SCS ENGINEERS
Environmental Consultants
8799 Balboa Avenue, Suite 290
San Diego, California 92123

WELL PURGING/SAMPLING LOG

Project Name: Wigington Oil | Well No.: MW-8
Project Number: 01208473.00 | Date: 12/21/11
Project Address: 11427 Woodside Avenue, Santee, CA
Well GPS: Latitude: Longitude:
Sampled by: C. Crosby | Checked by: CEH | License #: 945

WELL SPECIFICATIONS & MEASUREMENTS

Borehole Diameter (in.) (BD): 6 8 (10) 12
Casing Diameter (in.) (CD): 2 (4) 6 8
Total Well Depth (ft.) (WD): 39.5
Product thickness (ft.): NA
Static Water Level (ft.) (SWL): 30.87
Time measured: NA
Water Column (ft.) (WC=WD-SWL): 8.63
Filter Pack Porosity (P): 0.30

Borehole Volume (BV) Calculations

BV (gal) = 0.041 [CD^2 + P (BD^2-CD^2)](WC)

This equation applies to wells constructed straddling the water table only. For submerged screens, document all calculations. Porosity is expressed in decimal form. **BV =** ~~8.63~~ 14.7 **gallons**

PURGING & SAMPLING EQUIPMENT

Water Level Meter Type and ID: Heron OWIP
Purging Equipment/Method: Bladder Pump [ ] Bailer [X] Centrifugal Pump [ ] Other [ ]
pH/Temp/Conductivity Meter Type and ID: Oakton pH/Cond/Temp
Sampler Type: [ ] Teflon Bailer [X] Disposable Bailer [ ] Bladder Pump [ ] Centrifugal Pump [ ] Other:
Decontamination Method: [ ] Steam/High Pressure Wash [X] 3 Stage (Alconox, tap water & DI rinse) [ ] Other:

PURGING AND SAMPLING METHODOLOGIES

Well Recovery Type

[X] Fast -recovers 80% within 2 hours -Methods 1, 2, 3, & 5 [ ] Slow - more than 2 hours to recover 80% -Methods 3, 4, & 5

PURGING METHODS

[ ] Method 1, remove 3 BV, sample after well recovers 80% of total purged drawdown.
[X] Method 2, remove 1 BV, test parameters until stable per SAM Manual, sample after well recovers 80% of total purged drawdown.
[ ] Method 3, Low-flow - install pump at least 2 hours prior to start of purging. Follow detailed methodology in SAM Manual.
List the date and time the pump was installed: Date: Time:
[ ] Method 4, remove 1 BV, sample after 2 hours. Note - if well recovers 80% of total purged drawdown, use another method.
[ ] Method 5, non-purge method. Only with prior written approval from SAM

PURGING INFORMATION

Time	Water Level (feet below top of casing)	Drawdown (feet)	Water Volume Purged (gal)	Measured Parameters				
				Conductivity (µmhos)	Dissolved Oxygen	pH	Turbidity	Temp (°C)
1010								
1020	30.95	0.08	15	1.64	--	6.97	--	21.83
1028	31.03	0.16	23	1.66	--	7.04	--	22.00

Borehole Volume: 14.7 (gal) | Total Volume Purge Water: 23 (gal) | Average pumping rate: NA (gpm)

RECOVERY CALCULATIONS

Recovery of 80% of drawdown from purging = SWL + (0.2)(Maximum Drawdown during purging) 30.90

SAMPLING INFORMATION

Date & Time Sampled: 12/21/11 1040 | Depth to water at time of sampling (feet): 30.87

Quantity	Container Type	Filtered (Y/N)	Sample Preservatives	Analytical Methods to Perform
6	VOA	N	HCl	BTEX+OXY (8260); TPHg/d (8015B)

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WELL PURGING/SAMPLING LOG

Project Name: Wigington Oil | Well No.: MW-9
Project Number: 01208473.00 | Date: 12/21/11
Project Address: 11427 Woodside Avenue, Santee, CA
Well GPS: Latitude: Longitude:
Sampled by: AB | Checked by: CEH | License #: 945

WELL SPECIFICATIONS & MEASUREMENTS

Borehole Diameter (in.) (BD): 6 8 (10) 12
Casing Diameter (in.) (CD): 2 (4) 6 8
Total Well Depth (ft.) (WD): 38.3 | Product thickness (ft.): NA
Static Water Level (ft.) (SWL): 28.90 | Time measured: NA
Water Column (ft.) (WC=WD-SWL): 9.40 | Filter Pack Porosity (P): 0.30

Borehole Volume (BV) Calculations

BV (gal) = 0.041 [CD^2 + P (BD^2-CD^2)](WC)

This equation applies to wells constructed straddling the water table only. For submerged screens, document all calculations. Porosity is expressed in decimal form. **BV =** 16 **gallons**

PURGING & SAMPLING EQUIPMENT

Water Level Meter Type and ID: Heron OWIP
Purging Equipment/Method: Bladder Pump ☐ Bailer ☒ Centrifugal Pump ☐ Other ☐
pH/Temp/Conductivity Meter Type and ID: Oakton pH/Cond/Temp
Sampler Type: ☐ Teflon Bailer ☒ Disposable Bailer ☐ Bladder Pump ☐ Centrifugal Pump ☐ Other:
Decontamination Method: ☐ Steam/High Pressure Wash ☒ 3 Stage (Alconox, tap water & DI rinse) ☐ Other:

PURGING AND SAMPLING METHODOLOGIES

Well Recovery Type

☒ Fast -recovers 80% within 2 hours -Methods 1, 2, 3, & 5 ☐ Slow - more than 2 hours to recover 80% -Methods 3, 4, & 5

PURGING METHODS

☐ Method 1, remove 3 BV, sample after well recovers 80% of total purged drawdown.
☒ Method 2, remove 1 BV, test parameters until stable per SAM Manual, sample after well recovers 80% of total purged drawdown.
☐ Method 3, Low-flow - install pump at least 2 hours prior to start of purging. Follow detailed methodology in SAM Manual.
List the date and time the pump was installed: Date:_____ Time:_____
☐ Method 4, remove 1 BV, sample after 2 hours. Note - if well recovers 80% of total purged drawdown, use another method.
☐ Method 5, non-purge method. Only with prior written approval from SAM

PURGING INFORMATION

Time	Water Level (feet below top of casing)	Drawdown (feet)	Water Volume Purged (gal)	Measured Parameters				
				Conductivity (µmhos)	Dissolved Oxygen	pH	Turbidity	Temp (°C)
13:07	28.97	0.07	8	753	--	7.25	-	19.6
13:16	29.05	0.15	16	756	--	7.15	-	19.6
13:25	29.10	0.20	24	764	-	7.13	-	19.4
	↓							

Borehole Volume: 16 (gal) | Total Volume Purge Water: 24 (gal) | Average pumping rate: NA (gpm)

RECOVERY CALCULATIONS

Recovery of 80% of drawdown from purging = SWL + (0.2)(Maximum Drawdown during purging) 28.94

SAMPLING INFORMATION

Date & Time Sampled: 12/21/11, 13:45 | Depth to water at time of sampling (feet): 28.90

Quantity	Container Type	Filtered (Y/N)	Sample Preservatives	Analytical Methods to Perform
6	VOA	N	HCl	BTEX+OXY (8260); TPHg/d (8015B)

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WELL PURGING/SAMPLING LOG

Project Name: Wigington Oil — Well No.: MW-10
Project Number: 01208473.00 — Date: 12/2/11
Project Address: 11427 Woodside Avenue, Santee, CA
Well GPS: Latitude: Longitude:
Sampled by: AB — Checked by: CEH — License #: 945

WELL SPECIFICATIONS & MEASUREMENTS

Borehole Diameter (in.) (BD): 6 8 (10) 12
Casing Diameter (in.) (CD): 2 (4) 6 8
Total Well Depth (ft.) (WD): 38.3 — Product thickness (ft.): NA
Static Water Level (ft.) (SWL): 31.64 — Time measured: NA
Water Column (ft.) (WC=WD-SWL): 6.66 — Filter Pack Porosity (P): 0.30

Borehole Volume (BV) Calculations

BV (gal) = 0.041 [CD^2 + P (BD^2-CD^2)](WC)

This equation applies to wells constructed straddling the water table only. For submerged screens, document all calculations. Porosity is expressed in decimal form. **BV =** 11.3 **gallons**

PURGING & SAMPLING EQUIPMENT

Water Level Meter Type and ID: Heron OWIP
Purging Equipment/Method: Bladder Pump ☐ Bailer ☒ Centrifugal Pump ☐ Other ☐
pH/Temp/Conductivity Meter Type and ID: Oakton pH/Cond/Temp
Sampler Type: ☐ Teflon Bailer ☒ Disposable Bailer ☐ Bladder Pump ☐ Centrifugal Pump ☐ Other: _____
Decontamination Method: ☐ Steam/High Pressure Wash ☒ 3 Stage (Alconox, tap water & DI rinse) ☐ Other: _____

PURGING AND SAMPLING METHODOLOGIES

Well Recovery Type

☒ Fast -recovers 80% within 2 hours -Methods 1, 2, 3, & 5 ☐ Slow - more than 2 hours to recover 80% -Methods 3, 4, & 5

PURGING METHODS

☐ Method 1, remove 3 BV, sample after well recovers 80% of total purged drawdown.
☒ Method 2, remove 1 BV, test parameters until stable per SAM Manual, sample after well recovers 80% of total purged drawdown.
☐ Method 3, Low-flow - install pump at least 2 hours prior to start of purging. Follow detailed methodology in SAM Manual.
List the date and time the pump was installed: Date:_____ Time:_____
☐ Method 4, remove 1 BV, sample after 2 hours. Note - if well recovers 80% of total purged drawdown, use another method.
☐ Method 5, non-purge method. Only with prior written approval from SAM

PURGING INFORMATION

Time	Water Level (feet below top of casing)	Drawdown (feet)	Water Volume Purged (gal)	Measured Parameters				
				Conductivity (µmhos)	Dissolved Oxygen	pH	Turbidity	Temp (°C)
11:27	32.60	0.96	6	729	–	7.07	–	19.6
11:33	32.75	1.11	11.5	702	–	6.90	–	20.8
11:43	33.45	1.81	17.5	693	–	6.86	–	21.1

Borehole Volume: 11.3 (gal) — Total Volume Purge Water: 17.5 (gal) — Average pumping rate: NA (gpm)

RECOVERY CALCULATIONS

Recovery of 80% of drawdown from purging = SWL + (0.2)(Maximum Drawdown during purging) 32.00

SAMPLING INFORMATION

Date & Time Sampled: 11:55, 12/2/11 — Depth to water at time of sampling (feet): 31.69

Quantity	Container Type	Filtered (Y/N)	Sample Preservatives	Analytical Methods to Perform
6	VOA	N	HCl	BTEX+OXY (8260); TPHg/d (8015B)

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WELL PURGING/SAMPLING LOG

Project Name: Wigington Oil | Well No.: MW-11
Project Number: 01208473.00 | Date: 12/21/11
Project Address: 11427 Woodside Avenue, Santee, CA
Well GPS: Latitude: Longitude:
Sampled by: C. Crosby | Checked by: CEA | License #: 945

WELL SPECIFICATIONS & MEASUREMENTS

Borehole Diameter (in.) (BD): 6 (8) 10 12
Casing Diameter (in.) (CD): (2) 4 6 8
Total Well Depth (ft.) (WD): 37.4 | Product thickness (ft.): NA
Static Water Level (ft.) (SWL): 29.34 | Time measured: NA
Water Column (ft.) (WC=WD-SWL): 8.06 | Filter Pack Porosity (P): 0.30

Borehole Volume (BV) Calculations

$$BV\ (gal) = 0.041\ [CD^2 + P\ (BD^2 - CD^2)](WC)$$

This equation applies to wells constructed straddling the water table only. For submerged screens, document all calculations. Porosity is expressed in decimal form. **BV =** 7.3 **gallons**

PURGING & SAMPLING EQUIPMENT

Water Level Meter Type and ID: Heron OWIP
Purging Equipment/Method: Bladder Pump ☐ Bailer ☒ Centrifugal Pump ☐ Other ☐
pH/Temp/Conductivity Meter Type and ID: Oakton pH/Cond/Temp
Sampler Type: ☐ Teflon Bailer ☒ Disposable Bailer ☐ Bladder Pump ☐ Centrifugal Pump ☐ Other:
Decontamination Method: ☐ Steam/High Pressure Wash ☒ 3 Stage (Alconox, tap water & DI rinse) ☐ Other:

PURGING AND SAMPLING METHODOLOGIES

Well Recovery Type

☒ Fast -recovers 80% within 2 hours -Methods 1, 2, 3, & 5 ☐ Slow - more than 2 hours to recover 80% -Methods 3, 4, & 5

PURGING METHODS

☐ Method 1, remove 3 BV, sample after well recovers 80% of total purged drawdown.
☒ Method 2, remove 1 BV, test parameters until stable per SAM Manual, sample after well recovers 80% of total purged drawdown.
☐ Method 3, Low-flow - install pump at least 2 hours prior to start of purging. Follow detailed methodology in SAM Manual.
List the date and time the pump was installed: Date:_____ Time:_____
☐ Method 4, remove 1 BV, sample after 2 hours. Note - if well recovers 80% of total purged drawdown, use another method.
☐ Method 5, non-purge method. Only with prior written approval from SAM

PURGING INFORMATION

Time	Water Level (feet below top of casing)	Drawdown (feet)	Water Volume Purged (gal)	Measured Parameters: Conductivity (µmhos)	Dissolved Oxygen	pH	Turbidity	Temp (°C)
1116								
1132	29.34	0.00	7.5	682	--	6.84	--	22.92
1141	29.37	0.03	11.0	683	--	6.87	--	22.94

Borehole Volume: 7.3 (gal) | Total Volume Purge Water: 11 (gal) | Average pumping rate: NA (gpm)

RECOVERY CALCULATIONS

Recovery of 80% of drawdown from purging = SWL + (0.2)(Maximum Drawdown during purging) 29.34

SAMPLING INFORMATION

Date & Time Sampled: 12/21/11 1150 | Depth to water at time of sampling (feet): 29.34

Quantity	Container Type	Filtered (Y/N)	Sample Preservatives	Analytical Methods to Perform
6	VOA	N	HCl	BTEX+OXY (8260); TPHg/d (8015B)

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WELL PURGING/SAMPLING LOG

Project Name: Wigington Oil | Well No.: MW-12
Project Number: 01208473.00 | Date: 12/21/11
Project Address: 11427 Woodside Avenue, Santee, CA
Well GPS: Latitude: Longitude:
Sampled by: C. Crosby | Checked by: CEH | License #: 945

WELL SPECIFICATIONS & MEASUREMENTS

Borehole Diameter (in.) (BD): 6 (8) 10 12
Casing Diameter (in.) (CD): (2) 4 6 8
Total Well Depth (ft.) (WD): 36.2 | Product thickness (ft.): NA
Static Water Level (ft.) (SWL): 28.88 | Time measured: NA
Water Column (ft.) (WC=WD-SWL): 7.32 | Filter Pack Porosity (P): 0.30

Borehole Volume (BV) Calculations

BV (gal) = 0.041 [CD^2 + P (BD^2-CD^2)](WC)

This equation applies to wells constructed straddling the water table only. For submerged screens, document all calculations. Porosity is expressed in decimal form. **BV =** 6.6 **gallons**

PURGING & SAMPLING EQUIPMENT

Water Level Meter Type and ID: Heron OWIP
Purging Equipment/Method: Bladder Pump ☐ Bailer ☒ Centrifugal Pump ☐ Other ☐
pH/Temp/Conductivity Meter Type and ID: Oakton pH/Cond/Temp
Sampler Type: ☐ Teflon Bailer ☒ Disposable Bailer ☐ Bladder Pump ☐ Centrifugal Pump ☐ Other:
Decontamination Method: ☐ Steam/High Pressure Wash ☒ 3 Stage (Alconox, tap water & DI rinse) ☐ Other:

PURGING AND SAMPLING METHODOLOGIES

Well Recovery Type

☒ Fast -recovers 80% within 2 hours -Methods 1, 2, 3, & 5 ☐ Slow - more than 2 hours to recover 80% -Methods 3, 4, & 5

PURGING METHODS

☐ Method 1, remove 3 BV, sample after well recovers 80% of total purged drawdown.
☒ Method 2, remove 1 BV, test parameters until stable per SAM Manual, sample after well recovers 80% of total purged drawdown.
☐ Method 3, Low-flow - install pump at least 2 hours prior to start of purging. Follow detailed methodology in SAM Manual.
List the date and time the pump was installed: Date:_____ Time:_____
☐ Method 4, remove 1 BV, sample after 2 hours. Note - if well recovers 80% of total purged drawdown, use another method.
☐ Method 5, non-purge method. Only with prior written approval from SAM

PURGING INFORMATION

Time	Water Level (feet below top of casing)	Drawdown (feet)	Water Volume Purged (gal)	Measured Parameters				
				Conductivity (µmhos)	Dissolved Oxygen	pH	Turbidity	Temp (°C)
1209								
1225	28.92	0.04	7	663	--	6.76	--	22.65
1231	28.92	0.04	10	667	--	6.81	--	22.63

Borehole Volume: 6.6 (gal) | Total Volume Purge Water: 10 (gal) | Average pumping rate: NA (gpm)

RECOVERY CALCULATIONS

Recovery of 80% of drawdown from purging = SWL + (0.2)(Maximum Drawdown during purging) 28.88

SAMPLING INFORMATION

Date & Time Sampled: 12/21/11 1240 | Depth to water at time of sampling (feet): 28.88

Quantity	Container Type	Filtered (Y/N)	Sample Preservatives	Analytical Methods to Perform
6	VOA	N	HCl	BTEX+OXY (8260); TPHg/d (8015B)

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WELL PURGING/SAMPLING LOG

Project Name: Wigington Oil		Well No.: MW-13
Project Number: 01208473.00		Date: 12/21/11
Project Address: 11427 Woodside Avenue, Santee, CA		
Well GPS: Latitude:	Longitude:	
Sampled by: AB	Checked by: CEH	License #: 945

WELL SPECIFICATIONS & MEASUREMENTS

Borehole Diameter (in.) (BD): 6 (8) 10 12	
Casing Diameter (in.) (CD): (2) 4 6 8	
Total Well Depth (ft.) (WD): 44.7	Product thickness (ft.): NA
Static Water Level (ft.) (SWL): 31.36	Time measured: NA
Water Column (ft.) (WC=WD-SWL): 13.34	Filter Pack Porosity (P): 0.30

Borehole Volume (BV) Calculations

BV (gal) = 0.041 [CD^2 + P (BD^2-CD^2)](WC)

This equation applies to wells constructed straddling the water table only. For submerged screens, document all calculations. Porosity is expressed in decimal form. **BV =** 12 **gallons**

PURGING & SAMPLING EQUIPMENT

Water Level Meter Type and ID: Heron OWIP

Purging Equipment/Method: Bladder Pump ☐ Bailer ☒ Centrifugal Pump ☐ Other ☐

pH/Temp/Conductivity Meter Type and ID: Oakton pH/Cond/Temp

Sampler Type: ☐ Teflon Bailer ☒ Disposable Bailer ☐ Bladder Pump ☐ Centrifugal Pump ☐ Other: _____

Decontamination Method: ☐ Steam/High Pressure Wash ☒ 3 Stage (Alconox, tap water & DI rinse) ☐ Other: _____

PURGING AND SAMPLING METHODOLOGIES

Well Recovery Type

☒ Fast -recovers 80% within 2 hours -Methods 1, 2, 3, & 5 ☒ Slow - more than 2 hours to recover 80% -Methods 3, 4, & 5

PURGING METHODS

☐ Method 1, remove 3 BV, sample after well recovers 80% of total purged drawdown.

☒ Method 2, remove 1 BV, test parameters until stable per SAM Manual, sample after well recovers 80% of total purged drawdown.

☐ Method 3, Low-flow - install pump at least 2 hours prior to start of purging. Follow detailed methodology in SAM Manual.

List the date and time the pump was installed: Date:_____ Time:_____

☒ Method 4, remove 1 BV, sample after 2 hours. Note - if well recovers 80% of total purged drawdown, use another method.

☐ Method 5, non-purge method. Only with prior written approval from SAM

PURGING INFORMATION

Time	Water Level (feet below top of casing)	Drawdown (feet)	Water Volume Purged (gal)	Measured Parameters: Conductivity (µmhos)	Dissolved Oxygen	pH	Turbidity	Temp (°C)
10:00	39.39	8.03	6	996	-	6.88	-	20.6
10:39	43.40	12.04	12	922	-	6.83	-	20.1

Borehole Volume: 12 (gal) Total Volume Purge Water: 12 (gal) Average pumping rate: NA (gpm)

RECOVERY CALCULATIONS

Recovery of 80% of drawdown from purging = SWL + (0.2)(Maximum Drawdown during purging) 33.77

SAMPLING INFORMATION

Date & Time Sampled: 12/21/11, 12:45 Depth to water at time of sampling (feet): 39.14

Quantity	Container Type	Filtered (Y/N)	Sample Preservatives	Analytical Methods to Perform
6	VOA	N	HCl	BTEX+OXY (8260); TPHg/d (8015B)

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WELL PURGING/SAMPLING LOG

Project Name: Wigington Oil | Well No.: MW-14
Project Number: 01208473.00 | Date: 12/22/11
Project Address: 11427 Woodside Avenue, Santee, CA
Well GPS: Latitude: Longitude:
Sampled by: C. Crosby | Checked by: CE KF | License #: 945

WELL SPECIFICATIONS & MEASUREMENTS

Borehole Diameter (in.) (BD): 6 8 (10) 12
Casing Diameter (in.) (CD): 2 (4) 6 8
Total Well Depth (ft.) (WD): 36.8
Product thickness (ft.): NA
Static Water Level (ft.) (SWL): 29.53
Time measured: NA
Water Column (ft.) (WC=WD-SWL): 7.27
Filter Pack Porosity (P): 0.30

Borehole Volume (BV) Calculations

$BV\ (gal) = 0.041\ [CD^2 + P\ (BD^2 - CD^2)](WC)$

This equation applies to wells constructed straddling the water table only. For submerged screens, document all calculations. Porosity is expressed in decimal form. **BV =** 12.4 **gallons**

PURGING & SAMPLING EQUIPMENT

Water Level Meter Type and ID: Heron OWIP
Purging Equipment/Method: Bladder Pump ☐ Bailer ☒ Centrifugal Pump ☐ Other ☐
pH/Temp/Conductivity Meter Type and ID: Oakton pH/Cond/Temp
Sampler Type: ☐ Teflon Bailer ☒ Disposable Bailer ☐ Bladder Pump ☐ Centrifugal Pump ☐ Other: ____
Decontamination Method: ☐ Steam/High Pressure Wash ☒ 3 Stage (Alconox, tap water & DI rinse) ☐ Other: ____

PURGING AND SAMPLING METHODOLOGIES

Well Recovery Type

☒ Fast -recovers 80% within 2 hours -Methods 1, 2, 3, & 5 ☐ Slow - more than 2 hours to recover 80% -Methods 3, 4, & 5

PURGING METHODS

☐ Method 1, remove 3 BV, sample after well recovers 80% of total purged drawdown.
☒ Method 2, remove 1 BV, test parameters until stable per SAM Manual, sample after well recovers 80% of total purged drawdown.
☐ Method 3, Low-flow - install pump at least 2 hours prior to start of purging. Follow detailed methodology in SAM Manual.
List the date and time the pump was installed: Date:____ Time:____
☐ Method 4, remove 1 BV, sample after 2 hours. Note - if well recovers 80% of total purged drawdown, use another method.
☐ Method 5, non-purge method. Only with prior written approval from SAM

PURGING INFORMATION

Time	Water Level (feet below top of casing)	Drawdown (feet)	Water Volume Purged (gal)	Measured Parameters				
				Conductivity (µmhos)	Dissolved Oxygen	pH	Turbidity	Temp (°C)
1210								
1220	31.15	1.62	13	1.23	--	6.96	--	21.79
1227	31.80	2.27	19	1.22	--	6.98	--	21.81

Borehole Volume: 12.4 (gal) Total Volume Purge Water: 19 (gal) Average pumping rate: NA (gpm)

RECOVERY CALCULATIONS

Recovery of 80% of drawdown from purging = SWL + (0.2)(Maximum Drawdown during purging) 29.98

SAMPLING INFORMATION

Date & Time Sampled: 12/22/11 1240 Depth to water at time of sampling (feet): 29.55

Quantity	Container Type	Filtered (Y/N)	Sample Preservatives	Analytical Methods to Perform
6	VOA	N	HCl	BTEX+OXY (8260); TPHg/d (8015B)

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WELL PURGING/SAMPLING LOG

Project Name: Wigington Oil | Well No.: MW-15
Project Number: 01208473.00 | Date: 12/22/11
Project Address: 11427 Woodside Avenue, Santee, CA
Well GPS: Latitude: Longitude:
Sampled by: C. Crosby | Checked by: CEH | License #: 945

WELL SPECIFICATIONS & MEASUREMENTS

Borehole Diameter (in.) (BD): 6 (8) 10 12
Casing Diameter (in.) (CD): (2) 4 6 8
Total Well Depth (ft.) (WD): 37.2 | Product thickness (ft.): NA
Static Water Level (ft.) (SWL): 29.14 | Time measured: NA
Water Column (ft.) (WC=WD-SWL): 8.06 | Filter Pack Porosity (P): 0.30

Borehole Volume (BV) Calculations

$$BV\ (gal) = 0.041\ [CD^2 + P\ (BD^2\text{-}CD^2)](WC)$$

This equation applies to wells constructed straddling the water table only. For submerged screens, document all calculations. Porosity is expressed in decimal form. **BV =** 7.3 **gallons**

PURGING & SAMPLING EQUIPMENT

Water Level Meter Type and ID: Heron OWIP
Purging Equipment/Method: Bladder Pump ☐ Bailer ☒ Centrifugal Pump ☐ Other ☐
pH/Temp/Conductivity Meter Type and ID: Oakton pH/Cond/Temp
Sampler Type: ☐ Teflon Bailer ☒ Disposable Bailer ☐ Bladder Pump ☐ Centrifugal Pump ☐ Other:
Decontamination Method: ☐ Steam/High Pressure Wash ☒ 3 Stage (Alconox, tap water & DI rinse) ☐ Other:

PURGING AND SAMPLING METHODOLOGIES

Well Recovery Type

☒ Fast -recovers 80% within 2 hours -Methods 1, 2, 3, & 5 ☐ Slow - more than 2 hours to recover 80% -Methods 3, 4, & 5

PURGING METHODS

☐ Method 1, remove 3 BV, sample after well recovers 80% of total purged drawdown.
☒ Method 2, remove 1 BV, test parameters until stable per SAM Manual, sample after well recovers 80% of total purged drawdown.
☐ Method 3, Low-flow - install pump at least 2 hours prior to start of purging. Follow detailed methodology in SAM Manual.
List the date and time the pump was installed: Date:_____ Time:_____
☐ Method 4, remove 1 BV, sample after 2 hours. Note - if well recovers 80% of total purged drawdown, use another method.
☐ Method 5, non-purge method. Only with prior written approval from SAM

PURGING INFORMATION

Time	Water Level (feet below top of casing)	Drawdown (feet)	Water Volume Purged (gal)	Measured Parameters				
				Conductivity (µmhos)	Dissolved Oxygen	pH	Turbidity	Temp (°C)
0940								
0956	29.15	0.01	7.5	1.24	--	7.23	--	21.43
1005	29.15	0.01	11.0	1.23	--	7.27	--	21.61

Borehole Volume: 7.3 (gal) | Total Volume Purge Water: 11 (gal) | Average pumping rate: NA (gpm)

RECOVERY CALCULATIONS

Recovery of 80% of drawdown from purging = SWL + (0.2)(Maximum Drawdown during purging) 29.14

SAMPLING INFORMATION

Date & Time Sampled: 12/22/11 1015 | Depth to water at time of sampling (feet): 29.14

Quantity	Container Type	Filtered (Y/N)	Sample Preservatives	Analytical Methods to Perform
6	VOA	N	HCl	BTEX+OXY (8260); TPHg/d (8015B)

SCS ENGINEERS
Environmental Consultants
8799 Balboa Avenue, Suite 290
San Diego, California 92123

WELL PURGING/SAMPLING LOG

Project Name: Wigington Oil		Well No.: MW-16
Project Number: 01208473.00		Date: 12/21/11
Project Address: 11427 Woodside Avenue, Santee, CA		
Well GPS: Latitude:	Longitude:	
Sampled by: C. Crosby	Checked by: CEH	License #: 945

WELL SPECIFICATIONS & MEASUREMENTS

Borehole Diameter (in.) (BD): 6 (8) 10 12	
Casing Diameter (in.) (CD): (2) 4 6 8	
Total Well Depth (ft.) (WD): 38.3	Product thickness (ft.): NA
Static Water Level (ft.) (SWL): 29.42	Time measured: NA
Water Column (ft.) (WC=WD-SWL): 8.88	Filter Pack Porosity (P): 0.30

Borehole Volume (BV) Calculations

BV (gal) = 0.041 [CD^2 + P (BD^2-CD^2)](WC)

This equation applies to wells constructed straddling the water table only. For submerged screens, document all calculations. Porosity is expressed in decimal form. **BV =** 8.0 **gallons**

PURGING & SAMPLING EQUIPMENT

Water Level Meter Type and ID: Heron OWIP

Purging Equipment/Method: Bladder Pump ☐ Bailer ☒ Centrifugal Pump ☐ Other ☐

pH/Temp/Conductivity Meter Type and ID: Oakton pH/Cond/Temp

Sampler Type: ☐ Teflon Bailer ☒ Disposable Bailer ☐ Bladder Pump ☐ Centrifugal Pump ☐ Other: _____

Decontamination Method: ☐ Steam/High Pressure Wash ☒ 3 Stage (Alconox, tap water & DI rinse) ☐ Other: _____

PURGING AND SAMPLING METHODOLOGIES

Well Recovery Type

☒ Fast -recovers 80% within 2 hours -Methods 1, 2, 3, & 5 ☐ Slow - more than 2 hours to recover 80% -Methods 3, 4, & 5

PURGING METHODS

☐ Method 1, remove 3 BV, sample after well recovers 80% of total purged drawdown.

☒ Method 2, remove 1 BV, test parameters until stable per SAM Manual, sample after well recovers 80% of total purged drawdown.

☐ Method 3, Low-flow - install pump at least 2 hours prior to start of purging. Follow detailed methodology in SAM Manual.

List the date and time the pump was installed: Date:_____ Time:_____

☐ Method 4, remove 1 BV, sample after 2 hours. Note - if well recovers 80% of total purged drawdown, use another method.

☐ Method 5, non-purge method. Only with prior written approval from SAM

PURGING INFORMATION

Time	Water Level (feet below top of casing)	Drawdown (feet)	Water Volume Purged (gal)	Measured Parameters: Conductivity (µmhos)	Dissolved Oxygen	pH	Turbidity	Temp (°C)
1442								
1500	29.42	0.00	8	1.09	--	6.88	-	21.38
1507	29.42	0.00	12	1.12	-	6.97	-	21.45

Borehole Volume: 8.0 (gal) Total Volume Purge Water: 12 (gal) Average pumping rate: NA (gpm)

RECOVERY CALCULATIONS

Recovery of 80% of drawdown from purging = SWL + (0.2)(Maximum Drawdown during purging) 29.42

SAMPLING INFORMATION

Date & Time Sampled: 12/21/11 1520 Depth to water at time of sampling (feet): 29.42

Quantity	Container Type	Filtered (Y/N)	Sample Preservatives	Analytical Methods to Perform
6	VOA	N	HCl	BTEX+OXY (8260); TPHg/d (8015B)

SCS ENGINEERS
Environmental Consultants
8799 Balboa Avenue, Suite 290
San Diego, California 92123

WELL PURGING/SAMPLING LOG

Project Name: Wigington Oil | Well No.: MW-17
Project Number: 01208473.00 | Date: 12/22/11
Project Address: 11427 Woodside Avenue, Santee, CA
Well GPS: Latitude: Longitude:
Sampled by: C. Crosby | Checked by: CEH | License #: 945

WELL SPECIFICATIONS & MEASUREMENTS

Borehole Diameter (in.) (BD): 6 (8) 10 12
Casing Diameter (in.) (CD): (2) 4 6 8
Total Well Depth (ft.) (WD): 44.4 | Product thickness (ft.): NA
Static Water Level (ft.) (SWL): 34.45 | Time measured: NA
Water Column (ft.) (WC=WD-SWL): 9.95 | Filter Pack Porosity (P): 0.30

Borehole Volume (BV) Calculations

$$BV\ (gal) = 0.041\ [CD^2 + P\ (BD^2 - CD^2)](WC)$$

This equation applies to wells constructed straddling the water table only. For submerged screens, document all calculations. Porosity is expressed in decimal form. **BV =** 9.0 **gallons**

PURGING & SAMPLING EQUIPMENT

Water Level Meter Type and ID: Heron OWIP
Purging Equipment/Method: Bladder Pump ☐ Bailer ☒ Centrifugal Pump ☐ Other ☐
pH/Temp/Conductivity Meter Type and ID: Oakton pH/Cond/Temp
Sampler Type: ☐ Teflon Bailer ☒ Disposable Bailer ☐ Bladder Pump ☐ Centrifugal Pump ☐ Other:
Decontamination Method: ☐ Steam/High Pressure Wash ☒ 3 Stage (Alconox, tap water & DI rinse) ☐ Other:

PURGING AND SAMPLING METHODOLOGIES

Well Recovery Type

☒ Fast -recovers 80% within 2 hours -Methods 1, 2, 3, & 5 ☐ Slow - more than 2 hours to recover 80% -Methods 3, 4, & 5

PURGING METHODS

☐ Method 1, remove 3 BV, sample after well recovers 80% of total purged drawdown.
☒ Method 2, remove 1 BV, test parameters until stable per SAM Manual, sample after well recovers 80% of total purged drawdown.
☐ Method 3, Low-flow - install pump at least 2 hours prior to start of purging. Follow detailed methodology in SAM Manual.
List the date and time the pump was installed: Date:_____ Time:_____
☐ Method 4, remove 1 BV, sample after 2 hours. Note - if well recovers 80% of total purged drawdown, use another method.
☐ Method 5, non-purge method. Only with prior written approval from SAM

PURGING INFORMATION

Time	Water Level (feet below top of casing)	Drawdown (feet)	Water Volume Purged (gal)	Measured Parameters				
				Conductivity (µmhos)	Dissolved Oxygen	pH	Turbidity	Temp (°C)
0753								
0819	42.50	8.05	9	1.34	--	7.69	--	22.11
0841	42.78	8.33	13.5	1.37	--	7.62	--	22.09

Borehole Volume: 9.0 (gal) | Total Volume Purge Water: 13.5 (gal) | Average pumping rate: NA (gpm)

RECOVERY CALCULATIONS

Recovery of 80% of drawdown from purging = SWL + (0.2)(Maximum Drawdown during purging) 36.11

SAMPLING INFORMATION

Date & Time Sampled: 12/22/11 0905 | Depth to water at time of sampling (feet): 35.90

Quantity	Container Type	Filtered (Y/N)	Sample Preservatives	Analytical Methods to Perform
6	VOA	N	HCl	BTEX+OXY (8260); TPHg/d (8015B)

SCS ENGINEERS
Environmental Consultants
8799 Balboa Avenue, Suite 290
San Diego, California 92123

WELL PURGING/SAMPLING LOG

Project Name: Wigington Oil | Well No.: MW-18
Project Number: 01208473.00 | Date: 12/21/11
Project Address: 11427 Woodside Avenue, Santee, CA
Well GPS: Latitude: Longitude:
Sampled by: C. Crosby | Checked by: CEH | License #: 945

WELL SPECIFICATIONS & MEASUREMENTS

Borehole Diameter (in.) (BD): 6 (8) 10 12
Casing Diameter (in.) (CD): (2) 4 6 8
Total Well Depth (ft.) (WD): 39.1 | Product thickness (ft.): NA
Static Water Level (ft.) (SWL): 29.62 | Time measured: NA
Water Column (ft.) (WC=WD-SWL): 9.48 | Filter Pack Porosity (P): 0.30

Borehole Volume (BV) Calculations

BV (gal) = 0.041 [CD^2 + P (BD^2-CD^2)](WC)

This equation applies to wells constructed straddling the water table only. For submerged screens, document all calculations. Porosity is expressed in decimal form. **BV =** 8.5 **gallons**

PURGING & SAMPLING EQUIPMENT

Water Level Meter Type and ID: Heron OWIP
Purging Equipment/Method: Bladder Pump ☐ Bailer ☒ Centrifugal Pump ☐ Other ☐
pH/Temp/Conductivity Meter Type and ID: Oakton pH/Cond/Temp
Sampler Type: ☐ Teflon Bailer ☒ Disposable Bailer ☐ Bladder Pump ☐ Centrifugal Pump ☐ Other:
Decontamination Method: ☐ Steam/High Pressure Wash ☒ 3 Stage (Alconox, tap water & DI rinse) ☐ Other:

PURGING AND SAMPLING METHODOLOGIES

Well Recovery Type

☒ Fast -recovers 80% within 2 hours -Methods 1, 2, 3, & 5 ☐ Slow - more than 2 hours to recover 80% -Methods 3, 4, & 5

PURGING METHODS

☐ Method 1, remove 3 BV, sample after well recovers 80% of total purged drawdown.
☒ Method 2, remove 1 BV, test parameters until stable per SAM Manual, sample after well recovers 80% of total purged drawdown.
☐ Method 3, Low-flow - install pump at least 2 hours prior to start of purging. Follow detailed methodology in SAM Manual.
List the date and time the pump was installed: Date:_____ Time:_____
☐ Method 4, remove 1 BV, sample after 2 hours. Note - if well recovers 80% of total purged drawdown, use another method.
☐ Method 5, non-purge method. Only with prior written approval from SAM

PURGING INFORMATION

Time	Water Level (feet below top of casing)	Drawdown (feet)	Water Volume Purged (gal)	Measured Parameters: Conductivity (µmhos)	Dissolved Oxygen	pH	Turbidity	Temp (°C)
1324								
1347	29.65	0.03	8.5	1.41	--	6.93	--	21.05
1358	29.64	0.02	13.0	1.32	--	6.90	--	20.95

Borehole Volume: 8.5 (gal) | Total Volume Purge Water: 13 (gal) | Average pumping rate: NA (gpm)

RECOVERY CALCULATIONS

Recovery of 80% of drawdown from purging = SWL + (0.2)(Maximum Drawdown during purging) 29.62

SAMPLING INFORMATION

Date & Time Sampled: 12/21/11 1410 | Depth to water at time of sampling (feet): 29.62

Quantity	Container Type	Filtered (Y/N)	Sample Preservatives	Analytical Methods to Perform
6	VOA	N	HCl	BTEX+OXY (8260); TPHg/d (8015B)

SCS ENGINEERS
Environmental Consultants
8799 Balboa Avenue, Suite 290
San Diego, California 92123

WELL PURGING/SAMPLING LOG

Project Name: Wigington Oil | Well No.: MW-19
Project Number: 01208473.00 | Date: 12/22/11
Project Address: 11427 Woodside Avenue, Santee, CA
Well GPS: Latitude: Longitude:
Sampled by: C. Crosby | Checked by: CEH | License #: 945

WELL SPECIFICATIONS & MEASUREMENTS

Borehole Diameter (in.) (BD): 6 (8) 10 12
Casing Diameter (in.) (CD): (2) 4 6 8
Total Well Depth (ft.) (WD): 40.4 | Product thickness (ft.): NA
Static Water Level (ft.) (SWL): 32.28 | Time measured: NA
Water Column (ft.) (WC=WD-SWL): 8.12 | Filter Pack Porosity (P): 0.30

Borehole Volume (BV) Calculations

BV (gal) = 0.041 [CD^2 + P (BD^2-CD^2)](WC)

This equation applies to wells constructed straddling the water table only. For submerged screens, document all calculations. Porosity is expressed in decimal form. **BV =** 7.3 **gallons**

PURGING & SAMPLING EQUIPMENT

Water Level Meter Type and ID: Heron OWIP
Purging Equipment/Method: Bladder Pump ☐ Bailer ☒ Centrifugal Pump ☐ Other ☐
pH/Temp/Conductivity Meter Type and ID: Oakton pH/Cond/Temp
Sampler Type: ☐ Teflon Bailer ☒ Disposable Bailer ☐ Bladder Pump ☐ Centrifugal Pump ☐ Other:
Decontamination Method: ☐ Steam/High Pressure Wash ☒ 3 Stage (Alconox, tap water & DI rinse) ☐ Other:

PURGING AND SAMPLING METHODOLOGIES

Well Recovery Type

☒ Fast -recovers 80% within 2 hours -Methods 1, 2, 3, & 5 ☐ Slow - more than 2 hours to recover 80% -Methods 3, 4, & 5

PURGING METHODS

☐ Method 1, remove 3 BV, sample after well recovers 80% of total purged drawdown.
☒ Method 2, remove 1 BV, test parameters until stable per SAM Manual, sample after well recovers 80% of total purged drawdown.
☐ Method 3, Low-flow - install pump at least 2 hours prior to start of purging. Follow detailed methodology in SAM Manual.
List the date and time the pump was installed: Date:_____ Time:_____
☐ Method 4, remove 1 BV, sample after 2 hours. Note - if well recovers 80% of total purged drawdown, use another method.
☐ Method 5, non-purge method. Only with prior written approval from SAM

PURGING INFORMATION

Time	Water Level (feet below top of casing)	Drawdown (feet)	Water Volume Purged (gal)	Measured Parameters				
				Conductivity (µmhos)	Dissolved Oxygen	pH	Turbidity	Temp (°C)
1107	32.30	0.02	7.5	1.14	--	7.07	--	21.87
1116	32.33	0.05	11.0	1.13	--	7.09	--	21.94

Borehole Volume: 7.3 (gal) | Total Volume Purge Water: 11 (gal) | Average pumping rate: NA (gpm)

RECOVERY CALCULATIONS

Recovery of 80% of drawdown from purging = SWL + (0.2)(Maximum Drawdown during purging) 32.29

SAMPLING INFORMATION

Date & Time Sampled: 12/22/11 1125 | Depth to water at time of sampling (feet): 32.29

Quantity	Container Type	Filtered (Y/N)	Sample Preservatives	Analytical Methods to Perform
6	VOA	N	HCl	BTEX+OXY (8260); TPHg/d (8015B)

APPENDIX B

ANALYTICAL DATA AND CHAIN-OF-CUSTODY DOCUMENTATION

H&P Mobile Geochemistry Inc.

09 January 2012

Mr. Chuck Houser
SCS Engineers - San Diego
8799 Balboa Avenue, Suite 290
San Diego, CA 92123

H&P Project: SCS122311-13
Client Project: 01208473.00 / Wigington Oil

Dear Mr. Chuck Houser:

Enclosed is the analytical report for the above referenced project. The data herein applies to samples as received by H&P Mobile Geochemistry, Inc. on 23-Dec-11 which were analyzed in accordance with the attached Chain of Custody record(s).

The results for all sample analyses and required QA/QC analyses are presented in the following sections and summarized in the documents:

- Sample Summary
- Case Narrative (if applicable)
- Sample Results
- Quality Control Summary
- Notes and Definitions / Appendix
- Chain of Custody

Unless otherwise noted, all analyses were performed and reviewed in compliance with our Quality Systems Manual and Standard Operating Procedures. This report shall not be reproduced, except in full, without the written approval of H&P Mobile Geochemistry, Inc.

We at H&P Mobile Geochemistry, Inc. sincerely appreciate the opportunity to provide analytical services to you on this project. If you have any questions or concerns regarding this analytical report, please contact me at your convenience at 760-804-9678.

Sincerely,

J Villarreal

Janis Villarreal
Laboratory Director

H&P Mobile Geochemistry, Inc. operates under CA Environmental Lab Accreditation Program Numbers 2579, 2740, 2741, 2742, 2743, 2745 and 2754. National Environmental Laboratory Accreditation Conference (NELAC) Standards Lab #11845

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Mobile Geochemistry Inc.

2470 Impala Drive
Carlsbad, CA 92010
760-804-9678 Phone
760-804-9159 Fax

SCS Engineers - San Diego	Project: SCS122311-13	
8799 Balboa Avenue, Suite 290	Project Number: 01208473.00 / Wigington Oil	Reported:
San Diego, CA 92123	Project Manager: Mr. Chuck Houser	09-Jan-12 09:26

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
MW-1	E112105-01	Water	21-Dec-11	23-Dec-11
MW-2	E112105-02	Water	22-Dec-11	23-Dec-11
MW-3	E112105-03	Water	22-Dec-11	23-Dec-11
MW-4	E112105-04	Water	22-Dec-11	23-Dec-11
MW-6	E112105-05	Water	22-Dec-11	23-Dec-11
MW-7	E112105-06	Water	22-Dec-11	23-Dec-11
MW-8	E112105-07	Water	21-Dec-11	23-Dec-11
MW-9	E112105-08	Water	21-Dec-11	23-Dec-11
MW-10	E112105-09	Water	22-Dec-11	23-Dec-11
MW-11	E112105-10	Water	21-Dec-11	23-Dec-11
MW-12	E112105-11	Water	21-Dec-11	23-Dec-11
MW-13	E112105-12	Water	21-Dec-11	23-Dec-11
MW-14	E112105-13	Water	22-Dec-11	23-Dec-11
MW-15	E112105-14	Water	22-Dec-11	23-Dec-11
MW-16	E112105-15	Water	21-Dec-11	23-Dec-11
MW-17	E112105-16	Water	22-Dec-11	23-Dec-11
MW-18	E112105-17	Water	21-Dec-11	23-Dec-11
MW-19	E112105-18	Water	22-Dec-11	23-Dec-11

H&P Mobile Geochemistry Inc.

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SCS Engineers - San Diego	Project: SCS122311-13	
8799 Balboa Avenue, Suite 290	Project Number: 01208473.00 / Wigington Oil	Reported:
San Diego, CA 92123	Project Manager: Mr. Chuck Houser	09-Jan-12 09:26

Volatile Organic Compounds by EPA Method 5030B/8260B

H&P Mobile Geochemistry, Inc.

Analyte	Result	Reporting Limit	Units	Dilution Factor	Batch	Prepared	Analyzed	Method	Notes
MW-1 (E112105-01) Water Sampled: 21-Dec-11 Received: 23-Dec-11									
Methyl tertiary-butyl ether (MTBE)	**14**	1.0	ug/l	0.05	EA20504	04-Jan-12	04-Jan-12	EPA 8260B	
Diisopropyl ether (DIPE)	ND	1.0	"	"	"	"	"	"	
Ethyl tert-butyl ether (ETBE)	ND	1.0	"	"	"	"	"	"	
Tertiary-amyl methyl ether (TAME)	ND	1.0	"	"	"	"	"	"	
Benzene	**130**	5.0	"	1	"	"	"	"	
Toluene	ND	0.5	"	0.05	"	"	"	"	
Ethylbenzene	**19**	0.5	"	"	"	"	"	"	
m,p-Xylene	**1.0**	1.0	"	"	"	"	"	"	
o-Xylene	ND	0.5	"	"	"	"	"	"	
Tertiary-butyl alcohol (TBA)	**59**	5.0	"	"	"	"	"	"	
Surrogate: Dibromofluoromethane		*101 %*		*75-125*		"	"	"	
Surrogate: 1,2-Dichloroethane-d4		*104 %*		*62-139*		"	"	"	
Surrogate: Toluene-d8		*114 %*		*75-125*		"	"	"	
Surrogate: 4-Bromofluorobenzene		*96.8 %*		*75-125*		"	"	"	
MW-2 (E112105-02) Water Sampled: 22-Dec-11 Received: 23-Dec-11									
Methyl tertiary-butyl ether (MTBE)	**3.5**	1.0	ug/l	0.05	EA20504	04-Jan-12	04-Jan-12	EPA 8260B	
Diisopropyl ether (DIPE)	ND	1.0	"	"	"	"	"	"	
Ethyl tert-butyl ether (ETBE)	ND	1.0	"	"	"	"	"	"	
Tertiary-amyl methyl ether (TAME)	ND	1.0	"	"	"	"	"	"	
Benzene	ND	0.5	"	"	"	"	"	"	
Toluene	ND	0.5	"	"	"	"	"	"	
Ethylbenzene	ND	0.5	"	"	"	"	"	"	
m,p-Xylene	ND	1.0	"	"	"	"	"	"	
o-Xylene	ND	0.5	"	"	"	"	"	"	
Tertiary-butyl alcohol (TBA)	**1200**	5.0	"	"	"	"	"	"	
Surrogate: Dibromofluoromethane		*92.1 %*		*75-125*		"	"	"	
Surrogate: 1,2-Dichloroethane-d4		*89.2 %*		*62-139*		"	"	"	
Surrogate: Toluene-d8		*109 %*		*75-125*		"	"	"	
Surrogate: 4-Bromofluorobenzene		*97.6 %*		*75-125*		"	"	"	

H&P Mobile Geochemistry Inc.

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760-804-9678 Phone
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SCS Engineers - San Diego	Project: SCS122311-13	
8799 Balboa Avenue, Suite 290	Project Number: 01208473.00 / Wigington Oil	Reported:
San Diego, CA 92123	Project Manager: Mr. Chuck Houser	09-Jan-12 09:26

Volatile Organic Compounds by EPA Method 5030B/8260B

H&P Mobile Geochemistry, Inc.

Analyte	Result	Reporting Limit	Units	Dilution Factor	Batch	Prepared	Analyzed	Method	Notes
MW-3 (E112105-03) Water Sampled: 22-Dec-11 Received: 23-Dec-11									
Methyl tertiary-butyl ether (MTBE)	**64**	1.0	ug/l	0.05	EA20504	04-Jan-12	04-Jan-12	EPA 8260B	
Diisopropyl ether (DIPE)	ND	1.0	"	"	"	"	"	"	
Ethyl tert-butyl ether (ETBE)	ND	1.0	"	"	"	"	"	"	
Tertiary-amyl methyl ether (TAME)	ND	1.0	"	"	"	"	"	"	
Benzene	ND	0.5	"	"	"	"	"	"	
Toluene	ND	0.5	"	"	"	"	"	"	
Ethylbenzene	ND	0.5	"	"	"	"	"	"	
m,p-Xylene	ND	1.0	"	"	"	"	"	"	
o-Xylene	ND	0.5	"	"	"	"	"	"	
Tertiary-butyl alcohol (TBA)	**7.0**	5.0	"	"	"	"	"	"	
Surrogate: Dibromofluoromethane		*92.6 %*		*75-125*		"	"	"	
Surrogate: 1,2-Dichloroethane-d4		*87.8 %*		*62-139*		"	"	"	
Surrogate: Toluene-d8		*103 %*		*75-125*		"	"	"	
Surrogate: 4-Bromofluorobenzene		*87.5 %*		*75-125*		"	"	"	
MW-4 (E112105-04) Water Sampled: 22-Dec-11 Received: 23-Dec-11									
Methyl tertiary-butyl ether (MTBE)	**48**	1.0	ug/l	0.05	EA20504	04-Jan-12	04-Jan-12	EPA 8260B	
Diisopropyl ether (DIPE)	ND	1.0	"	"	"	"	"	"	
Ethyl tert-butyl ether (ETBE)	ND	1.0	"	"	"	"	"	"	
Tertiary-amyl methyl ether (TAME)	ND	1.0	"	"	"	"	"	"	
Benzene	**44**	0.5	"	"	"	"	"	"	
Toluene	**1.9**	0.5	"	"	"	"	"	"	
Ethylbenzene	**15**	0.5	"	"	"	"	"	"	
m,p-Xylene	**4.8**	1.0	"	"	"	"	"	"	
o-Xylene	**1.2**	0.5	"	"	"	"	"	"	
Tertiary-butyl alcohol (TBA)	ND	5.0	"	"	"	"	"	"	
Surrogate: Dibromofluoromethane		*90.4 %*		*75-125*		"	"	"	
Surrogate: 1,2-Dichloroethane-d4		*86.1 %*		*62-139*		"	"	"	
Surrogate: Toluene-d8		*109 %*		*75-125*		"	"	"	
Surrogate: 4-Bromofluorobenzene		*90.1 %*		*75-125*		"	"	"	

H&P Mobile Geochemistry Inc.

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SCS Engineers - San Diego	Project: SCS122311-13	
8799 Balboa Avenue, Suite 290	Project Number: 01208473.00 / Wigington Oil	Reported:
San Diego, CA 92123	Project Manager: Mr. Chuck Houser	09-Jan-12 09:26

Volatile Organic Compounds by EPA Method 5030B/8260B

H&P Mobile Geochemistry, Inc.

Analyte	Result	Reporting Limit	Units	Dilution Factor	Batch	Prepared	Analyzed	Method	Notes
MW-6 (E112105-05) Water Sampled: 22-Dec-11 Received: 23-Dec-11									
Methyl tertiary-butyl ether (MTBE)	**29**	10	ug/l	1	EA20504	04-Jan-12	04-Jan-12	EPA 8260B	
Diisopropyl ether (DIPE)	ND	10	"	"	"	"	"	"	
Ethyl tert-butyl ether (ETBE)	ND	10	"	"	"	"	"	"	
Tertiary-amyl methyl ether (TAME)	ND	10	"	"	"	"	"	"	
Benzene	**130**	5.0	"	"	"	"	"	"	
Toluene	ND	5.0	"	"	"	"	"	"	
Ethylbenzene	ND	5.0	"	"	"	"	"	"	
m,p-Xylene	ND	10	"	"	"	"	"	"	
o-Xylene	ND	5.0	"	"	"	"	"	"	
Tertiary-butyl alcohol (TBA)	ND	50	"	"	"	"	"	"	
Surrogate: Dibromofluoromethane		*93.1 %*		*75-125*	"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		*83.7 %*		*62-139*	"	"	"	"	
Surrogate: Toluene-d8		*103 %*		*75-125*	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*105 %*		*75-125*	"	"	"	"	
MW-7 (E112105-06) Water Sampled: 22-Dec-11 Received: 23-Dec-11									
Methyl tertiary-butyl ether (MTBE)	ND	1.0	ug/l	0.05	EA20504	04-Jan-12	04-Jan-12	EPA 8260B	
Diisopropyl ether (DIPE)	ND	1.0	"	"	"	"	"	"	
Ethyl tert-butyl ether (ETBE)	ND	1.0	"	"	"	"	"	"	
Tertiary-amyl methyl ether (TAME)	ND	1.0	"	"	"	"	"	"	
Benzene	ND	0.5	"	"	"	"	"	"	
Toluene	ND	0.5	"	"	"	"	"	"	
Ethylbenzene	ND	0.5	"	"	"	"	"	"	
m,p-Xylene	ND	1.0	"	"	"	"	"	"	
o-Xylene	ND	0.5	"	"	"	"	"	"	
Tertiary-butyl alcohol (TBA)	ND	5.0	"	"	"	"	"	"	
Surrogate: Dibromofluoromethane		*91.6 %*		*75-125*	"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		*85.5 %*		*62-139*	"	"	"	"	
Surrogate: Toluene-d8		*102 %*		*75-125*	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*90.1 %*		*75-125*	"	"	"	"	

H&P Mobile Geochemistry Inc.

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SCS Engineers - San Diego	Project: SCS122311-13	
8799 Balboa Avenue, Suite 290	Project Number: 01208473.00 / Wigington Oil	Reported:
San Diego, CA 92123	Project Manager: Mr. Chuck Houser	09-Jan-12 09:26

Volatile Organic Compounds by EPA Method 5030B/8260B

H&P Mobile Geochemistry, Inc.

Analyte	Result	Reporting Limit	Units	Dilution Factor	Batch	Prepared	Analyzed	Method	Notes
MW-8 (E112105-07) Water Sampled: 21-Dec-11 Received: 23-Dec-11									
Methyl tertiary-butyl ether (MTBE)	ND	1.0	ug/l	0.05	EA20503	03-Jan-12	03-Jan-12	EPA 8260B	
Diisopropyl ether (DIPE)	ND	1.0	"	"	"	"	"	"	
Ethyl tert-butyl ether (ETBE)	ND	1.0	"	"	"	"	"	"	
Tertiary-amyl methyl ether (TAME)	ND	1.0	"	"	"	"	"	"	
Benzene	ND	0.5	"	"	"	"	"	"	
Toluene	ND	0.5	"	"	"	"	"	"	
Ethylbenzene	**4.3**	0.5	"	"	"	"	"	"	
m,p-Xylene	ND	1.0	"	"	"	"	"	"	
o-Xylene	ND	0.5	"	"	"	"	"	"	
Tertiary-butyl alcohol (TBA)	ND	5.0	"	"	"	"	"	"	
Surrogate: Dibromofluoromethane		*103 %*		*75-125*		"	"	"	
Surrogate: 1,2-Dichloroethane-d4		*105 %*		*62-139*		"	"	"	
Surrogate: Toluene-d8		*113 %*		*75-125*		"	"	"	
Surrogate: 4-Bromofluorobenzene		*88.6 %*		*75-125*		"	"	"	
MW-9 (E112105-08) Water Sampled: 21-Dec-11 Received: 23-Dec-11									
Methyl tertiary-butyl ether (MTBE)	**5.5**	1.0	ug/l	0.05	EA20504	04-Jan-12	04-Jan-12	EPA 8260B	
Diisopropyl ether (DIPE)	ND	1.0	"	"	"	"	"	"	
Ethyl tert-butyl ether (ETBE)	ND	1.0	"	"	"	"	"	"	
Tertiary-amyl methyl ether (TAME)	ND	1.0	"	"	"	"	"	"	
Benzene	**16**	0.5	"	"	"	"	"	"	
Toluene	**3.6**	0.5	"	"	"	"	"	"	
Ethylbenzene	**22**	0.5	"	"	"	"	"	"	
m,p-Xylene	**22**	1.0	"	"	"	"	"	"	
o-Xylene	**3.3**	0.5	"	"	"	"	"	"	
Tertiary-butyl alcohol (TBA)	ND	5.0	"	"	"	"	"	"	
Surrogate: Dibromofluoromethane		*101 %*		*75-125*		"	"	"	
Surrogate: 1,2-Dichloroethane-d4		*87.3 %*		*62-139*		"	"	"	
Surrogate: Toluene-d8		*105 %*		*75-125*		"	"	"	
Surrogate: 4-Bromofluorobenzene		*101 %*		*75-125*		"	"	"	

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8799 Balboa Avenue, Suite 290	Project Number: 01208473.00 / Wigington Oil	Reported:
San Diego, CA 92123	Project Manager: Mr. Chuck Houser	09-Jan-12 09:26

Volatile Organic Compounds by EPA Method 5030B/8260B

H&P Mobile Geochemistry, Inc.

Analyte	Result	Reporting Limit	Units	Dilution Factor	Batch	Prepared	Analyzed	Method	Notes
MW-10 (E112105-09) Water Sampled: 22-Dec-11 Received: 23-Dec-11									
Methyl tertiary-butyl ether (MTBE)	ND	1.0	ug/l	0.05	EA20504	04-Jan-12	04-Jan-12	EPA 8260B	
Diisopropyl ether (DIPE)	ND	1.0	"	"	"	"	"	"	
Ethyl tert-butyl ether (ETBE)	ND	1.0	"	"	"	"	"	"	
Tertiary-amyl methyl ether (TAME)	ND	1.0	"	"	"	"	"	"	
Benzene	ND	0.5	"	"	"	"	"	"	
Toluene	ND	0.5	"	"	"	"	"	"	
Ethylbenzene	ND	0.5	"	"	"	"	"	"	
m,p-Xylene	ND	1.0	"	"	"	"	"	"	
o-Xylene	ND	0.5	"	"	"	"	"	"	
Tertiary-butyl alcohol (TBA)	ND	5.0	"	"	"	"	"	"	
Surrogate: Dibromofluoromethane		*102 %*		*75-125*	"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		*88.7 %*		*62-139*	"	"	"	"	
Surrogate: Toluene-d8		*101 %*		*75-125*	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*95.1 %*		*75-125*	"	"	"	"	
MW-11 (E112105-10) Water Sampled: 21-Dec-11 Received: 23-Dec-11									
Methyl tertiary-butyl ether (MTBE)	**1.1**	1.0	ug/l	0.05	EA20503	03-Jan-12	03-Jan-12	EPA 8260B	
Diisopropyl ether (DIPE)	ND	1.0	"	"	"	"	"	"	
Ethyl tert-butyl ether (ETBE)	ND	1.0	"	"	"	"	"	"	
Tertiary-amyl methyl ether (TAME)	ND	1.0	"	"	"	"	"	"	
Benzene	**16**	0.5	"	"	"	"	"	"	
Toluene	**1.2**	0.5	"	"	"	"	"	"	
Ethylbenzene	**27**	0.5	"	"	"	"	"	"	
m,p-Xylene	**2.2**	1.0	"	"	"	"	"	"	
o-Xylene	**0.6**	0.5	"	"	"	"	"	"	
Tertiary-butyl alcohol (TBA)	ND	5.0	"	"	"	"	"	"	
Surrogate: Dibromofluoromethane		*99.4 %*		*75-125*	"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		*94.5 %*		*62-139*	"	"	"	"	
Surrogate: Toluene-d8		*114 %*		*75-125*	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*92.1 %*		*75-125*	"	"	"	"	

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8799 Balboa Avenue, Suite 290	Project Number: 01208473.00 / Wigington Oil	Reported:
San Diego, CA 92123	Project Manager: Mr. Chuck Houser	09-Jan-12 09:26

Volatile Organic Compounds by EPA Method 5030B/8260B

H&P Mobile Geochemistry, Inc.

Analyte	Result	Reporting Limit	Units	Dilution Factor	Batch	Prepared	Analyzed	Method	Notes
MW-12 (E112105-11) Water Sampled: 21-Dec-11 Received: 23-Dec-11									
Methyl tertiary-butyl ether (MTBE)	**4.9**	1.0	ug/l	0.05	EA20504	04-Jan-12	04-Jan-12	EPA 8260B	
Diisopropyl ether (DIPE)	ND	1.0	"	"	"	"	"	"	
Ethyl tert-butyl ether (ETBE)	ND	1.0	"	"	"	"	"	"	
Tertiary-amyl methyl ether (TAME)	ND	1.0	"	"	"	"	"	"	
Benzene	ND	0.5	"	"	"	"	"	"	
Toluene	ND	0.5	"	"	"	"	"	"	
Ethylbenzene	ND	0.5	"	"	"	"	"	"	
m,p-Xylene	ND	1.0	"	"	"	"	"	"	
o-Xylene	ND	0.5	"	"	"	"	"	"	
Tertiary-butyl alcohol (TBA)	ND	5.0	"	"	"	"	"	"	
Surrogate: Dibromofluoromethane		*97.1 %*		*75-125*	"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		*89.5 %*		*62-139*	"	"	"	"	
Surrogate: Toluene-d8		*108 %*		*75-125*	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*93.9 %*		*75-125*	"	"	"	"	
MW-13 (E112105-12) Water Sampled: 21-Dec-11 Received: 23-Dec-11									
Methyl tertiary-butyl ether (MTBE)	ND	1.0	ug/l	0.05	EA20504	04-Jan-12	04-Jan-12	EPA 8260B	
Diisopropyl ether (DIPE)	ND	1.0	"	"	"	"	"	"	
Ethyl tert-butyl ether (ETBE)	ND	1.0	"	"	"	"	"	"	
Tertiary-amyl methyl ether (TAME)	ND	1.0	"	"	"	"	"	"	
Benzene	ND	0.5	"	"	"	"	"	"	
Toluene	ND	0.5	"	"	"	"	"	"	
Ethylbenzene	ND	0.5	"	"	"	"	"	"	
m,p-Xylene	ND	1.0	"	"	"	"	"	"	
o-Xylene	ND	0.5	"	"	"	"	"	"	
Tertiary-butyl alcohol (TBA)	ND	5.0	"	"	"	"	"	"	
Surrogate: Dibromofluoromethane		*93.3 %*		*75-125*	"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		*93.4 %*		*62-139*	"	"	"	"	
Surrogate: Toluene-d8		*106 %*		*75-125*	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*101 %*		*75-125*	"	"	"	"	

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Volatile Organic Compounds by EPA Method 5030B/8260B

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Analyte	Result	Reporting Limit	Units	Dilution Factor	Batch	Prepared	Analyzed	Method	Notes
MW-14 (E112105-13) Water Sampled: 22-Dec-11 Received: 23-Dec-11									
Methyl tertiary-butyl ether (MTBE)	**340**	100	ug/l	10	EA20504	04-Jan-12	04-Jan-12	EPA 8260B	
Diisopropyl ether (DIPE)	ND	100	"	"	"	"	"	"	
Ethyl tert-butyl ether (ETBE)	ND	100	"	"	"	"	"	"	
Tertiary-amyl methyl ether (TAME)	ND	100	"	"	"	"	"	"	
Benzene	**2300**	50	"	"	"	"	"	"	
Toluene	ND	50	"	"	"	"	"	"	
Ethylbenzene	**1800**	50	"	"	"	"	"	"	
m,p-Xylene	**2600**	100	"	"	"	"	"	"	
o-Xylene	ND	50	"	"	"	"	"	"	
Tertiary-butyl alcohol (TBA)	ND	500	"	"	"	"	"	"	
Surrogate: Dibromofluoromethane		*95.2 %*		*75-125*		"	"	"	
Surrogate: 1,2-Dichloroethane-d4		*91.7 %*		*62-139*		"	"	"	
Surrogate: Toluene-d8		*109 %*		*75-125*		"	"	"	
Surrogate: 4-Bromofluorobenzene		*99.3 %*		*75-125*		"	"	"	
MW-15 (E112105-14) Water Sampled: 22-Dec-11 Received: 23-Dec-11									
Methyl tertiary-butyl ether (MTBE)	ND	100	ug/l	10	EA20504	04-Jan-12	04-Jan-12	EPA 8260B	
Diisopropyl ether (DIPE)	ND	100	"	"	"	"	"	"	
Ethyl tert-butyl ether (ETBE)	ND	100	"	"	"	"	"	"	
Tertiary-amyl methyl ether (TAME)	ND	100	"	"	"	"	"	"	
Benzene	**450**	50	"	"	"	"	"	"	
Toluene	ND	50	"	"	"	"	"	"	
Ethylbenzene	**580**	50	"	"	"	"	"	"	
m,p-Xylene	**810**	100	"	"	"	"	"	"	
o-Xylene	ND	50	"	"	"	"	"	"	
Tertiary-butyl alcohol (TBA)	ND	500	"	"	"	"	"	"	
Surrogate: Dibromofluoromethane		*93.9 %*		*75-125*		"	"	"	
Surrogate: 1,2-Dichloroethane-d4		*85.4 %*		*62-139*		"	"	"	
Surrogate: Toluene-d8		*104 %*		*75-125*		"	"	"	
Surrogate: 4-Bromofluorobenzene		*93.7 %*		*75-125*		"	"	"	

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SCS Engineers - San Diego	Project: SCS122311-13	
8799 Balboa Avenue, Suite 290	Project Number: 01208473.00 / Wigington Oil	Reported:
San Diego, CA 92123	Project Manager: Mr. Chuck Houser	09-Jan-12 09:26

Volatile Organic Compounds by EPA Method 5030B/8260B

H&P Mobile Geochemistry, Inc.

Analyte	Result	Reporting Limit	Units	Dilution Factor	Batch	Prepared	Analyzed	Method	Notes
MW-16 (E112105-15) Water Sampled: 21-Dec-11 Received: 23-Dec-11									
Methyl tertiary-butyl ether (MTBE)	**10**	1.0	ug/l	0.05	EA20504	04-Jan-12	04-Jan-12	EPA 8260B	
Diisopropyl ether (DIPE)	ND	1.0	"	"	"	"	"	"	
Ethyl tert-butyl ether (ETBE)	ND	1.0	"	"	"	"	"	"	
Tertiary-amyl methyl ether (TAME)	ND	1.0	"	"	"	"	"	"	
Benzene	**10**	0.5	"	"	"	"	"	"	
Toluene	ND	0.5	"	"	"	"	"	"	
Ethylbenzene	**53**	0.5	"	"	"	"	"	"	
m,p-Xylene	**2.8**	1.0	"	"	"	"	"	"	
o-Xylene	ND	0.5	"	"	"	"	"	"	
Tertiary-butyl alcohol (TBA)	ND	5.0	"	"	"	"	"	"	
Surrogate: Dibromofluoromethane		*86.1 %*		*75-125*	"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		*91.1 %*		*62-139*	"	"	"	"	
Surrogate: Toluene-d8		*106 %*		*75-125*	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*88.5 %*		*75-125*	"	"	"	"	
MW-17 (E112105-16) Water Sampled: 22-Dec-11 Received: 23-Dec-11									
Methyl tertiary-butyl ether (MTBE)	**1.0**	1.0	ug/l	0.05	EA20504	04-Jan-12	04-Jan-12	EPA 8260B	
Diisopropyl ether (DIPE)	ND	1.0	"	"	"	"	"	"	
Ethyl tert-butyl ether (ETBE)	ND	1.0	"	"	"	"	"	"	
Tertiary-amyl methyl ether (TAME)	ND	1.0	"	"	"	"	"	"	
Benzene	ND	0.5	"	"	"	"	"	"	
Toluene	ND	0.5	"	"	"	"	"	"	
Ethylbenzene	ND	0.5	"	"	"	"	"	"	
m,p-Xylene	ND	1.0	"	"	"	"	"	"	
o-Xylene	ND	0.5	"	"	"	"	"	"	
Tertiary-butyl alcohol (TBA)	ND	5.0	"	"	"	"	"	"	
Surrogate: Dibromofluoromethane		*88.0 %*		*75-125*	"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		*86.2 %*		*62-139*	"	"	"	"	
Surrogate: Toluene-d8		*105 %*		*75-125*	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*88.6 %*		*75-125*	"	"	"	"	

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Volatile Organic Compounds by EPA Method 5030B/8260B

H&P Mobile Geochemistry, Inc.

Analyte	Result	Reporting Limit	Units	Dilution Factor	Batch	Prepared	Analyzed	Method	Notes
MW-18 (E112105-17) Water Sampled: 21-Dec-11 Received: 23-Dec-11									
Methyl tertiary-butyl ether (MTBE)	ND	1.0	ug/l	0.05	EA20504	04-Jan-12	04-Jan-12	EPA 8260B	
Diisopropyl ether (DIPE)	ND	1.0	"	"	"	"	"	"	
Ethyl tert-butyl ether (ETBE)	ND	1.0	"	"	"	"	"	"	
Tertiary-amyl methyl ether (TAME)	ND	1.0	"	"	"	"	"	"	
Benzene	ND	0.5	"	"	"	"	"	"	
Toluene	ND	0.5	"	"	"	"	"	"	
Ethylbenzene	ND	0.5	"	"	"	"	"	"	
m,p-Xylene	ND	1.0	"	"	"	"	"	"	
o-Xylene	ND	0.5	"	"	"	"	"	"	
Tertiary-butyl alcohol (TBA)	ND	5.0	"	"	"	"	"	"	
Surrogate: Dibromofluoromethane		*103 %*		*75-125*		"	"	"	
Surrogate: 1,2-Dichloroethane-d4		*88.5 %*		*62-139*		"	"	"	
Surrogate: Toluene-d8		*112 %*		*75-125*		"	"	"	
Surrogate: 4-Bromofluorobenzene		*100 %*		*75-125*		"	"	"	
MW-19 (E112105-18) Water Sampled: 22-Dec-11 Received: 23-Dec-11									
Methyl tertiary-butyl ether (MTBE)	ND	100	ug/l	10	EA20504	04-Jan-12	04-Jan-12	EPA 8260B	
Diisopropyl ether (DIPE)	ND	100	"	"	"	"	"	"	
Ethyl tert-butyl ether (ETBE)	ND	100	"	"	"	"	"	"	
Tertiary-amyl methyl ether (TAME)	ND	100	"	"	"	"	"	"	
Benzene	**650**	50	"	"	"	"	"	"	
Toluene	**1500**	50	"	"	"	"	"	"	
Ethylbenzene	**3300**	50	"	"	"	"	"	"	
m,p-Xylene	**4800**	100	"	"	"	"	"	"	
o-Xylene	**1900**	50	"	"	"	"	"	"	
Tertiary-butyl alcohol (TBA)	ND	500	"	"	"	"	"	"	
Surrogate: Dibromofluoromethane		*89.7 %*		*75-125*		"	"	"	
Surrogate: 1,2-Dichloroethane-d4		*87.0 %*		*62-139*		"	"	"	
Surrogate: Toluene-d8		*104 %*		*75-125*		"	"	"	
Surrogate: 4-Bromofluorobenzene		*91.6 %*		*75-125*		"	"	"	

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San Diego, CA 92123	Project Manager: Mr. Chuck Houser	09-Jan-12 09:26

TPH Analysis by LUFT

H&P Mobile Geochemistry, Inc.

Analyte	Result	Reporting Limit	Units	Dilution Factor	Batch	Prepared	Analyzed	Method	Notes
MW-1 (E112105-01) Water Sampled: 21-Dec-11 Received: 23-Dec-11									
Gasoline (C5-C11)	ND	500	ug/l	1	EA20406	04-Jan-12	04-Jan-12	LUFT	
Diesel (C12-C24)	ND	500	"	"	"	"	"	"	
MW-2 (E112105-02) Water Sampled: 22-Dec-11 Received: 23-Dec-11									
Gasoline (C5-C11)	ND	500	ug/l	1	EA20406	04-Jan-12	04-Jan-12	LUFT	
Diesel (C12-C24)	**3600**	500	"	"	"	"	"	"	D-08
MW-3 (E112105-03) Water Sampled: 22-Dec-11 Received: 23-Dec-11									
Gasoline (C5-C11)	ND	500	ug/l	1	EA20406	04-Jan-12	04-Jan-12	LUFT	
Diesel (C12-C24)	ND	500	"	"	"	"	"	"	
MW-4 (E112105-04) Water Sampled: 22-Dec-11 Received: 23-Dec-11									
Gasoline (C5-C11)	ND	500	ug/l	1	EA20406	04-Jan-12	04-Jan-12	LUFT	
Diesel (C12-C24)	**820**	500	"	"	"	"	"	"	D-08
MW-6 (E112105-05) Water Sampled: 22-Dec-11 Received: 23-Dec-11									
Gasoline (C5-C11)	ND	500	ug/l	1	EA20406	04-Jan-12	04-Jan-12	LUFT	
Diesel (C12-C24)	ND	500	"	"	"	"	"	"	
MW-7 (E112105-06) Water Sampled: 22-Dec-11 Received: 23-Dec-11									
Gasoline (C5-C11)	ND	500	ug/l	1	EA20406	04-Jan-12	04-Jan-12	LUFT	
Diesel (C12-C24)	ND	500	"	"	"	"	"	"	
MW-8 (E112105-07) Water Sampled: 21-Dec-11 Received: 23-Dec-11									
Gasoline (C5-C11)	ND	500	ug/l	1	EA20406	04-Jan-12	04-Jan-12	LUFT	
Diesel (C12-C24)	ND	500	"	"	"	"	"	"	

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SCS Engineers - San Diego	Project: SCS122311-13	
8799 Balboa Avenue, Suite 290	Project Number: 01208473.00 / Wigington Oil	Reported:
San Diego, CA 92123	Project Manager: Mr. Chuck Houser	09-Jan-12 09:26

TPH Analysis by LUFT

H&P Mobile Geochemistry, Inc.

Analyte	Result	Reporting Limit	Units	Dilution Factor	Batch	Prepared	Analyzed	Method	Notes
MW-9 (E112105-08) Water Sampled: 21-Dec-11 Received: 23-Dec-11									
Gasoline (C5-C11)	**3800**	500	ug/l	1	EA20406	04-Jan-12	04-Jan-12	LUFT	
Diesel (C12-C24)	ND	500	"	"	"	"	"	"	
MW-10 (E112105-09) Water Sampled: 22-Dec-11 Received: 23-Dec-11									
Gasoline (C5-C11)	ND	500	ug/l	1	EA20406	04-Jan-12	04-Jan-12	LUFT	
Diesel (C12-C24)	ND	500	"	"	"	"	"	"	
MW-11 (E112105-10) Water Sampled: 21-Dec-11 Received: 23-Dec-11									
Gasoline (C5-C11)	**910**	500	ug/l	1	EA20406	04-Jan-12	04-Jan-12	LUFT	
Diesel (C12-C24)	**1400**	500	"	"	"	"	"	"	D-08
MW-12 (E112105-11) Water Sampled: 21-Dec-11 Received: 23-Dec-11									
Gasoline (C5-C11)	ND	500	ug/l	1	EA20406	04-Jan-12	04-Jan-12	LUFT	
Diesel (C12-C24)	ND	500	"	"	"	"	"	"	
MW-13 (E112105-12) Water Sampled: 21-Dec-11 Received: 23-Dec-11									
Gasoline (C5-C11)	ND	500	ug/l	1	EA20406	04-Jan-12	04-Jan-12	LUFT	
Diesel (C12-C24)	ND	500	"	"	"	"	"	"	
MW-14 (E112105-13) Water Sampled: 22-Dec-11 Received: 23-Dec-11									
Gasoline (C5-C11)	**17000**	500	ug/l	1	EA20406	04-Jan-12	04-Jan-12	LUFT	
Diesel (C12-C24)	**6000**	500	"	"	"	"	"	"	D-08
MW-15 (E112105-14) Water Sampled: 22-Dec-11 Received: 23-Dec-11									
Gasoline (C5-C11)	**1200**	500	ug/l	1	EA20406	04-Jan-12	04-Jan-12	LUFT	
Diesel (C12-C24)	**720**	500	"	"	"	"	"	"	D-08

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San Diego, CA 92123	Project Manager: Mr. Chuck Houser	09-Jan-12 09:26

TPH Analysis by LUFT

H&P Mobile Geochemistry, Inc.

Analyte	Result	Reporting Limit	Units	Dilution Factor	Batch	Prepared	Analyzed	Method	Notes
MW-16 (E112105-15) Water Sampled: 21-Dec-11 Received: 23-Dec-11									
Gasoline (C5-C11)	ND	500	ug/l	1	EA20406	04-Jan-12	04-Jan-12	LUFT	
Diesel (C12-C24)	**770**	500	"	"	"	"	"	"	D-08
MW-17 (E112105-16) Water Sampled: 22-Dec-11 Received: 23-Dec-11									
Gasoline (C5-C11)	ND	500	ug/l	1	EA20406	04-Jan-12	04-Jan-12	LUFT	
Diesel (C12-C24)	ND	500	"	"	"	"	"	"	
MW-18 (E112105-17) Water Sampled: 21-Dec-11 Received: 23-Dec-11									
Gasoline (C5-C11)	ND	500	ug/l	1	EA20406	04-Jan-12	04-Jan-12	LUFT	
Diesel (C12-C24)	ND	500	"	"	"	"	"	"	
MW-19 (E112105-18) Water Sampled: 22-Dec-11 Received: 23-Dec-11									
Gasoline (C5-C11)	**35000**	500	ug/l	1	EA20406	04-Jan-12	04-Jan-12	LUFT	
Diesel (C12-C24)	**15000**	500	"	"	"	"	"	"	D-08

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San Diego, CA 92123	Project Manager: Mr. Chuck Houser	09-Jan-12 09:26

Volatile Organic Compounds by EPA Method 5030B/8260B - Quality Control

H&P Mobile Geochemistry, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch EA20503 - EPA 5030										
Blank (EA20503-BLK1)				Prepared & Analyzed: 03-Jan-12						
Methyl tertiary-butyl ether (MTBE)	ND	1.0	ug/l							
Diisopropyl ether (DIPE)	ND	1.0	"							
Ethyl tert-butyl ether (ETBE)	ND	1.0	"							
Tertiary-amyl methyl ether (TAME)	ND	1.0	"							
Benzene	ND	0.5	"							
Toluene	ND	0.5	"							
Ethylbenzene	ND	0.5	"							
m,p-Xylene	ND	1.0	"							
o-Xylene	ND	0.5	"							
Tertiary-butyl alcohol (TBA)	ND	5.0	"							
Surrogate: Dibromofluoromethane	*2.29*		"	*2.50*		*91.8*	*75-125*			
Surrogate: 1,2-Dichloroethane-d4	*2.45*		"	*2.50*		*97.9*	*62-139*			
Surrogate: Toluene-d8	*2.58*		"	*2.50*		*103*	*75-125*			
Surrogate: 4-Bromofluorobenzene	*2.31*		"	*2.50*		*92.2*	*75-125*			
LCS (EA20503-BS1)				Prepared & Analyzed: 03-Jan-12						
Methyl tertiary-butyl ether (MTBE)	2.22	1.0	ug/l	2.50		88.7	75-125			
Diisopropyl ether (DIPE)	2.48	1.0	"	2.50		99.3	75-125			
Ethyl tert-butyl ether (ETBE)	2.34	1.0	"	2.50		93.4	75-125			
Tertiary-amyl methyl ether (TAME)	2.00	1.0	"	2.50		80.0	75-125			
Benzene	2.36	0.5	"	2.50		94.4	75-125			
Toluene	2.45	0.5	"	2.50		97.9	75-125			
Ethylbenzene	2.02	0.5	"	2.50		80.7	75-125			
m,p-Xylene	4.68	1.0	"	5.00		93.6	75-125			
o-Xylene	2.32	0.5	"	2.50		92.7	75-125			
Tertiary-butyl alcohol (TBA)	8.43	5.0	"	12.5		67.5	75-125			QL-1L
Surrogate: Dibromofluoromethane	*2.57*		"	*2.50*		*103*	*75-125*			
Surrogate: 1,2-Dichloroethane-d4	*2.54*		"	*2.50*		*102*	*62-139*			
Surrogate: Toluene-d8	*2.71*		"	*2.50*		*109*	*75-125*			
Surrogate: 4-Bromofluorobenzene	*2.11*		"	*2.50*		*84.5*	*75-125*			

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Volatile Organic Compounds by EPA Method 5030B/8260B - Quality Control

H&P Mobile Geochemistry, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch EA20503 - EPA 5030										
LCS Dup (EA20503-BSD1)				Prepared & Analyzed: 03-Jan-12						
Methyl tertiary-butyl ether (MTBE)	2.44	1.0	ug/l	2.50		97.7	75-125	9.59	20	
Diisopropyl ether (DIPE)	2.44	1.0	"	2.50		97.6	75-125	1.69	20	
Ethyl tert-butyl ether (ETBE)	2.35	1.0	"	2.50		93.8	75-125	0.449	20	
Tertiary-amyl methyl ether (TAME)	2.17	1.0	"	2.50		86.9	75-125	8.22	20	
Benzene	2.23	0.5	"	2.50		89.3	75-125	5.59	20	
Toluene	2.43	0.5	"	2.50		97.3	75-125	0.615	20	
Ethylbenzene	2.29	0.5	"	2.50		91.8	75-125	12.9	20	
m,p-Xylene	5.02	1.0	"	5.00		100	75-125	7.10	20	
o-Xylene	2.47	0.5	"	2.50		98.8	75-125	6.29	20	
Tertiary-butyl alcohol (TBA)	9.08	5.0	"	12.5		72.7	75-125	7.42	20	QL-1L
Surrogate: Dibromofluoromethane	*2.21*		"	*2.50*		*88.4*	*75-125*			
Surrogate: 1,2-Dichloroethane-d4	*2.24*		"	*2.50*		*89.6*	*62-139*			
Surrogate: Toluene-d8	*2.55*		"	*2.50*		*102*	*75-125*			
Surrogate: 4-Bromofluorobenzene	*2.41*		"	*2.50*		*96.6*	*75-125*			
Batch EA20504 - EPA 5030										
Blank (EA20504-BLK1)				Prepared & Analyzed: 04-Jan-12						
Methyl tertiary-butyl ether (MTBE)	ND	1.0	ug/l							
Diisopropyl ether (DIPE)	ND	1.0	"							
Ethyl tert-butyl ether (ETBE)	ND	1.0	"							
Tertiary-amyl methyl ether (TAME)	ND	1.0	"							
Benzene	ND	0.5	"							
Toluene	ND	0.5	"							
Ethylbenzene	ND	0.5	"							
m,p-Xylene	ND	1.0	"							
o-Xylene	ND	0.5	"							
Tertiary-butyl alcohol (TBA)	ND	5.0	"							
Surrogate: Dibromofluoromethane	*2.39*		"	*2.50*		*95.6*	*75-125*			
Surrogate: 1,2-Dichloroethane-d4	*2.21*		"	*2.50*		*88.4*	*62-139*			
Surrogate: Toluene-d8	*2.62*		"	*2.50*		*105*	*75-125*			
Surrogate: 4-Bromofluorobenzene	*2.45*		"	*2.50*		*98.0*	*75-125*			

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Volatile Organic Compounds by EPA Method 5030B/8260B - Quality Control

H&P Mobile Geochemistry, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch EA20504 - EPA 5030										
LCS (EA20504-BS1)				Prepared & Analyzed: 04-Jan-12						
Methyl tertiary-butyl ether (MTBE)	5.29	1.0	ug/l	5.00		106	75-125			
Diisopropyl ether (DIPE)	5.16	1.0	"	5.00		103	75-125			
Ethyl tert-butyl ether (ETBE)	5.28	1.0	"	5.00		106	75-125			
Tertiary-amyl methyl ether (TAME)	4.74	1.0	"	5.00		94.8	75-125			
Benzene	5.08	0.5	"	5.00		102	75-125			
Toluene	5.53	0.5	"	5.00		111	75-125			
Ethylbenzene	5.51	0.5	"	5.00		110	75-125			
m,p-Xylene	10.6	1.0	"	10.0		106	75-125			
o-Xylene	5.51	0.5	"	5.00		110	75-125			
Tertiary-butyl alcohol (TBA)	22.3	5.0	"	25.0		89.3	75-125			
Surrogate: Dibromofluoromethane	*2.47*		"	*2.50*		*98.7*	*75-125*			
Surrogate: 1,2-Dichloroethane-d4	*2.21*		"	*2.50*		*88.2*	*62-139*			
Surrogate: Toluene-d8	*2.74*		"	*2.50*		*110*	*75-125*			
Surrogate: 4-Bromofluorobenzene	*2.53*		"	*2.50*		*101*	*75-125*			
LCS Dup (EA20504-BSD1)				Prepared & Analyzed: 04-Jan-12						
Methyl tertiary-butyl ether (MTBE)	4.73	1.0	ug/l	5.00		94.6	75-125	11.2	20	
Diisopropyl ether (DIPE)	4.86	1.0	"	5.00		97.2	75-125	5.98	20	
Ethyl tert-butyl ether (ETBE)	4.53	1.0	"	5.00		90.5	75-125	15.4	20	
Tertiary-amyl methyl ether (TAME)	4.37	1.0	"	5.00		87.5	75-125	8.10	20	
Benzene	4.70	0.5	"	5.00		94.0	75-125	7.75	20	
Toluene	5.12	0.5	"	5.00		102	75-125	7.73	20	
Ethylbenzene	5.98	0.5	"	5.00		120	75-125	8.17	20	
m,p-Xylene	10.9	1.0	"	10.0		109	75-125	3.32	20	
o-Xylene	5.36	0.5	"	5.00		107	75-125	2.61	20	
Tertiary-butyl alcohol (TBA)	17.8	5.0	"	25.0		71.3	75-125	22.5	20	QL-1L
Surrogate: Dibromofluoromethane	*2.40*		"	*2.50*		*95.9*	*75-125*			
Surrogate: 1,2-Dichloroethane-d4	*2.10*		"	*2.50*		*84.0*	*62-139*			
Surrogate: Toluene-d8	*2.63*		"	*2.50*		*105*	*75-125*			
Surrogate: 4-Bromofluorobenzene	*2.39*		"	*2.50*		*95.7*	*75-125*			

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Volatile Organic Compounds by EPA Method 5030B/8260B - Quality Control

H&P Mobile Geochemistry, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch EA20504 - EPA 5030										
Matrix Spike (EA20504-MS1)	**Source: E112105-06**			Prepared & Analyzed: 04-Jan-12						
Methyl tertiary-butyl ether (MTBE)	5.25	1.0	ug/l	5.00	ND	105	75-125			
Diisopropyl ether (DIPE)	5.33	1.0	"	5.00	0.23	102	75-125			
Ethyl tert-butyl ether (ETBE)	5.09	1.0	"	5.00	ND	102	75-125			
Tertiary-amyl methyl ether (TAME)	4.71	1.0	"	5.00	ND	94.3	75-125			
Benzene	5.15	0.5	"	5.00	ND	103	75-125			
Toluene	5.55	0.5	"	5.00	ND	111	75-125			
Ethylbenzene	6.02	0.5	"	5.00	ND	120	75-125			
m,p-Xylene	11.1	1.0	"	10.0	ND	111	75-125			
o-Xylene	5.39	0.5	"	5.00	ND	108	75-125			
Tertiary-butyl alcohol (TBA)	23.1	5.0	"	25.0	ND	92.6	75-125			
Surrogate: Dibromofluoromethane	*2.58*		"	*2.50*		*103*	*75-125*			
Surrogate: 1,2-Dichloroethane-d4	*2.15*		"	*2.50*		*85.8*	*62-139*			
Surrogate: Toluene-d8	*2.64*		"	*2.50*		*105*	*75-125*			
Surrogate: 4-Bromofluorobenzene	*2.48*		"	*2.50*		*99.2*	*75-125*			
Matrix Spike Dup (EA20504-MSD1)	**Source: E112105-06**			Prepared & Analyzed: 04-Jan-12						
Methyl tertiary-butyl ether (MTBE)	5.00	1.0	ug/l	5.00	ND	100	75-125	4.93	20	
Diisopropyl ether (DIPE)	5.53	1.0	"	5.00	0.23	106	75-125	3.70	20	
Ethyl tert-butyl ether (ETBE)	4.93	1.0	"	5.00	ND	98.7	75-125	3.14	20	
Tertiary-amyl methyl ether (TAME)	4.72	1.0	"	5.00	ND	94.4	75-125	0.138	20	
Benzene	5.22	0.5	"	5.00	ND	104	75-125	1.37	20	
Toluene	5.57	0.5	"	5.00	ND	111	75-125	0.324	20	
Ethylbenzene	5.67	0.5	"	5.00	ND	113	75-125	6.00	20	
m,p-Xylene	10.9	1.0	"	10.0	ND	109	75-125	2.43	20	
o-Xylene	5.33	0.5	"	5.00	ND	107	75-125	1.13	20	
Tertiary-butyl alcohol (TBA)	23.9	5.0	"	25.0	ND	95.6	75-125	3.22	20	
Surrogate: Dibromofluoromethane	*2.42*		"	*2.50*		*96.7*	*75-125*			
Surrogate: 1,2-Dichloroethane-d4	*2.02*		"	*2.50*		*80.8*	*62-139*			
Surrogate: Toluene-d8	*2.62*		"	*2.50*		*105*	*75-125*			
Surrogate: 4-Bromofluorobenzene	*2.19*		"	*2.50*		*87.7*	*75-125*			

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San Diego, CA 92123	Project Manager: Mr. Chuck Houser	09-Jan-12 09:26

TPH Analysis by LUFT - Quality Control

H&P Mobile Geochemistry, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch EA20406 - LUFT-DHS										
Blank (EA20406-BLK1)				Prepared & Analyzed: 04-Jan-12						
Gasoline (C5-C11)	ND	500	ug/l							
Diesel (C12-C24)	ND	500	"							
Matrix Spike (EA20406-MS1)		Source: E112105-09		Prepared & Analyzed: 04-Jan-12						
Gasoline (C5-C11)	1340	500	ug/l	1500	ND	89.6	75-125			
Diesel (C12-C24)	2830	500	"	3750	ND	75.5	75-125			
Matrix Spike Dup (EA20406-MSD1)		Source: E112105-09		Prepared & Analyzed: 04-Jan-12						
Gasoline (C5-C11)	1340	500	ug/l	1500	ND	89.6	75-125	0.00	30	
Diesel (C12-C24)	3070	500	"	3750	ND	81.9	75-125	8.13	30	

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Notes and Definitions

QL-1L	The LCS and/or LCSD recoveries fell below the established control specifications for this analyte. Any result for this compound is qualified and should be considered biased low.
D-08	Results in the diesel organics range are primarily due to overlap from a gasoline range product.
DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not Reported
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference

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Appendix

H&P Mobile Geochemistry, Inc. is approved as an Environmental Laboratory in conformance with the Environmental Laboratory Accreditation Program (CA) for the category of Volatile and Semi-Volatile Organic Chemistry of Hazardous Waste for the following methods:

Certificate# 2741, 2743, 2579, 2754 & 2740 approved for EPA 8260 and LUFT GC/MS
Certificate# 2742, 2745, & 2741 approved for LUFT
Certificate# 2745 & 2742 approved for EPA 418.1

H&P Mobile Geochemistry, Inc. is approved as an Environmental Laboratory in conformance with the National Environmental Accreditation Conference Standards for the category Environmental Analysis Air and Emissions for the following analytes and methods:

1,2,4-Trichlorobenzene by EPA TO-15 & TO-14A
Hexachlorobutadiene by EPA TO-15 & TO-14A
1,2,4-Trimethylbenzene by EPA TO -14A
1,2-Dichlorobenzene by EPA TO-15 & TO-14A
1,3,5-Trimethylbenzene by EPA TO -14A
1,4-Dichlorobenzene by EPA TO-15 & TO-14A
Benzene by EPA TO-15 & TO-14A
Chlorobenzene by EPA TO-15 & TO-14A
Ethyl benzene by EPA TO-15 & TO-14A
Styrene by EPA TO-15 & TO-14A
Toluene by EPA TO-15 & TO-14A
Total Xylenes by EPA TO-15 & TO-14A
1,1,1-Trichloroethane by EPA TO-15 & TO-14A
1,1,2,2-Tetrachloroethane by EPA TO-15 & TO-14A
1,1,2-Trichloroethane by EPA TO-15 & TO-14A
1,1-Dichloroethane by EPA TO-15 & TO-14A
1,1-Dichloroethene by EPA TO-15 & TO-14A
1,2-Dichloroethane by EPA TO-15 & TO-14A
1,2-Dichloropropane by EPA TO-15 & TO-14A
Bromoform by EPA TO-15
Bromomethane by EPA TO-15 & TO-14A
Carbon tetrachloride by EPA TO-15 & TO-14A
Chloroethane by EPA TO-15
Chloroform by EPA TO-15 & TO-14A
Chloromethane by EPA TO-15 & TO-14A
cis-1,2-Dichloroethene by EPA TO-15
cis-1,2-Dichloropropene by EPA TO-15 & TO-14A
Methylene chloride by EPA TO -15 & TO-14A
Tetrachloroethane by EPA TO-15 & TO-14A
trans-1,2-Dichloroethene by EPA TO-15
trans-1,2-Dichloropropene by EPA TO-15 & TO-14A
Trichloroethene by EPA TO-15 & TO-14A
Vinyl chloride by EPA TO -15 & TO-14A
2-Butanone by EPA TO-15
4-Methyl-2-Pentanone by EPA TO-15
Hexane by EPA TO-15
Methyl tert-butyl ether by EPA TO-15
Vinyl acetate by EPA TO-15

This certification applies to samples analyzed in summa canisters.

Chain of Custody Record

H&P Mobile Geochemistry Inc.

☒ 2470 Impala Dr., Carlsbad, CA 92010 • ph 760.804.9678 • fax 760 804 9159
☐ 1855 Coronado Ave., Signal Hill, CA 90755 • ph 800 834 9888

Date: _____
H&P Project # SCS122311-13
Outside Lab _____

Client: SCS Engineers
Address: 8799 Balboa Ave., Suite 290
San Diego, CA 92123
Email: ccrosby@scsengineers.com

Collector: C. Crosby / A Barrow
Client Project # 01208473.00
Location: Wigington Oil: 11427 Woodside Ave. Santee, CA
Phone: 858-571-5500 Fax: 858-571-5357

Page: 1 of 2
Project Contact: Chuck Houser
Turn around time: Normal (JAN4)

Geotracker EDF: Yes ☒ No ☐
Global ID: T0607303173
Excel EDD: Yes ☒ No ☐

Sample Receipt
Intact: ☑ Yes ☐ No
Seal Intact: ☐ Yes ☐ No ☑ N/A
Cold: ☑ Yes ☐ No ☐ N/A
Temperature: 10°C

Special Instructions
- cc results to chouser@scsengineers.com
- Please send invoice ASAP to ccrosby@scsengineers.com

Lab Work Order # E112105

Sample Name	Field Point Name	Purge Vol	Time	Date	Sample Type	Container Type	Total # of containers	8260B Full List	8260B ☒ BTEX/OXY ☐ TPH gas	8015M TPH ☒ g ☐ d ☐ ext	418.1 TRPH	VOC's: Full List ☐ 8260B ☐ TO-15	VOC's: Short List/DTSC ☐ 8260B ☐ TO-15	VOC's: SAM, 8260B ☐ SAM A ☐ SAM B	Naphthalene ☐ 8260B ☐ TO-15	Oxygenates ☐ 8260B ☐ TO-15	TPHv gas ☐ 8260B ☐ TO-15	Ketones ☐ 8260B ☐ TO-15	Other ____ ☐ 8260B ☐ TO-15	Leak Check Compound ☐ 1,1 DFA ☐ OTHER	Methane	Fixed Gases ☐ N_2 ☐ O_2 ☐ CO_2
								SOIL/GW				SOIL VAPOR/AIR ANALYSIS										
MW-1			1515	12/21/11	GW	VOA	6		X	X												
MW-2			1140	12/22/11					X	X												
MW-3			1400	12/22/11					X	X												
MW-4			1315	12/22/11					X	X												
MW-6			1420	12/22/11					X	X												
MW-7			1105	12/22/11					X	X												
MW-8			1040	12/21/11					X	X												
MW-9			1345	12/21/11					X	X												
MW-10			1155	12/22/11					X	X												
MW-11			1150	12/21/11	↓	↓	↓		X	X												

Relinquished by (Signature)	(company)	Received by (Signature)	(company)	Date	Time
[signature]	SCS	[signature]	H&P	12/23/11	1130
Relinquished by (Signature)	(company)	Received by (Signature)	(company)	Date	Time
Relinquished by (Signature)	(company)	Received by (Signature)	(company)	Date	Time

*Signature constitutes authorization to proceed with analysis and acceptance of condition on back.

Sample disposal instruction: ☒ Disposal ☐ Return to client ☐ Pickup

Chain of Custody Record

H&P Mobile Geochemistry Inc.

☒ 2470 Impala Dr Carlsbad, CA 92010 · ph 760 804 9678 · fax 760 804 9159
☐ 1855 Coronado Ave., Signal Hill, CA 90755 · ph 800.834.9888

Date
H&P Project # SCS122311-13
Outside Lab

Send to: SCS Engineers
Address: 8799 Balboa Ave, Suite 290
San Diego, CA 92123
Email: ccrosby@scsengineers.com

Collector: C. Crosby / A. Barrow
Client Project #: 01208473.00
Location: Wigington Oil: 11427 Woodside Ave., Santee, CA
Phone: 858-571-5500 Fax: 858-571-5357

Page 2 of 2
Project Contact: Chuck Houser
Turn around time: Normal (JAN 4)

Geotracker EDF: Yes ☒ No ☐
Global ID: T0607303173
Excel EDD: Yes ☒ No ☐

Sample Receipt
Intact ☒ Yes ☐ No
Seal Intact ☐ Yes ☐ No ☒ N/A
Cold ☒ Yes ☐ No ☐ N/A
Temperature 10

Special Instructions
See page 1

Lab Work Order # E112105

Sample Name	Field Point Name	Purge Vol	Time	Date	Sample Type	Container Type	Total # of containers	8260B Full List	8260B ☒ BTEX/OXY ☐ TPH gas	8015M TPH ☒ g ☒ d ☐ ext	418.1 TRPH	VOC's Full List ☐ 8260B ☐ TO-15	VOC's: Short List/DTSC ☐ 8260B ☐ TO-15	VOC's: SAM, 8260B ☐ SAM A ☐ SAM B	Naphthalene ☐ 8260B ☐ TO-15	Oxygenates ☐ 8260B ☐ TO-15	TPHv gas ☐ 8260B ☐ TO-15	Ketones ☐ 8260B ☐ TO-15	Other ____ ☐ 8260B ☐ TO-15	Leak Check Compound ☐ 1,1 DFA ☐ OTHER	Methane	Fixed Gases ☐ CO_2 ☐ O_2 ☐ N_2
								SOIL/GW				SOIL VAPOR/AIR ANALYSIS										
MW-12			1240	12/21/11	GW	VOA	6		☒	☒ ☒												
MW-13			1245	↓																		
MW-14			1240	12/22/11																		
MW-15			1015	↓																		
MW-16			1520	12/21/11																		
MW-17			0905	12/22/11																		
MW-18			1410	12/21/11																		
MW-19			1125	12/22/11	↓	↓	↓															

	Signature	Company	Date	Time
Relinquished by		SCS		
Received by		H&P	1/5/12	1176
Relinquished by				
Received by				
Relinquished by				
Received by				

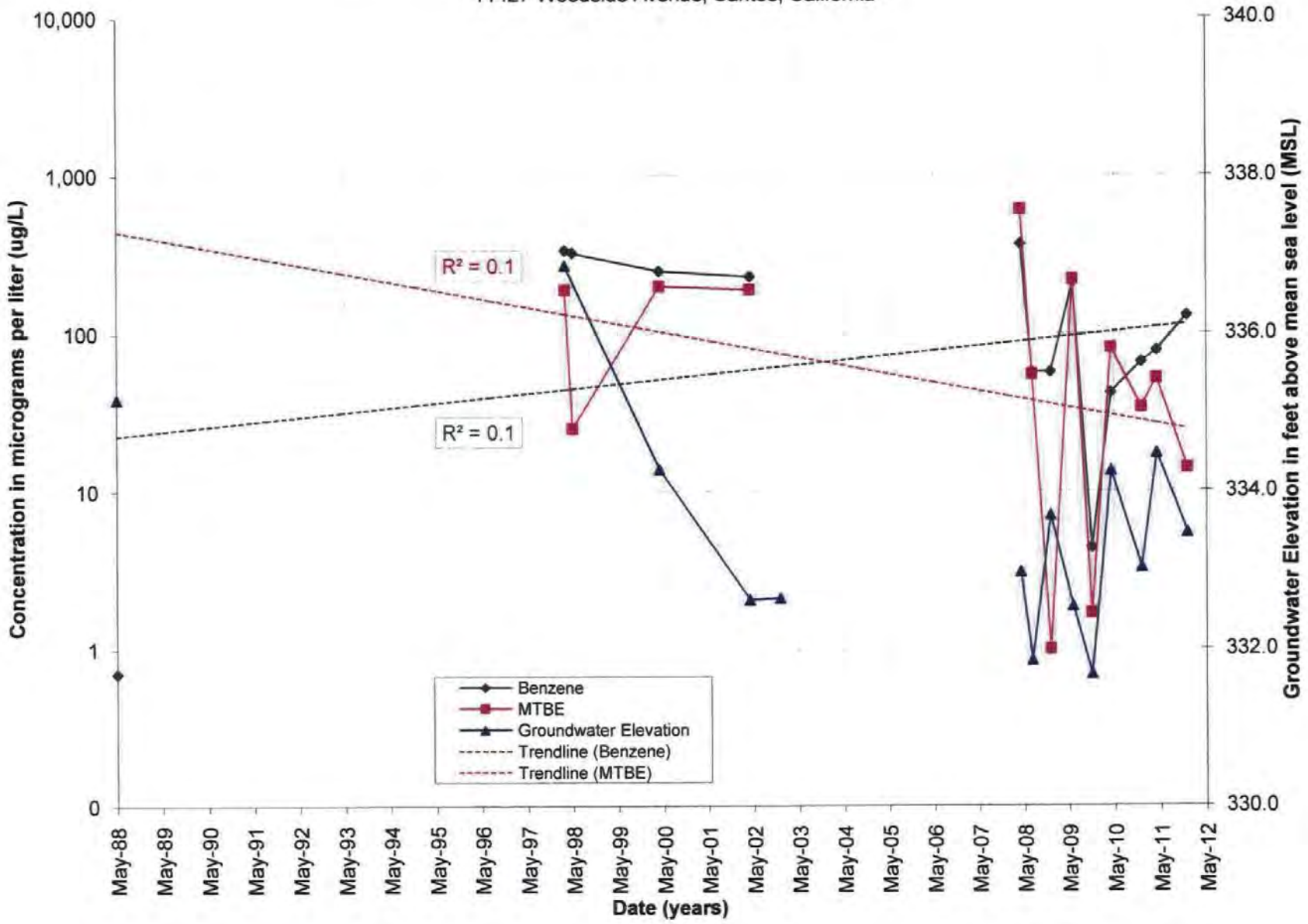
*Signature constitutes authorization to proceed with analysis and acceptance of conditions on back

Sample disposal instruction: ☒ Disposal ☐ Return to client ☐ Pickup

APPENDIX C

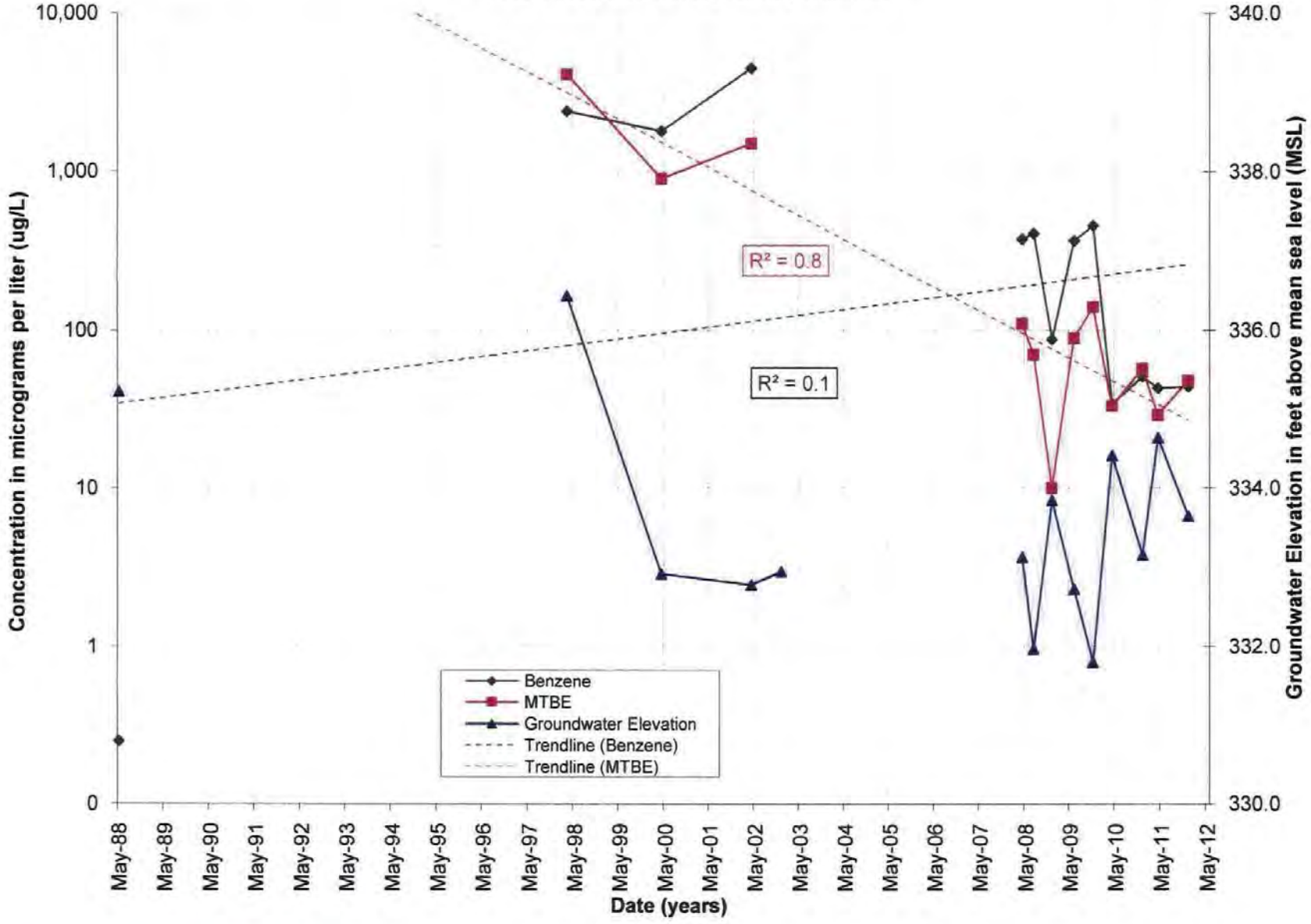
HYDROGRAPHS

MW-1
Benzene and MTBE Concentrations and Groundwater Elevation versus Time
Wigington Petroleum
11427 Woodside Avenue, Santee, California



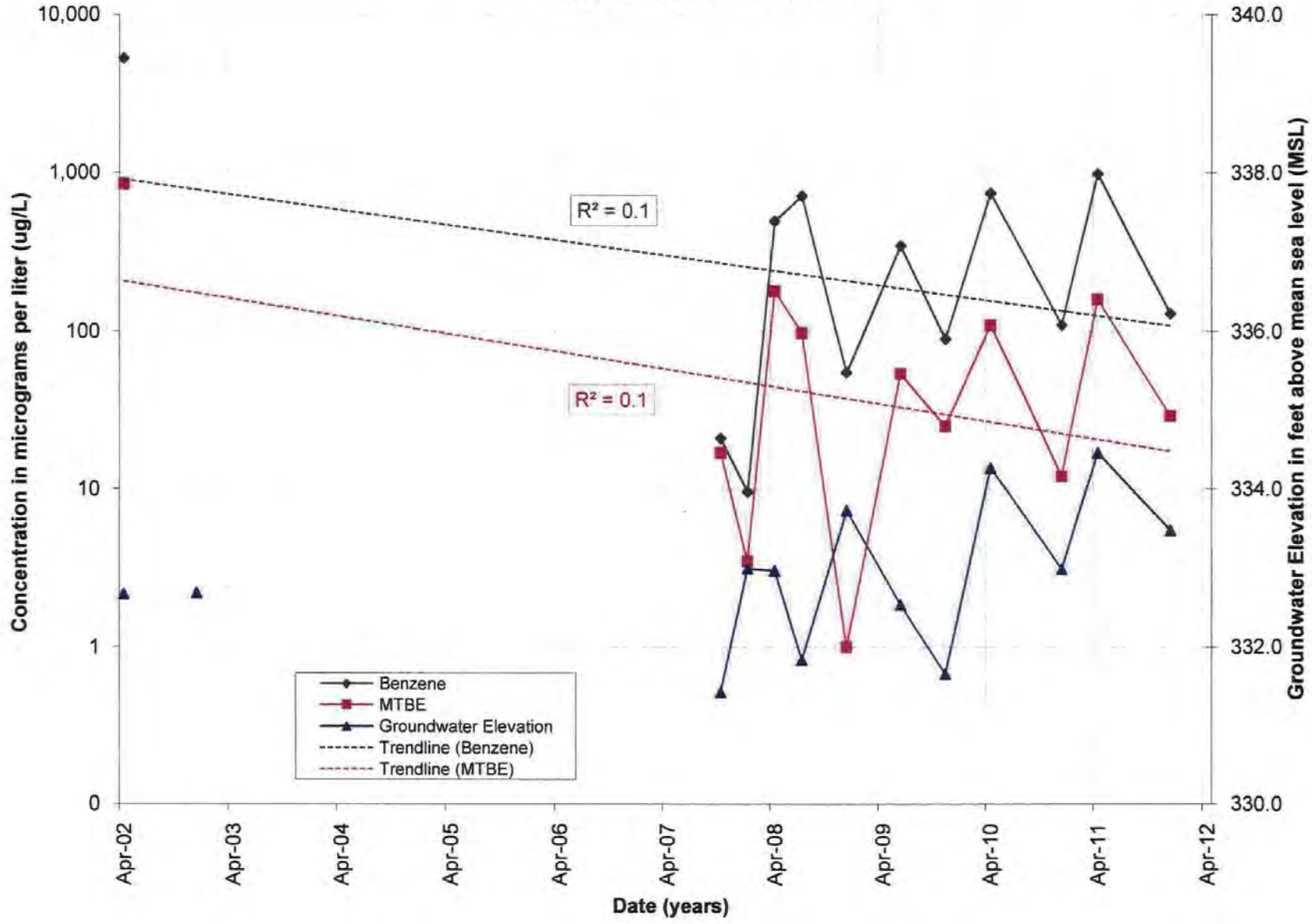
SCS ENGINEERS

MW-4
Benzene and MTBE Concentrations and Groundwater Elevation versus Time
Wigington Petroleum
11427 Woodside Avenue, Santee, California



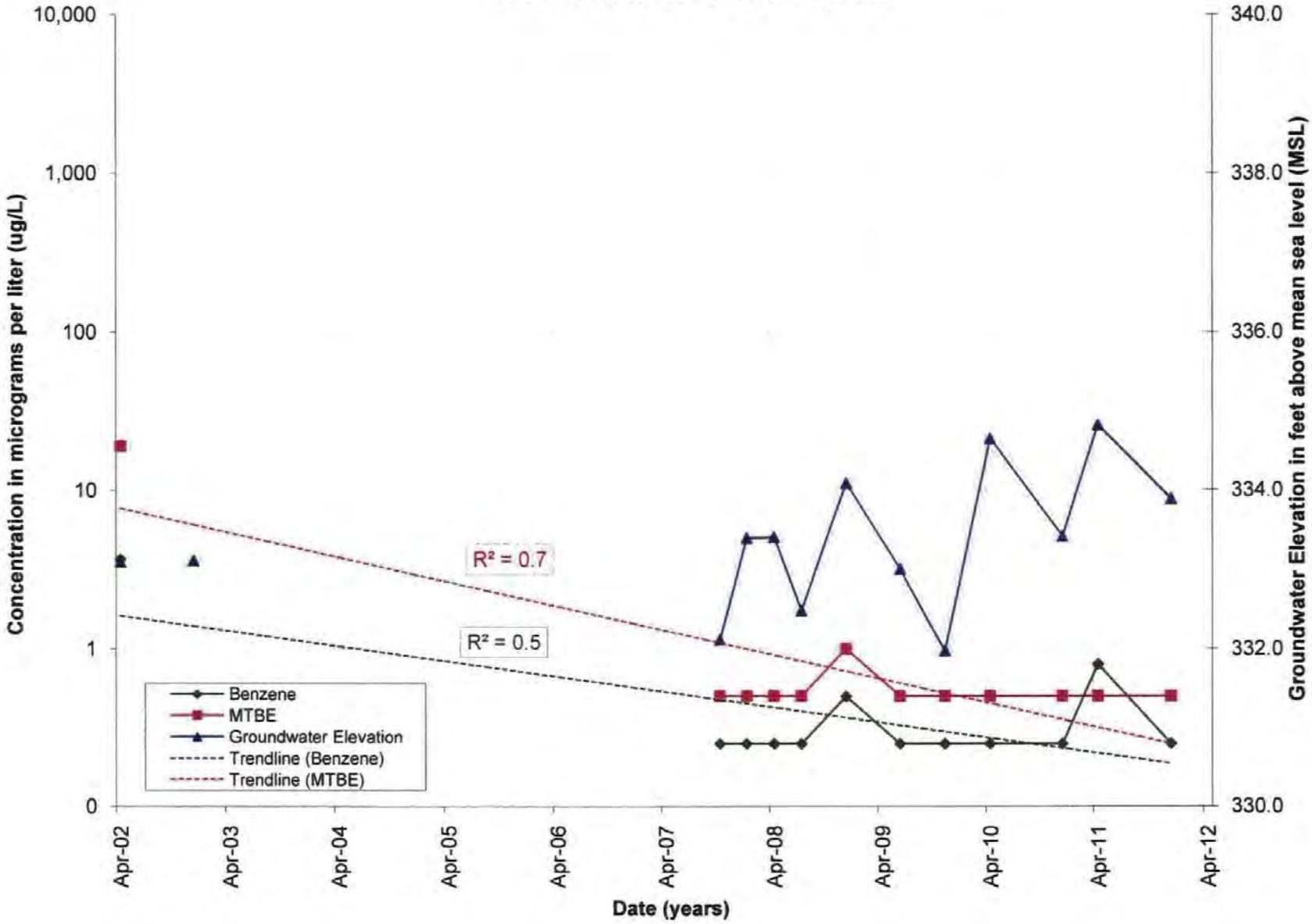
SCS ENGINEERS

MW-6
Benzene and MTBE Concentrations and Groundwater Elevation versus Time
Wigington Petroleum
11427 Woodside Avenue, Santee, California



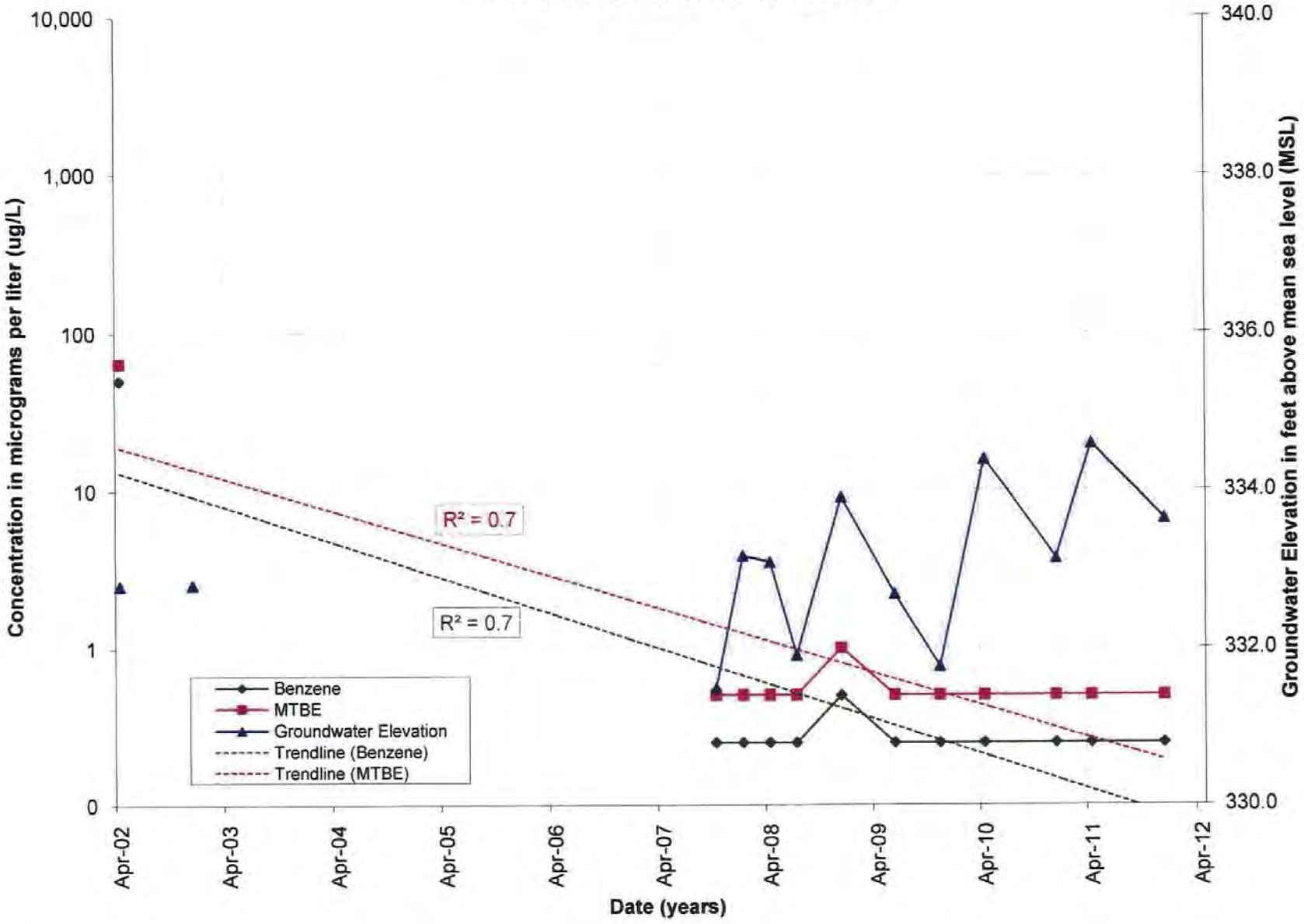
SCS ENGINEERS

MW-7
Benzene and MTBE Concentrations and Groundwater Elevation versus Time
Wigington Petroleum
11427 Woodside Avenue, Santee, California



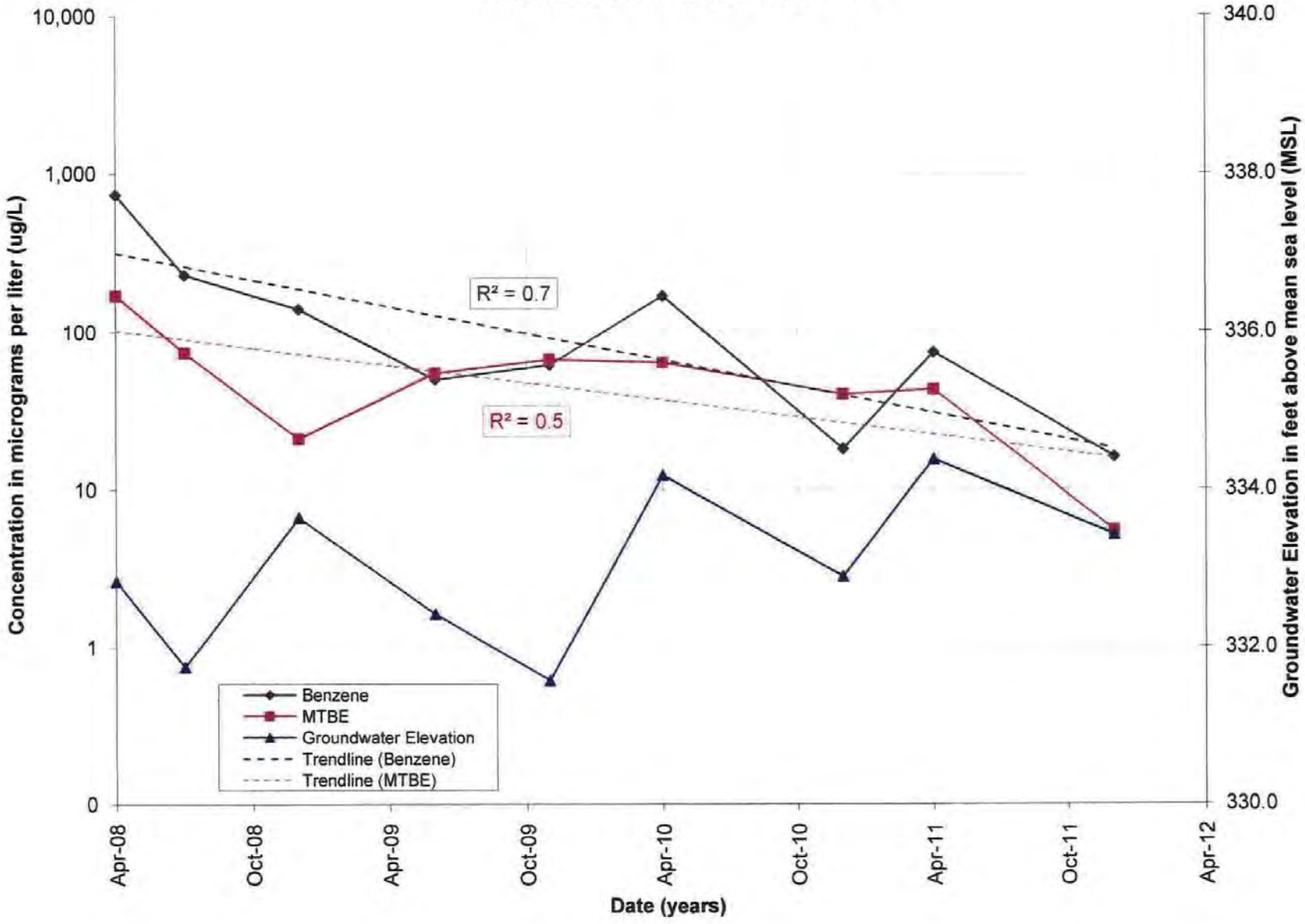
SCS ENGINEERS

MW-8
Benzene and MTBE Concentrations and Groundwater Elevation versus Time
Wigington Petroleum
11427 Woodside Avenue, Santee, California



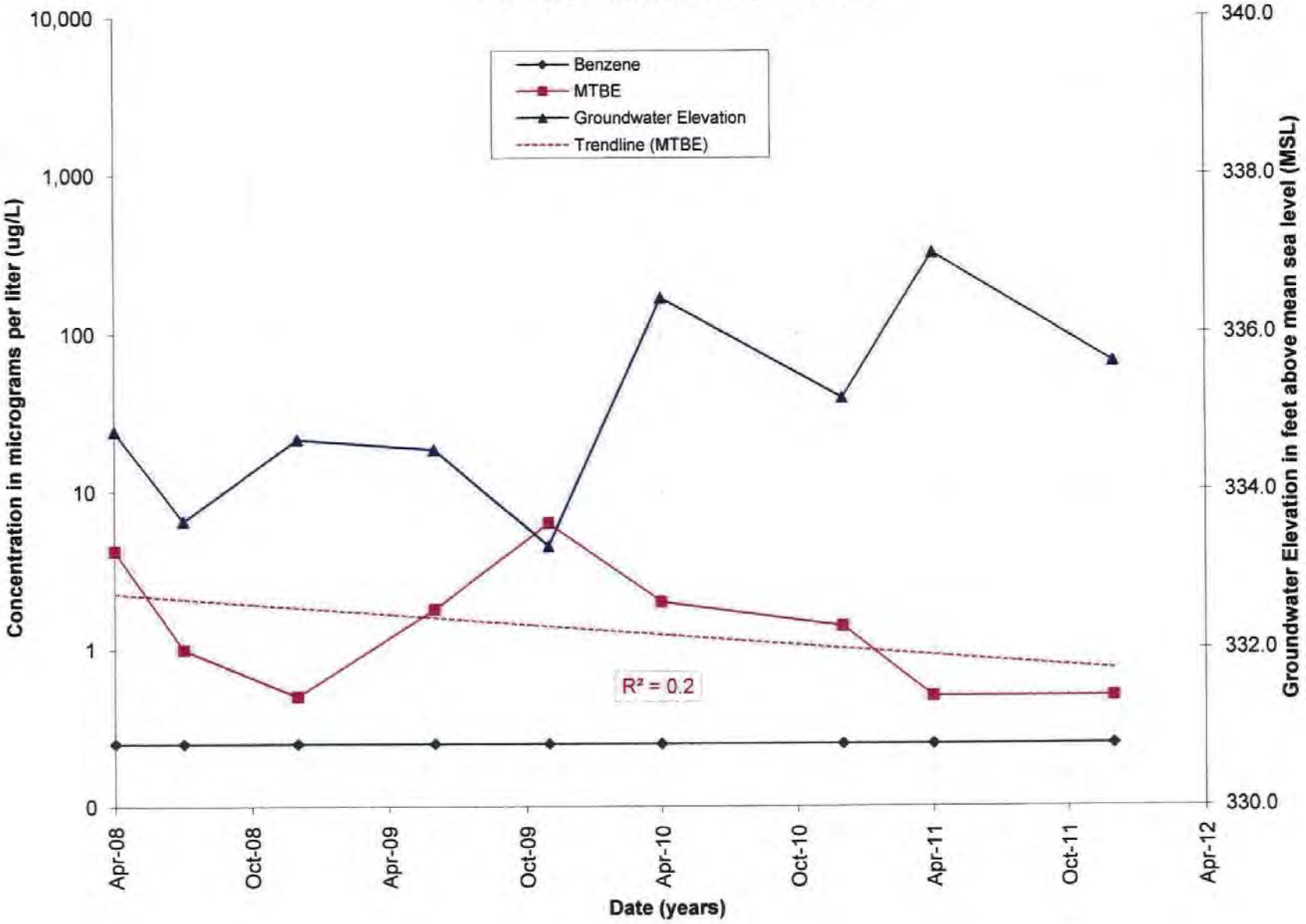
SCS ENGINEERS

MW-9
Benzene and MTBE Concentrations and Groundwater Elevation versus Time
Wigington Petroleum
11427 Woodside Avenue, Santee, California



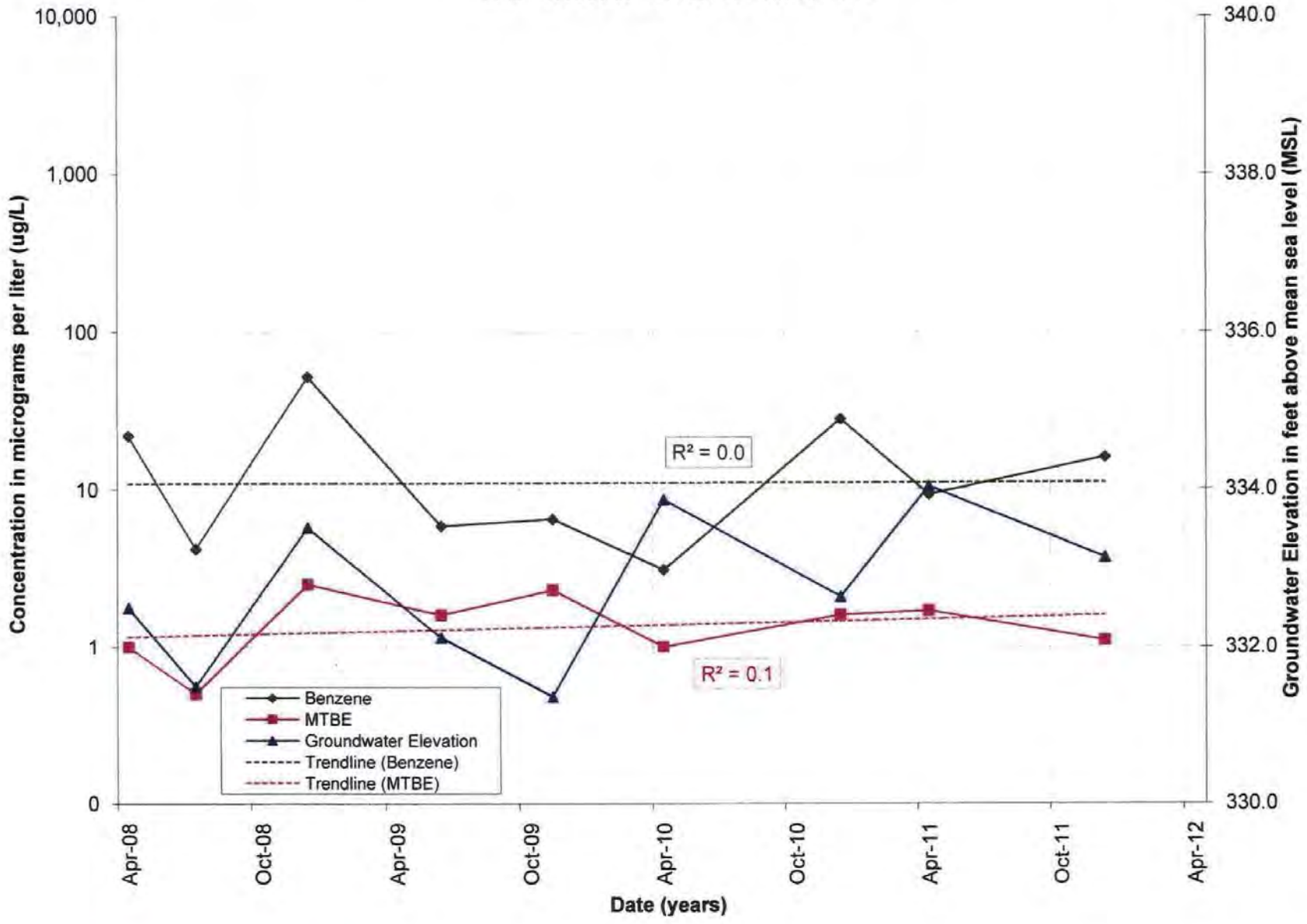
SCS ENGINEERS

MW-10
Benzene and MTBE Concentrations and Groundwater Elevation versus Time
Wigington Petroleum
11427 Woodside Avenue, Santee, California



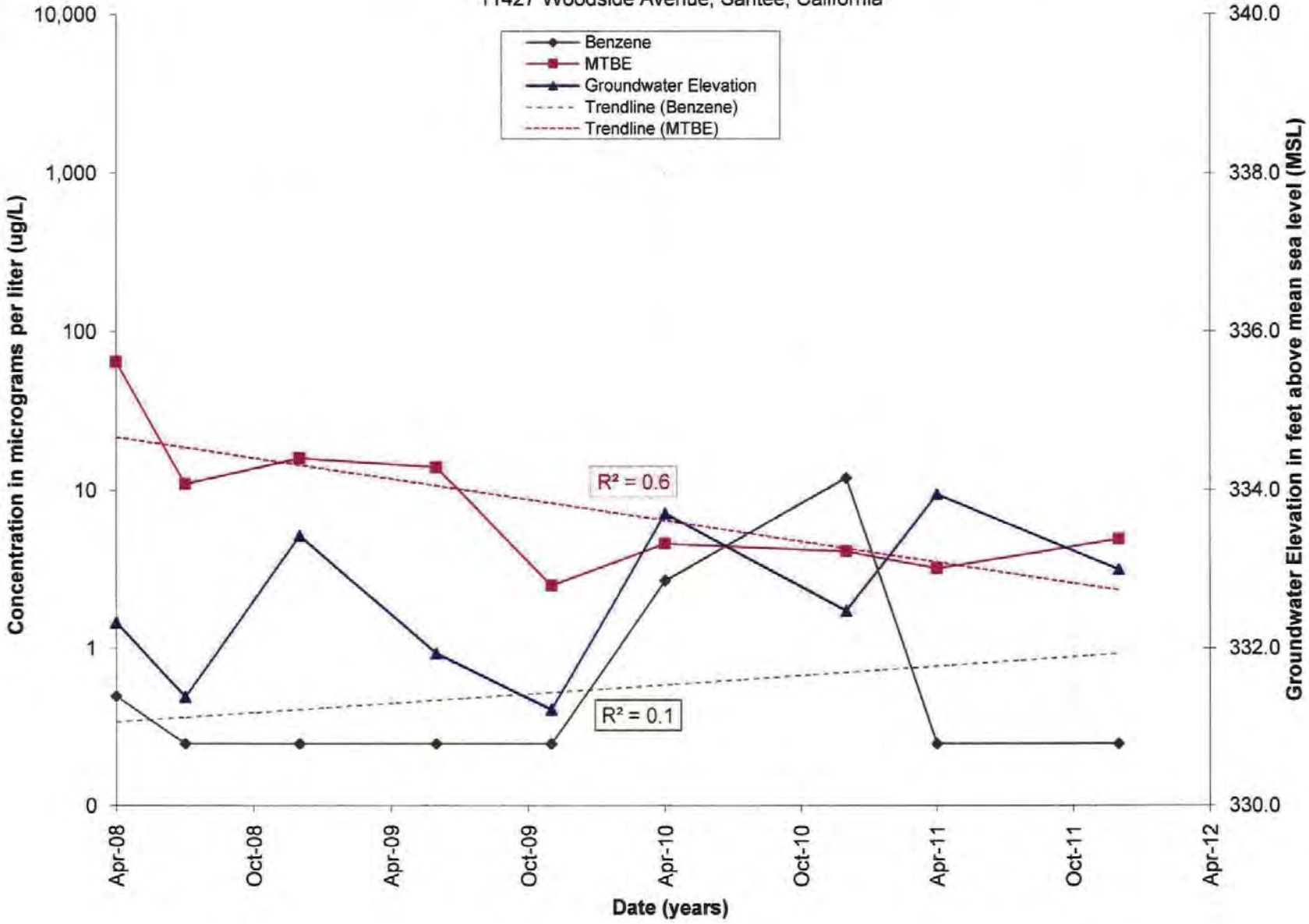
SCS ENGINEERS

MW-11
Benzene and MTBE Concentrations and Groundwater Elevation versus Time
Wigington Petroleum
11427 Woodside Avenue, Santee, California



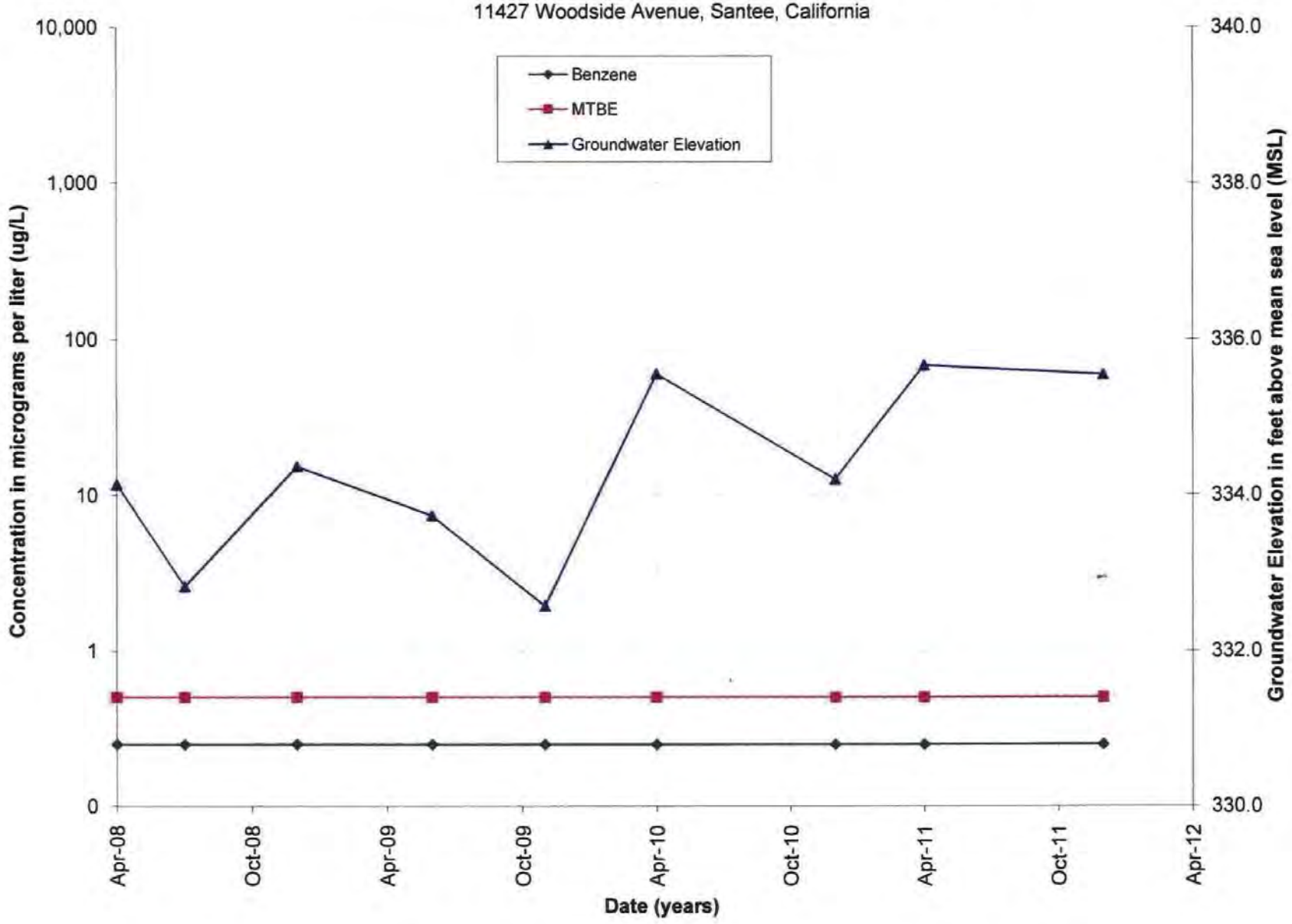
SCS ENGINEERS

MW-12
Benzene and MTBE Concentrations and Groundwater Elevation versus Time
Wigington Petroleum
11427 Woodside Avenue, Santee, California



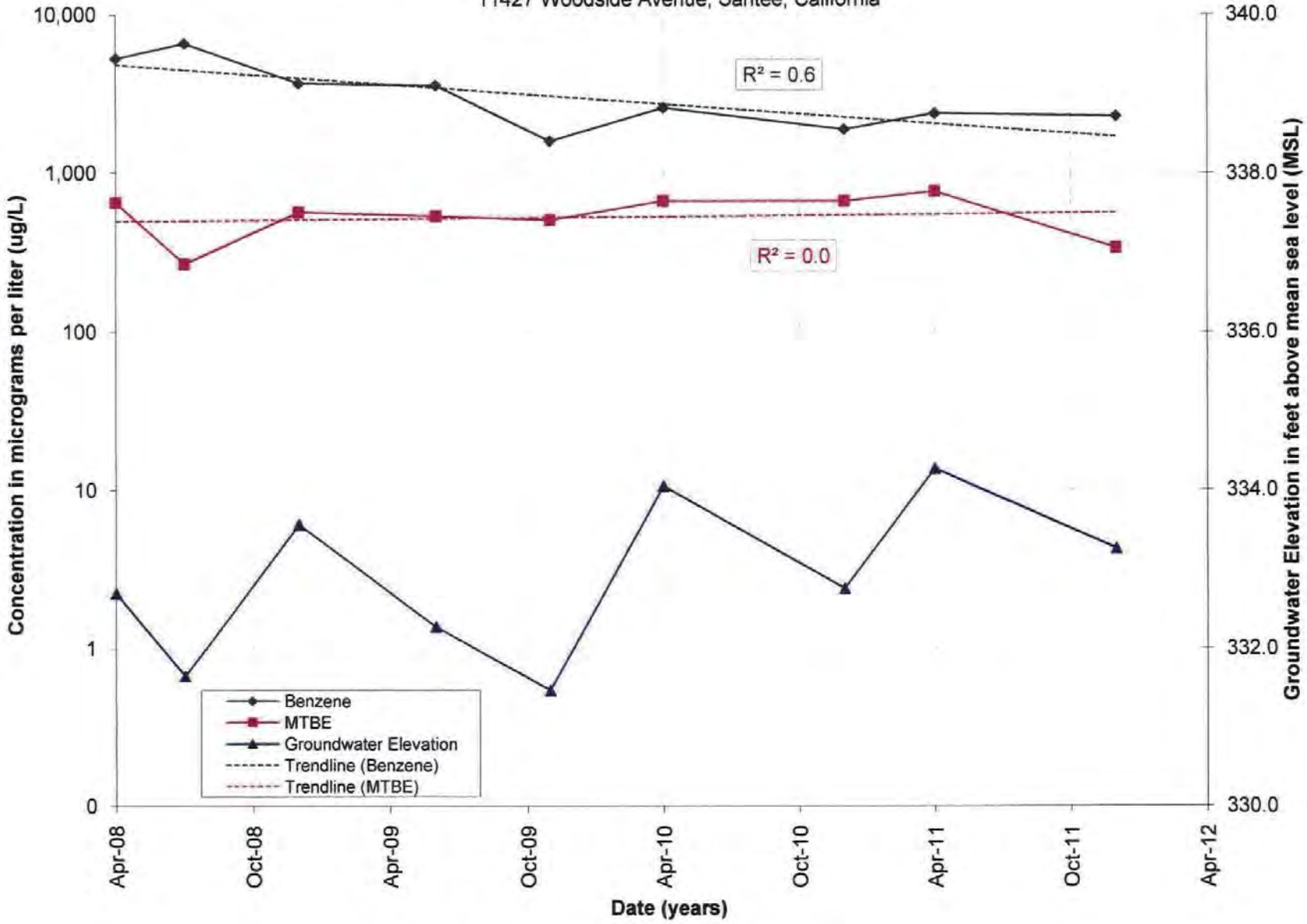
SCS ENGINEERS

MW-13
Benzene and MTBE Concentrations and Groundwater Elevation versus Time
Wigington Petroleum
11427 Woodside Avenue, Santee, California



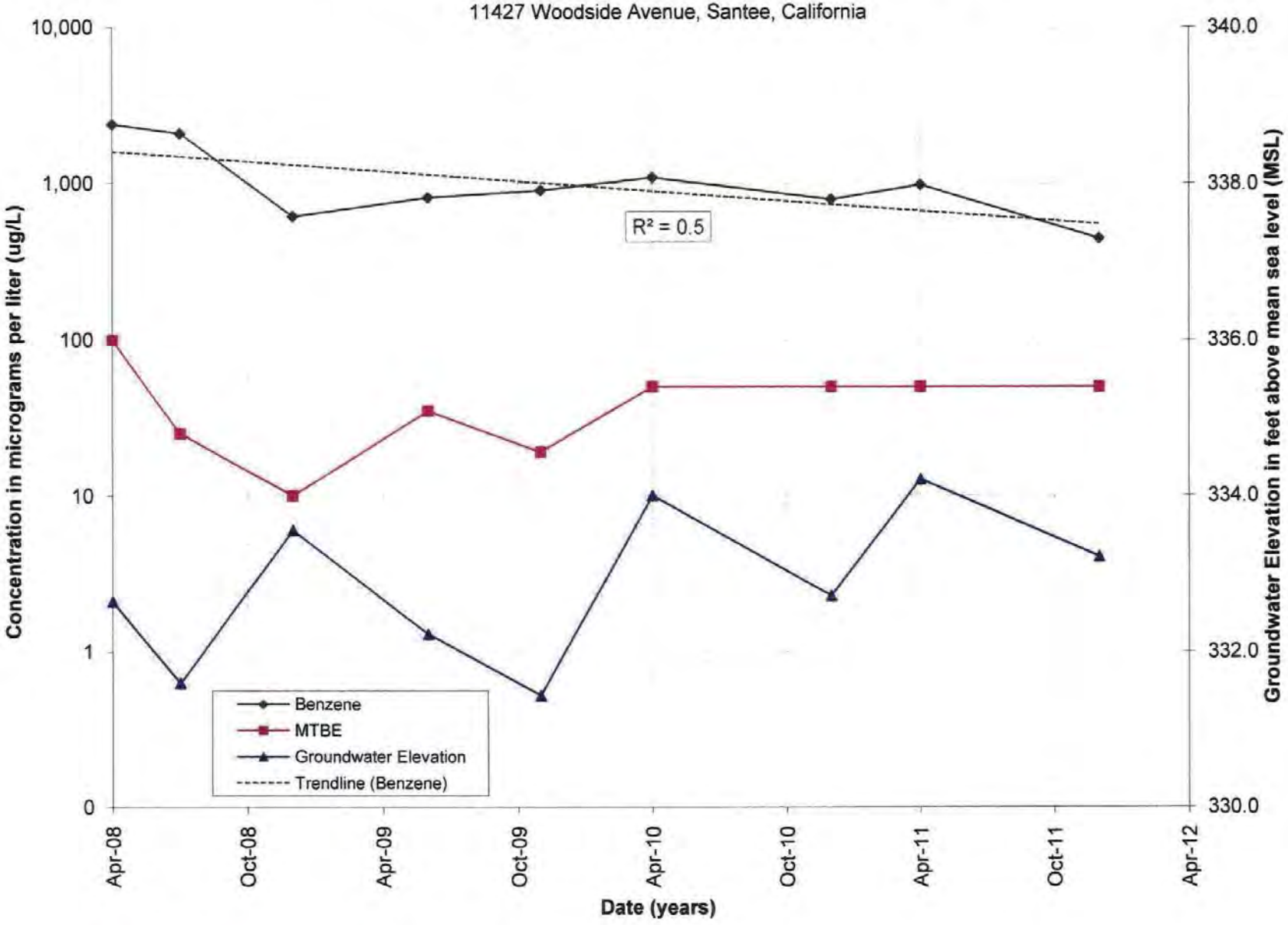
SCS ENGINEERS

MW-14
Benzene and MTBE Concentrations and Groundwater Elevation versus Time
Wigington Petroleum
11427 Woodside Avenue, Santee, California



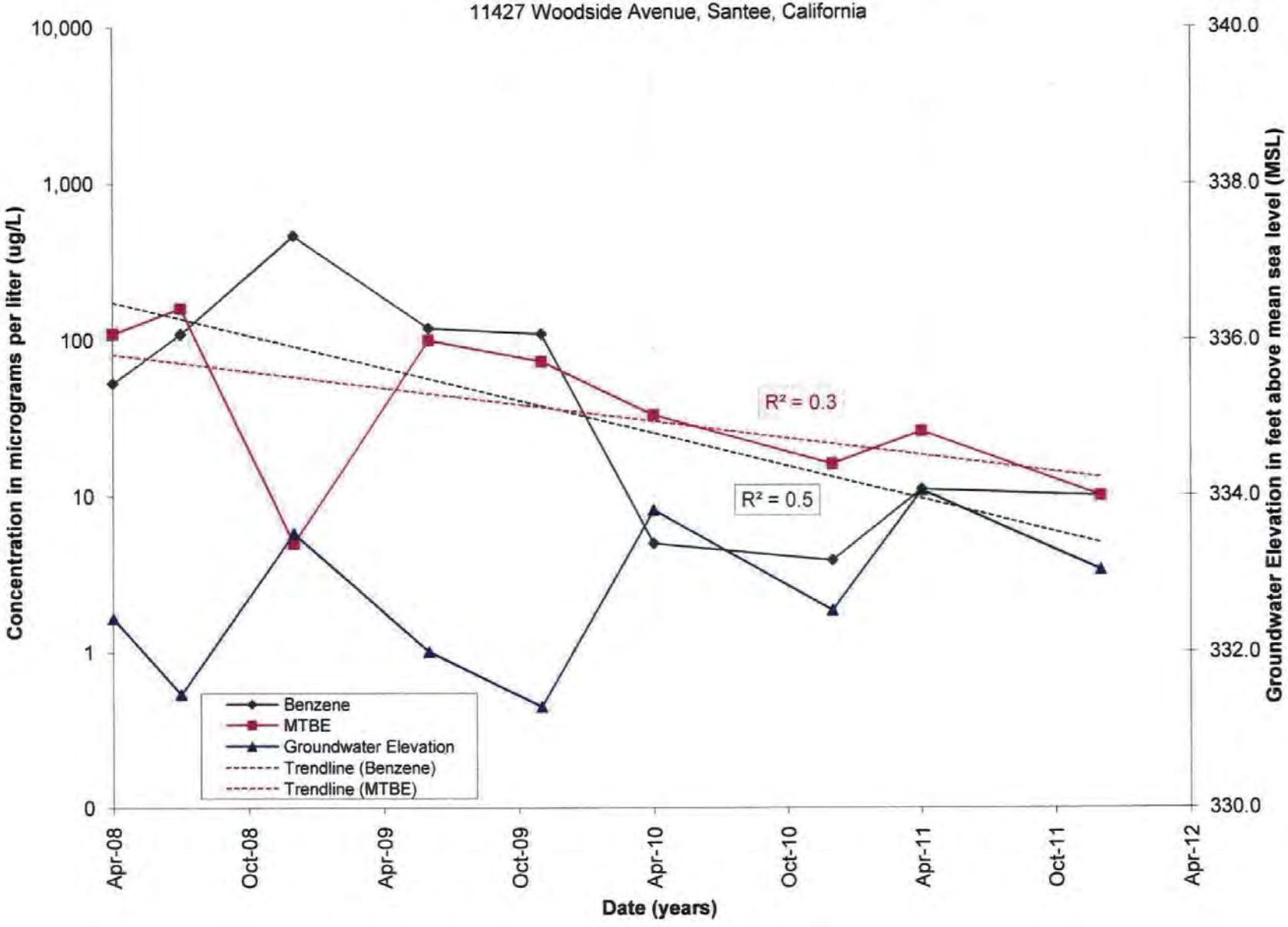
SCS ENGINEERS

MW-15
Benzene and MTBE Concentrations and Groundwater Elevation versus Time
Wigington Petroleum
11427 Woodside Avenue, Santee, California



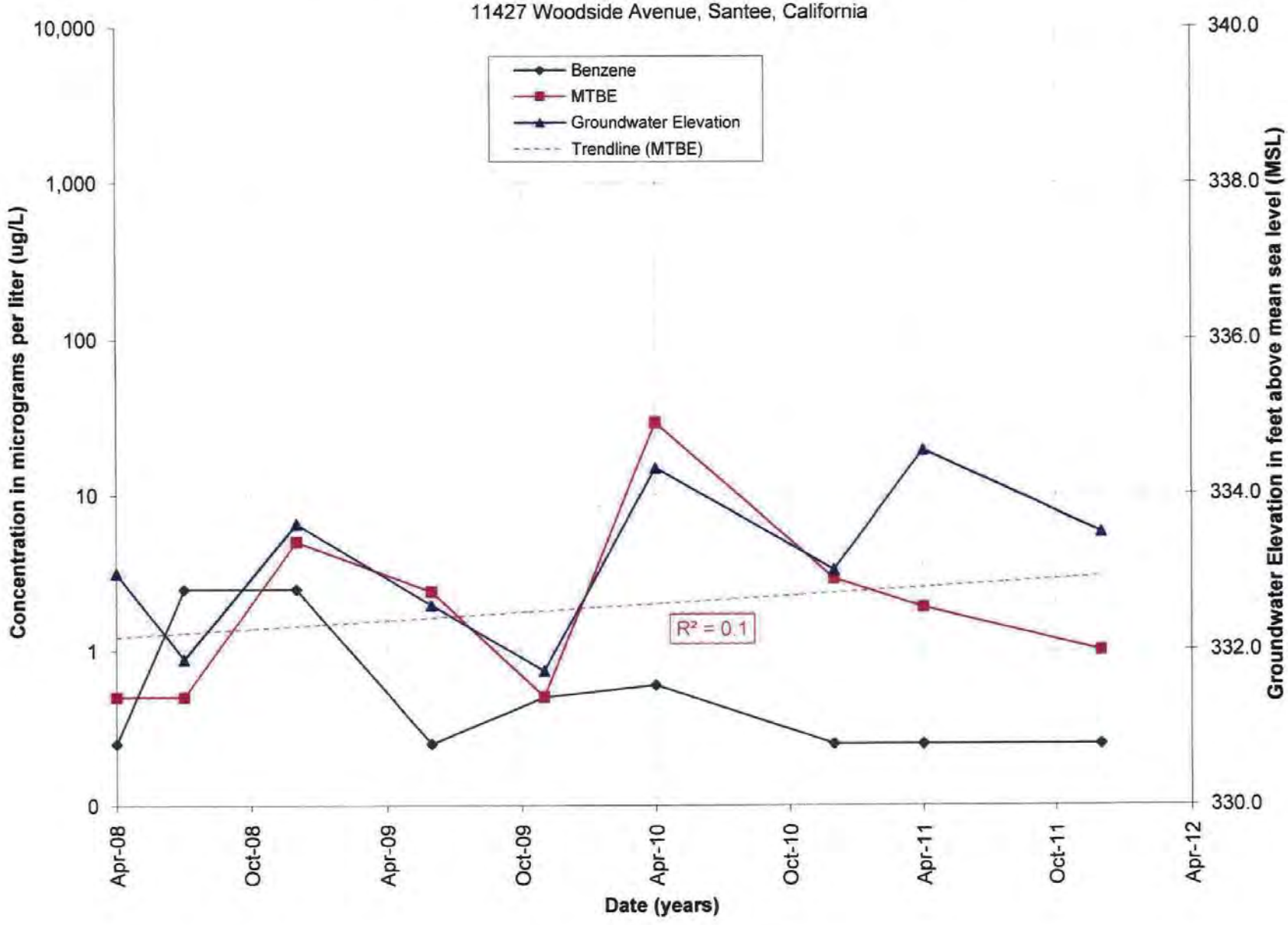
SCS ENGINEERS

MW-16
Benzene and MTBE Concentrations and Groundwater Elevation versus Time
Wigington Petroleum
11427 Woodside Avenue, Santee, California



SCS ENGINEERS

MW-17
Benzene and MTBE Concentrations and Groundwater Elevation versus Time
Wigington Petroleum
11427 Woodside Avenue, Santee, California



SCS ENGINEERS

SCS ENGINEERS

Semi-Annual Groundwater Monitoring
Fourth Quarter 2013

11427 Woodside Avenue

Santee, California

(DEH CASE #H19469-001)

Presented to:

Mr. James Clay
County of San Diego
Department of Environmental Health
P.O. Box 129261
San Diego, California 92112-9261

Presented by:

SCS ENGINEERS
8799 Balboa Avenue, Suite 290
San Diego, California 92123
(858) 571-5500

April 4, 2014
Project Number: 01208473.00

Offices Nationwide
www.scsengineers.com

April 4, 2014
Project No. 01208473.00

Mr. James Clay
County of San Diego
Department of Environmental Health
P.O. Box 129261
San Diego, California 92112-9261

Subject: Semi-Annual Groundwater Monitoring Event Conducted During December 2013 (4Q2013)

DEH File Number: H19469-001

Site: 11427 Woodside Avenue
Santee, California

Dear Mr. Clay:

SCS Engineers (SCS) is pleased to present this report (Report) of the semi-annual groundwater monitoring and sampling activities (Assessment) at the above-referenced Site (Figures 1 and 2). This Assessment was conducted in accordance with the guidelines set forth by the County of San Diego Department of Environmental Health (DEH), Site Assessment and Mitigation Program (SAM) and Scope of Service Change 4 (SSC4) to Exhibit 00 and the Contract between SCS and Wigington Petroleum, Inc. (Client), fully executed on March 30, 2009.

Should you have any questions regarding this Report, please do not hesitate to call the undersigned at (858) 571-5500.

Sincerely,

Chris Crosby, MBA
Project Professional
SCS ENGINEERS

Charles E. Houser, CHg 945
Project Manager
SCS ENGINEERS

PROFESSIONAL GEOLOGIST
CHARLES E. HOUSER
NO. 945
CERTIFIED
HYDROGEOLOGIST
Exp. 9/15
STATE OF CALIFORNIA

Chuck Pryatel, MBA, REHS
Vice President
SCS ENGINEERS

cc: Ms. Linda Wigington, c/o William Fischbeck, Esq.

State UST Cleanup Fund via upload to State Geotracker website

Enclosures

CC

F:\Projects\208\451-530\01208473 (Wigington Petroleum, Inc.)\01208473.00 (11427 Woodside Av)\Groundwater Monitoring 4Q2013\01208473.00.QTR GWM RPT (4Q2013).Final.doc

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Appendix C Analytical Data and Chain-of-Custody Documentation
Appendix D Hydrographs

1 BACKGROUND

The Site is located at 11427 Woodside Avenue in the City of Santee, San Diego County, California (Site, Figure 1). The Site is currently occupied by a commercial fuel and oil facility (Figure 2). Between 1987 and 1998, 13 underground storage tanks (USTs) were reportedly removed from the Site. Analysis of soil samples collected during the UST removals indicated that a release of petroleum hydrocarbons had occurred from the UST system. The County of San Diego, Department of Environmental Health (DEH), Hazardous Materials Management Division (HMMD) directed that corrective measures be taken regarding the release.

A summary of the previous environmental assessments conducted at the Site follows:

- EnecoTech Southwest, Inc. (EnecoTech) conducted assessment activities at the Site between 1988 and 2005. A total of 18 borings and 7 groundwater monitoring wells (MW-1 through MW-4 and MW-6 through MW-8) were drilled and sampled by EnecoTech. An existing 12-inch diameter concrete water production well inside the Site building was labeled MW-5 and was also sampled during the monitoring events in March 1998 and April 2002.

- In 1988, EnecoTech reported that four USTs were removed from the Site. A Site assessment was performed immediately following the tank removal activities, during which 11 soil borings were drilled and sampled and 4 of the borings were completed as groundwater monitoring wells (MW-1 through MW-4).

- On August 19, 1993, the HMMD issued a Notice of Violation to El Capitan Oil Co. requiring corrective action relative to the release. The DEH Site Assessment and Mitigation Program (SAM) reportedly assumed oversight responsibility of the UST assessment and mitigation in mid-1993.

- EnecoTech reported that single-walled product piping was removed from the Site in October 1997.

- In April 1998, samples collected by EnecoTech from the areas where nine USTs were reportedly removed from the Site indicated a release of petroleum hydrocarbons.

- On March 14, 2000, EnecoTech produced a workplan titled, *Work Plan for Environmental Services*, which proposed the installation of two additional groundwater monitoring wells. SAM reportedly directed that four groundwater monitoring wells be installed in a letter dated May 8, 2000. EnecoTech installed two groundwater monitoring wells (MW-6 and MW-7) on February 26, 2001, and one groundwater monitoring well (MW-8) on April 19, 2002.

- Based on the results of EnecoTech's Site assessment activities, groundwater beneath the Site was interpreted to have been impacted by petroleum hydrocarbons from on-Site releases.

- On March 25, 2005, EnecoTech submitted a workplan for additional Site assessment, which proposed the installation of nine additional groundwater monitoring wells both on and off Site.

- In 2006, Petra Geotechnical Inc. (Petra) was retained to conduct the Site assessment work. The SAM Program approved EnecoTech's workplan in a letter, dated October 10, 2007. Petra proposed one well be installed in addition to the nine wells proposed by EnecoTech. The SAM Program agreed that an additional well was needed and requested a revised workplan. Petra submitted an addendum to the revised workplan, dated December 21, 2007, to include the installation of a tenth groundwater monitoring well. SAM approved the revised workplan in a letter, dated January 15, 2008.

- On October 25, 2007, Petra assessed that phase-separated hydrocarbons (PSH) were present in monitoring wells MW-2, MW-3, and MW-4. Petra submitted a workplan to SAM titled, *Workplan for High Vacuum Dual Phase Extraction Pilot Test and Interim Remediation*, dated December 24, 2007. The SAM Program approved the workplan in a letter dated, January 16, 2008.

- Petra conducted a 33-day high-vacuum, dual-phase extraction (HVDPE) pilot test between January 22 and February 24, 2008. Approximately 3,256.17 pounds of petroleum hydrocarbons were removed and treated during the pilot test. During the pilot test, nine new monitoring wells (MW-9 through MW-17) were installed. The locations of these wells (MW-9 through MW-17) and previously existing wells (MW-1 through MW-8) are depicted on Figure 2. In April 2008, monitoring wells MW-1 through MW-4 and MW-6 through MW-17 were sampled.

- On July 25, 2008, Petra submitted a *Workplan for Well Maintenance and Well Destruction* to SAM to destroy well MW-5 and reconstruct the well heads for several monitoring wells. SAM approved this workplan in a letter, dated September 4, 2008. It is SCS's understanding that Petra subsequently destroyed MW-5.

- On July 13, 2009, SAM issued a letter that called for the reduction of the frequency of groundwater monitoring from quarterly to semi-annually, occurring during the second and fourth quarters.

- In 2009, SCS Engineers (SCS) was retained to conduct further groundwater monitoring and Site assessment beginning with the second quarter 2009 (2Q2009) groundwater monitoring event. SCS performed groundwater monitoring and sampling at the Site on June 2009 (2Q2009), November 2009 (4Q2009), April 2010 (2Q2010), and December 2010 (4Q2010).

- On February 19, 2010, SCS submitted a focused HVDPE pilot test workplan. SAM responded in a letter, dated March 16, 2010, stating that, prior to conducting remedial testing, an on-Site health risk assessment and delineation of the groundwater contamination should be completed.

- On April 26, 2010, SCS submitted a *Workplan for a Soil Vapor Survey and Health Risk Assessment* to SAM. SAM approved this workplan in a letter dated, May 18, 2010. Additionally, on April 26, 2010, SCS submitted a *Site Assessment Workplan* to SAM to install two additional groundwater monitoring wells (MW-18 and MW-19) in order to delineate the downgradient (westerly) and southernly extent of dissolved petroleum hydrocarbons in groundwater from the release at the Site. SAM approved this workplan in a letter dated, May 19, 2010.

- On April 28, 2011, SCS submitted a report titled, *Soil Vapor Survey and Health Risk Assessment* to SAM describing the installation and sampling activities of five nested soil vapor probes (SV1 through SV5) near the Site building conducted in March and April 2011. SAM concurred with SCS's conclusions in a letter, dated May 9, 2011, that there is a low likelihood that a significant health risk exists in connection with the concentrations of petroleum hydrocarbons in soil vapor beneath the on-Site building.

- On August 18, 2011, SCS submitted a report to SAM titled *Additional Site Assessment and Semi-Annual Groundwater Monitoring Report 2Q2011* describing the installation of two groundwater monitoring wells (MW-18 and MW-19) installed in March 2011 and the semi-annual sampling event conducted in April 2011. That report indicated that additional assessment was needed to the south of well MW-19.

- On May 18, 2012, SCS submitted a workplan for additional assessment south of well MW-19 at the Site. SAM issued a letter on May 29, 2012, granting approval of the workplan.

- SCS conducted groundwater monitoring and sampling during the fourth quarter of 2011 and, on February 13, 2012, submitted a report titled *Semi-Annual Groundwater Monitoring, Fourth Quarter 2011, 11427 Woodside Avenue, Santee, California*.

- During the second quarter 2012 groundwater monitoring event, PSH with the appearance of red-dyed diesel fuel was measured in well MW-10. Similar PSH has subsequently been monitored in wells MW-2, MW-3, MW-13, and MW-17. A separate DEH Voluntary Assistance Program (VAP) case (Case No. H19469-005) was opened on September 12, 2012 to address the release of red-dyed diesel from the on-Site above ground storage tank (AST) system.

- On December 11, 2013, the DEH issued a letter stating, "Based on current contaminant trends in groundwater, DEH staff is eliminating the requirement for the cross-gradient well/boring proposed in the May 18, 2012 *Workplan for Additional Site Assessment*." The letter goes on to state that an additional round of groundwater sampling should be conducted and to prepare a Corrective Action Plan (CAP).

The current Report describes the semi-annual groundwater monitoring event conducted during December 2013 (4Q2013).

2 SITE DESCRIPTION SUMMARY

Site Name:	Wigington Petroleum
Site Owner:	Wigington Petroleum, Inc.
Site Address:	11427 Woodside Avenue, Santee, California
DEH Case Number:	H19469-001
Cleanup Fund Claim Number:	912
Global ID:	T0607303173

3 OBJECTIVES

The objectives of the scope of services described in this Report were to:

- Assess the presence and extent of petroleum hydrocarbons and associated volatile organic compounds (VOCs) dissolved in groundwater at the Site.
- Assess the possible presence of PSH in groundwater at the Site.
- Assess the groundwater elevation and the hydraulic gradient at the Site.
- Assess whether RNA might be occurring at the Site, using procedures outlined in Section 7 of the SAM Manual.

4 SCOPE OF SERVICES

FIELD ACTIVITIES—GROUNDWATER SAMPLING AND ANALYSIS

Groundwater Monitoring and Sampling

On December 30 and 31, 2013, seventeen of the eighteen Site groundwater monitoring wells were monitored for depth to groundwater and for the presence of PSH. Well MW-8 was not gauged or sampled due to restricted access pending approval from CalTrans. Wells MW-2, MW-3, MW-10, MW-13, and MW-17 had measurable PSH and, therefore, were not sampled during the current sampling event. Depth-to-groundwater measurements were taken using an interface probe with a manufacturer's reported accuracy of 0.01 foot and are presented in Table 1.

On December 30 and 31, 2013, groundwater monitoring wells MW-1, MW-4, MW-6, MW-7, MW-9, MW-11, MW-12, MW-14 through MW-16, MW-18, and MW-19 were purged and sampled in accordance with SAM guidelines. All sampled wells were fast-recovering wells (i.e., those recovering at least 80 percent within two hours). During purging, temperature, conductivity, and pH measurements (collectively referred to as purging parameters) were measured after the removal of the first borehole volume and each one-half borehole volume

thereafter. Purging continued until at least one and one-half borehole volumes had been removed and purging parameters had stabilized to within 10 percent of the previous reading. Purge water was placed in appropriate 55-gallon drums, labeled, and stored on Site pending disposal.

After purging was completed, the wells were allowed to recover at least 80 percent before sampling. Groundwater samples were collected from each well with a single-use, disposable bailer and decanted into laboratory-supplied vials. The groundwater sample containers were labeled and placed in an ice-filled cooler pending delivery to the laboratory. Chain-of-custody procedures were implemented for sample tracking. Copies of groundwater monitoring/sampling data sheets are included in Appendix A.

Groundwater Sample Analysis

Groundwater samples were analyzed by H&P Mobile Geochemistry, a state-accredited environmental testing laboratory, in Carlsbad, California, for the following:

- Total petroleum hydrocarbons as gasoline (TPHg) and diesel (TPHd) in general accordance with the California Department of Health and Services Leaking Underground Fuel Tank (CA DHS LUFT) Method.

- Benzene, toluene, ethylbenzene, and total xylenes (BTEX) and fuel oxygenates in general accordance with Environmental Protection Agency (EPA) Method 8260B.

Select groundwater samples were analyzed by Calscience Environmental Laboratories, Incorporated (CEL), a state-accredited environmental testing laboratory in Garden Grove, California, for natural attenuation parameters, including iron and manganese by EPA Method 6010B; ferrous iron by Standard Method 3500; nitrate and sulfate by EPA Method 300.0; ammonia, phosphate, pH, dissolved oxygen, and carbon dioxide by EPA Method SM4500; redox potential by ASTM D-1498; and methane by EPA Method RSK175.

Disposal of Drummed Purged Groundwater and Rinsate Water

SCS submitted the necessary documentation to EFR Environmental Services (EFR) for the disposal of the drummed rinsate water and purged groundwater. On January 21, 2014, five drums of water were transported off Site to the Crosby & Overton Plant #1 facility in Long Beach, California for treatment and reuse under a nonhazardous waste manifest. A copy of the Non-Hazardous Waste Manifest is included in Appendix B.

PSH Monitoring

PSH monitoring was conducted on Site in wells MW-1 through MW-4 from September 4, 2009 to April 20, 2010 approximately two times per month. During this time PSH was measured by SCS in monitoring wells MW-2 (up to approximately 0.03 feet on September 4, 2009) and MW-3 (up to approximately 0.31 feet on November 30, 2009) (Table 2). PSH was not measured in any Site well between March 5, 2010 and April 20, 2010. As a result, since April 2010, PSH monitoring relating to the former USTs has been limited to semi-annual sampling events.

Beginning in 2012, PSH has been measured in three onsite wells (MW-2, MW-3, MW-10) and two offsite wells (MW-13 and MW-17) in connection with an unauthorized release of red-dyed diesel fuel from the on-Site a AST system. A separate case has been opened with the County of San Diego VAP to oversee the assessment and remediation of the red-dyed diesel fuel release.

5 FINDINGS

GEOLOGY

Regional Geology

The Site is located in the Peninsular Ranges Geomorphic Province of Southern California. This province is typified by northwest- to southeast-trending mountain ranges approximately parallel to the San Andreas Fault and related regional fault systems. The Peninsular Ranges are generally characterized by granitic rocks of the Southern California batholith and associated metamorphic rocks. Sedimentary rocks ranging in age from Cretaceous to Pleistocene form the San Diego embayment and coastal terraces west of the batholith.

Based on SCS's review of previous Site assessments, materials encountered at the Site generally included fill soil, alluvium, residual soil, and weathered granitic rock. Following is a brief description of these units.

Site Geology

Fill Soil

This unit was encountered in wells MW-13, MW-15, and MW-16 and was interpreted by Petra to be derived from the local alluvial soils. This unit generally consisted of loose, brown to olive-brown to dark yellowish-brown, dry to moist, fine- to very coarse-grained sand with some gravel and asphalt fragments.

Alluvium

This unit generally consisted of brown to olive-brown, moist to wet, interbedded silty to clayey, fine- to very coarse-grained sand, with some gravel. This unit was interpreted to extend from the surface to depths ranging from approximately 10 feet (well MW-10) to 41.5 feet below ground surface (bgs) (wells MW-14, MW-15, and MW-16).

Residual Soil

This unit generally consisted of earth material derived from in-situ weathering of granitic bedrock, and consisted of dark brown to dark reddish-brown, moist, fine- to medium-grained clayey sand with some coarse-grained sand and gravel. This unit was encountered in MW-10, MW-17, and MW-13 at depths of approximately 10, 20, and 30 feet bgs, respectively.

Weathered Granitic Rock

This unit generally consisted of dark yellowish-brown to dark olive-brown, hard to very hard, weathered crystalline granitic rock. This unit was encountered in MW-10 and MW-17 at approximately 30 feet bgs and 45 feet bgs, respectively.

HYDROGEOLOGY

Based on review of a document titled, *Water Quality Control Plan, San Diego Basin - Region 9*, prepared by the San Diego Regional Water Quality Control Board (RWQCB), dated September 1994, the Site is interpreted to be located within the Santee Hydrologic Sub Area (7.12) of the Lower San Diego Hydrologic Area (7.10) of the San Diego Hydrologic Unit (7.00). According to the RWQCB, the groundwater in this hydrologic unit has been classified as having existing beneficial uses for municipal and domestic supply, agricultural supply, industrial service supply, and industrial process supply purposes.

Groundwater Conditions

Groundwater elevations were calculated based on the surveyed top-of-well casing elevations and the measured depth to groundwater obtained from 12 Site wells (Table 1). Groundwater was encountered at depths ranging from approximately 29.30 (MW-7) to 33.08 (MW-19) feet below top-of-well casings. The groundwater elevations ranged from 331.78 feet above mean sea level (msl) in well MW-18 to 333.27 feet above msl in well MW-7. The groundwater flow direction was interpreted to be generally toward the west to west-southwest, with a gradient ranging from approximately 0.001 to 0.004 for the majority of the Site; however, groundwater near MW-19 appears to have a flow direction toward the south. The interpreted groundwater elevation contours and flow directions are depicted on Figure 3.

LABORATORY ANALYTICAL RESULTS

Groundwater Samples

Groundwater analytical results for TPH and VOCs from the 4Q2013 semi-annual sampling event are summarized in Table 3 and on Figure 5. Based on laboratory analytical results from the groundwater sampling event, wells MW-1, MW-4, MW-6, MW-9, MW-11, MW-12, MW-14 through MW-16, and MW-19 had detectable concentrations[1] of dissolved petroleum hydrocarbons. Concentrations of TPH and VOCs were reported as follows.

TPH

TPHg was reported at detectable concentrations in wells MW-11, MW-14, MW-15, and MW-19. The reported TPHg concentrations ranged from 2,000 micrograms per liter (µg/L) in MW-11 to 43,000 µg/L in MW-19. No detectable concentrations of TPHg were reported in the remainder of samples analyzed.

TPHd was reported at detectable concentrations in wells MW-11, MW-14, MW-15, and MW-19. The reported TPHd concentrations ranged from 730 µg/L in MW-11 to 3,500 µg/L in MW-15. No detectable concentrations of TPHd were reported in the remainder of samples analyzed.

[1] For the purposes of this Report, "detectable concentrations" means concentrations above the laboratory reporting limits for the analytical method used.

BTEX

Benzene was reported at detectable concentrations in wells MW-1, MW-4, MW-6, MW-9, MW-11, MW-12, MW-14 through MW-16, and MW-19. The reported benzene concentrations ranged from 7.2 µg/L in MW-16 to 1,800 µg/L in MW-14. No detectable concentrations of benzene were reported in the remainder of the groundwater samples analyzed. Iso-concentration contours for benzene are depicted on Figure 6.

Toluene was reported at detectable concentrations in wells MW-4, MW-9, MW-11, MW-12, MW-14, MW-16, and MW-19. The reported toluene concentrations ranged from 0.5 µg/L in MW-12 and MW-16 to 370 µg/L in MW-19. No detectable concentrations of toluene were reported in the remainder of the groundwater samples analyzed.

Ethylbenzene was reported at detectable concentrations in wells MW-1, MW-4, MW-6, MW-9, MW-11, MW-12, MW-14, MW-15, and MW-19. The reported ethylbenzene concentrations ranged from 0.8 µg/L in MW-1 and MW-12 to 2,900 µg/L in MW-19. No detectable concentrations of ethylbenzene were reported in the remainder of the groundwater samples analyzed.

Xylenes were reported at detectable concentrations in wells MW-4, MW-6, MW-9, MW-11, MW-14 through MW-16, and MW-19. The reported xylenes concentrations ranged from 1.3 µg/L in MW-4 to 5,400 µg/L in MW-19. No detectable concentrations of xylenes were reported in the remainder of the groundwater samples analyzed.

Fuel Oxygenates

Methyl tertiary butyl ether (MTBE) was reported at detectable concentrations in wells MW-1, MW-4, MW-6, MW-9, MW-12, and MW-16. The reported MTBE concentrations ranged from 1.1 µg/L in MW-1 to 19 µg/L in MW-4. Please note that a few wells had elevated reporting limits that were greater than this range of concentrations. No detectable concentrations of MTBE were reported in the remainder of the groundwater samples analyzed. Iso-concentration contours for MTBE are depicted on Figure 7.

Tertiary butyl alcohol (TBA) was reported at a detectable concentration of 37 µg/L in well MW-16. No detectable concentrations of TBA were reported in the remainder of the groundwater samples analyzed.

Detectable concentrations of ethyl tert-butyl ether (ETBE), tertiary amyl methyl ether (TAME), and di-isopropyl ether (DIPE) were not reported in any Site well during the current sampling event.

Copies of the laboratory analytical reports are included in Appendix C.

RNA Parameters

Groundwater samples collected from monitoring wells MW-6, MW-7, MW-14, and MW-18 were also analyzed for remediation by natural attenuation (RNA) parameters. Samples collected from well MW-6 is near the source area while MW-14 is downgradient but has historically had

the highest petroleum hydrocarbon concentrations at the Site and is interpreted to be representative of conditions within the plume area. Samples collected from MW-7 and MW-18 are representative of background conditions, since these wells have generally either had no detectable concentrations or relatively low reported concentrations. The results of the RNA parameter analysis are summarized in the following table. Complete results are presented in Table 4 and Figure 8. Copies of the laboratory analytical reports are provided in Appendix C.

RNA Parameter	Concentration near Source Area	Concentration in Downgradient Source Area	Concentration for Background Conditions	Concentration for Background Conditions	Expected RNA Result in Source Area	Supports RNA
	MW-6	MW-14	MW-7	MW-18		
Carbon dioxide (mg/L)	67	240	100	93	Higher	Yes (MW-14)
Methane (µg/L)	102	20.0	< 1	1.37	Higher	Yes
Total manganese (mg/L)	0.569	1.64	0.893	0.522	Higher	Yes (MW-14)
Iron II (mg/L)	< 0.10	10.4	< 0.10	< 0.10	Higher	Yes (MW-14)
Redox potential (mV)	110	-160	120	85	Lower	Yes (MW-14)
Nitrate (mg/L)	8.3	< 0.10	15	12	Lower	Yes
Sulfate (mg/L)	270	22	230	290	Lower	Yes (MW-14)
pH	7.16	6.67	6.89	6.81	Lower	Yes (MW-14)
Total phosphate (mg/L)	< 0.10	< 0.10	0.13	< 0.10	Lower	Inconclusive
Ammonia (mg/L)	0.17	0.22	0.17	0.11	Lower	No
Dissolved oxygen (mg/L)	2.91	1.72	2.98	6.36	Lower	Yes

Notes
µg/L: micrograms per liter
mg/L: milligrams per liter
mV: millivolts

Analytical results for RNA parameters generally indicate RNA is occurring based on the following:

- Based on results from MW-14, carbon dioxide is higher in the source area.
- Dissolved oxygen is lower in the source area.
- Methane is higher in the source area.
- Based on results from MW-14, manganese is higher in the source area.
- Based on results from MW-14, iron II is higher in the source area.
- Based on results from MW-14, redox potential is lower in the source area.
- Nitrate is lower in the source area.
- Based on results from MW-14, sulfate is lower in the source area.
- Based on results from MW-14, pH is lower in the source area.

Hydrographs

Hydrographs depicting groundwater elevations and concentrations of dissolved-phase benzene and MTBE in groundwater versus time for wells MW-1, MW-4, MW-6 through MW-9, MW-11, MW-12, MW-14, MW-15, MW-16, MW-18, and MW-19 are included in Appendix D and discussed in the table below. Hydrographs for MW-2, MW-3, MW-10, MW-13, and MW-17 were not included due to the current presence of PSH. Linear regression trendlines of the benzene and MTBE concentrations are depicted on each hydrograph, as appropriate, with the calculated R-squared (R^2) value.

The R^2 value indicates the *goodness-of-fit* of the trendline to the data set. In general, an R^2 value between 0.7 and 1.0 would be a *good* fit, between 0.4 and 0.7 a *moderate* fit, and below 0.4 would be a *poor* fit. Over time, significant data gaps are present, limiting the ability to calculate representative data trends from several wells. Two significant data gaps occur between samplings events May 1988 and March 1998 and between April 2002 and October 2007. For illustration purposes, samples with no detectable concentration of benzene or MTBE were plotted at one-half of the laboratory reporting limit. Please note that the laboratory reporting limits have changed for benzene and MTBE over time; therefore, some wells may show detectable concentrations that are below previous laboratory reporting limits.

Well	Benzene Trendline	MTBE Trendline	Correlation with GW Elevation	Benzene/MTBE Above MCL	Comment
MW-1	Decreasing R^2=0.4	Decreasing R^2=0.2	No	Yes	Benzene within historical range. MTBE near historic low.
MW-2	NA	NA	NA	NA	PSH detected since October 2012.
MW-3	NA	NA	NA	NA	PSH detected since October 2012.
MW-4	Decreasing R^2=0.8	Decreasing R^2=0.8	Inverse (2008-2012)	Yes	Benzene at historical low. MTBE within historical range.
MW-5	Abandoned by Petra				
MW-6	Decreasing R^2=0.1	Decreasing R^2=0.1	Yes, since June 2009	Yes	Benzene and MTBE within historical range.
MW-7	Decreasing R^2=0.4	Decreasing R^2=0.6	NA	No	Benzene and MTBE below laboratory reporting limit.
MW-8	Decreasing R^2=0.7	Decreasing R^2=0.7	NA	No	Benzene and MTBE below laboratory reporting limit.
MW-9	Decreasing R^2=0.7	Decreasing R^2=0.7	Benzene – Weak MTBE – No	Yes/No	Benzene near historic low. MTBE at historic low.
MW-10	NA	NA	NA	NA	PSH detected since June 2012.
MW-11	Stable R^2=0.0	Stable R^2=0.2	No	Yes/No	Benzene within historical range. MTBE below MCL since installation and below laboratory reporting limit since June 2012.

Well	Benzene Trendline	MTBE Trendline	Correlation with GW Elevation	Benzene/MTBE Above MCL	Comment
MW-12	Increasing R^2=0.4	Decreasing R^2=0.3	No	Yes/No	Benzene within historical range. MTBE below MCL since Nov. 2009.
MW-13	NA	NA	NA	NA	PSH detected since October 2012.
MW-14	Decreasing R^2=0.5	Decreasing R^2=0.4	No	Benzene – Yes MTBE – <100	Benzene within historical range. MTBE below laboratory reporting limit.
MW-15	Decreasing R^2=0.4	NA*	No	Benzene – Yes MTBE – <100	Benzene near historic low. MTBE below laboratory reporting limits since April 2010.
MW-16	Decreasing R^2=0.4	Decreasing R^2=0.4	No	Yes/No	Benzene within historical range. MTBE at historic low.
MW-17	NA	NA	NA	NA	PSH detected since October 2012.
MW-18	Decreasing R^2=0.4	NA	No	Benzene – No MTBE – <100	Benzene below laboratory reporting limits since Dec. 2011. MTBE below laboratory reporting limits since installation.
MW-19	Decreasing R^2=0.8	NA	No	Benzene – Yes MTBE – <100	Historical low for benzene. MTBE below laboratory reporting limits since installation.

Notes:
MCL's = Maximum contaminant levels, California Code of Regulations, Section 64444.5, dated February 12, 2014.
MCL for benzene = 1 ug/L; MCL for MTBE = 13 ug/L.
GW = Groundwater
NA = Not applicable either due to values below laboratory reporting limits or due to the presence of PSH
ND = Not detected above laboratory reporting limit
MTBE = Methyl tertiary butyl ether
ug/L = Micrograms per liter
* = MTBE trendline not calculated for MW-15 due to increased laboratory reporting limit

6 DISCUSSION

INTERPRETED EXTENT OF PETROLEUM HYDROCARBONS IN GROUNDWATER

Analytical results from the December 2013 sampling event were compared to those obtained during previous monitoring events conducted at the Site beginning in May 1988. Groundwater sample analytical results are summarized in Table 3 and Figures 4 and 5. Hydrographs for wells MW-1, MW-4, MW-6 through MW-9, MW-11, MW-12, MW-14, MW-15, MW-16, MW-18, and MW-19 are included in Appendix D. The following is a summary of trends on Site since the last semi-annual monitoring and sampling event. Please note that the discussion of recent trends in groundwater elevations and conditions may apply to more than just the interval between the second quarter 2012 monitoring event and this fourth quarter 2013 event.

- Phase-separated hydrocarbons (PSH) were observed in wells MW-2, MW-3, MW-10, MW-13, and MW17 at a thickness ranging from 0.45 to 3.33 feet. The PSH measured in these wells are believed to be due to a recent release of red-dyed diesel fuel from the on-Site AST system.

- Reported TPHg concentrations during this event were below laboratory reporting limits in wells MW-1, MW-4, MW-6, MW-7, MW-9, MW-12, MW-16, and MW-18; and within historical ranges for the remaining wells with detectable TPHg.

- Reported TPHd concentrations during this event were below laboratory reporting limits in wells MW-1, MW-4, MW-6, MW-7, MW-9, MW-12, MW-16, and MW-18; at a historical low for MW-19; and within historical ranges for the remaining wells with detectable TPHd. The reported detectable TPHd concentrations during this event were flagged by the laboratory stating, “results in the diesel organics range are primarily due to overlap from a gasoline-range product.”

- Since the last sampling event in June 2012, reported benzene concentrations during this event have decreased in wells MW-4, MW-6, MW-14, MW-15, MW-16, and MW-19. They remain stable at or below the laboratory reporting limit in wells MW-7 and MW-18. The reported benzene concentrations have increased in wells MW-1, MW-9, MW-11, and MW-12 since the last sampling event.

- Since the last sampling in June 2012, reported MTBE concentrations during this event have decreased in wells MW-1, MW-4, MW-6, MW-9, MW-14, and MW-16. They remain stable at or below the detection limit in wells MW-7, MW-11, MW-15, MW-18, and MW-19. The reported MTBE concentrations during this event have increased in well MW-12 since the last sampling event.

The interpreted extents of dissolved benzene and MTBE in groundwater, based on the quarterly sampling conducted during December 2013, are depicted on Figures 6 and 7, respectively.

With a few exceptions, analytical results for RNA parameters generally indicate RNA is occurring based on the following comparison of RNA concentrations reported in samples within the petroleum hydrocarbon plume area and samples in areas interpreted to be representative of background conditions.

- Based on results from MW-14, carbon dioxide is higher in the source area.
- Dissolved oxygen is lower in the source area.
- Methane is higher in the source area.
- Based on results from MW-14, manganese is higher in the source area.
- Based on results from MW-14, Iron II is higher in the source area.
- Based on results from MW-14, redox potential is lower in the source area.
- Nitrate is lower in the source area.
- Based on results from MW-14, sulfate are lower in the source area.
- Based on results from MW-14, pH is lower in the source area.

7 CONCLUSIONS

Based on the data collected during this Assessment, including but not limited to laboratory results, field observations and data evaluation by a professional geologist, and current regulatory guidelines, the following conclusions are made:

- Phase-separated hydrocarbons (PSH) measured in wells MW-2, MW-3, MW-10, MW-13, and MW17 at a thickness ranging from 0.45 to 3.33 feet are due to a recent release of red-dyed diesel fuel from the on-Site above-ground storage tank (AST) system. PSH were not observed in the remaining Site wells during the fourth quarter 2013 sampling event.

- On December 30, 2013, groundwater was encountered at depths ranging from approximately 29.30 (MW-7) to 33.08 (MW-19) feet below top-of-well casings. The groundwater elevations ranged from 331.78 feet above mean sea level (msl) in well MW-18 to 333.27 feet above msl in well MW-7. The groundwater flow direction was interpreted to be generally toward the west to west-southwest, with a gradient ranging from approximately 0.001 to 0.004 for the majority of the Site; however, groundwater near MW-19 appears to have a flow direction toward the south.

- The extent of dissolved benzene and MTBE concentrations in groundwater has generally been delineated to the north, east, west, and southwest. Although delineation is not complete to the south-southeast of MW-19, SCS interprets the extent of benzene and MTBE concentrations to the south of MW-19 to be limited to approximately 80 feet or less.

- Based on the results from the 4Q2013 sampling event, natural attenuation is occurring at the Site.

8 RECOMMENDATION

Based on SCS's assessment of the Site and the DEH letter dated December 11, 2013, SCS will prepare a Corrective Action Plan for the Site.

9 REPORT USAGE AND FUTURE SITE CONDITIONS

This Report is intended for the sole usage of the Client and the parties designated by SCS. Use of this Report is subject to the provisions of the fully executed Contract between the Client and SCS. Any third party usage of this Report shall be subject to the provisions of the Contract, and any unauthorized misuse of or reliance upon the Report shall be without risk or liability to SCS.

The conclusions of this Report are judged to be relevant at the time the work described in this Report was conducted. Future conditions may differ and this Report should not be relied upon to represent future Site conditions unless a qualified consultant familiar with the practice of Phase II environmental assessments in San Diego County is consulted to assess the necessity of updating this Report.

Although this Assessment has attempted to assess the likelihood that the Site has been impacted by a hazardous material/waste release, potential sources of impact may have escaped detection for reasons that include, but are not limited to: 1) inadequate or inaccurate information rightfully provided to SCS by third parties, such as public agencies and other outside sources; 2) the limited scope of this Assessment; and 3) the presence of undetected, unknown, or unreported environmental releases.

10 LIKELIHOOD STATEMENTS

Statements of "likelihood" have been made in this report. Likelihood statements are based on professional judgments of SCS. The term "likelihood," as used herein, pertains to the probability of a match between the prediction for an event and its actual occurrence. The likelihood statement assigns a measure for a "degree of belief" for the match between the prediction for the event and the actual occurrence of the event.

The likelihood statements in this Report are made qualitatively (expressed in words). The qualitative terms can be approximately related to quantitative percentages. The term "low likelihood" is used by SCS to approximate a range of 10 to 20 percent; the term "moderate likelihood" refers to an approximate range of 40 to 60 percent; and the term "high likelihood" refers to an approximate range of 80 to 90 percent.

TABLES

Table 1

Groundwater Elevation Data

11427 Woodside Avenue, Santee, California

Groundwater Monitoring Well	Wellhead Elevation (feet above msl) and Depth of Screen (feet below grade)	Date Measured	Depth to Groundwater (feet below TOC)	Groundwater Elevation (feet above msl)
MW-1	363.90 (22-42)	05/25/88	28.73	335.17
		03/10/98	27.03	336.87
		04/05/00	29.62	334.28
	362.84 (22-42)	04/26/02	30.21	332.63
		12/03/02	30.19	332.65
		10/26/07	NM	NM
		01/17/08	PSH	PSH
		04/18/08	29.86	332.98
		07/28/08	30.98	331.86
		12/29/08	29.14	333.70
		06/18/09	30.29	332.55
		11/17/09	31.15	331.69
		04/20/10	28.58	334.26
		12/20/10	29.80	333.04
		04/04/11	28.36	334.48
		12/21/11	29.36	333.48
		06/04/12	29.29	333.55
		12/30/13	30.12	332.72
MW-2	365.40 (24-44)	05/25/88	30.03	335.37
		03/10/98	28.75	336.65
		04/05/00	32.23	333.17
	365.08 (24-44)	04/26/02	31.72	333.36
		12/03/02	31.84	333.24
		10/26/07	PSH	PSH
		01/17/08	PSH	PSH
		04/18/08	31.06	334.02
		07/28/08	PSH	PSH
		12/29/08	31.50	333.58
		06/18/09	31.56	333.52
		11/17/09	32.86	332.22
		04/20/10	29.08	336.00
		12/20/10	PSH	PSH
		04/04/11	29.41	335.67
		12/21/11	30.93	334.15
		06/04/12	30.27	334.81
		12/30/13	PSH	PSH
MW-3	366.07 (24.5-44.5)	05/25/88	30.83	335.24
		03/10/98	28.25	337.82
		04/05/00	36.65	329.42
	364.16 (24.5-44.5)	04/26/02	31.37	332.79
		12/03/02	31.32	332.84
		10/26/07	PSH	PSH
		01/17/08	PSH	PSH
		04/18/08	30.91	333.25
		07/28/08	PSH	PSH
		12/29/08	30.54	333.62
		06/18/09	31.33	332.83
		11/17/09	PSH	PSH
		04/20/10	29.54	334.62
		12/20/10	PSH	PSH
		04/04/11	29.32	334.84
		12/21/11	30.41	333.75
		06/04/12	30.26	333.90
		12/30/13	PSH	PSH

Table 1
(Page 2 of 5)
Groundwater Elevation Data
11427 Woodside Avenue, Santee, California

Groundwater Monitoring Well	Wellhead Elevation (feet above msl) and Depth of Screen (feet below grade)	Date Measured	Depth to Groundwater (feet below TOC)	Groundwater Elevation (feet above msl)
MW-4	362.90 (22-42)	05/25/88	27.68	335.22
		03/10/98	26.46	336.44
		04/05/00	29.98	332.92
	362.38 (22-42)	04/26/02	29.60	332.78
		12/03/02	29.43	332.95
		10/26/07	PSH	PSH
		01/17/08	PSH	PSH
		04/18/08	29.25	333.13
		07/28/08	30.41	331.97
		12/29/08	28.53	333.85
		06/18/09	29.65	332.73
		11/17/09	30.58	331.80
		04/20/10	27.97	334.41
		12/20/10	29.22	333.16
		04/04/11	27.74	334.64
		12/21/11	28.73	333.65
		06/04/12	28.64	333.74
		12/30/13	29.42	332.96
MW-5	NM	03/10/98	27.50	NM
	363.42 (unknown)	04/26/02	30.39	333.03
		12/03/02	30.50	332.92
		10/26/07	31.72	331.70
		01/17/08	NM	NM
		04/18/08	31.07	332.35
		07/28/08	NM	NM
		12/29/08	NM	NM
		Well Destroyed		
MW-6	362.44 (17-42)	04/26/02	29.77	332.67
		12/03/02	29.75	332.69
		10/26/07	31.01	331.43
		01/17/08	29.44	333.00
		04/18/08	29.47	332.97
		07/28/08	30.60	331.84
		12/29/08	28.71	333.73
		06/18/09	29.90	332.54
		11/17/09	30.78	331.66
		04/20/10	28.17	334.27
		12/20/10	29.45	332.99
		04/04/11	27.98	334.46
		12/21/11	28.96	333.48
		06/04/12	28.84	333.60
		12/30/13	29.68	332.76

Table 1

Groundwater Elevation Data

11427 Woodside Avenue, Santee, California

Groundwater Monitoring Well	Wellhead Elevation (feet above msl) and Depth of Screen (feet below grade)	Date Measured	Depth to Groundwater (feet below TOC)	Groundwater Elevation (feet above msl)
MW-7	362.57 (17-42)	04/26/02	29.47	333.10
		12/03/02	29.45	333.12
		10/26/07	30.45	332.12
		01/17/08	29.17	333.40
		04/18/08	29.16	333.41
		07/28/08	30.08	332.49
		12/29/08	28.48	334.09
		06/18/09	29.56	333.01
		11/17/09	30.59	331.98
		04/20/10	27.92	334.65
		12/20/10	29.15	333.42
		04/04/11	27.75	334.82
		12/21/11	28.68	333.89
		06/04/12	28.60	333.97
		12/30/13	29.30	333.27
MW-8	364.51 (20.5-40.5)	04/26/02	31.71	332.80
		12/03/02	31.70	332.81
		10/26/07	33.02	331.49
		01/17/08	31.34	333.17
		04/18/08	31.42	333.09
		07/28/08	32.60	331.91
		12/29/08	30.60	333.91
		06/18/09	31.82	332.69
		11/17/09	32.74	331.77
		04/20/10	30.12	334.39
		12/20/10	31.37	333.14
		04/04/11	29.92	334.59
		12/21/11	30.87	333.64
		06/04/12	30.85	333.66
		12/30/13	NM	NM
MW-9	362.33 (34-39)	04/18/08	29.49	332.84
		07/28/08	30.58	331.75
		12/29/08	28.68	333.65
		06/18/09	29.90	332.43
		11/17/09	30.75	331.58
		04/20/10	28.15	334.18
		12/20/10	29.43	332.90
		04/04/11	27.95	334.38
		12/21/11	28.90	333.43
		06/04/12	28.84	333.49
		12/30/13	29.69	332.64
MW-10	367.28 (25-40)	04/18/08	32.52	334.76
		07/29/08	33.65	333.63
		12/29/08	32.62	334.66
		06/18/09	32.75	334.53
		11/17/09	33.97	333.31
		04/20/10	30.83	336.45
		12/20/10	32.10	335.18
		04/04/11	30.26	337.02
		12/21/11	31.64	335.64
		06/04/12	PSH	PSH
		12/30/13	PSH	PSH

Table 1

Groundwater Elevation Data

11427 Woodside Avenue, Santee, California

Groundwater Monitoring Well	Wellhead Elevation (feet above msl) and Depth of Screen (feet below grade)	Date Measured	Depth to Groundwater (feet below TOC)	Groundwater Elevation (feet above msl)
MW-11	362.48 (23-38)	04/18/08	29.98	332.50
		07/29/08	30.99	331.49
		12/29/08	28.96	333.52
		06/18/09	30.36	332.12
		11/17/09	31.12	331.36
		04/20/10	28.61	333.87
		12/20/10	29.84	332.64
		04/04/11	28.44	334.04
		12/21/11	29.34	333.14
		06/04/12	29.39	333.09
		12/30/13	30.09	332.39
MW-12	361.88 (24-39)	04/18/08	29.55	332.33
		07/29/08	30.49	331.39
		12/29/08	28.45	333.43
		06/18/09	29.94	331.94
		11/17/09	30.65	331.23
		04/20/10	28.17	333.71
		12/20/10	29.40	332.48
		04/04/11	27.93	333.95
		12/21/11	28.88	333.00
		06/04/12	28.93	332.95
		12/30/13	29.71	332.17
MW-13	366.91 (25-45)	04/21/08	32.77	334.14
		07/30/08	34.08	332.83
		12/29/08	32.54	334.37
		06/18/09	33.17	333.74
		11/17/09	34.33	332.58
		04/20/10	31.35	335.56
		12/20/10	32.71	334.20
		04/04/11	31.24	335.67
		12/21/11	31.36	335.55
		06/04/12	32.13	334.78
		12/30/13	PSH	PSH
MW-14	362.79 (23-38)	04/21/08	30.09	332.70
		07/30/08	31.14	331.65
		12/29/08	29.22	333.57
		06/18/09	30.51	332.28
		11/17/09	31.32	331.47
		04/20/10	28.74	334.05
		12/20/10	30.03	332.76
		04/04/11	28.52	334.27
		12/21/11	29.53	333.26
		06/04/12	29.49	333.30
		12/30/13	30.32	332.47
MW-15	362.36 (23.5-38.5)	04/21/08	29.91	332.65
		07/30/08	30.96	331.60
		12/29/08	28.80	333.56
		06/18/09	30.13	332.23
		11/17/09	30.92	331.44
		04/20/10	28.36	334.00
		12/20/10	29.64	332.72
		04/04/11	28.15	334.21
		12/21/11	29.14	333.22
		06/04/12	29.11	333.25
		12/30/13	29.95	332.41

Table 1

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Groundwater Elevation Data

11427 Woodside Avenue, Santee, California

Groundwater Monitoring Well	Wellhead Elevation (feet above msl) and Depth of Screen (feet below grade)	Date Measured	Depth to Groundwater (feet below TOC)	Groundwater Elevation (feet above msl)
MW-16	362.48 (24-39)	04/21/08	30.04	332.44
		07/30/08	31.02	331.46
		12/29/08	28.95	333.53
		06/18/09	30.47	332.01
		11/17/09	31.18	331.30
		04/20/10	28.66	333.82
		12/20/10	29.94	332.54
		04/04/11	28.41	334.07
		12/21/11	29.42	333.06
		06/04/12	29.41	333.07
		12/30/13	30.27	332.21
MW-17	367.97 (24.5-44.5)	04/21/08	34.97	333.00
		07/30/08	36.08	331.89
		12/29/08	34.34	333.63
		06/18/09	35.38	332.59
		11/17/09	36.23	331.74
		04/20/10	33.63	334.34
		12/20/10	34.93	333.04
		04/04/11	33.40	334.57
		12/21/11	34.45	333.52
		06/04/12	34.35	333.62
		12/30/13	PSH	PSH
MW-18	362.28 (24-39)	04/04/11	28.60	333.68
		12/21/11	29.62	332.66
		06/04/12	29.63	332.65
		12/30/13	30.50	331.78
MW-19	365.07 (26-41)	04/04/11	31.28	333.79
		12/21/11	32.28	332.79
		06/04/12	32.24	332.83
		12/30/13	33.08	331.99

Notes:

MSL = mean sea level

TOC = top of well casing

PSH = phase-separated hydrocarbons present in well, therefore groundwater elevation was not calculated

NM = well not measured

Wells were surveyed by Southern California Survey initially on April 26, 2002 and updated on March 28, 2008.

Table 2
Phase-Separated Hydrocarbon Monitoring Data
11427 Woodside Avenue, Santee, CA

Date	MW-1			MW-2			MW-3			MW-4			MW-10		
	DTP	DTW	PT	DTP	DTW	PT	DTP	DTW	PT	DTP	DTW	PT	DTP	DTW	PT
6/18/2009	NP	30.29	NP	NP	31.56	NP	NP	31.33	NP	NP	29.65	NP	NP	32.75	NP
9/4/2009	NP	31.10	NP	32.62	32.65	0.03	32.15	32.18	0.03	NP	30.51	NP	NM	NM	NM
9/18/2009	NP	31.16	NP	32.72	32.73	0.01	32.21	32.26	0.05	NP	30.57	NP	NM	NM	NM
10/2/2009	NP	31.20	NP	NP	32.79	NP	32.26	32.36	0.10	NP	30.61	NP	NM	NM	NM
10/16/2009	NP	31.23	NP	32.82	32.83	0.01	32.29	32.45	0.16	NP	30.64	NP	NM	NM	NM
10/29/2009	NP	31.24	NP	NP	32.90	NP	32.29	32.52	0.23	NP	30.63	NP	NM	NM	NM
11/17/2009	NP	31.15	NP	NP	32.86	NP	32.20	32.48	0.28	NP	30.58	NP	NP	33.97	NP
11/30/2009	NP	31.09	NP	NP	32.82	NP	32.10	32.41	0.31	NP	30.48	NP	NM	NM	NM
12/11/2009	NP	30.50	NP	NP	32.41	NP	31.64	31.80	0.16	NP	29.80	NP	NM	NM	NM
12/24/2009	NP	29.42	NP	NP	31.62	NP	NP	30.72	NP	NP	28.79	NP	NM	NM	NM
1/7/2010	NP	29.67	NP	NP	29.03	NP	31.78	31.79	0.01	NP	29.03	NP	NM	NM	NM
1/26/2010	NP	28.69	NP	NP	31.04	NP	NP	30.11	NP	NP	27.98	NP	NM	NM	NM
2/8/2010	NP	28.30	NP	NP	30.08	NP	NP	29.56*	NP	NP	27.68	NP	NM	NM	NM
2/19/2010	NP	28.07	NP	NP	29.32	NP	29.26	29.27	0.01	NP	27.46	NP	NM	NM	NM
3/5/2010	NP	27.83	NP	NP	28.94	NP	NP	29.07*	NP	NP	27.22	NP	NM	NM	NM
3/19/2010	NP	28.12	NP	NP	28.31	NP	NP	29.22	NP	NP	27.51	NP	NM	NM	NM
4/2/2010	NP	28.55	NP	NP	28.61	NP	NP	29.57	NP	NP	27.94	NP	NM	NM	NM
4/20/2010	NP	28.58	NP	NP	29.08	NP	NP	29.54	NP	NP	27.97	NP	NP	30.83	NP
12/20/2010	NP	29.80	NP	31.25	31.27	0.02	30.83	30.84	0.01	NP	29.22	NP	NP	32.10	NP
4/4/2011	NP	28.36	NP	NP	29.41	NP	NP	29.32	NP	NP	27.74	NP	NP	30.26	NP
12/21/2011	NP	29.36	NP	NP	30.93	NP	NP	30.41	NP	NP	28.73	NP	NP	31.64	NP
6/4/2012	NP	29.29	NP	NP	30.27	NP	NP	30.26	NP	NP	28.64	NP	31.07	33.41	2.34
12/3/2013	NP	30.13	NP	31.41	32.74	1.33	30.81	34.14	3.33	NP	29.41	NP	32.42	34.07	1.65

Notes: DTP = Depth to phase-separated hydrocarbons (PSH) below top of casing in feet
DTW = Depth to water below top of casing in feet
PT = PSH thickness in feet
NP = No PSH
* = PSH sheen
NM = Well not monitored

Table 3
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Groundwater Analytical Data for TPH and VOCs
11427 Woodside Avenue, Santee, California

Well Number	Sample Date	TPH	TPHg (µg/L)	TPHd (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Xylenes (µg/L)	MTBE (µg/L)	ETBE (µg/L)	TAME (µg/L)	TBA (µg/L)	DIPE (µg/L)
MW-1 (installed 5/11/88)	05/25/88	0.6	NA	NA	**0.7**	< 0.5	NA	< 0.5	NA	NA	NA	NA	NA
	03/10/98	NA	**2,500**	**910**	**340**	**200**	**18**	**240**	**190**	NA	NA	NA	NA
	05/18/98	NA	**704**	< 500	**326**	**89.5**	< 50.0	< 100	< 50.0	NA	NA	NA	NA
	04/05/00	NA	**1,800**	NA	**250**	**14**	**34**	**380**	**200**	NA	NA	NA	NA
	04/26/02	NA	**1,100**	**1,100**	**230**	**14**	**36**	**220**	**190**	< 40	< 40	**500**	< 40
	12/03/02	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	10/25/07	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	01/17/08	PSH	PSH	PSH	PSH	PSH	PSH	PSH	PSH	PSH	PSH	PSH	PSH
	04/18/08	NA	**2,800**	**980**	**370**	**6.6**	**170**	**227.8**	**610**	NA	NA	NA	NA
	07/28/08	NA	**420**	< 500	**57**	< 0.5	**19.0**	**15**	**55**	NA	NA	NA	NA
	12/29/08	NA	**440**	**720**	**57**	< 1.0	**30**	**26**	< 2.0	< 2.0	< 2.0	**27**	< 2.0
	06/18/09	NA	< 500	< 500	**210**	**1.0**	**38**	**17.7**	**220**	< 1.0	< 1.0	**140**	< 1.0
	11/17/09	NA	< 500	< 500	**4.4**	**0.6**	**2.5**	**1.1**	**1.7**	< 1.0	< 1.0	< 5.0	< 1.0
	04/20/10	NA	< 500	< 500	**42**	<0.5	**3.7**	**1.1**	**81**	< 1.0	< 1.0	**49**	< 1.0
	12/20/10	NA	< 500	< 500	**66**	<0.5	**35**	**4.6**	**34**	< 1.0	< 1.0	**15**	< 1.0
	04/04/11	NA	< 500	< 500	**78**	**1.3**	**9.8**	**10.4**	**52**	< 1.0	< 1.0	**40**	< 1.0
	12/21/11	NA	< 500	< 500	**130**	< 0.5	**19**	**1.0**	**14**	< 1.0	< 1.0	**59**	< 1.0
	06/05/12	NA	< 500	< 500	**13**	< 0.5	**0.8**	< 1.5	**3.0**	< 1.0	< 1.0	**10**	< 1.0
	12/30/13	NA	< 500	< 500	**42**	< 0.5	**0.8**	< 1.5	**1.1**	< 1.0	< 1.0	< 0.5	< 1.0
MW-2 (installed 5/12/88)	05/25/88	< 0.5	NA	NA	< 0.5	< 0.5	NA	< 0.5	NA	NA	NA	NA	NA
	03/10/98	NA	**330**	< 500	**20**	**3.3**	**25**	**47**	**53**	NA	NA	NA	NA
	04/04/00	NA	**7,600**	NA	**7.6**	**3.3**	**30**	**59**	**3,500**	NA	NA	NA	NA
	04/26/02	NA	**6,000**	**160,000**	**9.2**	**3.9**	**16**	**17**	**3,100**	< 40	< 40	**500**	< 40
	12/03/02	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	10/25/07	PSH	PSH	PSH	PSH	PSH	PSH	PSH	PSH	PSH	PSH	PSH	PSH
	01/17/08	PSH	PSH	PSH	PSH	PSH	PSH	PSH	PSH	PSH	PSH	PSH	PSH
	04/18/08	NA	**510**	**6,400**	< 10	< 10	< 10	< 30	**1,300**	NA	NA	NA	NA
	07/28/08	PSH	PSH	PSH	PSH	PSH	PSH	PSH	PSH	PSH	PSH	PSH	PSH
	12/30/08	NA	**440**	**22,000**	< 2.5	< 2.5	**4.0**	< 10	< 5.0	< 5.0	< 5.0	**2,100**	< 5.0
	06/19/09	NA	< 500	< 500	< 0.5	< 0.5	**4.9**	< 1.5	**8.3**	< 1.0	< 1.0	**2,000**	< 1.0
	11/18/09	NA	**2,300**	< 500	**1.0**	**0.7**	**3.4**	< 1.5	**1.9**	< 1.0	< 1.0	**1,100**	< 1.0
	04/21/10	NA	< 500	**7,400**	< 0.5	< 0.5	**3.7**	< 1.5	**20**	< 1.0	< 1.0	**170**	< 1.0
	12/20/10	PSH	PSH	PSH	PSH	PSH	PSH	PSH	PSH	PSH	PSH	PSH	PSH
	04/06/11	NA	< 500	**2,600**	< 0.5	< 0.5	< 0.5	< 1.5	**13**	< 1.0	< 1.0	**490**	< 1.0
	12/22/11	NA	< 500	**3,600**	< 0.5	< 0.5	< 0.5	< 1.5	**3.5**	< 1.0	< 1.0	**1,200**	< 1.0
	06/05/12	NA	< 500	**5,100**	**0.6**	**1.3**	**2.3**	**11.6**	**8.0**	< 1.0	< 1.0	**720**	< 1.0
	12/30/13	PSH	PSH	PSH	PSH	PSH	PSH	PSH	PSH	PSH	PSH	PSH	PSH

Table 3
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Groundwater Analytical Data for TPH and VOCs
11427 Woodside Avenue, Santee, California

Well Number	Sample Date	TPH	TPHg (µg/L)	TPHd (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Xylenes (µg/L)	MTBE (µg/L)	ETBE (µg/L)	TAME (µg/L)	TBA (µg/L)	DIPE (µg/L)
MW-3 (installed 5/13/88)	05/25/88	**140**	NA	NA	**19**	**3.4**	NA	**1.3**	NA	NA	NA	NA	NA
	03/10/98	NA	**2,300**	**5,100**	**3.6**	**0.7**	**0.7**	**4.1**	**2,000**	NA	NA	NA	NA
	05/18/98	NA	**115**	< 500	**98.5**	< 12.5	< 12.5	< 25.0	**226**	NA	NA	NA	NA
	04/05/00	NA	**420**	NA	**18**	**1.7**	**3.9**	**12**	**230**	NA	NA	NA	NA
	04/26/02	NA	**9,700**	**190,000**	**92**	< 3.0	**56**	**62**	**590**	< 100	< 100	< 1,200	< 100
	12/03/02	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	10/25/07	PSH	PSH	PSH	PSH	PSH	PSH	PSH	PSH	PSH	PSH	PSH	PSH
	01/17/08	PSH	PSH	PSH	PSH	PSH	PSH	PSH	PSH	PSH	PSH	PSH	PSH
	04/18/08	NA	< 500	**1,800**	**2.8**	< 1.0	< 1.0	< 3.0	**99**	NA	NA	NA	NA
	07/28/08	PSH	PSH	PSH	PSH	PSH	PSH	PSH	PSH	PSH	PSH	PSH	PSH
	12/30/08	NA	**230**	**3,200**	**1.7**	< 0.5	**0.61**	< 2.0	**110**	< 1.0	< 1.0	**59**	< 1.0
	06/19/09	NA	< 500	< 500	**0.5**	< 0.5	< 0.5	< 1.5	**77**	< 1.0	< 1.0	**400**	< 1.0
	11/17/09	PSH	PSH	PSH	PSH	PSH	PSH	PSH	PSH	PSH	PSH	PSH	PSH
	04/21/10	NA	< 500	**5,900**	**1.3**	< 0.5	**1.2**	< 1.5	**90**	< 1.0	< 1.0	**43**	< 1.0
	12/20/10	PSH	PSH	PSH	PSH	PSH	PSH	PSH	PSH	PSH	PSH	PSH	PSH
	04/06/11	NA	< 500	< 500	< 0.5	< 0.5	< 0.5	< 1.5	**96**	< 1.0	< 1.0	**9.5**	< 1.0
	12/22/11	NA	< 500	< 500	< 0.5	< 0.5	< 0.5	< 1.5	**64**	< 1.0	< 1.0	**7.0**	< 1.0
	06/06/12	NA	< 500	< 500	< 0.5	< 0.5	< 0.5	< 1.5	**78**	< 1.0	< 1.0	**15**	< 1.0
	12/30/13	PSH	PSH	PSH	PSH	PSH	PSH	PSH	PSH	PSH	PSH	PSH	PSH
MW-4 (installed 5/13/88)	05/25/88	**6.3**	NA	NA	< 0.5	< 0.5	NA	< 0.5	NA	NA	NA	NA	NA
	03/10/98	NA	**9,600**	**3,700**	**2,400**	250	**50**	430	**4,100**	NA	NA	NA	NA
	04/04/00	NA	**8,700**	NA	**1,800**	< 12	**110**	**790**	**900**	NA	NA	NA	NA
	04/26/02	NA	**15,000**	**95,000**	**4,500**	**150**	**450**	**1,900**	**1,500**	< 100	< 100	< 1,200	< 100
	12/03/02	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	10/25/07	PSH	PSH	PSH	PSH	PSH	PSH	PSH	PSH	PSH	PSH	PSH	PSH
	01/17/08	PSH	PSH	PSH	PSH	PSH	PSH	PSH	PSH	PSH	PSH	PSH	PSH
	04/18/08	NA	**2,000**	**4,500**	**380**	**2.9**	**95**	**41.0**	**110.0**	NA	NA	NA	NA
	07/28/08	NA	**2,100**	**1,300**	**410**	< 2.5	**72.0**	< 10	**70**	NA	NA	NA	NA
	12/30/08	NA	**4,900**	**3,400**	**88**	< 10	**20**	**53**	< 20	< 20	< 20	< 200	< 20
	06/18/09	NA	< 500	< 500	**370**	**2.0**	**58**	**11.6**	**89**	< 1.0	< 1.0	**24**	< 1.0
	11/18/09	NA	**3,300**	**2,600**	**460**	**11**	**130**	**70.4**	**140**	< 1.0	< 1.0	< 5.0	< 1.0
	04/21/10	NA	< 500	< 500	**34**	**0.5**	**4.7**	**1.0**	**33**	< 1.0	< 1.0	< 5.0	< 1.0
	12/23/10	NA	< 500	< 500	**51**	**1.2**	**20**	**4.7**	**57**	< 1.0	< 1.0	< 5.0	< 1.0
	04/05/11	NA	< 500	**860**	**43**	**2.7**	**11**	**8.3**	**29**	< 1.0	< 1.0	< 5.0	< 1.0
	12/22/11	NA	< 500	**820**	**44**	**1.9**	**15**	**6.0**	**48**	< 1.0	< 1.0	< 5.0	< 1.0
	06/04/12	NA	< 500	< 500	**39**	**1.2**	**21**	**1.3**	**42**	< 1.0	< 1.0	< 5.0	< 1.0
	12/30/13	NA	< 500	< 500	**29**	**0.9**	**53**	**1.3**	**19**	< 1.0	< 1.0	< 5.0	< 1.0

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Groundwater Analytical Data for TPH and VOCs
11427 Woodside Avenue, Santee, California

Well Number	Sample Date	TPH	TPHg (µg/L)	TPHd (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Xylenes (µg/L)	MTBE (µg/L)	ETBE (µg/L)	TAME (µg/L)	TBA (µg/L)	DIPE (µg/L)
MW-5 (instalation unknown)	03/10/98	NA	**730**	**1,700**	**20**	**0.6**	< 0.30	**39**	**92**	NA	NA	NA	NA
	04/26/02	NA	**500**	**2,000**	**7.3**	**1.7**	**2.8**	**6.8**	**230**	NA	NA	NA	NA
	12/03/02	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	10/25/07	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	01/17/08	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	04/18/08	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	07/28/08	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	12/30/08	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	Well Destroyed												
MW-6 (installed 2/26/01)	04/26/02	NA	**25,000**	**9,100**	**5,300**	**1,400**	**1,200**	**5,900**	**850**	NA	NA	NA	NA
	12/03/02	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	10/25/07	NA	**570**	< 500	**21**	**0.7**	**48**	**14**	**17**	NA	NA	NA	NA
	01/17/08	NA	**1,400**	< 500	**9.6**	**0.6**	**4.8**	**8.5**	**3.5**	NA	NA	NA	NA
	04/18/08	NA	**2,000**	**750**	**500**	< 20	**210**	**150**	**180**	NA	NA	NA	NA
	07/28/08	NA	**6,900**	**980**	**720**	**7.6**	**410**	**540**	**98**	NA	NA	NA	NA
	12/30/08	NA	**950**	**650**	**55**	< 1.0	**34**	**30**	< 2.0	< 2.0	< 2.0	< 20	< 2.0
	06/19/09	NA	< 500	< 500	**350**	**3.1**	**250**	**182.3**	**54**	< 1.0	< 1.0	**22**	< 1.0
	11/18/09	NA	< 500	< 500	**90**	**2.0**	**75**	**73.0**	**25**	< 1.0	< 1.0	< 5.0	< 1.0
	04/21/10	NA	**1,300**	**1,500**	**750**	**4.1**	**320**	**29.7**	**110**	< 1.0	< 1.0	< 5.0	< 1.0
	12/20/10	NA	< 500	< 500	**110**	< 1.0	**16**	**5.0**	**12**	< 1.0	< 1.0	< 5.0	< 1.0
	04/05/11	NA	**1,200**	**6,800**	**990**	**5.7**	**550**	**28.8**	**160**	< 1.0	< 1.0	< 5.0	< 1.0
	12/22/11	NA	< 500	< 500	**130**	< 5.0	< 5.0	< 15	**29**	< 10	< 10	< 50	< 10
	06/05/12	NA	**4,300**	**4,000**	**710**	**7.6**	**660**	**91**	**150**	< 10	< 10	< 50	< 10
	12/30/13	NA	< 500	< 500	**20**	<0.5	**27**	**2.4**	**6.5**	< 1.0	< 1.0	< 5.0	< 1.0
MW-7 (installed 2/26/01)	04/26/02	NA	**1,900**	**13,000**	**3.7**	**1.1**	**4**	**7.9**	**19**	NA	NA	NA	NA
	12/03/02	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	10/25/07	NA	< 500	< 500	< 0.5	< 0.5	< 0.5	< 1.5	< 1.0	NA	NA	NA	NA
	01/17/08	NA	< 500	< 500	< 0.5	< 0.5	< 0.5	< 1.5	< 1.0	NA	NA	NA	NA
	04/21/08	NA	< 500	< 500	< 0.5	< 0.5	< 0.5	< 1.5	< 1.0	NA	NA	NA	NA
	07/29/08	NA	< 50	< 500	< 0.5	< 0.5	< 0.5	< 1.5	< 1.0	NA	NA	NA	NA
	12/30/08	NA	< 50	< 500	< 1.0	< 1.0	< 1.0	< 3.0	< 2.0	< 2.0	< 2.0	< 20	< 2.0
	06/18/09	NA	< 500	< 500	< 0.5	< 0.5	< 0.5	< 1.5	< 1.0	< 1.0	< 1.0	**15**	< 1.0
	11/17/09	NA	< 500	< 500	< 0.5	< 0.5	< 0.5	< 1.5	< 1.0	< 1.0	< 1.0	**8.7**	< 1.0
	04/20/10	NA	< 500	< 500	< 0.5	< 0.5	< 0.5	< 1.5	< 1.0	< 1.0	< 1.0	< 5.0	< 1.0
	12/21/10	NA	< 500	< 500	< 0.5	< 0.5	< 0.5	< 1.5	< 1.0	< 1.0	< 1.0	< 5.0	< 1.0
	04/05/11	NA	< 500	< 500	**0.8**	< 0.5	**0.6**	**2.8**	< 1.0	< 1.0	< 1.0	< 5.0	< 1.0
	12/22/11	NA	< 500	< 500	< 0.5	< 0.5	< 0.5	< 1.5	< 1.0	< 1.0	< 1.0	< 5.0	< 1.0
	06/04/12	NA	< 500	< 500	< 0.5	< 0.5	< 0.5	< 1.5	< 1.0	< 1.0	< 1.0	< 5.0	< 1.0
	12/30/13	NA	< 500	< 500	< 0.5	< 0.5	< 0.5	< 1.5	< 1.0	< 1.0	< 1.0	< 5.0	< 1.0

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Groundwater Analytical Data for TPH and VOCs
11427 Woodside Avenue, Santee, California

Well Number	Sample Date	TPH	TPHg (µg/L)	TPHd (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Xylenes (µg/L)	MTBE (µg/L)	ETBE (µg/L)	TAME (µg/L)	TBA (µg/L)	DIPE (µg/L)
MW-8 (installed 4/19/02)	04/26/02	NA	**4,800**	**6,500**	**50**	**9.2**	**170**	**210**	**64**	NA	NA	NA	NA
	12/03/02	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	10/26/07	NA	**1,100**	**790**	< 0.5	< 0.5	**23**	< 0.5	< 1.0	NA	NA	NA	NA
	01/17/08	NA	**1,100**	**570**	< 0.5	< 0.5	**27**	< 1.5	< 1.0	NA	NA	NA	NA
	04/21/08	NA	**980**	**1,200**	< 0.5	< 0.5	**23**	< 1.5	< 1.0	NA	NA	NA	NA
	07/29/08	NA	**660**	**2,100**	< 0.5	< 0.5	**15**	< 2.0	< 1.0	NA	NA	NA	NA
	12/30/08	NA	**890**	**3,000**	< 1.0	< 1.0	**16**	< 4.0	< 2.0	< 2.0	< 2.0	< 20	< 2.0
	06/18/09	NA	< 500	< 500	< 0.5	< 0.5	**13**	< 1.5	< 1.0	< 1.0	< 1.0	**13**	< 1.0
	11/17/09	NA	< 500	< 500	< 0.5	**0.7**	**10**	< 1.5	< 1.0	< 1.0	< 1.0	< 5.0	< 1.0
	04/20/10	NA	< 500	< 500	< 0.5	< 0.5	**6.1**	< 1.5	< 1.0	< 1.0	< 1.0	< 5.0	< 1.0
	12/23/10	NA	< 500	< 500	< 0.5	< 0.5	**1.9**	< 1.5	< 1.0	< 1.0	< 1.0	< 5.0	< 1.0
	04/05/11	NA	< 500	< 500	< 0.5	< 0.5	**5.1**	< 1.5	< 1.0	< 1.0	< 1.0	< 5.0	< 1.0
	12/21/11	NA	< 500	< 500	< 0.5	< 0.5	**4.3**	< 1.5	< 1.0	< 1.0	< 1.0	< 5.0	< 1.0
	06/05/12	NA	< 500	< 500	< 0.5	< 0.5	**4.6**	< 1.5	< 1.0	< 1.0	< 1.0	< 5.0	< 1.0
	12/30/13	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW-9 (installed 2/4/08)	04/18/08	NA	**1,700**	**560**	**740**	**250**	**270**	**1,010**	**170**	NA	NA	NA	NA
	07/28/08	NA	**1,100**	**570**	**230**	**27**	**27**	**65**	**74**	NA	NA	NA	NA
	12/30/08	NA	**1,300**	< 500	**140**	**10**	**71**	**200**	**21**	< 5.0	< 5.0	< 50	< 5.0
	06/19/09	NA	< 500	< 500	**50**	**6.1**	**34**	**49.3**	**55**	< 1.0	< 1.0	**34**	< 1.0
	11/18/09	NA	< 500	< 500	**62**	**8.9**	**51**	**89**	**67**	< 1.0	< 1.0	< 5.0	< 1.0
	04/21/10	NA	< 500	< 500	**170**	**28**	**86**	**164**	**64**	< 1.0	< 1.0	< 5.0	< 1.0
	12/20/10	NA	< 500	< 500	**18**	**2.9**	**22**	**31.3**	**40**	< 1.0	< 1.0	< 5.0	< 1.0
	04/04/11	NA	**1,300**	**500**	**74**	**31**	**84**	**146**	**43**	< 1.0	< 1.0	< 5.0	< 1.0
	12/21/11	NA	**3,800**	< 500	**16**	**3.6**	**22**	**25.3**	**5.5**	< 1.0	< 1.0	< 5.0	< 1.0
	06/05/12	NA	< 500	< 500	**8.2**	**4.5**	**10**	**13.8**	**6.3**	< 1.0	< 1.0	< 5.0	< 1.0
	12/30/13	NA	< 500	< 500	**11**	**0.8**	**25**	**13**	**5**	< 1.0	< 1.0	< 5.0	< 1.0
MW-10 (installed 2/5/08)	04/18/08	NA	< 500	< 500	< 0.5	< 0.5	< 0.5	< 1.5	**4.2**	NA	NA	NA	NA
	07/29/08	NA	< 50	< 500	< 0.5	< 0.5	< 0.5	< 2.0	**1.0**	NA	NA	NA	NA
	12/30/08	NA	< 50	< 500	< 0.5	< 0.5	< 0.5	< 2.0	< 1.0	< 1.0	< 1.0	< 10	< 1.0
	06/18/09	NA	< 500	< 500	< 0.5	< 0.5	< 0.5	< 1.5	**1.8**	< 1.0	< 1.0	**20**	< 1.0
	11/17/09	NA	< 500	< 500	< 0.5	**0.5**	< 0.5	< 1.5	**6.3**	< 1.0	< 1.0	**6.3**	< 1.0
	04/20/10	NA	< 500	< 500	< 0.5	< 0.5	< 0.5	< 1.5	**2.0**	< 1.0	< 1.0	< 5.0	< 1.0
	12/20/10	NA	< 500	< 500	< 0.5	< 0.5	< 0.5	< 1.5	**1.4**	< 1.0	< 1.0	< 5.0	< 1.0
	04/05/11	NA	< 500	< 500	< 0.5	< 0.5	< 0.5	< 1.5	< 1.0	< 1.0	< 1.0	< 5.0	< 1.0
	12/22/11	NA	< 500	< 500	< 0.5	< 0.5	< 0.5	< 1.5	< 1.0	< 1.0	< 1.0	< 5.0	< 1.0
	06/04/12	PSH	PSH	PSH	PSH	PSH	PSH	PSH	PSH	PSH	PSH	PSH	PSH
	12/30/13	PSH	PSH	PSH	PSH	PSH	PSH	PSH	PSH	PSH	PSH	PSH	PSH

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Groundwater Analytical Data for TPH and VOCs
11427 Woodside Avenue, Santee, California

Well Number	Sample Date	TPH	TPHg (µg/L)	TPHd (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Xylenes (µg/L)	MTBE (µg/L)	ETBE (µg/L)	TAME (µg/L)	TBA (µg/L)	DIPE (µg/L)
MW-11 (installed 2/8/08)	04/18/08	NA	**1,800**	< 500	**22**	< 1.0	**170**	< 3.0	< 2.0	NA	NA	NA	NA
	07/29/08	NA	**690**	**720**	**4.2**	**0.81**	**39**	< 2.0	< 1.0	NA	NA	NA	NA
	12/31/08	NA	**2,000**	**1,600**	**52**	**6.8**	**230**	**11**	< 5.0	< 5.0	< 5.0	< 50	< 5.0
	06/18/09	NA	< 500	< 500	**5.9**	**0.6**	**19**	< 1.5	**1.6**	< 1.0	< 1.0	**12**	< 1.0
	11/17/09	NA	**900**	< 500	**6.5**	**1.5**	**5.5**	**1.2**	**2.3**	< 1.0	< 1.0	< 5.0	< 1.0
	04/20/10	NA	< 500	< 500	**3.1**	< 0.5	**0.7**	< 1.5	**1.0**	< 1.0	< 1.0	< 5.0	< 1.0
	12/21/10	NA	< 500	< 500	**28**	**4.1**	**22**	**9.6**	**1.6**	< 1.0	< 1.0	< 5.0	< 1.0
	04/04/11	NA	< 500	**600**	**9.3**	**0.7**	**5.7**	< 1.5	**1.7**	< 1.0	< 1.0	< 5.0	< 1.0
	12/21/11	NA	**910**	**1,400**	**16**	**1.2**	**27**	**2.8**	**1.1**	< 1.0	< 1.0	< 5.0	< 1.0
	06/04/12	NA	**1,700**	**1,600**	**13**	**2.5**	**16**	**13.4**	< 1.0	< 1.0	< 1.0	< 5.0	< 1.0
	12/30/13	NA	**2,000**	**730**	**15**	**1.4**	**39**	**5.6**	< 1.0	< 1.0	< 1.0	< 5.0	< 1.0
MW-12 (installed 2/8/08)	04/18/08	NA	< 500	< 500	< 1.0	< 1.0	**2.0**	< 3.0	**65**	NA	NA	NA	NA
	07/29/08	NA	< 50	< 500	< 0.5	< 0.5	< 0.5	< 2.0	**11**	NA	NA	NA	NA
	12/31/08	NA	< 50	< 500	< 0.5	< 0.5	< 0.5	< 2.0	**16**	< 1.0	< 1.0	< 10	< 1.0
	06/18/09	NA	< 500	< 500	< 0.5	< 0.5	< 0.5	< 1.5	**14**	< 1.0	< 1.0	**32**	< 1.0
	11/17/09	NA	< 500	< 500	< 0.5	< 0.5	< 0.5	< 1.5	**2.5**	< 1.0	< 1.0	< 5.0	< 1.0
	04/20/10	NA	< 500	< 500	**2.7**	< 0.5	< 0.5	< 1.5	**4.6**	< 1.0	< 1.0	< 5.0	< 1.0
	12/23/10	NA	< 500	< 500	**12**	**0.6**	**0.7**	**3.6**	**4.1**	< 1.0	< 1.0	< 5.0	< 1.0
	04/04/11	NA	< 500	< 500	< 0.5	< 0.5	< 0.5	< 1.5	**3.2**	< 1.0	< 1.0	< 5.0	< 1.0
	12/21/11	NA	< 500	< 500	< 0.5	< 0.5	< 0.5	< 1.5	**4.9**	< 1.0	< 1.0	< 5.0	< 1.0
	06/04/12	NA	< 500	< 500	**3.3**	**0.7**	< 0.5	< 1.5	< 1.0	< 1.0	< 1.0	< 5.0	< 1.0
	12/30/13	NA	< 500	< 500	**9.6**	**0.5**	**0.8**	< 1.5	**9.2**	< 1.0	< 1.0	< 5.0	< 1.0
MW-13 (installed 2/18/08)	04/21/08	NA	< 500	< 500	< 0.5	< 0.5	< 0.5	< 2.0	< 1.0	NA	NA	NA	NA
	07/30/08	NA	< 50	< 500	< 0.5	< 0.5	< 0.5	< 2.0	< 1.0	NA	NA	NA	NA
	12/30/08	NA	< 50	< 500	< 0.5	< 0.5	< 0.5	< 2.0	< 1.0	< 1.0	< 1.0	< 10	< 1.0
	06/18/09	NA	< 500	< 500	< 0.5	< 0.5	< 0.5	< 1.5	< 1.0	< 1.0	< 1.0	**11**	< 1.0
	11/17/09	NA	< 500	< 500	< 0.5	**0.6**	< 0.5	< 1.5	< 1.0	< 1.0	< 1.0	< 5.0	< 1.0
	04/20/10	NA	< 500	< 500	< 0.5	< 0.5	< 0.5	< 1.5	< 1.0	< 1.0	< 1.0	< 5.0	< 1.0
	12/23/10	NA	< 500	< 500	< 0.5	< 0.5	< 0.5	< 1.5	< 1.0	< 1.0	< 1.0	< 5.0	< 1.0
	04/05/11	NA	< 500	< 500	< 0.5	< 0.5	**1.0**	< 1.5	< 1.0	< 1.0	< 1.0	< 5.0	< 1.0
	12/21/11	NA	< 500	< 500	< 0.5	< 0.5	< 0.5	< 1.5	< 1.0	< 1.0	< 1.0	< 5.0	< 1.0
	06/04/12	NA	< 500	< 500	< 0.5	< 0.5	< 0.5	< 1.5	< 1.0	< 1.0	< 1.0	< 5.0	< 1.0
	12/30/13	PSH	PSH	PSH	PSH	PSH	PSH	PSH	PSH	PSH	PSH	PSH	PSH

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Groundwater Analytical Data for TPH and VOCs
11427 Woodside Avenue, Santee, California

Well Number	Sample Date	TPH	TPHg (µg/L)	TPHd (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Xylenes (µg/L)	MTBE (µg/L)	ETBE (µg/L)	TAME (µg/L)	TBA (µg/L)	DIPE (µg/L)
MW-14 (installed 2/18/08)	04/21/08	NA	**27,000**	**3,800**	**5,300**	**290**	**2,400**	**6,460**	**650**	NA	NA	NA	NA
	07/30/08	NA	**25,000**	**12,000**	**6,600**	**170**	**2,400**	**3,700**	**270**	NA	NA	NA	NA
	12/31/08	NA	**18,000**	**1,000**	**3,700**	< 50	**1,500**	**2,000**	**570**	< 100	< 100	< 1,000	< 100
	06/19/09	NA	< 500	< 500	**3,600**	**160**	**1,900**	**2,990**	**540**	< 20	< 20	**110**	< 20
	11/18/09	NA	**6,900**	< 500	**1,600**	**54**	**1,000**	**944**	**510**	< 1.0	< 1.0	< 5.0	< 1.0
	04/20/10	NA	**3,700**	< 500	**2,600**	**210**	**1,700**	**3,650**	**670**	< 20	< 20	< 100	< 20
	12/20/10	NA	**5,500**	**2,300**	**1,900**	**98**	**1,400**	**2,180**	**670**	< 40	< 40	< 200	< 40
	04/05/11	NA	**14,000**	**2,900**	**2,400**	**110**	**1,500**	**2,759**	**770**	< 40	< 40	< 200	< 40
	12/22/11	NA	**17,000**	**6,000**	**2,300**	< 50	**1,800**	**2,600**	**340**	< 100	< 100	< 500	< 100
	06/05/12	NA	**6,000**	**2,600**	**3,000**	**120**	**2,500**	**3,751**	**390**	< 100	< 100	< 500	< 100
	12/30/13	NA	**25,000**	**2,200**	**1,800**	59	**1,700**	**1,900**	< 100	< 100	< 100	< 500	< 100
MW-15 (installed 2/19/08)	04/21/08	NA	**32,000**	**3,500**	**2,400**	**510**	**4,100**	**13,380**	< 200	NA	NA	NA	NA
	07/30/08	NA	**46,000**	**17,000**	**2,100**	**250**	**3,700**	**10,000**	< 50	NA	NA	NA	NA
	12/31/08	NA	**8,400**	**2,100**	**620**	**12**	**1,500**	**160**	< 20	< 20	< 20	< 200	< 20
	06/19/09	NA	< 500	< 500	**820**	**250**	**2,800**	**6,930**	**35**	< 20	< 20	< 100	< 20
	11/18/09	NA	**19,000**	< 500	**910**	**77**	**3,700**	**4,308.9**	**19**	< 10	< 10	< 50	< 10
	04/20/10	NA	**1,800**	**1,500**	**1,100**	**130**	**3,700**	**10,090**	< 100	< 100	< 100	< 500	< 100
	12/21/10	NA	**7,100**	**4,800**	**800**	**63**	**2,600**	**2,800**	< 100	< 100	< 100	< 500	< 100
	04/05/11	NA	**21,000**	**8,400**	**990**	**120**	**3,000**	**7,180**	< 100	< 100	< 100	< 500	< 100
	12/22/11	NA	**1,200**	**720**	**450**	< 50	**580**	**810**	< 100	< 100	< 100	< 500	< 100
	06/06/12	NA	**44,000**	**8,200**	**1,300**	**72**	**3,800**	**6,790**	< 100	< 100	< 100	< 500	< 100
	12/30/13	NA	**26,000**	**3,500**	**350**	< 50	**2,800**	**3,400**	< 100	< 100	< 100	< 500	< 100
MW-16 (installed 2/16/08)	04/21/08	NA	< 500	< 500	**53**	< 2.5	**77**	< 7.5	**110**	NA	NA	NA	NA
	07/30/08	NA	**1,300**	**780**	**110**	**1.7**	**210**	< 4.0	**160**	NA	NA	NA	NA
	12/31/08	NA	**2,500**	**790**	**470**	**6**	**390**	< 20	< 10	< 10	< 10	< 100	< 10
	06/19/09	NA	< 500	< 500	**120**	**16**	**220**	**33**	**100**	< 20	< 20	**170**	< 20
	11/18/09	NA	**570**	< 500	**110**	**2.5**	**65**	**10.5**	**73**	< 1.0	< 1.0	< 5.0	< 1.0
	04/20/10	NA	< 500	< 500	< 10	< 10	< 10	< 30	**33**	< 20	< 20	< 100	< 20
	12/21/10	NA	< 500	< 500	**3.9**	< 1.0	< 1.0	< 1.5	**16**	< 1.0	< 1.0	< 5.0	< 1.0
	04/04/11	NA	< 500	**570**	**11**	**0.7**	**60**	< 1.5	**26**	< 1.0	< 1.0	< 5.0	< 1.0
	12/21/11	NA	< 500	**770**	**10**	< 0.5	**53**	**2.8**	**10**	< 1.0	< 1.0	< 5.0	< 1.0
	06/04/12	NA	< 500	**640**	**32**	**0.9**	**24**	**3.5**	**16**	< 1.0	< 1.0	< 5.0	< 1.0
	12/30/13	NA	< 500	< 500	**7.2**	**0.5**	<0.5	**3.4**	**5.3**	<1.0	<1.0	**37**	<1.0

Table 3
(Page 7 of 7)
Groundwater Analytical Data for TPH and VOCs
11427 Woodside Avenue, Santee, California

Well Number	Sample Date	TPH	TPHg (µg/L)	TPHd (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Xylenes (µg/L)	MTBE (µg/L)	ETBE (µg/L)	TAME (µg/L)	TBA (µg/L)	DIPE (µg/L)
MW-17 (installed 2/19/08)	04/21/08	NA	**990**	**3,100**	< 0.5	< 0.5	< 0.5	< 1.5	< 1.0	NA	NA	NA	NA
	07/30/08	NA	**780**	**11,000**	< 5.0	< 5.0	< 5.0	< 1.5	< 1.0	NA	NA	NA	NA
	12/30/08	NA	**520**	**55,000**	< 5.0	< 5.0	< 5.0	< 20	< 10	< 10	< 10	< 100	< 10
	06/19/09	NA	**1,600**	**730**	< 0.5	**0.7**	< 0.5	< 1.5	**2.4**	< 1.0	< 1.0	**15**	< 1.0
	11/17/09	NA	**550**	< 500	**0.5**	< 0.5	**1.9**	**2.4**	< 1.0	< 1.0	< 1.0	< 5.0	< 1.0
	04/20/10	NA	< 500	< 500	**0.6**	< 0.5	< 0.5	< 1.5	**29**	< 1.0	< 1.0	**35**	< 1.0
	12/20/10	NA	< 500	< 500	< 0.5	< 0.5	< 0.5	< 1.5	**2.9**	< 1.0	< 1.0	< 5.0	< 1.0
	04/05/11	NA	< 500	< 500	< 0.5	< 0.5	< 0.5	< 1.5	**1.9**	< 1.0	< 1.0	< 5.0	< 1.0
	12/22/11	NA	< 500	< 500	< 0.5	< 0.5	< 0.5	< 1.5	**1.0**	< 1.0	< 1.0	< 5.0	< 1.0
	06/05/12	NA	< 500	< 500	< 0.5	< 0.5	< 0.5	< 1.5	**1.3**	< 1.0	< 1.0	< 5.0	< 1.0
	12/30/13	PSH	PSH	PSH	PSH	PSH	PSH	PSH	PSH	PSH	PSH	PSH	PSH
MW-18 (installed 3/23/11)	04/04/11	NA	**530**	< 500	**0.5**	< 0.5	**0.5**	< 1.5	< 1.0	< 1.0	< 1.0	< 5.0	< 1.0
	12/21/11	NA	< 500	< 500	< 0.5	< 0.5	< 0.5	< 1.5	< 1.0	< 1.0	< 1.0	< 5.0	< 1.0
	06/04/12	NA	< 500	< 500	< 0.5	< 0.5	< 0.5	< 1.5	< 1.0	< 1.0	< 1.0	< 5.0	< 1.0
	12/30/13	NA	< 500	< 500	< 0.5	< 0.5	< 0.5	< 1.5	< 1.0	< 1.0	< 1.0	< 5.0	< 1.0
MW-19 (installed 3/23/11)	04/04/11	NA	**55,000**	**6,100**	**640**	**2,600**	**4,100**	**17,200**	< 100	< 100	< 100	< 500	< 100
	12/22/11	NA	**35,000**	**15,000**	**650**	**1,500**	**3,300**	**6,700**	< 100	< 100	< 100	< 500	< 100
	06/05/12	NA	**22,000**	**6,000**	**410**	**870**	**2,400**	**4,800**	< 100	< 100	< 100	< 500	< 100
	12/30/13	NA	**43,000**	**2,300**	**360**	**370**	**2,900**	**5,400**	< 100	< 100	< 100	< 500	< 100

Notes:

Groundwater samples collected by SCS Engineers from June 2009 to present.

Groundwater samples collected by Petra Geotechnical, Inc. from October 25, 2007 to December 31, 2008.

Groundwater samples collected by EnecoTech Southwest, Inc. from May 25, 1988 to December 3, 2002.

Results presented in micrograms per liter (µg/L).

Samples were analyzed for gasoline-range (TPHg) and diesel-range (TPHd) total petroleum hydrocarbons in general accordance with CA DHS LUFT Method; and benzene, toluene, ethylbenzene, and xylenes (BTEX), methyl tertiary butyl ether (MTBE), di-isopropyl ether (DIPE), ethyl-t-butyl ether (ETBE), tert-amyl methyl ether (TAME), and t-butanol (TBA) in general accordance with EPA Method 8260B.

< indicates not reported at a concentration above laboratory detection limit, and bold font indicates concentrations above the laboratory reporting limit.

NS indicates well not sampled.

NA indicates not analyzed for particular constituent of concern.

* indicates samples were analyzed by EPA Method 418.1 for total extractable hydrocarbons.

PSH = phase-separated hydrocarbons

Table 4
(Page 1 of 1)
RNA Analytical Results
11427 Woodside Avenue, Santee, California

Sample Number	Date Sampled	Conductivity (µS/cm3)	pH	Dissolved Oxygen (mg/L)	Redox Potential (mV)	Total Iron (mg/L)	Ferric Iron (mg/L)	Iron (II) (mg/L)	Nitrate as N (mg/L)	Sulfate (mg/L)	Total Manganese (mg/L)	Ammonia (mg/L)	Phosphate (mg/L)	Carbon Dioxide (mg/L)	Methane (µg/L)
MW-6	12/30/2013	**1.89***	**7.16**	**2.91**	**110**	**2.67**	**2.67**	< 0.10	**8.3**	**270**	**0.569**	**0.17**	< 0.10	**67**	**102**
MW-7	12/30/2013	**1.78***	**6.89**	**2.98**	**120**	**1.62**	**1.62**	< 0.10	**15**	**230**	**0.893**	**0.17**	**0.13**	**100**	< 1
MW-14	12/30/2013	**1.51***	**6.67**	**1.72**	**-160**	**20.0**	**9.6**	**10.4**	< 0.10	**22**	**1.64**	**0.22**	< 0.10	**240**	**20.0**
MW-18	12/30/2013	**1.39***	**6.81**	**6.36**	**85**	**36.8**	**36.8**	< 0.10	**12**	**290**	**0.522**	**0.11**	< 0.10	**93**	**1.37**

Notes:

< Not reported at concentrations greater than the indicated analytical method reporting limit.

µS/cm3 microsiemens per centimeter

µg/L micrograms per liter

mg/L milligrams per liter

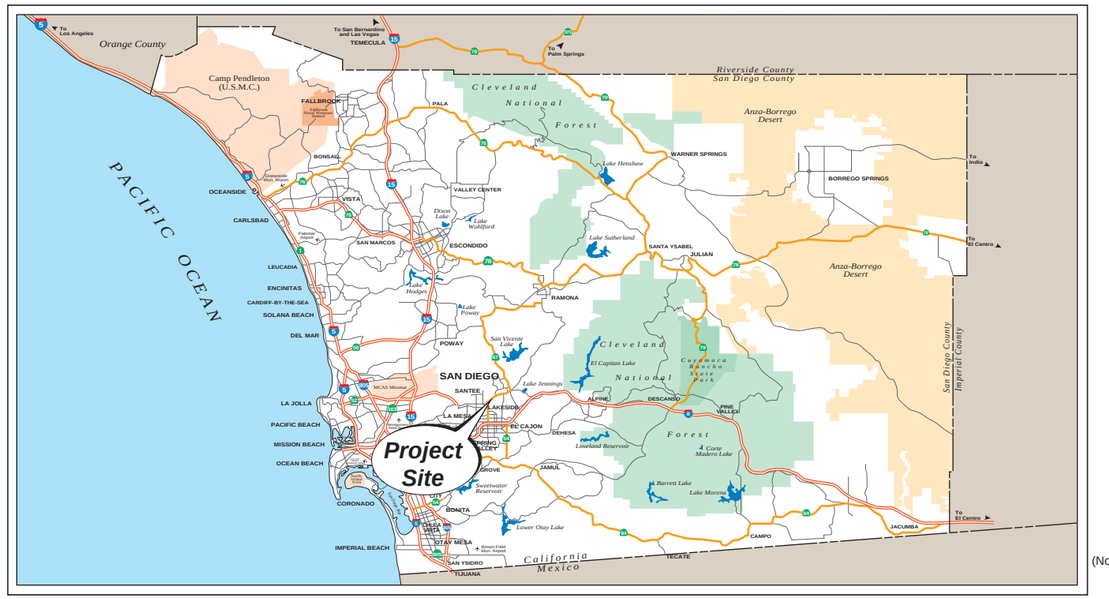
mV milli volts

Groundwater samples analyzed for geochemical parameters in accordance with Method SM3500-FE-D for ferrous iron, Method 300 for nitrate and sulfate, Method 6010B for manganese and iron, Method SM4500 for ammonia, phosphate, pH, dissolved oxygen, and carbon dioxide, Method RSK175 for methane, and ASTM D-1498 for redox potential.

Bold font indicates concentrations above laboratory reporting limits for the analyte.

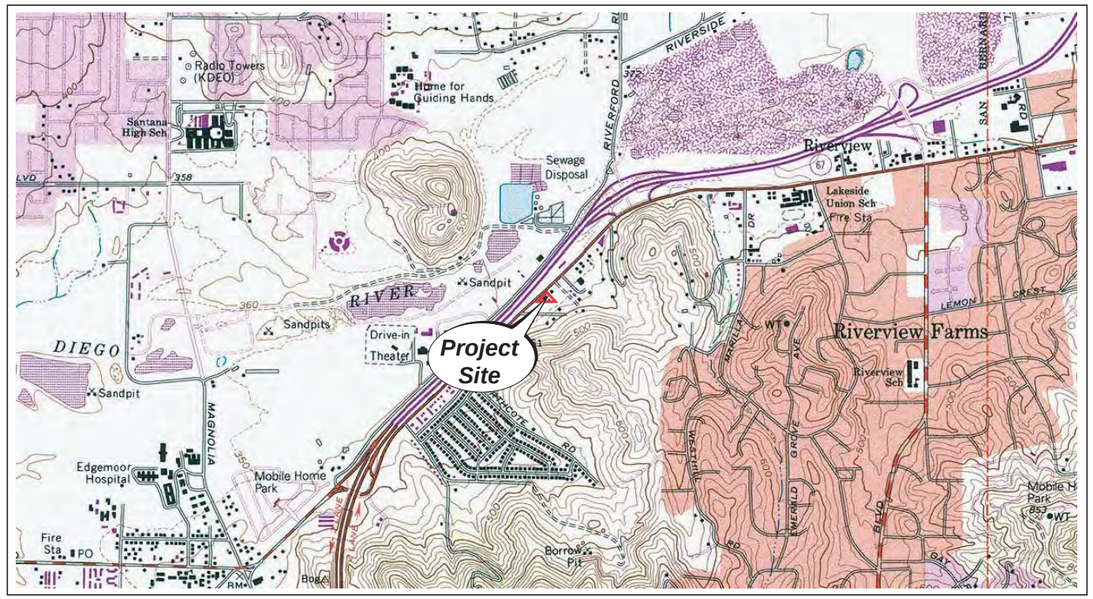
* indicates data collected from a field instrument

FIGURES



North
(Not to scale)

REGIONAL SITE LOCATION



North

Reference:
U.S.G.S. 7.5 Minute Quadrangle map
El Cajon, California - 1977. Photo revised 1982.

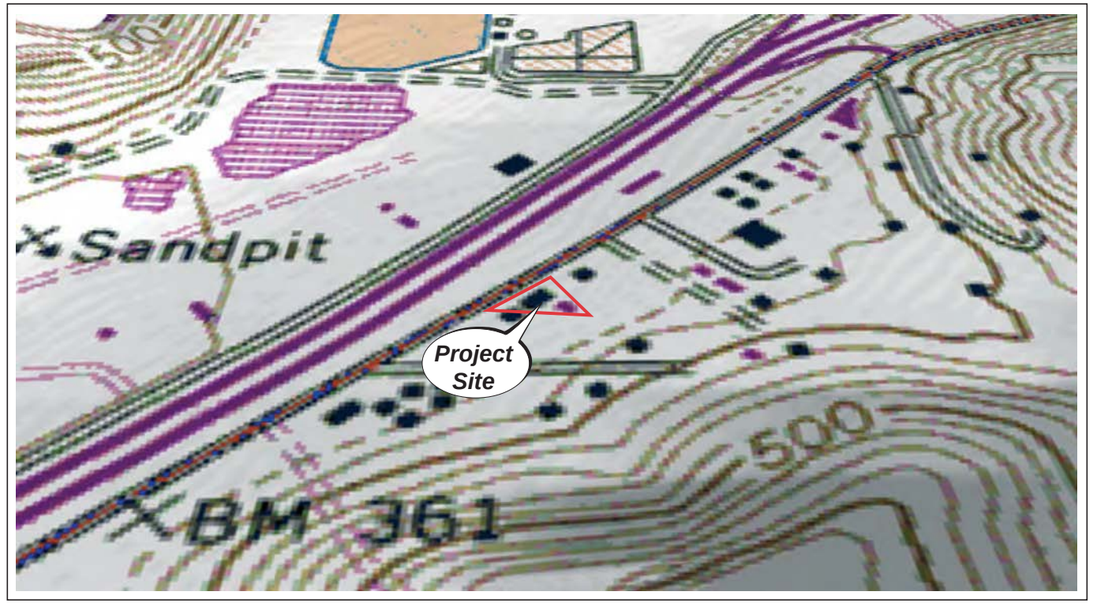
2-DIMENSIONAL SITE LOCATION

0 1,000 2,000 3,000
Approximate Graphic Scale in Feet

North
(Not to scale)

Reference:
Google Earth Aerial Photograph
Santee, California - February 2008

SITE AERIAL PHOTOGRAPH



North
(Not to scale)

Reference:
U.S.G.S. 7.5 Minute Quadrangle map
El Cajon, California - 1977. Photo revised 1982.

3-DIMENSIONAL SITE LOCATION

Disclaimer: This figure is based on available data. Actual conditions may differ. All locations and dimensions are approximate.

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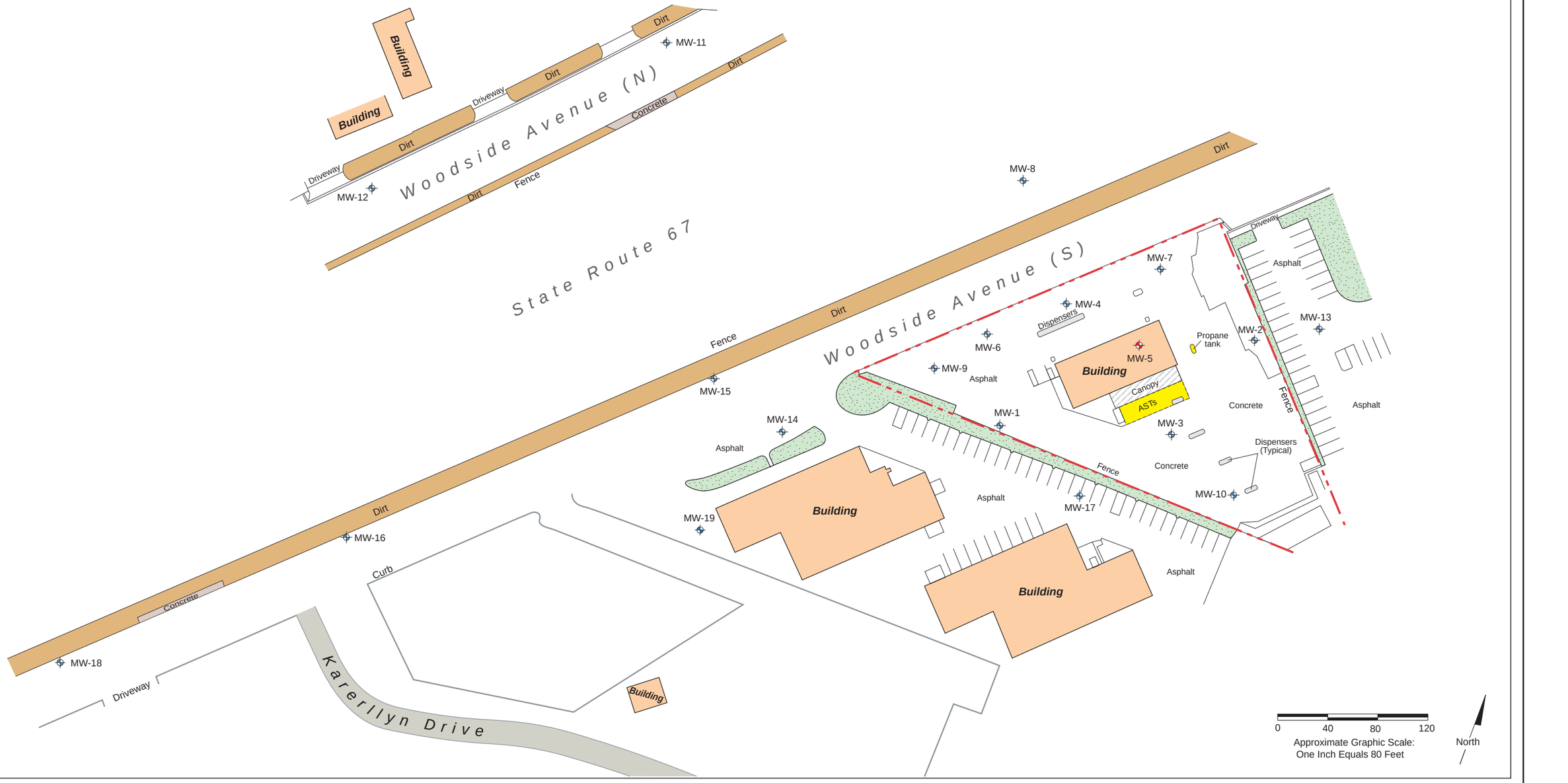
4-WAY SITE LOCATION MAP

Wigington Oil
11427 Woodside Avenue
Santee, California

Project No.: 01208473.00

Figure 1

Date Drafted: 11/4/09



EXPLANATION

MW-16 — Groundwater monitoring well location

MW-5 — Well destroyed

Approximate Site boundary

AST = aboveground storage tank

Disclaimer: This figure is based on available data. Actual conditions may differ. All locations and dimensions are approximate.

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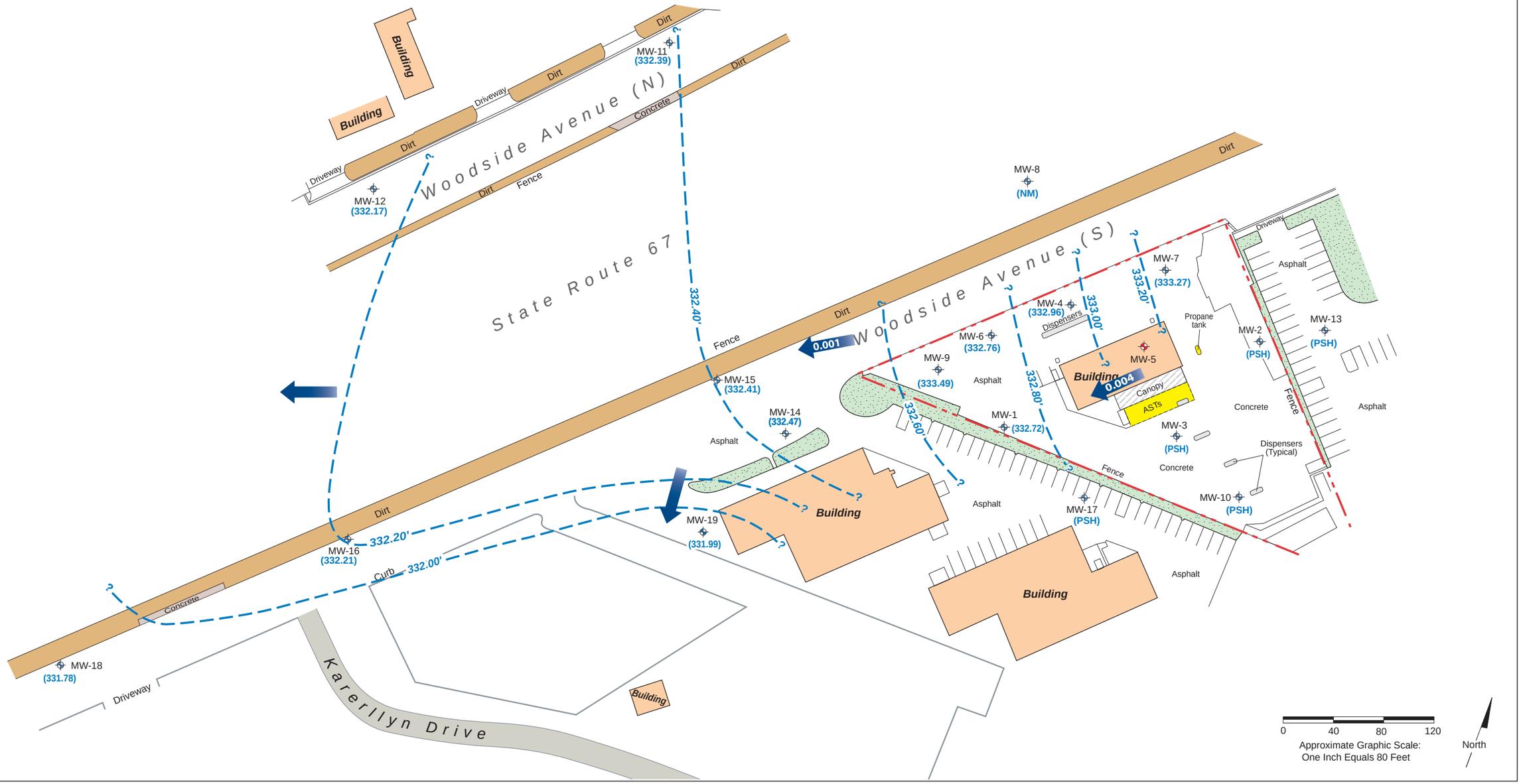
SITE MAP

Wigington Oil
11427 Woodside Avenue
Santee, California

Project No.: 01208473.00

Figure 2

Date Drafted: 1/25/12



EXPLANATION

MW-16 (332.21) — Groundwater monitoring well location with groundwater elevation in feet above mean sea level.

MW-5 — Well destroyed

334.50' — Estimated groundwater contour in feet above mean sea level.

0.001 — Interpreted direction of groundwater flow and estimated groundwater gradient.

AST = aboveground storage tank
PSH = phase-separated hydrocarbons

Disclaimer: This figure is based on available data. Actual conditions may differ. All locations and dimensions are approximate.

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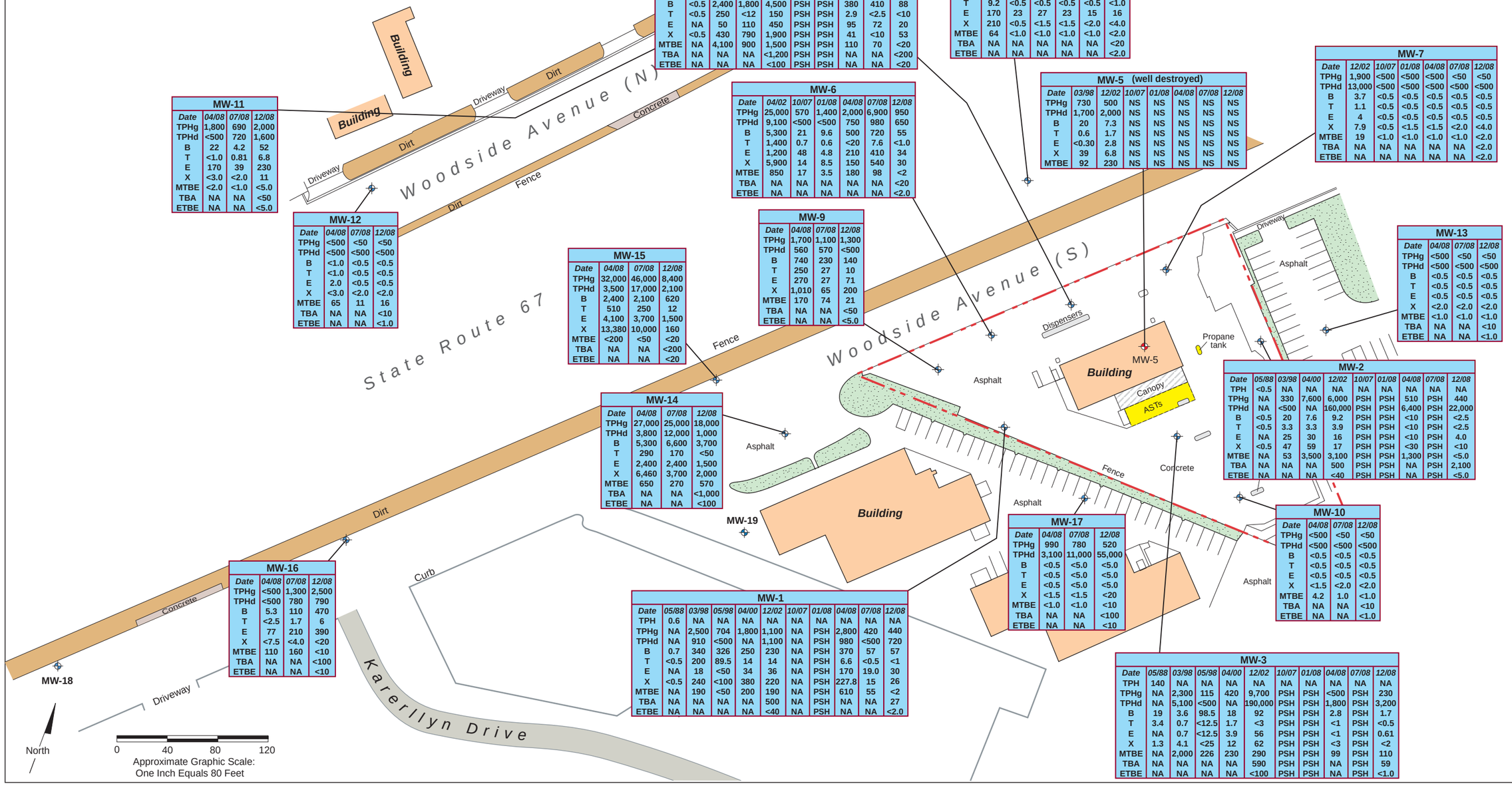
GROUNDWATER ELEVATION MAP
DECEMBER 2013

Wigington Oil
11427 Woodside Avenue
Santee, California

Project No.: 01208473.00

Figure 3

Date Drafted: 2/6/14



MW-4

Date	05/88	03/98	04/00	12/02	10/07	01/08	04/08	07/08	12/08
TPH	6.3	NA	NA	NA	NA	NA	NA	NA	NA
TPHg	NA	9,600	8,700	15,000	PSH	PSH	2,000	2,100	4,900
TPHd	NA	3,700	NA	95,000	PSH	PSH	4,500	1,300	3,400
B	<0.5	2,400	1,800	4,500	PSH	PSH	380	410	88
T	<0.5	250	<12	150	PSH	PSH	2.9	<2.5	<10
E	NA	50	110	450	PSH	PSH	95	72	20
X	<0.5	430	790	1,900	PSH	PSH	41	<10	53
MTBE	NA	4,100	900	1,500	PSH	PSH	110	70	<20
TBA	NA	NA	NA	<1,200	PSH	PSH	NA	NA	<200
ETBE	NA	NA	NA	<100	PSH	PSH	NA	NA	<20

MW-8

Date	12/02	10/07	01/08	04/08	07/08	12/08
TPHg	4,800	1,100	1,100	980	660	890
TPHd	6,500	790	570	1,200	2,100	3,000
B	50	<0.5	<0.5	<0.5	<0.5	<1.0
T	9.2	<0.5	<0.5	<0.5	<0.5	<1.0
E	170	23	27	23	15	16
X	210	<0.5	<1.5	<1.5	<2.0	<4.0
MTBE	64	<1.0	<1.0	<1.0	<1.0	<2.0
TBA	NA	NA	NA	NA	NA	<20
ETBE	NA	NA	NA	NA	NA	<2.0

MW-11

Date	04/08	07/08	12/08
TPHg	1,800	690	2,000
TPHd	<500	720	1,600
B	22	4.2	52
T	<1.0	0.81	6.8
E	170	39	230
X	<3.0	<2.0	11
MTBE	<2.0	<1.0	<5.0
TBA	NA	NA	<50
ETBE	NA	NA	<5.0

MW-6

Date	04/02	10/07	01/08	04/08	07/08	12/08
TPHg	25,000	570	1,400	2,000	6,900	950
TPHd	9,100	<500	<500	750	980	650
B	5,300	21	9.6	500	720	55
T	1,400	0.7	0.6	<20	7.6	<1.0
E	1,200	48	4.8	210	410	34
X	5,900	14	8.5	150	540	30
MTBE	850	17	3.5	180	98	<2
TBA	NA	NA	NA	NA	NA	<20
ETBE	NA	NA	NA	NA	NA	<2.0

MW-5 (well destroyed)

Date	03/98	12/02	10/07	01/08	04/08	07/08	12/08
TPHg	730	500	NS	NS	NS	NS	NS
TPHd	1,700	2,000	NS	NS	NS	NS	NS
B	20	7.3	NS	NS	NS	NS	NS
T	0.6	1.7	NS	NS	NS	NS	NS
E	<0.30	2.8	NS	NS	NS	NS	NS
X	39	6.8	NS	NS	NS	NS	NS
MTBE	92	230	NS	NS	NS	NS	NS

MW-7

Date	12/02	10/07	01/08	04/08	07/08	12/08
TPHg	1,900	<500	<500	<500	<50	<50
TPHd	13,000	<500	<500	<500	<500	<500
B	3.7	<0.5	<0.5	<0.5	<0.5	<0.5
T	1.1	<0.5	<0.5	<0.5	<0.5	<0.5
E	4	<0.5	<0.5	<0.5	<0.5	<0.5
X	7.9	<0.5	<1.5	<1.5	<2.0	<4.0
MTBE	19	<1.0	<1.0	<1.0	<1.0	<2.0
TBA	NA	NA	NA	NA	NA	<2.0
ETBE	NA	NA	NA	NA	NA	<2.0

MW-12

Date	04/08	07/08	12/08
TPHg	<500	<50	<50
TPHd	<500	<500	<500
B	<1.0	<0.5	<0.5
T	<1.0	<0.5	<0.5
E	2.0	<0.5	<0.5
X	<3.0	<2.0	<2.0
MTBE	65	11	16
TBA	NA	NA	<10
ETBE	NA	NA	<1.0

MW-9

Date	04/08	07/08	12/08
TPHg	1,700	1,100	1,300
TPHd	560	570	<500
B	740	230	140
T	250	27	10
E	270	27	71
X	1,010	65	200
MTBE	170	74	21
TBA	NA	NA	<50
ETBE	NA	NA	<5.0

MW-15

Date	04/08	07/08	12/08
TPHg	32,000	46,000	8,400
TPHd	3,500	17,000	2,100
B	2,400	2,100	620
T	510	250	12
E	4,100	3,700	1,500
X	13,380	10,000	160
MTBE	<200	<50	<20
TBA	NA	NA	<200
ETBE	NA	NA	<20

MW-13

Date	04/08	07/08	12/08
TPHg	<500	<50	<50
TPHd	<500	<500	<500
B	<0.5	<0.5	<0.5
T	<0.5	<0.5	<0.5
E	<0.5	<0.5	<0.5
X	<2.0	<2.0	<2.0
MTBE	<1.0	<1.0	<1.0
TBA	NA	NA	<10
ETBE	NA	NA	<1.0

MW-14

Date	04/08	07/08	12/08
TPHg	27,000	25,000	18,000
TPHd	3,800	12,000	1,000
B	5,300	6,600	3,700
T	290	170	<50
E	2,400	2,400	1,500
X	6,460	3,700	2,000
MTBE	650	270	570
TBA	NA	NA	<1,000
ETBE	NA	NA	<100

MW-2

Date	05/88	03/98	04/00	12/02	10/07	01/08	04/08	07/08	12/08
TPH	<0.5	NA	NA	NA	NA	NA	NA	NA	NA
TPHg	NA	330	7,600	6,000	PSH	PSH	510	PSH	440
TPHd	NA	<500	NA	160,000	PSH	PSH	6,400	PSH	22,000
B	<0.5	20	7.6	9.2	PSH	PSH	<10	PSH	<2.5
T	<0.5	3.3	3.3	3.9	PSH	PSH	<10	PSH	<2.5
E	NA	25	30	16	PSH	PSH	<10	PSH	4.0
X	<0.5	47	59	17	PSH	PSH	<30	PSH	<10
MTBE	NA	53	3,500	3,100	PSH	PSH	1,300	PSH	<5.0
TBA	NA	NA	NA	500	PSH	PSH	NA	PSH	2,100
ETBE	NA	NA	NA	<40	PSH	PSH	NA	PSH	<5.0

MW-10

Date	04/08	07/08	12/08
TPHg	<500	<50	<50
TPHd	<500	<500	<500
B	<0.5	<0.5	<0.5
T	<0.5	<0.5	<0.5
E	<0.5	<0.5	<0.5
X	<1.5	<2.0	<2.0
MTBE	4.2	1.0	<1.0
TBA	NA	NA	<10
ETBE	NA	NA	<1.0

MW-17

Date	04/08	07/08	12/08
TPHg	990	780	520
TPHd	3,100	11,000	55,000
B	<0.5	<5.0	<5.0
T	<0.5	<5.0	<5.0
E	<0.5	<5.0	<5.0
X	<1.5	<1.5	<20
MTBE	<1.0	<1.0	<10
TBA	NA	NA	<100
ETBE	NA	NA	<10

MW-1

Date	05/88	03/98	05/98	04/00	12/02	10/07	01/08	04/08	07/08	12/08
TPH	0.6	NA	NA	NA	NA	NA	NA	NA	NA	NA
TPHg	NA	2,500	704	1,800	1,100	NA	PSH	2,800	420	440
TPHd	NA	910	<500	NA	1,100	NA	PSH	980	<500	720
B	0.7	340	326	250	230	NA	PSH	370	57	57
T	<0.5	200	89.5	14	14	NA	PSH	6.6	<0.5	<1
E	NA	18	<50	34	36	NA	PSH	170	19.0	30
X	<0.5	240	<100	380	220	NA	PSH	227.8	15	26
MTBE	NA	190	<50	200	190	NA	PSH	610	55	<2
TBA	NA	NA	NA	NA	500	NA	PSH	NA	NA	27
ETBE	NA	NA	NA	NA	<40	NA	PSH	NA	NA	<2.0

MW-3

Date	05/88	03/98	05/98	04/00	12/02	10/07	01/08	04/08	07/08	12/08
TPH	140	NA	NA	NA	NA	NA	NA	NA	NA	NA
TPHg	NA	2,300	115	420	9,700	PSH	PSH	<500	PSH	230
TPHd	NA	5,100	<500	NA	190,000	PSH	PSH	1,800	PSH	3,200
B	19	3.6	98.5	18	92	PSH	PSH	2.8	PSH	1.7
T	3.4	0.7	<12.5	1.7	<3	PSH	PSH	<1	PSH	<0.5
E	NA	0.7	<12.5	3.9	56	PSH	PSH	<1	PSH	0.61
X	1.3	4.1	<25	12	62	PSH	PSH	<3	PSH	<2
MTBE	NA	2,000	226	230	290	PSH	PSH	99	PSH	110
TBA	NA	NA	NA	NA	590	PSH	PSH	NA	PSH	59
ETBE	NA	NA	NA	NA	<100	PSH	PSH	NA	PSH	<1.0

MW-16

Date	04/08	07/08	12/08
TPHg	<500	1,300	2,500
TPHd	<500	780	790
B	5.3	110	470
T	<2.5	1.7	6
E	77	210	390
X	<7.5	<4.0	<20
MTBE	110	160	<10
TBA	NA	NA	<100
ETBE	NA	NA	<10

EXPLANATION

MW-17 — Groundwater monitoring well location

MW-5 — Well destroyed

Disclaimer: This figure is based on available data. Actual conditions may differ. All locations and dimensions are approximate.

MW-16

Date	04/08	07/08	12/08	05/09	11/09
TPHg	<500	1,300	2,500	<500	570
TPHd	<500	780	790	<500	<500
B	5.3	110	470	120	110
T	<2.5	1.7	6	16	2.5
E	77	210	390	220	6.5
X	<7.5	<4.0	<20	33	10.5
MTBE	110	160	<10	100	73
TBA	NA	NA	<100	170	<5.0
ETBE	NA	NA	<10	<20	<1.0

Groundwater samples collected by SCS Engineers beginning in June 2009; Petra Geotechnical, Inc. from October 2007 to December 2008; and Eneco Tech Southwest, Inc. from May 1988 to December 2002. Groundwater samples analyzed for total petroleum hydrocarbons by CA DHS LUFT Method; volatile organic compounds (VOCs) by EPA Method 8260B. All results reported in micrograms per liter (ug/L). < indicates concentration not reported above indicated reporting limit for relevant analyte and analytical method. NA indicates sample not analyzed. PSH indicates phase-separated hydrocarbons. Refer to laboratory reports for full listing of VOCs analyzed.

TPH = total petroleum hydrocarbons
TPHg = total petroleum hydrocarbons as gasoline
TPHd = total petroleum hydrocarbons as diesel
B = benzene
T = toluene
E = ethylbenzene
X = xylenes
MTBE = methyl tertiary buty ether
TBA = tertiary butyl alcohol
ETBE = Ethyl tertiary butyl ether

AST = aboveground storage tank

SCS ENGINEERS
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8799 Balboa Avenue, Suite 290
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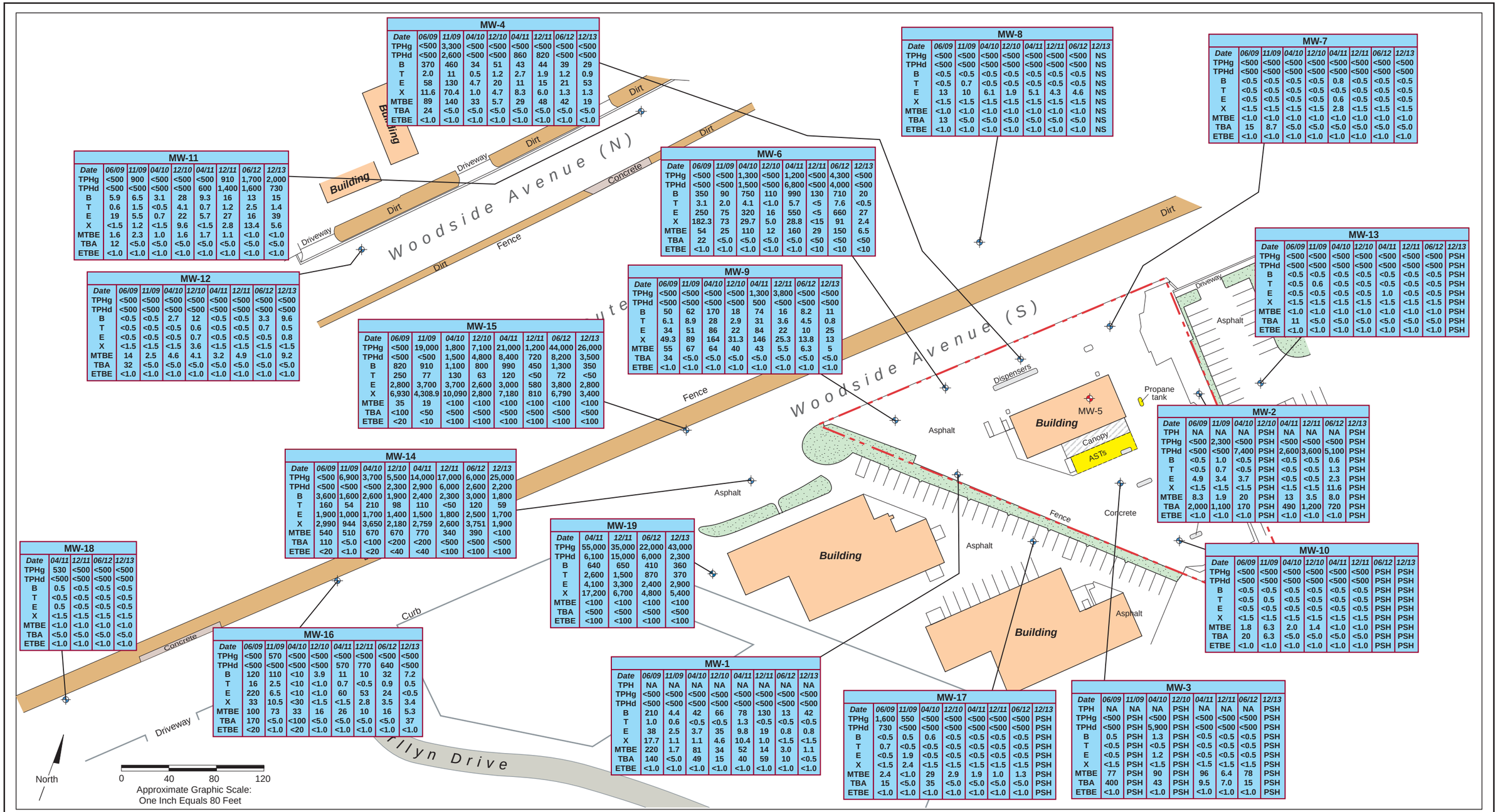
HISTORICAL GROUNDWATER SAMPLE ANALYTICAL RESULTS (1988 THRU 2008)

Wigington Oil
11427 Woodside Avenue
Santee, California

Project No.: 01208473.00

Figure 4

Date Drafted: 7/31/12



MW-4

Date	06/09	11/09	04/10	12/10	04/11	12/11	06/12	12/13
TPHg	<500	3,300	<500	<500	<500	<500	<500	<500
TPHd	<500	2,600	<500	<500	860	820	<500	<500
B	370	460	34	51	43	44	39	29
T	2.0	11	0.5	1.2	2.7	1.9	1.2	0.9
E	58	130	4.7	20	11	15	21	53
X	11.6	70.4	1.0	4.7	8.3	6.0	1.3	1.3
MTBE	89	140	33	5.7	29	48	42	19
TBA	24	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
ETBE	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0

MW-8

Date	06/09	11/09	04/10	12/10	04/11	12/11	06/12	12/13
TPHg	<500	<500	<500	<500	<500	<500	<500	NS
TPHd	<500	<500	<500	<500	<500	<500	<500	NS
B	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	NS
T	<0.5	0.7	<0.5	<0.5	<0.5	<0.5	<0.5	NS
E	13	10	6.1	1.9	5.1	4.3	4.6	NS
X	<1.5	<1.5	<1.5	<1.5	<1.5	<1.5	<1.5	NS
MTBE	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	NS
TBA	13	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	NS
ETBE	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	NS

MW-7

Date	06/09	11/09	04/10	12/10	04/11	12/11	06/12	12/13
TPHg	<500	<500	<500	<500	<500	<500	<500	<500
TPHd	<500	<500	<500	<500	<500	<500	<500	<500
B	<0.5	<0.5	<0.5	<0.5	0.8	<0.5	<0.5	<0.5
T	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
E	<0.5	<0.5	<0.5	<0.5	0.6	<0.5	<0.5	<0.5
X	<1.5	<1.5	<1.5	<1.5	2.8	<1.5	<1.5	<1.5
MTBE	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
TBA	15	8.7	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
ETBE	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0

MW-11

Date	06/09	11/09	04/10	12/10	04/11	12/11	06/12	12/13
TPHg	<500	900	<500	<500	<500	910	1,700	2,000
TPHd	<500	<500	<500	<500	600	1,400	1,600	730
B	5.9	6.5	3.1	28	9.3	16	13	15
T	0.6	1.5	<0.5	4.1	0.7	1.2	2.5	1.4
E	19	5.5	0.7	22	5.7	27	16	39
X	<1.5	1.2	<1.5	9.6	<1.5	2.8	13.4	5.6
MTBE	1.6	2.3	1.0	1.6	1.7	1.1	<1.0	<1.0
TBA	12	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
ETBE	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0

MW-6

Date	06/09	11/09	04/10	12/10	04/11	12/11	06/12	12/13
TPHg	<500	<500	1,300	<500	1,200	<500	4,300	<500
TPHd	<500	<500	1,500	<500	6,800	<500	4,000	<500
B	350	90	750	110	990	130	710	20
T	3.1	2.0	4.1	<1.0	5.7	<5	7.6	<0.5
E	250	75	320	16	550	<5	660	27
X	182.3	73	29.7	5.0	28.8	<15	91	2.4
MTBE	54	25	110	12	160	29	150	6.5
TBA	22	<5.0	<5.0	<5.0	<5.0	<50	<50	<50
ETBE	<1.0	<1.0	<1.0	<1.0	<1.0	<10	<10	<10

MW-13

Date	06/09	11/09	04/10	12/10	04/11	12/11	06/12	12/13
TPHg	<500	<500	<500	<500	<500	<500	<500	PSH
TPHd	<500	<500	<500	<500	<500	<500	<500	PSH
B	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	PSH
T	<0.5	0.6	<0.5	<0.5	<0.5	<0.5	<0.5	PSH
E	<0.5	<0.5	<0.5	<0.5	1.0	<0.5	<0.5	PSH
X	<1.5	<1.5	<1.5	<1.5	<1.5	<1.5	<1.5	PSH
MTBE	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	PSH
TBA	11	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	PSH
ETBE	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	PSH

MW-12

Date	06/09	11/09	04/10	12/10	04/11	12/11	06/12	12/13
TPHg	<500	<500	<500	<500	<500	<500	<500	<500
TPHd	<500	<500	<500	<500	<500	<500	<500	<500
B	<0.5	<0.5	2.7	12	<0.5	<0.5	3.3	9.6
T	<0.5	<0.5	<0.5	0.6	<0.5	<0.5	0.7	0.5
E	<0.5	<0.5	<0.5	0.7	<0.5	<0.5	<0.5	0.8
X	<1.5	<1.5	<1.5	3.6	<1.5	<1.5	<1.5	<1.5
MTBE	14	2.5	4.6	4.1	3.2	4.9	<1.0	9.2
TBA	32	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
ETBE	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0

MW-9

Date	06/09	11/09	04/10	12/10	04/11	12/11	06/12	12/13
TPHg	<500	<500	<500	<500	1,300	3,800	<500	<500
TPHd	<500	<500	<500	<500	500	<500	<500	<500
B	50	62	170	18	74	16	8.2	11
T	6.1	8.9	28	2.9	31	3.6	4.5	0.8
E	34	51	86	22	84	22	10	25
X	49.3	89	164	31.3	146	25.3	13.8	13
MTBE	55	67	64	40	43	5.5	6.3	5
TBA	34	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
ETBE	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0

MW-15

Date	06/09	11/09	04/10	12/10	04/11	12/11	06/12	12/13
TPHg	<500	19,000	1,800	7,100	21,000	1,200	44,000	26,000
TPHd	<500	<500	1,500	4,800	8,400	720	8,200	3,500
B	820	910	1,100	800	990	450	1,300	350
T	250	77	130	63	120	<50	72	<50
E	2,800	3,700	3,700	2,600	3,000	580	3,800	2,800
X	6,930	4,308.9	10,090	2,800	7,180	810	6,790	3,400
MTBE	35	19	<100	<100	<100	<100	<100	<100
TBA	<100	<50	<500	<500	<500	<500	<500	<500
ETBE	<20	<10	<100	<100	<100	<100	<100	<100

MW-2

Date	06/09	11/09	04/10	12/10	04/11	12/11	06/12	12/13
TPH	NA	NA	NA	PSH	NA	NA	NA	PSH
TPHg	<500	2,300	<500	PSH	<500	<500	<500	PSH
TPHd	<500	<500	7,400	PSH	2,600	3,600	5,100	PSH
B	<0.5	1.0	<0.5	PSH	<0.5	<0.5	0.6	PSH
T	<0.5	0.7	<0.5	PSH	<0.5	<0.5	1.3	PSH
E	4.9	3.4	3.7	PSH	<0.5	<0.5	2.3	PSH
X	<1.5	<1.5	<1.5	PSH	<1.5	<1.5	11.6	PSH
MTBE	8.3	1.9	20	PSH	13	3.5	8.0	PSH
TBA	2,000	1,100	170	PSH	490	1,200	720	PSH
ETBE	<1.0	<1.0	<1.0	PSH	<1.0	<1.0	<1.0	PSH

MW-14

Date	06/09	11/09	04/10	12/10	04/11	12/11	06/12	12/13
TPHg	<500	6,900	3,700	5,500	14,000	17,000	6,000	25,000
TPHd	<500	<500	<500	2,300	2,900	6,000	2,600	2,200
B	3,600	1,600	2,600	1,900	2,400	2,300	3,000	1,800
T	160	54	210	98	110	<50	120	59
E	1,900	1,000	1,700	1,400	1,500	1,800	2,500	1,700
X	2,990	944	3,650	2,180	2,759	2,600	3,751	1,900
MTBE	540	510	670	670	770	340	390	<100
TBA	110	<5.0	<100	<200	<200	<500	<500	<500
ETBE	<20	<1.0	<20	<40	<40	<100	<100	<100

MW-19

Date	04/11	12/11	06/12	12/13
TPHg	55,000	35,000	22,000	43,000
TPHd	6,100	15,000	6,000	2,300
B	640	650	410	360
T	2,600	1,500	870	370
E	4,100	3,300	2,400	2,900
X	17,200	6,700	4,800	5,400
MTBE	<100	<100	<100	<100
TBA	<500	<500	<500	<500
ETBE	<100	<100	<100	<100

MW-10

Date	06/09	11/09	04/10	12/10	04/11	12/11	06/12	12/13
TPHg	<500	<500	<500	<500	<500	<500	PSH	PSH
TPHd	<500	<500	<500	<500	<500	<500	PSH	PSH
B	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	PSH	PSH
T	<0.5	0.5	<0.5	<0.5	<0.5	<0.5	PSH	PSH
E	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	PSH	PSH
X	<1.5	<1.5	<1.5	<1.5	<1.5	<1.5	PSH	PSH
MTBE	1.8	6.3	2.0	1.4	<1.0	<1.0	PSH	PSH
TBA	20	6.3	<5.0	<5.0	<5.0	<5.0	PSH	PSH
ETBE	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	PSH	PSH

MW-18

Date	04/11	12/11	06/12	12/13
TPHg	530	<500	<500	<500
TPHd	<500	<500	<500	<500
B	0.5	<0.5	<0.5	<0.5
T	<0.5	<0.5	<0.5	<0.5
E	0.5	<0.5	<0.5	<0.5
X	<1.5	<1.5	<1.5	<1.5
MTBE	<1.0	<1.0	<1.0	<1.0
TBA	<5.0	<5.0	<5.0	<5.0
ETBE	<1.0	<1.0	<1.0	<1.0

MW-16

Date	06/09	11/09	04/10	12/10	04/11	12/11	06/12	12/13
TPHg	<500	570	<500	<500	<500	<500	<500	<500
TPHd	<500	<500	<500	<500	570	770	640	<500
B	120	110	<10	3.9	11	10	32	7.2
T	16	2.5	<10	<1.0	0.7	<0.5	0.9	0.5
E	220	6.5	<10	<1.0	60	53	24	<0.5
X	33	10.5	<30	<1.5	<1.5	2.8	3.5	3.4
MTBE	100	73	33	16	26	10	16	5.3
TBA	170	<5.0	<100	<5.0	<5.0	<5.0	<5.0	37
ETBE	<20	<1.0	<20	<1.0	<1.0	<1.0	<1.0	<1.0

MW-1

Date	06/09	11/09	04/10	12/10	04/11	12/11	06/12	12/13
TPH	NA	NA	NA	NA	NA	NA	NA	NA
TPHg	<500	<500	<500	<500	<500	<500	<500	<500
TPHd	<500	<500	<500	<500	<500	<500	<500	<500
B	210	4.4	42	66	78	130	13	42
T	1.0	0.6	<0.5	<0.5	1.3	<0.5	<0.5	<0.5
E	38	2.5	3.7	35	9.8	19	0.8	0.8
X	17.7	1.1	1.1	4.6	10.4	1.0	<1.5	<1.5
MTBE	220	1.7	81	34	52	14	3.0	1.1
TBA	140	<5.0	49	15	40	59	10	<0.5
ETBE	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0

MW-17

Date	06/09	11/09	04/10	12/10	04/11	12/11	06/12	12/13
TPHg	1,600	550	<500	<500	<500	<500	<500	PSH
TPHd	730	<500	<500	<500	<500	<500	<500	PSH
B	<0.5	0.5	0.6	<0.5	<0.5	<0.5	<0.5	PSH
T	0.7	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	PSH
E	<0.5	1.9	<0.5	<0.5	<0.5	<0.5	<0.5	PSH
X	<1.5	2.4	<1.5	<1.5	<1.5	<1.5	<1.5	PSH
MTBE	2.4	<1.0	29	2.9	1.9	1.0	1.3	PSH
TBA	15	<5.0	35	<5.0	<5.0	<5.0	<5.0	PSH
ETBE	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	PSH

MW-3

Date	06/09	11/09	04/10	12/10	04/11	12/11	06/12	12/13
TPH	NA	NA	NA	PSH	NA	NA	NA	PSH
TPHg	<500	PSH	<500	PSH	<500	<500	<500	PSH
TPHd	<500	PSH	5,900	PSH	<500	<500	<500	PSH
B	0.5	PSH	1.3	PSH	<0.5	<0.5	<0.5	PSH
T	<0.5	PSH	<0.5	PSH	<0.5	<0.5	<0.5	PSH
E	<0.5	PSH	1.2	PSH	<0.5	<0.5	<0.5	PSH
X	<1.5	PSH	<1.5	PSH	<1.5	<1.5	<1.5	PSH
MTBE	77	PSH	90	PSH	96	6.4	78	PSH
TBA	400	PSH	43	PSH	9.5	7.0	15	PSH
ETBE	<1.0	PSH	<1.0	PSH	<1.0	<1.0	<1.0	PSH

EXPLANATION

MW-17 — Groundwater monitoring well location

MW-5 — Well destroyed

MW-16

Date	04/08	07/08	12/08	06/09	11/09
TPHg	<500	1,300	2,500	<500	570
TPHd	<500	780	790	<500	<500
B	5.3	110	470	120	110
T	<2.5	1.7	6	16	2.5
E	77	210	390	220	6.5
X	<7.5	<4.0	<20	33	10.5
MTBE	110	160	<10	100	73
TBA	NA	NA	<100	170	<5.0
ETBE	NA	NA	<10	<20	<1.0

Groundwater samples collected by SCS Engineers beginning in June 2009; Petra Geotechnical, Inc. from October 2007 to December 2008; and Eneco Tech Southwest, Inc. from May 1988 to December 2002. Groundwater samples analyzed for total petroleum hydrocarbons by CA DHS LUFT Method; volatile organic compounds (VOCs) by EPA Method 8260B. All results reported in micrograms per liter (ug/L). < indicates concentration not reported above indicated reporting limit for relevant analyte and analytical method. NA indicates sample not analyzed. PSH indicates phase-separated hydrocarbons. Refer to laboratory reports for full listing of VOCs analyzed.

TPH = total petroleum hydrocarbons
TPHg = total petroleum hydrocarbons as gasoline
TPHd = total petroleum hydrocarbons as diesel
B = benzene
T = toluene
E = ethylbenzene
X = xylenes
MTBE = methyl tertiary buty ether
TBA = tertiary butyl alcohol
ETBE = Ethyl tertiary butyl ether

AST = aboveground storage tank

Disclaimer: This figure is based on available data. Actual conditions may differ. All locations and dimensions are approximate.

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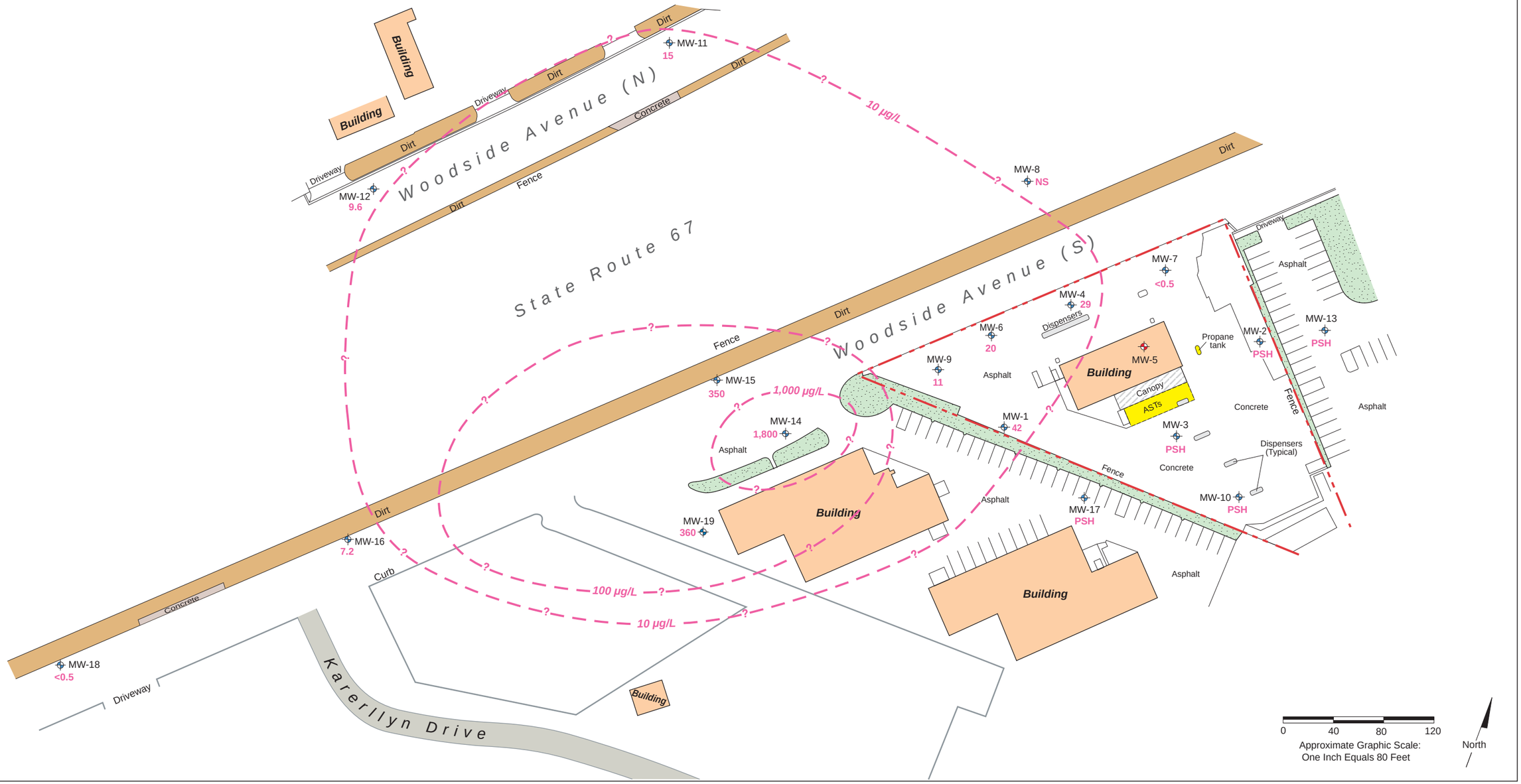
GROUNDWATER SAMPLE ANALYTICAL RESULTS 2009 THROUGH 2013

Wigington Oil
11427 Woodside Avenue
Santee, California

Project No.: 01208473.00

Figure 5

Date Drafted: 2/7/14



EXPLANATION

MW-16 7.2 — Groundwater monitoring well location with reported concentrations of benzene reported in micrograms per liter (µg/L). < indicates not reported above laboratory reporting limit for given analyte.

MW-5 — Well destroyed

100 µg/L — Iso-concentration of benzene reported in µg/L. Dashed where estimated, queried where inferred.

AST = aboveground storage tank
PSH = phase-separated hydrocarbons

Disclaimer: This figure is based on available data. Actual conditions may differ. All locations and dimensions are approximate.

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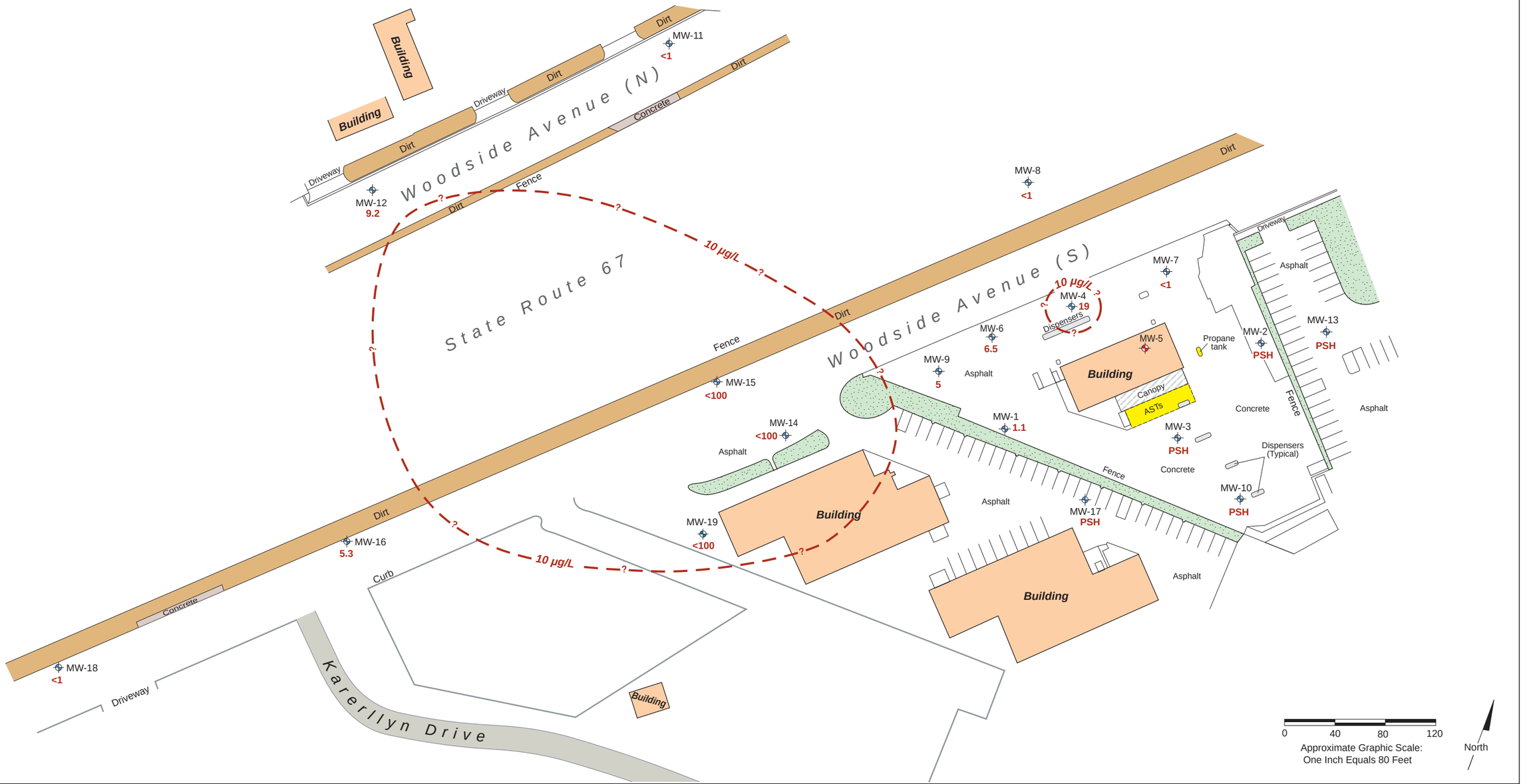
ISO-CONCENTRATION CONTOURS OF BENZENE IN SHALLOW GROUNDWATER - DECEMBER 2013

Wigington Oil
11427 Woodside Avenue
Santee, California

Project No.: 01208473.00

Figure 6

Date Drafted: 2/6/14



EXPLANATION

MW-16 5.3 — Groundwater monitoring well location with reported concentrations of methyl tertiary butyl ether (MTBE) reported in micrograms per liter (µg/L). < indicates not reported above laboratory detection limit for given analyte.

MW-5 — Well destroyed

100 — Iso-concentration of MTBE reported in µg/L. Dashed where estimated, queried where inferred.

AST = aboveground storage tank
PSH = phase-separated hydrocarbons

Disclaimer: This figure is based on available data. Actual conditions may differ. All locations and dimensions are approximate.

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San Diego, California 92123

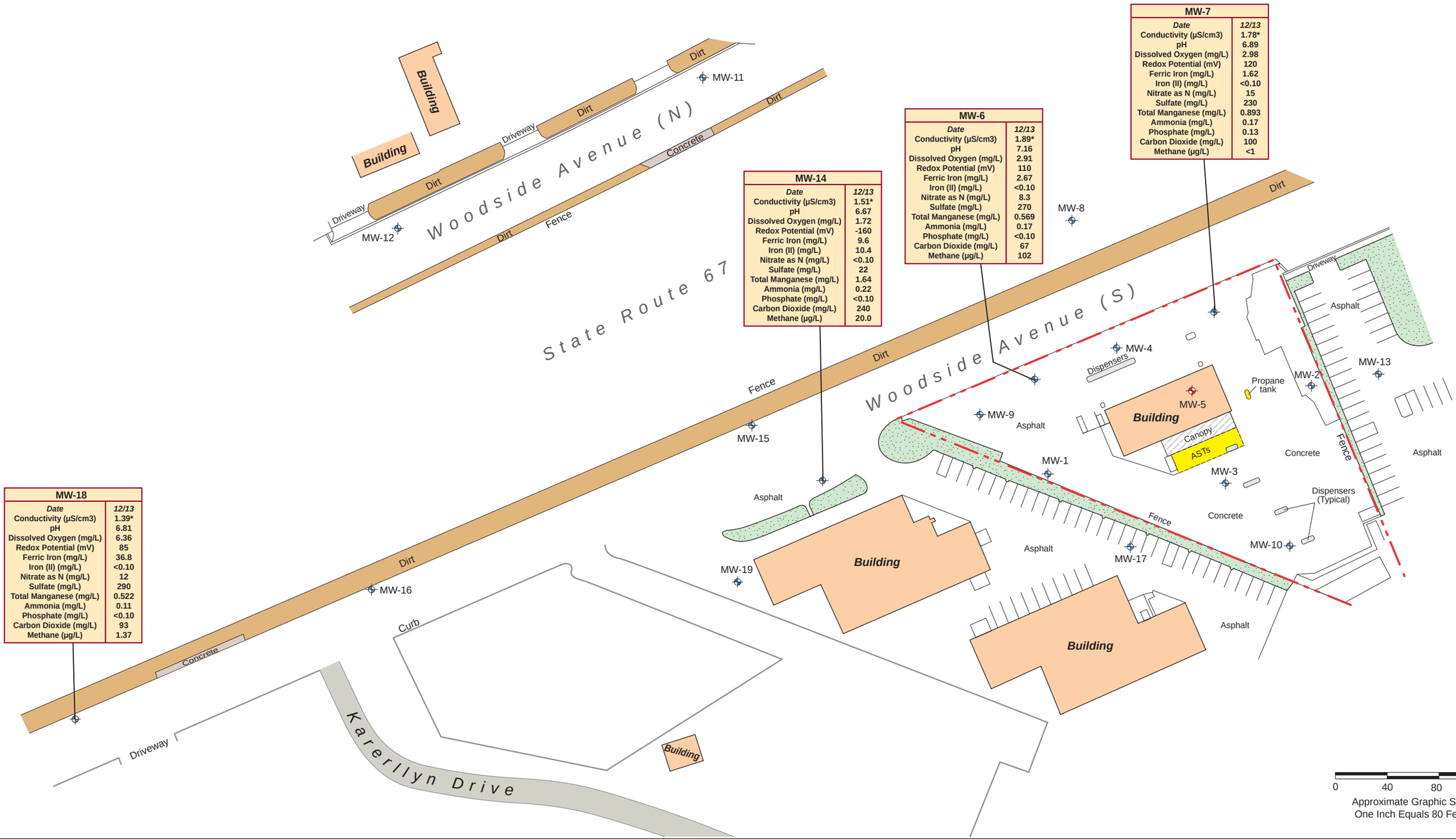
ISO-CONCENTRATION CONTOURS OF MTBE IN SHALLOW GROUNDWATER - DECEMBER 2013

Wigington Oil
11427 Woodside Avenue
Santee, California

Project No.: 01208473.00

Figure 7

Date Drafted: 2/6/14



MW-7	
Date	*12/13*
Conductivity (µS/cm3)	1.78*
pH	6.89
Dissolved Oxygen (mg/L)	2.98
Redox Potential (mV)	120
Ferric Iron (mg/L)	1.62
Iron (II) (mg/L)	<0.10
Nitrate as N (mg/L)	15
Sulfate (mg/L)	230
Total Manganese (mg/L)	0.893
Ammonia (mg/L)	0.17
Phosphate (mg/L)	0.13
Carbon Dioxide (mg/L)	100
Methane (µg/L)	<1

MW-6	
Date	*12/13*
Conductivity (µS/cm3)	1.89*
pH	7.16
Dissolved Oxygen (mg/L)	2.91
Redox Potential (mV)	110
Ferric Iron (mg/L)	2.67
Iron (II) (mg/L)	<0.10
Nitrate as N (mg/L)	8.3
Sulfate (mg/L)	270
Total Manganese (mg/L)	0.569
Ammonia (mg/L)	0.17
Phosphate (mg/L)	<0.10
Carbon Dioxide (mg/L)	67
Methane (µg/L)	102

MW-14	
Date	*12/13*
Conductivity (µS/cm3)	1.51*
pH	6.67
Dissolved Oxygen (mg/L)	1.72
Redox Potential (mV)	-160
Ferric Iron (mg/L)	9.6
Iron (II) (mg/L)	10.4
Nitrate as N (mg/L)	<0.10
Sulfate (mg/L)	22
Total Manganese (mg/L)	1.64
Ammonia (mg/L)	0.22
Phosphate (mg/L)	<0.10
Carbon Dioxide (mg/L)	240
Methane (µg/L)	20.0

MW-18	
Date	*12/13*
Conductivity (µS/cm3)	1.39*
pH	6.81
Dissolved Oxygen (mg/L)	6.36
Redox Potential (mV)	85
Ferric Iron (mg/L)	36.8
Iron (II) (mg/L)	<0.10
Nitrate as N (mg/L)	12
Sulfate (mg/L)	290
Total Manganese (mg/L)	0.522
Ammonia (mg/L)	0.11
Phosphate (mg/L)	<0.10
Carbon Dioxide (mg/L)	93
Methane (µg/L)	1.37

EXPLANATION

MW-16 — Groundwater monitoring well location

MW-5 — Well destroyed

Approximate Site boundary

Disclaimer: This figure is based on available data. Actual conditions may differ. All locations and dimensions are approximate.

MW-6	
Date	*12/13*
Conductivity (µS/cm3)	1.89*
pH	7.16
Dissolved Oxygen (mg/L)	2.91
Redox Potential (mV)	110
Ferric Iron (mg/L)	2.67
Iron (II) (mg/L)	<0.10
Nitrate as N (mg/L)	8.3
Sulfate (mg/L)	270
Total Manganese (mg/L)	0.569
Ammonia (mg/L)	0.17
Phosphate (mg/L)	<0.10
Carbon Dioxide (mg/L)	67
Methane (µg/L)	102

Groundwater samples analyzed for geochemical parameters in accordance with Method SM3500-FE-D for ferrous iron, Method 300 for nitrate and sulfate, Method 6010B for manganese and iron, Method SM4500 for ammonia, phosphate, pH, dissolved oxygen, and carbon dioxide, Method RSK175 for methane, and ASTM-D-1498 for redox potential. < indicates not reported at concentrations greater than the indicated analytical method reporting limit. * indicates data collected from a field instrument.

µS/cm3 = micro siemens per centimeter
mg/L = milligrams per liter
mV = milli volts
µg/L = micrograms per liter

AST = aboveground storage tank

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RNA ANALYTICAL RESULTS

Wigington Oil
11427 Woodside Avenue
Santee, California

Project No.: 01208473.00

Figure 8

Date Drafted: 4/1/14

APPENDICES

APPENDIX A

GROUNDWATER PURGING AND SAMPLING SHEETS

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Client:	Wigington Oil	**Project No:** 1208473.00	**Recorded By:**
Site Address:	11427 Woodside Avenue Santee, CA	**Date:** 12/30/2013	CC/GL

WELL MONITORING DATA

WELL NO.	DTB	DTW	DTP	PT	SWE	ELEV-W	ELEV-P
MW-1	41.6	30.12			362.84	332.72	
MW-2	44.6	32.74	31.41	1.33	365.08	332.34	333.67
MW-3	43.2	34.14	30.81	3.33	364.16	330.02	333.35
MW-4	41.6	29.42			362.38	332.96	
MW-6	41.8	29.68			362.44	332.76	
MW-7	41.9	29.30			362.57	333.27	
MW-8	39.5	NA			364.51	NA	
MW-9	38.3	29.69			362.33	332.64	
MW-10	38.3	34.07	32.42	1.65	367.28	333.21	334.86
MW-11	37.4	30.09			362.48	332.39	
MW-12	36.2	29.71			361.88	332.17	
MW-13	44.7	33.65	32.95	0.70	366.91	333.26	333.96
MW-14	36.8	30.32			362.79	332.47	
MW-15	37.2	29.95			362.36	332.41	
MW-16	38.3	30.27			362.48	332.21	
MW-17	44.4	35.63	35.18	0.45	367.97	332.34	332.79
MW-18	39.1	30.50			362.28	331.78	
MW-19	40.4	33.08			365.07	331.99	

NOTES

WELL NO. - Monitoring well number
DTW - Depth to water from datum
DTP - Depth to product from datum
PT - Product Thickness

DTB - Depth to bottom of well
SWE - Surveyed well elevation in feet
ELEV-W - Relative elevation of water
ELEV-P - Relative elevation of product

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WELL PURGING/SAMPLING LOG

Project Name: Wigington Oil | Well No.: MW-1
Project Number: 01208473.00 | Date: 12/31/13
Project Address: 11427 Woodside Avenue, Santee, CA
Well GPS: Latitude: Longitude:
Sampled by: C. Crosby | Checked by: GEH | License #: 945

WELL SPECIFICATIONS & MEASUREMENTS

Borehole Diameter (in.) (BD): 6 8 (10) 12
Casing Diameter (in.) (CD): 2 (4) 6 8
Total Well Depth (ft.) (WD): 41.6 | Product thickness (ft.): NA
Static Water Level (ft.) (SWL): 30.12 | Time measured: NA
Water Column (ft.) (WC=WD-SWL): 11.48 | Filter Pack Porosity (P): 0.30

Borehole Volume (BV) Calculations

BV (gal) = 0.041 [CD^2 + P (BD^2-CD^2)](WC)

This equation applies to wells constructed straddling the water table only. For submerged screens, document all calculations. Porosity is expressed in decimal form. **BV =** 19.5 **gallons**

PURGING & SAMPLING EQUIPMENT

Water Level Meter Type and ID: Heron OWIP
Purging Equipment/Method: Bladder Pump [ ] Bailer [x] Centrifugal Pump [ ] Other [ ]
pH/Temp/Conductivity Meter Type and ID: Oakton pH/Cond/Temp
Sampler Type: [ ] Teflon Bailer [x] Disposable Bailer [ ] Bladder Pump [ ] Centrifugal Pump [ ] Other:
Decontamination Method: [ ] Steam/High Pressure Wash [x] 3 Stage (Alconox, tap water & DI rinse) [ ] Other:

PURGING AND SAMPLING METHODOLOGIES

Well Recovery Type

[x] Fast -recovers 80% within 2 hours -Methods 1, 2, 3, & 5 [ ] Slow - more than 2 hours to recover 80% -Methods 3, 4, & 5

PURGING METHODS

[ ] Method 1, remove 3 BV, sample after well recovers 80% of total purged drawdown.
[x] Method 2, remove 1 BV, test parameters until stable per SAM Manual, sample after well recovers 80% of total purged drawdown.
[ ] Method 3, Low-flow - install pump at least 2 hours prior to start of purging. Follow detailed methodology in SAM Manual.
List the date and time the pump was installed: Date: Time:
[ ] Method 4, remove 1 BV, sample after 2 hours. Note - if well recovers 80% of total purged drawdown, use another method.
[ ] Method 5, non-purge method. Only with prior written approval from SAM

PURGING INFORMATION

Time	Water Level (feet below top of casing)	Drawdown (feet)	Water Volume Purged (gal)	Measured Parameters				
				Conductivity (µmhos)	Dissolved Oxygen	pH	Turbidity	Temp (°C)
0915								
0927	30.64	0.52	20	1.05	–	7.31	–	22.37
0934	30.92	0.80	30	1.07	–	7.41	–	22.68

Borehole Volume: 19.5 (gal) | Total Volume Purge Water: 30 (gal) | Average pumping rate: NA (gpm)

RECOVERY CALCULATIONS

Recovery of 80% of drawdown from purging = SWL + (0.2)(Maximum Drawdown during purging) 30.28

SAMPLING INFORMATION

Date & Time Sampled: 12/31/13 0945 | Depth to water at time of sampling (feet): 30.13

Quantity	Container Type	Filtered (Y/N)	Sample Preservatives	Analytical Methods to Perform
6	VOA	N	HCl	BTEX+OXY (8260); TPHg/d (8015B)

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WELL PURGING/SAMPLING LOG

Project Name: Wigington Oil | Well No.: MW-4
Project Number: 01208473.00 | Date: 12/31/13
Project Address: 11427 Woodside Avenue, Santee, CA
Well GPS: Latitude: Longitude:
Sampled by: C. Crosby | Checked by: CEB | License #: 945

WELL SPECIFICATIONS & MEASUREMENTS

Borehole Diameter (in.) (BD): 6 8 (10) 12
Casing Diameter (in.) (CD): 2 (4) 6 8
Total Well Depth (ft.) (WD): 41.6 | Product thickness (ft.): NA
Static Water Level (ft.) (SWL): 29.42 | Time measured: NA
Water Column (ft.) (WC=WD-SWL): 12.18 | Filter Pack Porosity (P): 0.30

Borehole Volume (BV) Calculations

BV (gal) = 0.041 [CD^2 + P (BD^2-CD^2)](WC)

This equation applies to wells constructed straddling the water table only. For submerged screens, document all calculations. Porosity is expressed in decimal form. **BV = 20.7 gallons**

PURGING & SAMPLING EQUIPMENT

Water Level Meter Type and ID: Heron OWIP
Purging Equipment/Method: Bladder Pump [ ] Bailer [X] Centrifugal Pump [ ] Other [ ]
pH/Temp/Conductivity Meter Type and ID: Oakton pH/Cond/Temp
Sampler Type: [ ] Teflon Bailer [X] Disposable Bailer [ ] Bladder Pump [ ] Centrifugal Pump [ ] Other:
Decontamination Method: [ ] Steam/High Pressure Wash [X] 3 Stage (Alconox, tap water & DI rinse) [ ] Other:

PURGING AND SAMPLING METHODOLOGIES

Well Recovery Type

[X] Fast -recovers 80% within 2 hours -Methods 1, 2, 3, & 5 [ ] Slow - more than 2 hours to recover 80% -Methods 3, 4, & 5

PURGING METHODS

[ ] Method 1, remove 3 BV, sample after well recovers 80% of total purged drawdown.
[X] Method 2, remove 1 BV, test parameters until stable per SAM Manual, sample after well recovers 80% of total purged drawdown.
[ ] Method 3, Low-flow - install pump at least 2 hours prior to start of purging. Follow detailed methodology in SAM Manual.
List the date and time the pump was installed: Date: Time:
[ ] Method 4, remove 1 BV, sample after 2 hours. Note - if well recovers 80% of total purged drawdown, use another method.
[ ] Method 5, non-purge method. Only with prior written approval from SAM

PURGING INFORMATION

Time	Water Level (feet below top of casing)	Drawdown (feet)	Water Volume Purged (gal)	Measured Parameters				
				Conductivity (µmhos)	Dissolved Oxygen	pH	Turbidity	Temp (°C)
1017								
1032	30.15	0.73	21	1.85	--	7.41	--	22.06
1040	30.40	0.98	32	1.85	--	7.48	--	22.18

Borehole Volume: 20.7 (gal) | Total Volume Purge Water: 32 (gal) | Average pumping rate: NA (gpm)

RECOVERY CALCULATIONS

Recovery of 80% of drawdown from purging = SWL + (0.2)(Maximum Drawdown during purging) 29.61

SAMPLING INFORMATION

Date & Time Sampled: 12/31/13 1050 | Depth to water at time of sampling (feet): 29.41

Quantity	Container Type	Filtered (Y/N)	Sample Preservatives	Analytical Methods to Perform
6	VOA	N	HCl	BTEX+OXY (8260); TPHg/d (8015B)

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WELL PURGING/SAMPLING LOG

Project Name: Wigington Oil | Well No.: MW-6
Project Number: 01208473.00 | Date: 12/30/13
Project Address: 11427 Woodside Avenue, Santee, CA
Well GPS: Latitude: Longitude:
Sampled by: C. Crosby | Checked by: CEH | License #: 945

WELL SPECIFICATIONS & MEASUREMENTS

Borehole Diameter (in.) (BD): 6 8 (10) 12
Casing Diameter (in.) (CD): 2 (4) 6 8
Total Well Depth (ft.) (WD): 41.8
Product thickness (ft.): NA
Static Water Level (ft.) (SWL): 29.68
Time measured: NA
Water Column (ft.) (WC=WD-SWL): 12.12
Filter Pack Porosity (P): 0.30

Borehole Volume (BV) Calculations

BV (gal) = 0.041 [CD^2 + P (BD^2-CD^2)](WC)

This equation applies to wells constructed straddling the water table only. For submerged screens, document all calculations. Porosity is expressed in decimal form. **BV =** 20.6 **gallons**

PURGING & SAMPLING EQUIPMENT

Water Level Meter Type and ID: Heron OWIP
Purging Equipment/Method: Bladder Pump [ ] Bailer [X] Centrifugal Pump [ ] Other [ ]
pH/Temp/Conductivity Meter Type and ID: Oakton pH/Cond/Temp
Sampler Type: [ ] Teflon Bailer [X] Disposable Bailer [ ] Bladder Pump [ ] Centrifugal Pump [ ] Other:
Decontamination Method: [ ] Steam/High Pressure Wash [X] 3 Stage (Alconox, tap water & DI rinse) [ ] Other:

PURGING AND SAMPLING METHODOLOGIES

Well Recovery Type

[X] Fast -recovers 80% within 2 hours -Methods 1, 2, 3, & 5 [ ] Slow - more than 2 hours to recover 80% -Methods 3, 4, & 5

PURGING METHODS

[ ] Method 1, remove 3 BV, sample after well recovers 80% of total purged drawdown.
[X] Method 2, remove 1 BV, test parameters until stable per SAM Manual, sample after well recovers 80% of total purged drawdown.
[ ] Method 3, Low-flow - install pump at least 2 hours prior to start of purging. Follow detailed methodology in SAM Manual.
List the date and time the pump was installed: Date: Time:
[ ] Method 4, remove 1 BV, sample after 2 hours. Note - if well recovers 80% of total purged drawdown, use another method.
[ ] Method 5, non-purge method. Only with prior written approval from SAM

PURGING INFORMATION

Time	Water Level (feet below top of casing)	Drawdown (feet)	Water Volume Purged (gal)	Measured Parameters				
				Conductivity (µmhos)	Dissolved Oxygen	pH	Turbidity	Temp (°C)
1055								
1108	29.75	0.07	21	1.88	–	7.61	–	21.99
1117	29.78	0.10	32	1.89	–	7.58	–	22.16

Borehole Volume: 20.6 (gal) | Total Volume Purge Water: 32 (gal) | Average pumping rate: NA (gpm)

RECOVERY CALCULATIONS

Recovery of 80% of drawdown from purging = SWL + (0.2)(Maximum Drawdown during purging) 29.70

SAMPLING INFORMATION

Date & Time Sampled: 12/30/13 1130 | Depth to water at time of sampling (feet): 29.68

Quantity	Container Type	Filtered (Y/N)	Sample Preservatives	Analytical Methods to Perform
6	VOA	N	HCl	BTEX+OXY (8260); TPHg/d (8015B)

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WELL PURGING/SAMPLING LOG

Project Name: Wigington Oil | Well No.: MW-7
Project Number: 01208473.00 | Date: 12-30-13
Project Address: 11427 Woodside Avenue, Santee, CA
Well GPS: Latitude: Longitude:
Sampled by: GLL | Checked by: CEW | License #: 945

WELL SPECIFICATIONS & MEASUREMENTS

Borehole Diameter (in.) (BD): 6 8 (10) 12
Casing Diameter (in.) (CD): 2 (4) 6 8
Total Well Depth (ft.) (WD): 41.9
Product thickness (ft.): NA
Static Water Level (ft.) (SWL): 29.30
Time measured: NA
Water Column (ft.) (WC=WD-SWL): 12.6
Filter Pack Porosity (P): 0.30

12.6

Borehole Volume (BV) Calculations

BV (gal) = 0.041 [CD^2 + P (BD^2-CD^2)](WC)

This equation applies to wells constructed straddling the water table only. For submerged screens, document all calculations. Porosity is expressed in decimal form. **BV =** 21.4 **gallons**

16
+ 0.3(100-6
1
84
.3
25.2
16+25.2
1
41.2
12.6
1
24 78
82 40
41 200
519.12

PURGING & SAMPLING EQUIPMENT

Water Level Meter Type and ID: Heron OWIP
Purging Equipment/Method: Bladder Pump [ ] Bailer [x] Centrifugal Pump [ ] Other [ ]
pH/Temp/Conductivity Meter Type and ID: Oakton pH/Cond/Temp
Sampler Type: [ ] Teflon Bailer [x] Disposable Bailer [ ] Bladder Pump [ ] Centrifugal Pump [ ] Other:
Decontamination Method: [ ] Steam/High Pressure Wash [x] 3 Stage (Alconox, tap water & DI rinse) [ ] Other:

PURGING AND SAMPLING METHODOLOGIES

Well Recovery Type

[x] Fast -recovers 80% within 2 hours -Methods 1, 2, 3, & 5 [ ] Slow - more than 2 hours to recover 80% -Methods 3, 4, & 5

PURGING METHODS

[ ] Method 1, remove 3 BV, sample after well recovers 80% of total purged drawdown.
[x] Method 2, remove 1 BV, test parameters until stable per SAM Manual, sample after well recovers 80% of total purged drawdown.
[ ] Method 3, Low-flow - install pump at least 2 hours prior to start of purging. Follow detailed methodology in SAM Manual.
List the date and time the pump was installed: Date: Time:
[ ] Method 4, remove 1 BV, sample after 2 hours. Note - if well recovers 80% of total purged drawdown, use another method.
[ ] Method 5, non-purge method. Only with prior written approval from SAM

PURGING INFORMATION

Time	Water Level (feet below top of casing)	Drawdown (feet)	Water Volume Purged (gal)	Measured Parameters (±10%)				
				mS/cm Conductivity ~~(umhos)~~	Dissolved Oxygen	pH	Turbidity	Temp (°C)
1130	29.31	0.01	22	1.77	-	6.52	-	21.73
1203	29.34	0.04	36	1.78	-	6.58	-	21.83

Borehole Volume: 21.4 (gal) | Total Volume Purge Water: 36 (gal) | Average pumping rate: NA (gpm)

RECOVERY CALCULATIONS

Recovery of 80% of drawdown from purging = SWL + (0.2)(Maximum Drawdown during purging)

SAMPLING INFORMATION

Date & Time Sampled: ~~10/30~~ 12/30/13 - 1215 | Depth to water at time of sampling (feet): 29.30

Quantity	Container Type	Filtered (Y/N)	Sample Preservatives	Analytical Methods to Perform
6	VOA	N	HCl	BTEX+OXY (8260); TPHg/d (8015B)

WELL PURGING/SAMPLING LOG

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Project Name: Wigington Oil | Well No.: MW-9
Project Number: 01208473.00 | Date: 12/31/13
Project Address: 11427 Woodside Avenue, Santee, CA
Well GPS: Latitude: Longitude:
Sampled by: C. Crosby | Checked by: CEH | License #: 945

WELL SPECIFICATIONS & MEASUREMENTS

Borehole Diameter (in.) (BD): 6 8 (10) 12
Casing Diameter (in.) (CD): 2 (4) 6 8
Total Well Depth (ft.) (WD): 38.3 | Product thickness (ft.): NA
Static Water Level (ft.) (SWL): 29.69 | Time measured: NA
Water Column (ft.) (WC=WD-SWL): 8.61 | Filter Pack Porosity (P): 0.30

Borehole Volume (BV) Calculations

$$BV\ (gal) = 0.041\ [CD^2 + P\ (BD^2 - CD^2)](WC)$$

This equation applies to wells constructed straddling the water table only. For submerged screens, document all calculations. Porosity is expressed in decimal form. **BV =** 14.6 **gallons**

PURGING & SAMPLING EQUIPMENT

Water Level Meter Type and ID: Heron OWIP
Purging Equipment/Method: Bladder Pump [ ] Bailer [X] Centrifugal Pump [ ] Other [ ]
pH/Temp/Conductivity Meter Type and ID: Oakton pH/Cond/Temp
Sampler Type: [ ] Teflon Bailer [X] Disposable Bailer [ ] Bladder Pump [ ] Centrifugal Pump [ ] Other:
Decontamination Method: [ ] Steam/High Pressure Wash [X] 3 Stage (Alconox, tap water & DI rinse) [ ] Other:

PURGING AND SAMPLING METHODOLOGIES

Well Recovery Type

[X] Fast -recovers 80% within 2 hours -Methods 1, 2, 3, & 5 [ ] Slow - more than 2 hours to recover 80% -Methods 3, 4, & 5

PURGING METHODS

[ ] Method 1, remove 3 BV, sample after well recovers 80% of total purged drawdown.
[X] Method 2, remove 1 BV, test parameters until stable per SAM Manual, sample after well recovers 80% of total purged drawdown.
[ ] Method 3, Low-flow - install pump at least 2 hours prior to start of purging. Follow detailed methodology in SAM Manual.
List the date and time the pump was installed: Date: _____ Time: _____
[ ] Method 4, remove 1 BV, sample after 2 hours. Note - if well recovers 80% of total purged drawdown, use another method.
[ ] Method 5, non-purge method. Only with prior written approval from SAM

PURGING INFORMATION

Time	Water Level (feet below top of casing)	Drawdown (feet)	Water Volume Purged (gal)	Measured Parameters				
				Conductivity (µmhos)	Dissolved Oxygen	pH	Turbidity	Temp (°C)
1142								
1154	29.83	0.14	15	1.85	-	7.54	-	22.41
1159	30.05	0.36	22	1.84	-	7.62	-	22.44

Borehole Volume: 14.6 (gal) | Total Volume Purge Water: 22 (gal) | Average pumping rate: NA (gpm)

RECOVERY CALCULATIONS

Recovery of 80% of drawdown from purging = SWL + (0.2)(Maximum Drawdown during purging) 29.76

SAMPLING INFORMATION

Date & Time Sampled: 12/31/13 1215 | Depth to water at time of sampling (feet): 29.68

Quantity	Container Type	Filtered (Y/N)	Sample Preservatives	Analytical Methods to Perform
6	VOA	N	HCl	BTEX+OXY (8260); TPHg/d (8015B)

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WELL PURGING/SAMPLING LOG

Project Name: Wigington Oil		Well No.: MW-11
Project Number: 01208473.00		Date: 12/30/13
Project Address: 11427 Woodside Avenue, Santee, CA		
Well GPS: Latitude:	Longitude:	
Sampled by: GL	Checked by: CEH	License #: 945

WELL SPECIFICATIONS & MEASUREMENTS

Borehole Diameter (in.) (BD): 6 (8) 10 12	
Casing Diameter (in.) (CD): (2) 4 6 8	
Total Well Depth (ft.) (WD): 37.40	Product thickness (ft.): NA
Static Water Level (ft.) (SWL): 30.09	Time measured: NA
Water Column (ft.) (WC=WD-SWL): 7.31	Filter Pack Porosity (P): 0.30

7.31 × 9 = 65.79

Borehole Volume (BV) Calculations

BV (gal) = 0.041 [CD^2 + P (BD^2-CD^2)](WC)

This equation applies to wells constructed straddling the water table only. For submerged screens, document all calculations. Porosity is expressed in decimal form. **BV =** 6.6 **gallons**

PURGING & SAMPLING EQUIPMENT

Water Level Meter Type and ID: Heron OWIP

Purging Equipment/Method: Bladder Pump ☐ Bailer ☒ Centrifugal Pump ☐ Other ☐

pH/Temp/Conductivity Meter Type and ID: Oakton pH/Cond/Temp

Sampler Type: ☐ Teflon Bailer ☒ Disposable Bailer ☐ Bladder Pump ☐ Centrifugal Pump ☐ Other: _____

Decontamination Method: ☐ Steam/High Pressure Wash ☒ 3 Stage (Alconox, tap water & DI rinse) ☐ Other: _____

PURGING AND SAMPLING METHODOLOGIES

Well Recovery Type

☒ Fast -recovers 80% within 2 hours -Methods 1, 2, 3, & 5 ☐ Slow - more than 2 hours to recover 80% -Methods 3, 4, & 5

PURGING METHODS

☐ Method 1, remove 3 BV, sample after well recovers 80% of total purged drawdown.

☒ Method 2, remove 1 BV, test parameters until stable per SAM Manual, sample after well recovers 80% of total purged drawdown.

☐ Method 3, Low-flow - install pump at least 2 hours prior to start of purging. Follow detailed methodology in SAM Manual.

List the date and time the pump was installed: Date:_____ Time:_____

☐ Method 4, remove 1 BV, sample after 2 hours. Note - if well recovers 80% of total purged drawdown, use another method.

☐ Method 5, non-purge method. Only with prior written approval from SAM

PURGING INFORMATION

Time	Water Level (feet below top of casing)	Drawdown (feet)	Water Volume Purged (gal)	Measured Parameters				
				Conductivity (µmhos)	Dissolved Oxygen	pH	Turbidity	Temp (°C)
1541	30.11	0.02	7	1.39	--	6.60	--	21.67
1606	30.09	0.00	10.5	1.39	--	6.60	--	21.67

Borehole Volume: 6.6 (gal) Total Volume Purge Water: 10.5 (gal) Average pumping rate: NA (gpm)

RECOVERY CALCULATIONS

Recovery of 80% of drawdown from purging = SWL + (0.2)(Maximum Drawdown during purging)

SAMPLING INFORMATION

Date & Time Sampled: 12/30/13 1615 Depth to water at time of sampling (feet): 30.09

Quantity	Container Type	Filtered (Y/N)	Sample Preservatives	Analytical Methods to Perform
6	VOA	N	HCl	BTEX+OXY (8260); TPHg/d (8015B)

SCS ENGINEERS
Environmental Consultants
8799 Balboa Avenue, Suite 290
San Diego, California 92123

WELL PURGING/SAMPLING LOG

Project Name: Wigington Oil — Well No.: MW-12
Project Number: 01208473.00 — Date: 12/31/13
Project Address: 11427 Woodside Avenue, Santee, CA
Well GPS: Latitude: Longitude:
Sampled by: C. Crosby — Checked by: CEH — License #: 945

WELL SPECIFICATIONS & MEASUREMENTS

Borehole Diameter (in.) (BD): 6 (8) 10 12
Casing Diameter (in.) (CD): (2) 4 6 8
Total Well Depth (ft.) (WD): 36.2
Product thickness (ft.): NA
Static Water Level (ft.) (SWL): 29.71
Time measured: NA
Water Column (ft.) (WC=WD-SWL): 6.49
Filter Pack Porosity (P): 0.30

Borehole Volume (BV) Calculations

BV (gal) = 0.041 [CD^2 + P (BD^2-CD^2)](WC)

This equation applies to wells constructed straddling the water table only. For submerged screens, document all calculations. Porosity is expressed in decimal form. **BV =** 5.8 **gallons**

PURGING & SAMPLING EQUIPMENT

Water Level Meter Type and ID: Heron OWIP
Purging Equipment/Method: Bladder Pump [ ] Bailer [x] Centrifugal Pump [ ] Other [ ]
pH/Temp/Conductivity Meter Type and ID: Oakton pH/Cond/Temp
Sampler Type: [ ] Teflon Bailer [x] Disposable Bailer [ ] Bladder Pump [ ] Centrifugal Pump [ ] Other:
Decontamination Method: [ ] Steam/High Pressure Wash [x] 3 Stage (Alconox, tap water & DI rinse) [ ] Other:

PURGING AND SAMPLING METHODOLOGIES

Well Recovery Type

[x] Fast -recovers 80% within 2 hours -Methods 1, 2, 3, & 5 [ ] Slow - more than 2 hours to recover 80% -Methods 3, 4, & 5

PURGING METHODS

[ ] Method 1, remove 3 BV, sample after well recovers 80% of total purged drawdown.
[x] Method 2, remove 1 BV, test parameters until stable per SAM Manual, sample after well recovers 80% of total purged drawdown.
[ ] Method 3, Low-flow - install pump at least 2 hours prior to start of purging. Follow detailed methodology in SAM Manual.
List the date and time the pump was installed: Date: Time:
[ ] Method 4, remove 1 BV, sample after 2 hours. Note - if well recovers 80% of total purged drawdown, use another method.
[ ] Method 5, non-purge method. Only with prior written approval from SAM

PURGING INFORMATION

Time	Water Level (feet below top of casing)	Drawdown (feet)	Water Volume Purged (gal)	Measured Parameters				
				Conductivity (µmhos)	Dissolved Oxygen	pH	Turbidity	Temp (°C)
0822	29.74	0.03	6	0.862	--	6.94	--	22.03
0829	29.73	0.02	9	0.850	--	7.00	--	22.23

Borehole Volume: 5.8 (gal) Total Volume Purge Water: 9 (gal) Average pumping rate: NA (gpm)

RECOVERY CALCULATIONS

Recovery of 80% of drawdown from purging = SWL + (0.2)(Maximum Drawdown during purging)

SAMPLING INFORMATION

Date & Time Sampled: 12/31/13 0840 Depth to water at time of sampling (feet): 29.73

Quantity	Container Type	Filtered (Y/N)	Sample Preservatives	Analytical Methods to Perform
6	VOA	N	HCl	BTEX+OXY (8260); TPHg/d (8015B)

SCS ENGINEERS
Environmental Consultants
8799 Balboa Avenue, Suite 290
San Diego, California 92123

WELL PURGING/SAMPLING LOG

Project Name: Wigington Oil | Well No.: MW-14
Project Number: 01208473.00 | Date: 12/30/13
Project Address: 11427 Woodside Avenue, Santee, CA
Well GPS: Latitude: Longitude:
Sampled by: C. Crosby | Checked by: CBH | License #: 945

WELL SPECIFICATIONS & MEASUREMENTS

Borehole Diameter (in.) (BD): 6 8 (10) 12
Casing Diameter (in.) (CD): 2 (4) 6 8
Total Well Depth (ft.) (WD): 36.8
Product thickness (ft.): NA
Static Water Level (ft.) (SWL): 30.22
Time measured: NA
Water Column (ft.) (WC=WD-SWL): 6.48
Filter Pack Porosity (P): 0.30

Borehole Volume (BV) Calculations

BV (gal) = 0.041 [CD^2 + P (BD^2-CD^2)](WC)

This equation applies to wells constructed straddling the water table only. For submerged screens, document all calculations. Porosity is expressed in decimal form. **BV =** 11.0 **gallons**

PURGING & SAMPLING EQUIPMENT

Water Level Meter Type and ID: Heron OWIP
Purging Equipment/Method: Bladder Pump [ ] Bailer [x] Centrifugal Pump [ ] Other [ ]
pH/Temp/Conductivity Meter Type and ID: Oakton pH/Cond/Temp
Sampler Type: [ ] Teflon Bailer [x] Disposable Bailer [ ] Bladder Pump [ ] Centrifugal Pump [ ] Other:
Decontamination Method: [ ] Steam/High Pressure Wash [x] 3 Stage (Alconox, tap water & DI rinse) [ ] Other:

PURGING AND SAMPLING METHODOLOGIES

Well Recovery Type

[x] Fast -recovers 80% within 2 hours -Methods 1, 2, 3, & 5 [ ] Slow - more than 2 hours to recover 80% -Methods 3, 4, & 5

PURGING METHODS

[ ] Method 1, remove 3 BV, sample after well recovers 80% of total purged drawdown.
[x] Method 2, remove 1 BV, test parameters until stable per SAM Manual, sample after well recovers 80% of total purged drawdown.
[ ] Method 3, Low-flow - install pump at least 2 hours prior to start of purging. Follow detailed methodology in SAM Manual.
List the date and time the pump was installed: Date: Time:
[ ] Method 4, remove 1 BV, sample after 2 hours. Note - if well recovers 80% of total purged drawdown, use another method.
[ ] Method 5, non-purge method. Only with prior written approval from SAM

PURGING INFORMATION

Time	Water Level (feet below top of casing)	Drawdown (feet)	Water Volume Purged (gal)	Measured Parameters				
				Conductivity (µmhos)	Dissolved Oxygen	pH	Turbidity	Temp (°C)
1208								
1214	32.30		11	1.55	–	7.17	–	22.63
1223	32.70	2.38	17	1.51	–	7.18	–	22.58

Borehole Volume: 11.0 (gal) Total Volume Purge Water: 17 (gal) Average pumping rate: NA (gpm)

RECOVERY CALCULATIONS

Recovery of 80% of drawdown from purging = SWL + (0.2)(Maximum Drawdown during purging) 30.79

SAMPLING INFORMATION

Date & Time Sampled: 12/30/13 1240 Depth to water at time of sampling (feet): 30.35

Quantity	Container Type	Filtered (Y/N)	Sample Preservatives	Analytical Methods to Perform
6	VOA	N	HCl	BTEX+OXY (8260); TPHg/d (8015B)

SCS ENGINEERS
Environmental Consultants
8799 Balboa Avenue, Suite 290
San Diego, California 92123

WELL PURGING/SAMPLING LOG

Project Name: Wigington Oil | Well No.: MW-15
Project Number: 01208473.00 | Date: 12/30/13
Project Address: 11427 Woodside Avenue, Santee, CA
Well GPS: Latitude: Longitude:
Sampled by: C. Crosby | Checked by: CEH | License #: 945

WELL SPECIFICATIONS & MEASUREMENTS

Borehole Diameter (in.) (BD): 6 (8") 10 12
Casing Diameter (in.) (CD): (2) 4 6 8
Total Well Depth (ft.) (WD): 37.2 | Product thickness (ft.): NA
Static Water Level (ft.) (SWL): 29.95 | Time measured: NA
Water Column (ft.) (WC=WD-SWL): 7.25 | Filter Pack Porosity (P): 0.30

Borehole Volume (BV) Calculations

BV (gal) = 0.041 [CD^2 + P (BD^2-CD^2)](WC)

This equation applies to wells constructed straddling the water table only. For submerged screens, document all calculations. Porosity is expressed in decimal form. **BV =** 6.5 **gallons**

PURGING & SAMPLING EQUIPMENT

Water Level Meter Type and ID: Heron OWIP
Purging Equipment/Method: Bladder Pump [ ] Bailer [x] Centrifugal Pump [ ] Other [ ]
pH/Temp/Conductivity Meter Type and ID: Oakton pH/Cond/Temp
Sampler Type: [ ] Teflon Bailer [x] Disposable Bailer [ ] Bladder Pump [ ] Centrifugal Pump [ ] Other:
Decontamination Method: [ ] Steam/High Pressure Wash [x] 3 Stage (Alconox, tap water & DI rinse) [ ] Other:

PURGING AND SAMPLING METHODOLOGIES

Well Recovery Type

[x] Fast -recovers 80% within 2 hours -Methods 1, 2, 3, & 5 [ ] Slow - more than 2 hours to recover 80% -Methods 3, 4, & 5

PURGING METHODS

[ ] Method 1, remove 3 BV, sample after well recovers 80% of total purged drawdown.
[x] Method 2, remove 1 BV, test parameters until stable per SAM Manual, sample after well recovers 80% of total purged drawdown.
[ ] Method 3, Low-flow - install pump at least 2 hours prior to start of purging. Follow detailed methodology in SAM Manual.
List the date and time the pump was installed: Date: Time:
[ ] Method 4, remove 1 BV, sample after 2 hours. Note - if well recovers 80% of total purged drawdown, use another method.
[ ] Method 5, non-purge method. Only with prior written approval from SAM

PURGING INFORMATION

Time	Water Level (feet below top of casing)	Drawdown (feet)	Water Volume Purged (gal)	Measured Parameters				
				Conductivity (µmhos)	Dissolved Oxygen	pH	Turbidity	Temp (°C)
1455								
1510	29.95	0.00	6.5	1.18	-	7.04	-	22.70
1520	29.95	0.00	10	1.18	-	7.06	-	22.69

Borehole Volume: 6.5 (gal) | Total Volume Purge Water: 10 (gal) | Average pumping rate: NA (gpm)

RECOVERY CALCULATIONS

Recovery of 80% of drawdown from purging = SWL + (0.2)(Maximum Drawdown during purging) 29.95

SAMPLING INFORMATION

Date & Time Sampled: 12/30/13 1530 | Depth to water at time of sampling (feet): 29.95

Quantity	Container Type	Filtered (Y/N)	Sample Preservatives	Analytical Methods to Perform
6	VOA	N	HCl	BTEX+OXY (8260); TPHg/d (8015B)

SCS ENGINEERS
Environmental Consultants
8799 Balboa Avenue, Suite 290
San Diego, California 92123

WELL PURGING/SAMPLING LOG

Project Name: Wigington Oil — Well No.: MW-16
Project Number: 01208473.00 — Date: 12/31/13
Project Address: 11427 Woodside Avenue, Santee, CA
Well GPS: Latitude: Longitude:
Sampled by: C. Crosby — Checked by: CEB — License #: 945

WELL SPECIFICATIONS & MEASUREMENTS

Borehole Diameter (in.) (BD): 6 (8) 10 12
Casing Diameter (in.) (CD): (2) 4 6 8
Total Well Depth (ft.) (WD): 38.3
Product thickness (ft.): NA
Static Water Level (ft.) (SWL): 30.27
Time measured: NA
Water Column (ft.) (WC=WD-SWL): 8.03
Filter Pack Porosity (P): 0.30

Borehole Volume (BV) Calculations

BV (gal) = 0.041 [CD^2 + P (BD^2-CD^3)](WC)

This equation applies to wells constructed straddling the water table only. For submerged screens, document all calculations. Porosity is expressed in decimal form. **BV =** 7.2 **gallons**

PURGING & SAMPLING EQUIPMENT

Water Level Meter Type and ID: Heron OWIP
Purging Equipment/Method: Bladder Pump [ ] Bailer [X] Centrifugal Pump [ ] Other [ ]
pH/Temp/Conductivity Meter Type and ID: Oakton pH/Cond/Temp
Sampler Type: [ ] Teflon Bailer [X] Disposable Bailer [ ] Bladder Pump [ ] Centrifugal Pump [ ] Other:
Decontamination Method: [ ] Steam/High Pressure Wash [X] 3 Stage (Alconox, tap water & DI rinse) [ ] Other:

PURGING AND SAMPLING METHODOLOGIES

Well Recovery Type

[X] Fast -recovers 80% within 2 hours -Methods 1, 2, 3, & 5 [ ] Slow - more than 2 hours to recover 80% -Methods 3, 4, & 5

PURGING METHODS

[ ] Method 1, remove 3 BV, sample after well recovers 80% of total purged drawdown.
[X] Method 2, remove 1 BV, test parameters until stable per SAM Manual, sample after well recovers 80% of total purged drawdown.
[ ] Method 3, Low-flow - install pump at least 2 hours prior to start of purging. Follow detailed methodology in SAM Manual.
List the date and time the pump was installed: Date: Time:
[ ] Method 4, remove 1 BV, sample after 2 hours. Note - if well recovers 80% of total purged drawdown, use another method.
[ ] Method 5, non-purge method. Only with prior written approval from SAM

PURGING INFORMATION

Time	Water Level (feet below top of casing)	Drawdown (feet)	Water Volume Purged (gal)	Measured Parameters				
				Conductivity (µmhos)	Dissolved Oxygen	pH	Turbidity	Temp (°C)
0655								
0714	30.28	0.01	7.5	0.970	--	7.29	--	20.91
0725	30.28	0.01	11.0	0.963	--	7.27	--	21.19

Borehole Volume: 7.2 (gal) Total Volume Purge Water: 11 (gal) Average pumping rate: NA (gpm)

RECOVERY CALCULATIONS

Recovery of 80% of drawdown from purging = SWL + (0.2)(Maximum Drawdown during purging)

SAMPLING INFORMATION

Date & Time Sampled: 12/31/13 0735 Depth to water at time of sampling (feet): 30.28

Quantity	Container Type	Filtered (Y/N)	Sample Preservatives	Analytical Methods to Perform
6	VOA	N	HCl	BTEX+OXY (8260); TPHg/d (8015B)

SCS ENGINEERS
Environmental Consultants
8799 Balboa Avenue, Suite 290
San Diego, California 92123

WELL PURGING/SAMPLING LOG

Project Name: Wigington Oil | Well No: MW-18
Project Number: 01208473.00 | Date: 12-30-13
Project Address: 11427 Woodside Avenue, Santee, CA
Well GPS: Latitude: Longitude:
Sampled by: GLL | Checked by: CEH | License #: 945

WELL SPECIFICATIONS & MEASUREMENTS

Borehole Diameter (in.) (BD): 6 (8) 10 12
Casing Diameter (in.) (CD): (2) 4 6 8
Total Well Depth (ft.) (WD): 39.1
Product thickness (ft.): NA
Static Water Level (ft.) (SWL): 30.5
Time measured: NA
Water Column (ft.) (WC=WD-SWL): 8.6
Filter Pack Porosity (P): 0.30

5
8.6
x .9
7.74

Borehole Volume (BV) Calculations

BV (gal) = 0.041 [CD^2 + P (BD^2-CD^2)](WC)

This equation applies to wells constructed straddling the water table only. For submerged screens, document all calculations. Porosity is expressed in decimal form. **BV =** 7.75 **gallons**

PURGING & SAMPLING EQUIPMENT

Water Level Meter Type and ID: Heron OWIP
Purging Equipment/Method: Bladder Pump [ ] Bailer [x] Centrifugal Pump [ ] Other [ ]
pH/Temp/Conductivity Meter Type and ID: Oakton pH/Cond/Temp
Sampler Type: [ ] Teflon Bailer [x] Disposable Bailer [ ] Bladder Pump [ ] Centrifugal Pump [ ] Other:
Decontamination Method: [ ] Steam/High Pressure Wash [x] 3 Stage (Alconox, tap water & DI rinse) [ ] Other:

PURGING AND SAMPLING METHODOLOGIES

Well Recovery Type

[x] Fast -recovers 80% within 2 hours -Methods 1, 2, 3, & 5 [ ] Slow - more than 2 hours to recover 80% -Methods 3, 4, & 5

PURGING METHODS

[ ] Method 1, remove 3 BV, sample after well recovers 80% of total purged drawdown.
[x] Method 2, remove 1 BV, test parameters until stable per SAM Manual, sample after well recovers 80% of total purged drawdown.
[ ] Method 3, Low-flow - install pump at least 2 hours prior to start of purging. Follow detailed methodology in SAM Manual.
List the date and time the pump was installed: Date: Time:
[ ] Method 4, remove 1 BV, sample after 2 hours. Note - if well recovers 80% of total purged drawdown, use another method.
[ ] Method 5, non-purge method. Only with prior written approval from SAM

PURGING INFORMATION

Time	Water Level (feet below top of casing)	Drawdown (feet)	Water Volume Purged (gal)	Measured Parameters				
				Conductivity (µmhos)	Dissolved Oxygen	pH	Turbidity	Temp (°C)
1330	30.44	-0.01	8	1.58	--	6.63	--	21.55
1347	30.48	-0.02	12	1.39	--	6.60	--	21.67
1358	30.51	0.01	16	1.39	--	6.60	--	21.67

Borehole Volume: 7.75 (gal) Total Volume Purge Water: 16 (gal) Average pumping rate: NA (gpm)

RECOVERY CALCULATIONS

Recovery of 80% of drawdown from purging = SWL + (0.2)(Maximum Drawdown during purging)

SAMPLING INFORMATION

Date & Time Sampled: 12/30/13 - 1445 Depth to water at time of sampling (feet): 30.50

Quantity	Container Type	Filtered (Y/N)	Sample Preservatives	Analytical Methods to Perform
6	VOA	N	HCl	BTEX+OXY (8260); TPHg/d (8015B)

SCS ENGINEERS
Environmental Consultants
8799 Balboa Avenue, Suite 290
San Diego, California 92123

WELL PURGING/SAMPLING LOG

Project Name: Wigington Oil | Well No.: MW-19
Project Number: 01208473.00 | Date: 12/30/13
Project Address: 11427 Woodside Avenue, Santee, CA
Well GPS: Latitude: Longitude:
Sampled by: C. Crosby | Checked by: CEB | License #: 945

WELL SPECIFICATIONS & MEASUREMENTS

Borehole Diameter (in.) (BD): 6 (8) 10 12
Casing Diameter (in.) (CD): (2) 4 6 8
Total Well Depth (ft.) (WD): 40.4
Product thickness (ft.): NA
Static Water Level (ft.) (SWL): 37.08
Time measured: NA
Water Column (ft.) (WC=WD-SWL): 7.32
Filter Pack Porosity (P): 0.30

Borehole Volume (BV) Calculations

BV (gal) = 0.041 [CD^2 + P (BD^2-CD^2)](WC)

This equation applies to wells constructed straddling the water table only. For submerged screens, document all calculations. Porosity is expressed in decimal form. **BV =** 6.5 **gallons**

PURGING & SAMPLING EQUIPMENT

Water Level Meter Type and ID: Heron OWIP
Purging Equipment/Method: Bladder Pump [ ] Bailer [X] Centrifugal Pump [ ] Other [ ]
pH/Temp/Conductivity Meter Type and ID: Oakton pH/Cond/Temp
Sampler Type: [ ] Teflon Bailer [X] Disposable Bailer [ ] Bladder Pump [ ] Centrifugal Pump [ ] Other:
Decontamination Method: [ ] Steam/High Pressure Wash [X] 3 Stage (Alconox, tap water & DI rinse) [ ] Other:

PURGING AND SAMPLING METHODOLOGIES

Well Recovery Type

[X] Fast -recovers 80% within 2 hours -Methods 1, 2, 3, & 5 [ ] Slow - more than 2 hours to recover 80% -Methods 3, 4, & 5

PURGING METHODS

[ ] Method 1, remove 3 BV, sample after well recovers 80% of total purged drawdown.
[X] Method 2, remove 1 BV, test parameters until stable per SAM Manual, sample after well recovers 80% of total purged drawdown.
[ ] Method 3, Low-flow - install pump at least 2 hours prior to start of purging. Follow detailed methodology in SAM Manual.
List the date and time the pump was installed: Date: Time:
[ ] Method 4, remove 1 BV, sample after 2 hours. Note - if well recovers 80% of total purged drawdown, use another method.
[ ] Method 5, non-purge method. Only with prior written approval from SAM

PURGING INFORMATION

Time	Water Level (feet below top of casing)	Drawdown (feet)	Water Volume Purged (gal)	Measured Parameters				
				Conductivity (µmhos)	Dissolved Oxygen	pH	Turbidity	Temp (°C)
1357								
1414	33.12	0.04	6.5	1.25	-	7.18	-	23.13
1420	33.15	0.07	10.5	1.21	-	7.13	-	22.81

Borehole Volume: 6.5 (gal) | Total Volume Purge Water: 10.5 (gal) | Average pumping rate: NA (gpm)

RECOVERY CALCULATIONS

Recovery of 80% of drawdown from purging = SWL + (0.2)(Maximum Drawdown during purging) 38.09

SAMPLING INFORMATION

Date & Time Sampled: 12/30/13 1435 | Depth to water at time of sampling (feet): 35.08

Quantity	Container Type	Filtered (Y/N)	Sample Preservatives	Analytical Methods to Perform
6	VOA	N	HCl	BTEX+OXY (8260); TPHg/d (8015B)

APPENDIX B

NON-HAZARDOUS WASTE MANIFEST

NON-HAZARDOUS WASTE MANIFEST

1. Generator ID Number

2. Page 1 of 1

3. Emergency Response Phone: 1-800-424-9300

4. Waste Tracking Number: 41199

5. Generator's Name and Mailing Address
WIGINGTON OIL
C/O SCS ENGINEERS 8799 BALBOA AVE.
SAN DIEGO, CA 92123
Generator's Phone: 858-571-5500 CHRIS CROSBY

Generator's Site Address (if different than mailing address)
WIGINGTON OIL
11427 S. WOODSIDE AVE.
SANTEE, CA 92071

6. Transporter 1 Company Name: EFR ENVIRONMENTAL SERVICES, INC.
U.S. EPA ID Number: CAR000011205

7. Transporter 2 Company Name
U.S. EPA ID Number

8. Designated Facility Name and Site Address: CROSBY & OVERTON PLANT #1
1630 WEST 17TH STREET
LONG BEACH, CA 90813
Facility's Phone: 562-432-5445
U.S. EPA ID Number: CAD028409019

	9. Waste Shipping Name and Description	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	
1.	NON-HAZARDOUS WASTE LIQUID (PURGE WATER)	5	DM	275	G	
2.						
3.						
4.						

THE REFERENCED WASTE WAS RECEIVED, HANDLED AND STORED FOR SUBSEQUENT OFFSITE DISPOSAL, TREATMENT OR REUSE. CROSBY & OVERTON INC. OPERATES THE FACILITY UNDER UNITS GRANTED TO THEM BY THE DEPARTMENT OF TOXIC SUBSTANCE CONTROL, TOGETHER WITH THE ENVIRONMENTAL PROTECTION AGENCY IN ACCORDANCE WITH THE PROVISIONS OF THE RESOURCE CONSERVATION AND RECOVERY ACT OF 1976 TOGETHER WITH APPLICABLE FEDERAL AND STATE REGULATIONS. CROSBY & OVERTON HAS ALL OF THE NECESSARY PERMITS TO ACCEPT THE REFERENCED WASTE AND ALL THE WASTE HAS BEEN HANDLED ACCORDINGLY

13. Special Handling Instructions and Additional Information
9B-1 PROFILE NO: 83458 (PURGE WATER)

D93171

ALWAYS WEAR APPROPRIATE PPE & USE SAFE HANDLING METHODS.

14. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations.

Generator's/Offeror's Printed/Typed Name: On behalf of Generator - Chris Crosby (SCS)
Signature: Chris Crosby
Month 1 Day 21 Year 14

15. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter Signature (for exports only): Date leaving U.S.:

16. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name: Octavio Quintero
Signature
Month 1 Day 21 Year 14

Transporter 2 Printed/Typed Name
Signature
Month Day Year

17. Discrepancy

17a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

Manifest Reference Number:

17b. Alternate Facility (or Generator)
U.S. EPA ID Number

Facility's Phone:

17c. Signature of Alternate Facility (or Generator)
Month Day Year

H135

18. Designated Facility Owner or Operator: Certification of receipt of materials covered by the manifest except as noted in Item 17a

Printed/Typed Name: Cathy Navarrete
Signature
Month 01 Day 22 Year 14

GENERATOR — INT'L — TRANSPORTER — DESIGNATED FACILITY

DESIGNATED FACILITY TO GENERATOR

169-BLC-O 6 10498 (Rev. 9/09)

APPENDIX C

ANALYTICAL DATA AND CHAIN-OF-CUSTODY DOCUMENTATION

Mobile Geochemistry Inc.

10 January 2014

Mr. Chris Crosby
SCS Engineers - San Diego
8799 Balboa Avenue, Suite 290
San Diego, CA 92123

H&P Project: SCS123113-11
Client Project: 01208473.00 / Wigington Oil

Dear Mr. Chris Crosby:

Enclosed is the analytical report for the above referenced project. The data herein applies to samples as received by H&P Mobile Geochemistry, Inc. on 31-Dec-13 which were analyzed in accordance with the attached Chain of Custody record(s).

The results for all sample analyses and required QA/QC analyses are presented in the following sections and summarized in the documents:

- Sample Summary
- Case Narrative (if applicable)
- Sample Results
- Quality Control Summary
- Notes and Definitions / Appendix
- Chain of Custody

Unless otherwise noted, all analyses were performed and reviewed in compliance with our Quality Systems Manual and Standard Operating Procedures. This report shall not be reproduced, except in full, without the written approval of H&P Mobile Geochemistry, Inc.

We at H&P Mobile Geochemistry, Inc. sincerely appreciate the opportunity to provide analytical services to you on this project. If you have any questions or concerns regarding this analytical report, please contact me at your convenience at 760-804-9678.

Sincerely,

Janis Villarreal

Janis Villarreal
Laboratory Director

H&P Mobile Geochemistry, Inc. operates under CA Environmental Lab Accreditation Program Numbers 2579, 2740, 2741, 2742, 2743, 2745 and 2754. National Environmental Laboratory Accreditation Conference (NELAC) Standards Lab #11845

H&P Mobile
Geochemistry Inc.

2470 Impala Drive
Carlsbad, CA 92010
760-804-9678 Phone
760-804-9159 Fax

SCS Engineers - San Diego	Project: SCS123113-11	
8799 Balboa Avenue, Suite 290	Project Number: 01208473.00 / Wigington Oil	Reported:
San Diego, CA 92123	Project Manager: Mr. Chris Crosby	10-Jan-14 09:48

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
MW-1	E401003-01	Water	31-Dec-13	31-Dec-13
MW-4	E401003-02	Water	31-Dec-13	31-Dec-13
MW-6	E401003-03	Water	30-Dec-13	31-Dec-13
MW-7	E401003-04	Water	30-Dec-13	31-Dec-13
MW-9	E401003-05	Water	31-Dec-13	31-Dec-13
MW-11	E401003-06	Water	30-Dec-13	31-Dec-13
MW-12	E401003-07	Water	31-Dec-13	31-Dec-13
MW-14	E401003-08	Water	30-Dec-13	31-Dec-13
MW-15	E401003-09	Water	30-Dec-13	31-Dec-13
MW-16	E401003-10	Water	31-Dec-13	31-Dec-13
MW-18	E401003-11	Water	30-Dec-13	31-Dec-13
MW-19	E401003-12	Water	30-Dec-13	31-Dec-13

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SCS Engineers - San Diego	Project: SCS123113-11	
8799 Balboa Avenue, Suite 290	Project Number: 01208473.00 / Wigington Oil	Reported:
San Diego, CA 92123	Project Manager: Mr. Chris Crosby	10-Jan-14 09:48

DETECTIONS SUMMARY

Sample ID: **MW-1** Laboratory ID: **E401003-01**

Analyte	Result	Reporting Limit	Units	Method	Notes
Methyl tertiary-butyl ether (MTBE)	**1.1**	1.0	ug/l	EPA 8260B	
Benzene	**42**	0.5	ug/l	EPA 8260B	
Ethylbenzene	**0.8**	0.5	ug/l	EPA 8260B	

Sample ID: **MW-4** Laboratory ID: **E401003-02**

Analyte	Result	Reporting Limit	Units	Method	Notes
Methyl tertiary-butyl ether (MTBE)	**19**	1.0	ug/l	EPA 8260B	
Benzene	**29**	0.5	ug/l	EPA 8260B	
Toluene	**0.9**	0.5	ug/l	EPA 8260B	
Ethylbenzene	**53**	0.5	ug/l	EPA 8260B	
m,p-Xylene	**1.3**	1.0	ug/l	EPA 8260B	

Sample ID: **MW-6** Laboratory ID: **E401003-03**

Analyte	Result	Reporting Limit	Units	Method	Notes
Methyl tertiary-butyl ether (MTBE)	**6.5**	1.0	ug/l	EPA 8260B	
Benzene	**20**	0.5	ug/l	EPA 8260B	
Ethylbenzene	**27**	0.5	ug/l	EPA 8260B	
m,p-Xylene	**2.4**	1.0	ug/l	EPA 8260B	

Sample ID: **MW-7** Laboratory ID: **E401003-04**

Analyte	Result	Reporting Limit	Units	Method	Notes
No Detections Reported					

Sample ID: **MW-9** Laboratory ID: **E401003-05**

Analyte	Result	Reporting Limit	Units	Method	Notes
Methyl tertiary-butyl ether (MTBE)	**5.0**	1.0	ug/l	EPA 8260B	
Benzene	**11**	0.5	ug/l	EPA 8260B	
Toluene	**0.8**	0.5	ug/l	EPA 8260B	
Ethylbenzene	**25**	0.5	ug/l	EPA 8260B	
m,p-Xylene	**12**	1.0	ug/l	EPA 8260B	
o-Xylene	**1.0**	0.5	ug/l	EPA 8260B	

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Sample ID: **MW-11** Laboratory ID: **E401003-06**

Analyte	Result	Reporting Limit	Units	Method	Notes
Benzene	**15**	0.5	ug/l	EPA 8260B	
Toluene	**1.4**	0.5	ug/l	EPA 8260B	
Ethylbenzene	**39**	0.5	ug/l	EPA 8260B	
m,p-Xylene	**5.1**	1.0	ug/l	EPA 8260B	
o-Xylene	**0.5**	0.5	ug/l	EPA 8260B	
Gasoline (C5-C11)	**2000**	500	ug/l	LUFT	G-25
Diesel (C12-C24)	**730**	500	ug/l	LUFT	D-08

Sample ID: **MW-12** Laboratory ID: **E401003-07**

Analyte	Result	Reporting Limit	Units	Method	Notes
Methyl tertiary-butyl ether (MTBE)	**9.2**	1.0	ug/l	EPA 8260B	
Benzene	**9.6**	0.5	ug/l	EPA 8260B	
Toluene	**0.5**	0.5	ug/l	EPA 8260B	
Ethylbenzene	**0.8**	0.5	ug/l	EPA 8260B	

Sample ID: **MW-14** Laboratory ID: **E401003-08**

Analyte	Result	Reporting Limit	Units	Method	Notes
Benzene	**1800**	50	ug/l	EPA 8260B	
Toluene	**59**	50	ug/l	EPA 8260B	
Ethylbenzene	**1700**	50	ug/l	EPA 8260B	
m,p-Xylene	**1900**	100	ug/l	EPA 8260B	
Gasoline (C5-C11)	**25000**	500	ug/l	LUFT	
Diesel (C12-C24)	**2200**	500	ug/l	LUFT	D-08

Sample ID: **MW-15** Laboratory ID: **E401003-09**

Analyte	Result	Reporting Limit	Units	Method	Notes
Benzene	**350**	50	ug/l	EPA 8260B	
Ethylbenzene	**2800**	50	ug/l	EPA 8260B	
m,p-Xylene	**3400**	100	ug/l	EPA 8260B	
Gasoline (C5-C11)	**26000**	500	ug/l	LUFT	
Diesel (C12-C24)	**3500**	500	ug/l	LUFT	D-08

Sample ID: **MW-16** Laboratory ID: **E401003-10**

Analyte	Result	Reporting Limit	Units	Method	Notes
Methyl tertiary-butyl ether (MTBE)	**5.3**	1.0	ug/l	EPA 8260B	

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Sample ID: **MW-16** Laboratory ID: **E401003-10**

Analyte	Result	Reporting Limit	Units	Method	Notes
Benzene	**7.2**	0.5	ug/l	EPA 8260B	
Toluene	**0.5**	0.5	ug/l	EPA 8260B	
m,p-Xylene	**3.4**	1.0	ug/l	EPA 8260B	
Tertiary-butyl alcohol (TBA)	**37**	5.0	ug/l	EPA 8260B	

Sample ID: **MW-18** Laboratory ID: **E401003-11**

Analyte	Result	Reporting Limit	Units	Method	Notes
No Detections Reported					

Sample ID: **MW-19** Laboratory ID: **E401003-12**

Analyte	Result	Reporting Limit	Units	Method	Notes
Benzene	**360**	50	ug/l	EPA 8260B	
Toluene	**370**	50	ug/l	EPA 8260B	
Ethylbenzene	**2900**	50	ug/l	EPA 8260B	
m,p-Xylene	**3900**	100	ug/l	EPA 8260B	
o-Xylene	**1500**	50	ug/l	EPA 8260B	
Gasoline (C5-C11)	**43000**	500	ug/l	LUFT	
Diesel (C12-C24)	**2300**	500	ug/l	LUFT	D-08

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Volatile Organic Compounds by EPA Method 5030B/8260B

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Analyte	Result	Reporting Limit	Units	Dilution Factor	Batch	Prepared	Analyzed	Method	Notes
MW-1 (E401003-01) Water Sampled: 31-Dec-13 Received: 31-Dec-13									
Methyl tertiary-butyl ether (MTBE)	**1.1**	1.0	ug/l	0.05	EA40605	06-Jan-14	06-Jan-14	EPA 8260B	
Diisopropyl ether (DIPE)	ND	1.0	"	"	"	"	"	"	
Ethyl tert-butyl ether (ETBE)	ND	1.0	"	"	"	"	"	"	
Tertiary-amyl methyl ether (TAME)	ND	1.0	"	"	"	"	"	"	
Benzene	**42**	0.5	"	"	"	"	"	"	
Toluene	ND	0.5	"	"	"	"	"	"	
Ethylbenzene	**0.8**	0.5	"	"	"	"	"	"	
m,p-Xylene	ND	1.0	"	"	"	"	"	"	
o-Xylene	ND	0.5	"	"	"	"	"	"	
Tertiary-butyl alcohol (TBA)	ND	5.0	"	"	"	"	"	"	
Surrogate: Dibromofluoromethane		*102 %*		*75-125*		"	"	"	
Surrogate: 1,2-Dichloroethane-d4		*102 %*		*62-139*		"	"	"	
Surrogate: Toluene-d8		*108 %*		*75-125*		"	"	"	
Surrogate: 4-Bromofluorobenzene		*100 %*		*75-125*		"	"	"	
MW-4 (E401003-02) Water Sampled: 31-Dec-13 Received: 31-Dec-13									
Methyl tertiary-butyl ether (MTBE)	**19**	1.0	ug/l	0.05	EA40605	06-Jan-14	06-Jan-14	EPA 8260B	
Diisopropyl ether (DIPE)	ND	1.0	"	"	"	"	"	"	
Ethyl tert-butyl ether (ETBE)	ND	1.0	"	"	"	"	"	"	
Tertiary-amyl methyl ether (TAME)	ND	1.0	"	"	"	"	"	"	
Benzene	**29**	0.5	"	"	"	"	"	"	
Toluene	**0.9**	0.5	"	"	"	"	"	"	
Ethylbenzene	**53**	0.5	"	"	"	"	"	"	
m,p-Xylene	**1.3**	1.0	"	"	"	"	"	"	
o-Xylene	ND	0.5	"	"	"	"	"	"	
Tertiary-butyl alcohol (TBA)	ND	5.0	"	"	"	"	"	"	
Surrogate: Dibromofluoromethane		*101 %*		*75-125*		"	"	"	
Surrogate: 1,2-Dichloroethane-d4		*98.4 %*		*62-139*		"	"	"	
Surrogate: Toluene-d8		*115 %*		*75-125*		"	"	"	
Surrogate: 4-Bromofluorobenzene		*101 %*		*75-125*		"	"	"	

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Volatile Organic Compounds by EPA Method 5030B/8260B

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Analyte	Result	Reporting Limit	Units	Dilution Factor	Batch	Prepared	Analyzed	Method	Notes
MW-6 (E401003-03) Water Sampled: 30-Dec-13 Received: 31-Dec-13									
Methyl tertiary-butyl ether (MTBE)	**6.5**	1.0	ug/l	0.1	EA40807	08-Jan-14	08-Jan-14	EPA 8260B	
Diisopropyl ether (DIPE)	ND	1.0	"	"	"	"	"	"	
Ethyl tert-butyl ether (ETBE)	ND	1.0	"	"	"	"	"	"	
Tertiary-amyl methyl ether (TAME)	ND	1.0	"	"	"	"	"	"	
Benzene	**20**	0.5	"	"	"	"	"	"	
Toluene	ND	0.5	"	"	"	"	"	"	
Ethylbenzene	**27**	0.5	"	"	"	"	"	"	
m,p-Xylene	**2.4**	1.0	"	"	"	"	"	"	
o-Xylene	ND	0.5	"	"	"	"	"	"	
Tertiary-butyl alcohol (TBA)	ND	5.0	"	"	"	"	"	"	
Surrogate: Dibromofluoromethane		*96.1 %*		*75-125*	"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		*104 %*		*62-139*	"	"	"	"	
Surrogate: Toluene-d8		*110 %*		*75-125*	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*99.2 %*		*75-125*	"	"	"	"	
MW-7 (E401003-04) Water Sampled: 30-Dec-13 Received: 31-Dec-13									
Methyl tertiary-butyl ether (MTBE)	ND	1.0	ug/l	0.05	EA40605	06-Jan-14	06-Jan-14	EPA 8260B	
Diisopropyl ether (DIPE)	ND	1.0	"	"	"	"	"	"	
Ethyl tert-butyl ether (ETBE)	ND	1.0	"	"	"	"	"	"	
Tertiary-amyl methyl ether (TAME)	ND	1.0	"	"	"	"	"	"	
Benzene	ND	0.5	"	"	"	"	"	"	
Toluene	ND	0.5	"	"	"	"	"	"	
Ethylbenzene	ND	0.5	"	"	"	"	"	"	
m,p-Xylene	ND	1.0	"	"	"	"	"	"	
o-Xylene	ND	0.5	"	"	"	"	"	"	
Tertiary-butyl alcohol (TBA)	ND	5.0	"	"	"	"	"	"	
Surrogate: Dibromofluoromethane		*103 %*		*75-125*	"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		*99.1 %*		*62-139*	"	"	"	"	
Surrogate: Toluene-d8		*105 %*		*75-125*	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*98.1 %*		*75-125*	"	"	"	"	

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Volatile Organic Compounds by EPA Method 5030B/8260B

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Analyte	Result	Reporting Limit	Units	Dilution Factor	Batch	Prepared	Analyzed	Method	Notes
MW-9 (E401003-05) Water Sampled: 31-Dec-13 Received: 31-Dec-13									
Methyl tertiary-butyl ether (MTBE)	**5.0**	1.0	ug/l	0.05	EA40605	06-Jan-14	06-Jan-14	EPA 8260B	
Diisopropyl ether (DIPE)	ND	1.0	"	"	"	"	"	"	
Ethyl tert-butyl ether (ETBE)	ND	1.0	"	"	"	"	"	"	
Tertiary-amyl methyl ether (TAME)	ND	1.0	"	"	"	"	"	"	
Benzene	**11**	0.5	"	"	"	"	"	"	
Toluene	**0.8**	0.5	"	"	"	"	"	"	
Ethylbenzene	**25**	0.5	"	"	"	"	"	"	
m,p-Xylene	**12**	1.0	"	"	"	"	"	"	
o-Xylene	**1.0**	0.5	"	"	"	"	"	"	
Tertiary-butyl alcohol (TBA)	ND	5.0	"	"	"	"	"	"	
Surrogate: Dibromofluoromethane		*95.1 %*		*75-125*	"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		*95.5 %*		*62-139*	"	"	"	"	
Surrogate: Toluene-d8		*112 %*		*75-125*	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*106 %*		*75-125*	"	"	"	"	
MW-11 (E401003-06) Water Sampled: 30-Dec-13 Received: 31-Dec-13									
Methyl tertiary-butyl ether (MTBE)	ND	1.0	ug/l	0.05	EA40605	06-Jan-14	06-Jan-14	EPA 8260B	
Diisopropyl ether (DIPE)	ND	1.0	"	"	"	"	"	"	
Ethyl tert-butyl ether (ETBE)	ND	1.0	"	"	"	"	"	"	
Tertiary-amyl methyl ether (TAME)	ND	1.0	"	"	"	"	"	"	
Benzene	**15**	0.5	"	"	"	"	"	"	
Toluene	**1.4**	0.5	"	"	"	"	"	"	
Ethylbenzene	**39**	0.5	"	"	"	"	"	"	
m,p-Xylene	**5.1**	1.0	"	"	"	"	"	"	
o-Xylene	**0.5**	0.5	"	"	"	"	"	"	
Tertiary-butyl alcohol (TBA)	ND	5.0	"	"	"	"	"	"	
Surrogate: Dibromofluoromethane		*93.7 %*		*75-125*	"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		*89.7 %*		*62-139*	"	"	"	"	
Surrogate: Toluene-d8		*114 %*		*75-125*	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*105 %*		*75-125*	"	"	"	"	

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Volatile Organic Compounds by EPA Method 5030B/8260B

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Analyte	Result	Reporting Limit	Units	Dilution Factor	Batch	Prepared	Analyzed	Method	Notes
MW-12 (E401003-07) Water Sampled: 31-Dec-13 Received: 31-Dec-13									
Methyl tertiary-butyl ether (MTBE)	**9.2**	1.0	ug/l	0.05	EA40605	06-Jan-14	06-Jan-14	EPA 8260B	
Diisopropyl ether (DIPE)	ND	1.0	"	"	"	"	"	"	
Ethyl tert-butyl ether (ETBE)	ND	1.0	"	"	"	"	"	"	
Tertiary-amyl methyl ether (TAME)	ND	1.0	"	"	"	"	"	"	
Benzene	**9.6**	0.5	"	"	"	"	"	"	
Toluene	**0.5**	0.5	"	"	"	"	"	"	
Ethylbenzene	**0.8**	0.5	"	"	"	"	"	"	
m,p-Xylene	ND	1.0	"	"	"	"	"	"	
o-Xylene	ND	0.5	"	"	"	"	"	"	
Tertiary-butyl alcohol (TBA)	ND	5.0	"	"	"	"	"	"	
Surrogate: Dibromofluoromethane		*92.4 %*		*75-125*	"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		*98.3 %*		*62-139*	"	"	"	"	
Surrogate: Toluene-d8		*112 %*		*75-125*	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*105 %*		*75-125*	"	"	"	"	
MW-14 (E401003-08) Water Sampled: 30-Dec-13 Received: 31-Dec-13									
Methyl tertiary-butyl ether (MTBE)	ND	100	ug/l	10	EA40605	06-Jan-14	06-Jan-14	EPA 8260B	
Diisopropyl ether (DIPE)	ND	100	"	"	"	"	"	"	
Ethyl tert-butyl ether (ETBE)	ND	100	"	"	"	"	"	"	
Tertiary-amyl methyl ether (TAME)	ND	100	"	"	"	"	"	"	
Benzene	**1800**	50	"	"	"	"	"	"	
Toluene	**59**	50	"	"	"	"	"	"	
Ethylbenzene	**1700**	50	"	"	"	"	"	"	
m,p-Xylene	**1900**	100	"	"	"	"	"	"	
o-Xylene	ND	50	"	"	"	"	"	"	
Tertiary-butyl alcohol (TBA)	ND	500	"	"	"	"	"	"	
Surrogate: Dibromofluoromethane		*91.0 %*		*75-125*	"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		*95.5 %*		*62-139*	"	"	"	"	
Surrogate: Toluene-d8		*109 %*		*75-125*	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*106 %*		*75-125*	"	"	"	"	

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Volatile Organic Compounds by EPA Method 5030B/8260B

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Analyte	Result	Reporting Limit	Units	Dilution Factor	Batch	Prepared	Analyzed	Method	Notes
MW-15 (E401003-09) Water Sampled: 30-Dec-13 Received: 31-Dec-13									
Methyl tertiary-butyl ether (MTBE)	ND	100	ug/l	10	EA40605	06-Jan-14	06-Jan-14	EPA 8260B	
Diisopropyl ether (DIPE)	ND	100	"	"	"	"	"	"	
Ethyl tert-butyl ether (ETBE)	ND	100	"	"	"	"	"	"	
Tertiary-amyl methyl ether (TAME)	ND	100	"	"	"	"	"	"	
Benzene	**350**	50	"	"	"	"	"	"	
Toluene	ND	50	"	"	"	"	"	"	
Ethylbenzene	**2800**	50	"	"	"	"	"	"	
m,p-Xylene	**3400**	100	"	"	"	"	"	"	
o-Xylene	ND	50	"	"	"	"	"	"	
Tertiary-butyl alcohol (TBA)	ND	500	"	"	"	"	"	"	
Surrogate: Dibromofluoromethane		*95.1 %*		*75-125*	"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		*97.4 %*		*62-139*	"	"	"	"	
Surrogate: Toluene-d8		*108 %*		*75-125*	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*108 %*		*75-125*	"	"	"	"	
MW-16 (E401003-10) Water Sampled: 31-Dec-13 Received: 31-Dec-13									
Methyl tertiary-butyl ether (MTBE)	**5.3**	1.0	ug/l	0.05	EA40605	06-Jan-14	06-Jan-14	EPA 8260B	
Diisopropyl ether (DIPE)	ND	1.0	"	"	"	"	"	"	
Ethyl tert-butyl ether (ETBE)	ND	1.0	"	"	"	"	"	"	
Tertiary-amyl methyl ether (TAME)	ND	1.0	"	"	"	"	"	"	
Benzene	**7.2**	0.5	"	"	"	"	"	"	
Toluene	**0.5**	0.5	"	"	"	"	"	"	
Ethylbenzene	ND	0.5	"	"	"	"	"	"	
m,p-Xylene	**3.4**	1.0	"	"	"	"	"	"	
o-Xylene	ND	0.5	"	"	"	"	"	"	
Tertiary-butyl alcohol (TBA)	**37**	5.0	"	"	"	"	"	"	
Surrogate: Dibromofluoromethane		*92.6 %*		*75-125*	"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		*98.0 %*		*62-139*	"	"	"	"	
Surrogate: Toluene-d8		*113 %*		*75-125*	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*106 %*		*75-125*	"	"	"	"	

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SCS Engineers - San Diego	Project: SCS123113-11	
8799 Balboa Avenue, Suite 290	Project Number: 01208473.00 / Wigington Oil	Reported:
San Diego, CA 92123	Project Manager: Mr. Chris Crosby	10-Jan-14 09:48

Volatile Organic Compounds by EPA Method 5030B/8260B

H&P Mobile Geochemistry, Inc.

Analyte	Result	Reporting Limit	Units	Dilution Factor	Batch	Prepared	Analyzed	Method	Notes
MW-18 (E401003-11) Water Sampled: 30-Dec-13 Received: 31-Dec-13									
Methyl tertiary-butyl ether (MTBE)	ND	1.0	ug/l	0.05	EA40605	06-Jan-14	06-Jan-14	EPA 8260B	
Diisopropyl ether (DIPE)	ND	1.0	"	"	"	"	"	"	
Ethyl tert-butyl ether (ETBE)	ND	1.0	"	"	"	"	"	"	
Tertiary-amyl methyl ether (TAME)	ND	1.0	"	"	"	"	"	"	
Benzene	ND	0.5	"	"	"	"	"	"	
Toluene	ND	0.5	"	"	"	"	"	"	
Ethylbenzene	ND	0.5	"	"	"	"	"	"	
m,p-Xylene	ND	1.0	"	"	"	"	"	"	
o-Xylene	ND	0.5	"	"	"	"	"	"	
Tertiary-butyl alcohol (TBA)	ND	5.0	"	"	"	"	"	"	
Surrogate: Dibromofluoromethane		*94.5 %*		*75-125*	"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		*96.9 %*		*62-139*	"	"	"	"	
Surrogate: Toluene-d8		*107 %*		*75-125*	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*106 %*		*75-125*	"	"	"	"	
MW-19 (E401003-12) Water Sampled: 30-Dec-13 Received: 31-Dec-13									
Methyl tertiary-butyl ether (MTBE)	ND	100	ug/l	10	EA40605	06-Jan-14	06-Jan-14	EPA 8260B	
Diisopropyl ether (DIPE)	ND	100	"	"	"	"	"	"	
Ethyl tert-butyl ether (ETBE)	ND	100	"	"	"	"	"	"	
Tertiary-amyl methyl ether (TAME)	ND	100	"	"	"	"	"	"	
Benzene	**360**	50	"	"	"	"	"	"	
Toluene	**370**	50	"	"	"	"	"	"	
Ethylbenzene	**2900**	50	"	"	"	"	"	"	
m,p-Xylene	**3900**	100	"	"	"	"	"	"	
o-Xylene	**1500**	50	"	"	"	"	"	"	
Tertiary-butyl alcohol (TBA)	ND	500	"	"	"	"	"	"	
Surrogate: Dibromofluoromethane		*91.5 %*		*75-125*	"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		*95.6 %*		*62-139*	"	"	"	"	
Surrogate: Toluene-d8		*108 %*		*75-125*	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*101 %*		*75-125*	"	"	"	"	

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8799 Balboa Avenue, Suite 290	Project Number: 01208473.00 / Wigington Oil	Reported:
San Diego, CA 92123	Project Manager: Mr. Chris Crosby	10-Jan-14 09:48

TPH Analysis by LUFT

H&P Mobile Geochemistry, Inc.

Analyte	Result	Reporting Limit	Units	Dilution Factor	Batch	Prepared	Analyzed	Method	Notes
MW-1 (E401003-01) Water Sampled: 31-Dec-13 Received: 31-Dec-13									
Gasoline (C5-C11)	ND	500	ug/l	1	EA40603	02-Jan-14	02-Jan-14	LUFT	
Diesel (C12-C24)	ND	500	"	"	"	"	"	"	
MW-4 (E401003-02) Water Sampled: 31-Dec-13 Received: 31-Dec-13									
Gasoline (C5-C11)	ND	500	ug/l	1	EA40603	02-Jan-14	02-Jan-14	LUFT	
Diesel (C12-C24)	ND	500	"	"	"	"	"	"	
MW-6 (E401003-03) Water Sampled: 30-Dec-13 Received: 31-Dec-13									
Gasoline (C5-C11)	ND	500	ug/l	1	EA40603	02-Jan-14	02-Jan-14	LUFT	
Diesel (C12-C24)	ND	500	"	"	"	"	"	"	
MW-7 (E401003-04) Water Sampled: 30-Dec-13 Received: 31-Dec-13									
Gasoline (C5-C11)	ND	500	ug/l	1	EA40603	02-Jan-14	02-Jan-14	LUFT	
Diesel (C12-C24)	ND	500	"	"	"	"	"	"	
MW-9 (E401003-05) Water Sampled: 31-Dec-13 Received: 31-Dec-13									
Gasoline (C5-C11)	ND	500	ug/l	1	EA40603	02-Jan-14	02-Jan-14	LUFT	
Diesel (C12-C24)	ND	500	"	"	"	"	"	"	
MW-11 (E401003-06) Water Sampled: 30-Dec-13 Received: 31-Dec-13									
Gasoline (C5-C11)	**2000**	500	ug/l	1	EA40603	02-Jan-14	02-Jan-14	LUFT	G-25
Diesel (C12-C24)	**730**	500	"	"	"	"	"	"	D-08
MW-12 (E401003-07) Water Sampled: 31-Dec-13 Received: 31-Dec-13									
Gasoline (C5-C11)	ND	500	ug/l	1	EA40603	02-Jan-14	02-Jan-14	LUFT	
Diesel (C12-C24)	ND	500	"	"	"	"	"	"	

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SCS Engineers - San Diego	Project: SCS123113-11	
8799 Balboa Avenue, Suite 290	Project Number: 01208473.00 / Wigington Oil	Reported:
San Diego, CA 92123	Project Manager: Mr. Chris Crosby	10-Jan-14 09:48

TPH Analysis by LUFT

H&P Mobile Geochemistry, Inc.

Analyte	Result	Reporting Limit	Units	Dilution Factor	Batch	Prepared	Analyzed	Method	Notes
MW-14 (E401003-08) Water Sampled: 30-Dec-13 Received: 31-Dec-13									
Gasoline (C5-C11)	**25000**	500	ug/l	1	EA40603	02-Jan-14	02-Jan-14	LUFT	
Diesel (C12-C24)	**2200**	500	"	"	"	"	"	"	D-08
MW-15 (E401003-09) Water Sampled: 30-Dec-13 Received: 31-Dec-13									
Gasoline (C5-C11)	**26000**	500	ug/l	1	EA40603	02-Jan-14	02-Jan-14	LUFT	
Diesel (C12-C24)	**3500**	500	"	"	"	"	"	"	D-08
MW-16 (E401003-10) Water Sampled: 31-Dec-13 Received: 31-Dec-13									
Gasoline (C5-C11)	ND	500	ug/l	1	EA40603	02-Jan-14	02-Jan-14	LUFT	
Diesel (C12-C24)	ND	500	"	"	"	"	"	"	
MW-18 (E401003-11) Water Sampled: 30-Dec-13 Received: 31-Dec-13									
Gasoline (C5-C11)	ND	500	ug/l	1	EA40603	02-Jan-14	02-Jan-14	LUFT	
Diesel (C12-C24)	ND	500	"	"	"	"	"	"	
MW-19 (E401003-12) Water Sampled: 30-Dec-13 Received: 31-Dec-13									
Gasoline (C5-C11)	**43000**	500	ug/l	1	EA40603	02-Jan-14	02-Jan-14	LUFT	
Diesel (C12-C24)	**2300**	500	"	"	"	"	"	"	D-08

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8799 Balboa Avenue, Suite 290	Project Number: 01208473.00 / Wigington Oil	Reported:
San Diego, CA 92123	Project Manager: Mr. Chris Crosby	10-Jan-14 09:48

Volatile Organic Compounds by EPA Method 5030B/8260B - Quality Control

H&P Mobile Geochemistry, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch EA40605 - EPA 5030										
Blank (EA40605-BLK1)				Prepared & Analyzed: 06-Jan-14						
Methyl tertiary-butyl ether (MTBE)	ND	1.0	ug/l							
Diisopropyl ether (DIPE)	ND	1.0	"							
Ethyl tert-butyl ether (ETBE)	ND	1.0	"							
Tertiary-amyl methyl ether (TAME)	ND	1.0	"							
Benzene	ND	0.5	"							
Toluene	ND	0.5	"							
Ethylbenzene	ND	0.5	"							
m,p-Xylene	ND	1.0	"							
o-Xylene	ND	0.5	"							
Tertiary-butyl alcohol (TBA)	ND	5.0	"							
Surrogate: Dibromofluoromethane	*2.43*		*"*	*2.50*		*97.0*	*75-125*			
Surrogate: 1,2-Dichloroethane-d4	*2.43*		*"*	*2.50*		*97.4*	*62-139*			
Surrogate: Toluene-d8	*2.63*		*"*	*2.50*		*105*	*75-125*			
Surrogate: 4-Bromofluorobenzene	*2.54*		*"*	*2.50*		*102*	*75-125*			
Matrix Spike (EA40605-MS1)		**Source: E401003-04**		Prepared & Analyzed: 06-Jan-14						
Methyl tertiary-butyl ether (MTBE)	5.15	1.0	ug/l	5.00	ND	103	65-125			
Diisopropyl ether (DIPE)	5.64	1.0	"	5.00	ND	113	75-125			
Ethyl tert-butyl ether (ETBE)	4.95	1.0	"	5.00	ND	99.0	75-125			
Tertiary-amyl methyl ether (TAME)	4.69	1.0	"	5.00	ND	93.8	75-125			
Benzene	4.91	0.5	"	5.00	ND	98.2	80-120			
Toluene	4.75	0.5	"	5.00	ND	95.1	75-120			
Ethylbenzene	5.43	0.5	"	5.00	ND	109	75-125			
m,p-Xylene	9.96	1.0	"	10.0	ND	99.6	75-130			
o-Xylene	5.27	0.5	"	5.00	ND	105	80-120			
Tertiary-butyl alcohol (TBA)	23.4	5.0	"	25.0	ND	93.8	75-125			
Surrogate: Dibromofluoromethane	*2.53*		*"*	*2.50*		*101*	*75-125*			
Surrogate: 1,2-Dichloroethane-d4	*2.35*		*"*	*2.50*		*93.9*	*62-139*			
Surrogate: Toluene-d8	*2.67*		*"*	*2.50*		*107*	*75-125*			
Surrogate: 4-Bromofluorobenzene	*2.73*		*"*	*2.50*		*109*	*75-125*			

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8799 Balboa Avenue, Suite 290	Project Number: 01208473.00 / Wigington Oil	Reported:
San Diego, CA 92123	Project Manager: Mr. Chris Crosby	10-Jan-14 09:48

Volatile Organic Compounds by EPA Method 5030B/8260B - Quality Control

H&P Mobile Geochemistry, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch EA40605 - EPA 5030										
Matrix Spike Dup (EA40605-MSD1)	**Source: E401003-04**			Prepared & Analyzed: 06-Jan-14						
Methyl tertiary-butyl ether (MTBE)	5.11	1.0	ug/l	5.00	ND	102	65-125	0.877	20	
Diisopropyl ether (DIPE)	5.86	1.0	"	5.00	ND	117	75-125	3.80	20	
Ethyl tert-butyl ether (ETBE)	5.19	1.0	"	5.00	ND	104	75-125	4.79	20	
Tertiary-amyl methyl ether (TAME)	4.84	1.0	"	5.00	ND	96.9	75-125	3.21	20	
Benzene	5.04	0.5	"	5.00	ND	101	80-120	2.56	20	
Toluene	4.99	0.5	"	5.00	ND	99.9	75-120	4.93	20	
Ethylbenzene	5.59	0.5	"	5.00	ND	112	75-125	2.93	20	
m,p-Xylene	10.4	1.0	"	10.0	ND	104	75-130	4.81	20	
o-Xylene	5.43	0.5	"	5.00	ND	109	80-120	3.03	20	
Tertiary-butyl alcohol (TBA)	24.7	5.0	"	25.0	ND	99.0	75-125	5.37	20	
Surrogate: Dibromofluoromethane	*2.45*		"	*2.50*		*98.1*	*75-125*			
Surrogate: 1,2-Dichloroethane-d4	*2.36*		"	*2.50*		*94.5*	*62-139*			
Surrogate: Toluene-d8	*2.73*		"	*2.50*		*109*	*75-125*			
Surrogate: 4-Bromofluorobenzene	*2.65*		"	*2.50*		*106*	*75-125*			
Batch EA40807 - EPA 5030										
Blank (EA40807-BLK1)				Prepared & Analyzed: 08-Jan-14						
Methyl tertiary-butyl ether (MTBE)	ND	1.0	ug/l							
Diisopropyl ether (DIPE)	ND	1.0	"							
Ethyl tert-butyl ether (ETBE)	ND	1.0	"							
Tertiary-amyl methyl ether (TAME)	ND	1.0	"							
Benzene	ND	0.5	"							
Toluene	ND	0.5	"							
Ethylbenzene	ND	0.5	"							
m,p-Xylene	ND	1.0	"							
o-Xylene	ND	0.5	"							
Tertiary-butyl alcohol (TBA)	ND	5.0	"							
Surrogate: Dibromofluoromethane	*2.43*		"	*2.50*		*97.3*	*75-125*			
Surrogate: 1,2-Dichloroethane-d4	*2.54*		"	*2.50*		*102*	*62-139*			
Surrogate: Toluene-d8	*2.66*		"	*2.50*		*106*	*75-125*			
Surrogate: 4-Bromofluorobenzene	*2.48*		"	*2.50*		*99.2*	*75-125*			

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SCS Engineers - San Diego	Project: SCS123113-11	
8799 Balboa Avenue, Suite 290	Project Number: 01208473.00 / Wigington Oil	Reported:
San Diego, CA 92123	Project Manager: Mr. Chris Crosby	10-Jan-14 09:48

Volatile Organic Compounds by EPA Method 5030B/8260B - Quality Control

H&P Mobile Geochemistry, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch EA40807 - EPA 5030										
LCS (EA40807-BS1)				Prepared & Analyzed: 08-Jan-14						
Methyl tertiary-butyl ether (MTBE)	4.94	1.0	ug/l	5.00		98.8	65-125			
Diisopropyl ether (DIPE)	5.70	1.0	"	5.00		114	75-125			
Ethyl tert-butyl ether (ETBE)	4.83	1.0	"	5.00		96.6	75-125			
Tertiary-amyl methyl ether (TAME)	4.36	1.0	"	5.00		87.2	75-125			
Benzene	5.20	0.5	"	5.00		104	80-120			
Toluene	5.14	0.5	"	5.00		103	75-120			
Ethylbenzene	5.90	0.5	"	5.00		118	75-125			
m,p-Xylene	10.8	1.0	"	10.0		108	75-130			
o-Xylene	5.55	0.5	"	5.00		111	80-120			
Tertiary-butyl alcohol (TBA)	23.7	5.0	"	25.0		94.9	75-125			
Surrogate: Dibromofluoromethane	*2.65*		*"*	*2.50*		*106*	*75-125*			
Surrogate: 1,2-Dichloroethane-d4	*2.39*		*"*	*2.50*		*95.6*	*62-139*			
Surrogate: Toluene-d8	*2.73*		*"*	*2.50*		*109*	*75-125*			
Surrogate: 4-Bromofluorobenzene	*2.63*		*"*	*2.50*		*105*	*75-125*			
LCS Dup (EA40807-BSD1)				Prepared & Analyzed: 08-Jan-14						
Methyl tertiary-butyl ether (MTBE)	4.67	1.0	ug/l	5.00		93.4	65-125	5.62	20	
Diisopropyl ether (DIPE)	5.61	1.0	"	5.00		112	75-125	1.48	20	
Ethyl tert-butyl ether (ETBE)	4.64	1.0	"	5.00		92.8	75-125	4.01	20	
Tertiary-amyl methyl ether (TAME)	4.25	1.0	"	5.00		84.9	75-125	2.61	20	
Benzene	5.12	0.5	"	5.00		102	80-120	1.61	20	
Toluene	5.07	0.5	"	5.00		101	75-120	1.45	20	
Ethylbenzene	6.01	0.5	"	5.00		120	75-125	1.84	20	
m,p-Xylene	11.3	1.0	"	10.0		113	75-130	4.18	20	
o-Xylene	5.80	0.5	"	5.00		116	80-120	4.31	20	
Tertiary-butyl alcohol (TBA)	22.7	5.0	"	25.0		90.9	75-125	4.31	20	
Surrogate: Dibromofluoromethane	*2.39*		*"*	*2.50*		*95.7*	*75-125*			
Surrogate: 1,2-Dichloroethane-d4	*2.29*		*"*	*2.50*		*91.6*	*62-139*			
Surrogate: Toluene-d8	*2.72*		*"*	*2.50*		*109*	*75-125*			
Surrogate: 4-Bromofluorobenzene	*2.86*		*"*	*2.50*		*115*	*75-125*			

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SCS Engineers - San Diego	Project: SCS123113-11	
8799 Balboa Avenue, Suite 290	Project Number: 01208473.00 / Wigington Oil	Reported:
San Diego, CA 92123	Project Manager: Mr. Chris Crosby	10-Jan-14 09:48

TPH Analysis by LUFT - Quality Control

H&P Mobile Geochemistry, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch EA40603 - GC										
Blank (EA40603-BLK1)				Prepared & Analyzed: 02-Jan-14						
Gasoline (C5-C11)	ND	500	ug/l							
Diesel (C12-C24)	ND	500	"							
LCS (EA40603-BS1)				Prepared & Analyzed: 02-Jan-14						
Gasoline (C5-C11)	2750	500	ug/l	3000		91.6	75-125			
Diesel (C12-C24)	6930	500	"	7500		92.3	75-125			
LCS Dup (EA40603-BSD1)				Prepared & Analyzed: 02-Jan-14						
Gasoline (C5-C11)	2980	500	ug/l	3000		99.3	75-125	7.99	30	
Diesel (C12-C24)	6760	500	"	7500		90.1	75-125	2.47	30	

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San Diego, CA 92123	Project Manager:	Mr. Chris Crosby	10-Jan-14 09:48

Notes and Definitions

G-25	The chromatogram resembles weathered gasoline.
D-08	Results in the diesel organics range are primarily due to overlap from a gasoline range product.
DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not Reported
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference

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Appendix

H&P Mobile Geochemistry, Inc. is approved as an Environmental Testing Laboratory (Certification # L11-175) in accordance with the DoD-ELAP program. H&P is approved by the State of Arizona under Certification Numbers AZM758 and AZ0779. H&P is approved as an Environmental Laboratory in conformance with the Environmental Laboratory Accreditation Program (CA) for the category of Volatile and Semi-Volatile Organic Chemistry of Hazardous Waste for the following methods:

Certificate# 2741, 2743, 2579, 2754 & 2740 approved for EPA 8260 and LUFT GC/MS
Certificate# 2742, 2745, & 2741 approved for LUFT
Certificate# 2745 & 2742 approved for EPA 418.1

H&P Mobile Geochemistry, Inc. is approved as an Environmental Laboratory in conformance with the National Environmental Accreditation Conference Standards for the category Environmental Analysis Air and Emissions for the following analytes and methods:

Hexachlorobutadiene by EPA TO-15 & TO-14A
1,2,4-Trichlorobenzene by EPA TO-15 & TO-14A
1,2-Dichlorobenzene by EPA TO-15 & TO-14A
Dichlorotetrafluoroethane by EPA TO-14A
1,4-Dichlorobenzene by EPA TO-15 & TO-14A
Benzene by EPA TO-15 & TO-14A
Chlorobenzene by EPA TO-15 & TO-14A
Ethyl benzene by EPA TO-15 & TO-14A
Styrene by EPA TO-15 & TO-14A
Toluene by EPA TO-15 & TO-14A
Total Xylenes by EPA TO-15
1,1,1-Trichloroethane by EPA TO-15 & TO-14A
1,1,2,2-Tetrachloroethane by EPA TO-15 & TO-14A
1,1,2-Trichloroethane by EPA TO-15 & TO-14A
1,1-Dichloroethane by EPA TO-15 & TO-14A
1,1-Dichloroethene by EPA TO-15 & TO-14A
1,2-Dichloroethane by EPA TO-15 & TO-14A
1,2-Dichloropropane by EPA TO-15 & TO-14A
Benzyl Chloride by EPA TO-15 & TO-14A
Bromoform by EPA TO-15
Bromomethane by EPA TO-15 & TO-14A
Carbon tetrachloride by EPA TO-15 & TO-14A
Chloroethane by EPA TO-15 & TO-14A
Chloroform by EPA TO-15 & TO-14A
Chloromethane by EPA TO-15 & TO-14A
cis-1,2-Dichloroethene by EPA TO-15 & TO-14A
cis-1,3-Dichloropropene by EPA TO-15 & TO-14A
Methylene chloride by EPA TO -15 & TO-14A
Tetrachloroethane by EPA TO-15 & TO-14A
trans-1,2-Dichloroethene by EPA TO-15
trans-1,3-Dichloropropene by EPA TO-15 & TO-14A
Trichloroethene by EPA TO-15 & TO-14A
Vinyl chloride by EPA TO -15
2-Butanone by EPA TO-15
4-Methyl-2-Pentanone by EPA TO-15
Hexane by EPA TO-15
Methyl tert-butyl ether by EPA TO-15
Vinyl acetate by EPA TO-15

1,3-Dichlorobenzene by EPA TO-15 & TO-14A
Trichlorofluoromethane by EPA TO-14A
Naphthalene by H&P SOP TO-15/GC-MS
1,2-Dibromoethane (EDB) by EPA TO-15 & TO-14A
1,2-Dibromo-3-chloropropane by EPA TO-15
1,3-Butadiene by EPA TO-15
1,1,2-Trichlorotrifluoroethane by EPA TO-14A
Carbon disulfide by EPA TO-15
1,4-Dioxane by EPA TO-15

This certification applies to samples analyzed in summa canisters.

Chain of Custody Record

H&P Mobile Geochemistry Inc.

☒ 2470 Impala Dr., Carlsbad, CA 92010 • ph 760.804.9678 • fax 760.804.9159
☐ 1855 Coronado Ave., Signal Hill, CA 90755 • ph 800.834.9888

Date: _____

H&P Project # SCS123113-11

Outside Lab: _____

Client: SCS Engineers
Address: 8799 Balboa Ave., Suite 290
San Diego, CA 92123
Email: ccrosby@scsengineers.com

Collector: Chris Crosby / George Liddle
Client Project # 01208473.00
Location: Wigington Oil : 11427 Woodside Ave., Santee, CA
Phone: 858-571-5500 Fax: _____

Page: 1 of 2
Project Contact: Chuck Houser
Turn around time: Normal

Geotracker EDF: Yes ☒ No ☐
Global ID: T0607303173
Excel EDD: Yes ☒ Na ☐

Sample Receipt
Intact: ☑ Yes ☐ No
Seal Intact: ☐ Yes ☐ No ☑ N/A
Cold: ☑ Yes ☐ No ☐ N/A
Temperature: 2°C

(P)

Special Instructions:
- Please cc results to chouser@scsengineers.com
- Please send invoice to Chuck Houser ASAP.

Lab Work Order # E401003

Sample Name	Field Point Name	Purge Vol	Time	Date	Sample Type	Container Type	Total # of containers	8260B Full List	8260B ☒ BTEX/OXY ☐ TPH gas	8015M TPH ☒ g ☒ d ☐ ext	418.1 TRPH	VOC's: Full List ☐ 8260B ☐ TO-15	VOC's: Short List/DTSC ☐ 8260B ☐ TO-15	VOC's: SAM, 8260B ☐ SAM A ☐ SAM B	Naphthalene ☐ 8260B ☐ TO-15	Oxygenates ☐ 8260B ☐ TO-15	TPHv gas ☐ 8260B ☐ TO-15	Ketones ☐ 8260B ☐ TO-15	Other _____ ☐ 8260B ☐ TO-15	Leak Check Compound ☐ 1,1 DFA ☐ OTHER	Methane	Fixed Gases ☐ CO_2 ☐ O_2 ☐ N_2
								SOIL/GW				SOIL VAPOR/AIR ANALYSIS										
MW-1			0945	12/31/13	GW	VOA	6		X	X												
MW-4			1050	↓					X	X												
MW-6			1130	12/30/13					X	X												
MW-7			1215	↓					X	X												
MW-9			1215	12/31/13					X	X												
MW-11			1615	12/30/13					X	X												
MW-12			0840	12/31/13					X	X												
MW-14			1240	12/30/13					X	X												
MW-15			1530	↓					X	X												
MW-16			0735	12/31/13					X	X												

Relinquished by: (Signature) Chris Crosby	(company) SCS	Received by: (Signature) Shelli L. Chouser	(company) H+P	Date: 12/31/13 Time: 1335
Relinquished by: (Signature)	(company)	Received by: (Signature)	(company)	Date: Time:
Relinquished by: (Signature)	(company)	Received by: (Signature)	(company)	Date: Time:

*Signature constitutes authorization to proceed with analysis and acceptance of condition on back.

Sample disposal instruction: ☒ Disposal ☐ Return to client ☐ Pickup

Chain of Custody Record

Mobile Geochemistry, Inc.

☒ 2470 Impala Dr., Carlsbad, CA 92010 • ph 760.804.9678 • fax 760.804.9159
☐ 1855 Coronado Ave., Signal Hill, CA 90755 • ph 800.834.9888

Date:

H&P Project # SCS123113-11

Outside Lab:

Client: SCS Engineers

Collector:

Page: 2 of 2

Address:

Client Project # 01208473.00

Project Contact:

San Diego

Location: Wigington Oil

Email: ccrosby@scsengineers.com

Phone:

Fax:

Turn around time: Normal

Geotracker EDF: Yes ☒ No ☐

Global ID: T0607303173

Excel EDD: Yes ☒ No ☐

Sample Receipt
Intact: ☑ Yes ☐ No
Seal Intact: ☐ Yes ☐ No ☑ N/A
Cold: ☑ Yes ☐ No ☐ N/A
Temperature: 2°C

(P)

Special Instructions:

Lab Work Order # E401003

Sample Name	Field Point Name	Purge Vol	Time	Date	Sample Type	Container Type	Total # of containers	8260B Full List	8260B ☒ BTEX/OXY ☐ TPH gas	LUFT/8015M TPH ☒ g ☒ d ☐ ext	418.1 TRPH	VOC's: Full List ☐ 8260B ☐ TO-15	VOC's: Short List/DTSC ☐ 8260B ☐ TO-15	VOC's: SAM, 8260B ☐ SAM A ☐ SAM B	Naphthalene ☐ 8260B ☐ TO-15	Oxygenates ☐ 8260B ☐ TO-15	TPHv gas ☐ 8260B ☐ TO-15	Ketones ☐ 8260B ☐ TO-15	Other ____ ☐ 8260B ☐ TO-15	Leak Check Compound ☐ 1,1 DFA ☐ OTHER	Methane	Fixed Gases ☐ CO_2 ☐ O_2 ☐ N_2
								SOIL/GW				SOIL VAPOR/AIR ANALYSIS									
MW-18	—	—	1415	12/30/13	GW	VOA	6		X	X											
MW-19	—	—	1435	↓	↓	↓	↓		X	X											

Approved/Relinquished by: (Signature) Chris Crosby	(company) SCS	Received by: (Signature) Shelli L. Chin	(company) H+P	Date: 12/31/13	Time: 1335
Approved/Relinquished by: (Signature)	(company)	Received by: (Signature)	(company)	Date:	Time:
Approved/Relinquished by: (Signature)	(company)	Received by: (Signature)	(company)	Date:	Time:

*Signature constitutes authorization to proceed with analysis and acceptance of condition on back.

Sample disposal instruction: ☒ Disposal ☐ Return to client ☐ Pickup

Calscience Environmental Laboratories, Inc.

CALSCIENCE

WORK ORDER NUMBER: 13-12-2050

The difference is service

AIR | SOIL | WATER | MARINE CHEMISTRY

Analytical Report For

Client: SCS Engineers

Client Project Name: Wigington Petroleum

Attention: Chuck Houser
8799 Balboa Avenue, Suite 290
San Diego, CA 92123-1562

for

Approved for release on 01/10/2014 by:
Ranjit Clarke
Project Manager

ResultLink

Email your PM

Calscience Environmental Laboratories, Inc. (Calscience) certifies that the test results provided in this report meet all NELAC requirements for parameters for which accreditation is required or available. Any exceptions to NELAC requirements are noted in the case narrative. The original report of subcontracted analyses, if any, is attached to this report. The results in this report are limited to the sample(s) tested and any reproduction thereof must be made in its entirety. The client or recipient of this report is specifically prohibited from making material changes to said report and, to the extent that such changes are made, Calscience is not responsible, legally or otherwise. The client or recipient agrees to indemnify Calscience for any defense to any litigation which may arise.

Calscience Environmental Laboratories, Inc.

Contents

Client Project Name: Wigington Petroleum
Work Order Number: 13-12-2050

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Calscience Environmental Laboratories, Inc.

Work Order Narrative

Work Order: 13-12-2050 Page 1 of 1

Condition Upon Receipt:

Samples were received under Chain of Custody (COC) on 12/30/13. They were assigned to Work Order 13-12-2050.

Unless otherwise noted on the Sample Receiving forms all samples were received in good condition and within the recommended EPA temperature criteria for the methods noted on the COC. The COC and Sample Receiving Documents are integral elements of the analytical report and are presented at the back of the report.

Holding Times:

All samples were analyzed within prescribed holding times (HT) and/or in accordance with the Calscience Sample Acceptance Policy unless otherwise noted in the analytical report and/or comprehensive case narrative, if required.

Any parameter identified in 40CFR Part 136.3 Table II that is designated as "analyze immediately" with a holding time of <= 15 minutes (40CFR-136.3 Table II, footnote 4), is considered a "field" test and the reported results will be qualified as being received outside of the stated holding time unless received at the laboratory within 15 minutes of the collection time.

Quality Control:

All quality control parameters (QC) were within established control limits except where noted in the QC summary forms or described further within this report.

Additional Comments:

Air - Sorbent-extracted air methods (EPA TO-4A, EPA TO-10, EPA TO-13A, EPA TO-17): Analytical results are converted from mass/sample basis to mass/volume basis using client-supplied air volumes.

New York NELAP air certification does not certify for all reported methods and analytes, reference the accredited items here: http://www.calscience.com/PDF/New_York.pdf

Solid - Unless otherwise indicated, solid sample data is reported on a wet weight basis, not corrected for % moisture. All QC results are always reported on a wet weight basis.

Subcontractor Information:

Unless otherwise noted below (or on the subcontract form), no samples were subcontracted.

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Calscience Environmental Laboratories, Inc.

Analytical Report

SCS Engineers
8799 Balboa Avenue, Suite 290
San Diego, CA 92123-1562

Project: Wigington Petroleum

Date Received: 12/30/13
Work Order: 13-12-2050
Preparation: N/A
Method: RSK-175M
Units: ug/L

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW-6	**13-12-2050-1-A**	**12/30/13 11:30**	**Aqueous**	**GC 52**	**N/A**	**12/31/13 11:31**	**131231L01**

Parameter	Result	RL	DF	Qualifiers
Methane	102	1.00	1	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW-7	**13-12-2050-2-A**	**12/30/13 12:15**	**Aqueous**	**GC 52**	**N/A**	**12/31/13 12:23**	**131231L01**

Parameter	Result	RL	DF	Qualifiers
Methane	ND	1.00	1	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW-14	**13-12-2050-3-A**	**12/30/13 12:40**	**Aqueous**	**GC 52**	**N/A**	**12/31/13 13:15**	**131231L01**

Parameter	Result	RL	DF	Qualifiers
Methane	2870	20.0	20	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW-18	**13-12-2050-4-A**	**12/30/13 14:15**	**Aqueous**	**GC 52**	**N/A**	**12/31/13 14:33**	**131231L01**

Parameter	Result	RL	DF	Qualifiers
Methane	1.37	1.00	1	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	**099-12-663-2062**	**N/A**	**Aqueous**	**GC 52**	**N/A**	**12/31/13 10:56**	**131231L01**

Parameter	Result	RL	DF	Qualifiers
Methane	ND	1.00	1	

Return to Contents

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Calscience Environmental Laboratories, Inc.

Analytical Report

SCS Engineers
8799 Balboa Avenue, Suite 290
San Diego, CA 92123-1562

Project: Wigington Petroleum

Date Received: 12/30/13
Work Order: 13-12-2050
Preparation: EPA 3010A Total
Method: EPA 6010B
Units: mg/L

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW-6	**13-12-2050-1-E**	**12/30/13 11:30**	**Aqueous**	**ICP 7300**	**12/31/13**	**01/03/14 18:42**	**131231LA2**

Parameter	Result	RL	DF	Qualifiers
Iron	2.67	0.100	1	
Manganese	0.569	0.00500	1	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW-7	**13-12-2050-2-E**	**12/30/13 12:15**	**Aqueous**	**ICP 7300**	**12/31/13**	**01/03/14 19:38**	**131231LA2**

Parameter	Result	RL	DF	Qualifiers
Iron	1.62	0.100	1	
Manganese	0.893	0.00500	1	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW-14	**13-12-2050-3-E**	**12/30/13 12:40**	**Aqueous**	**ICP 7300**	**12/31/13**	**01/03/14 19:40**	**131231LA2**

Parameter	Result	RL	DF	Qualifiers
Iron	20.0	0.100	1	
Manganese	1.64	0.00500	1	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW-18	**13-12-2050-4-E**	**12/30/13 14:15**	**Aqueous**	**ICP 7300**	**12/31/13**	**01/03/14 19:41**	**131231LA2**

Parameter	Result	RL	DF	Qualifiers
Iron	36.8	0.100	1	
Manganese	0.522	0.00500	1	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	**097-01-003-13926**	**N/A**	**Aqueous**	**ICP 7300**	**12/31/13**	**01/03/14 16:21**	**131231LA2**

Parameter	Result	RL	DF	Qualifiers
Iron	ND	0.100	1	
Manganese	ND	0.00500	1	

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RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Calscience Environmental Laboratories, Inc.

Analytical Report

SCS Engineers
8799 Balboa Avenue, Suite 290
San Diego, CA 92123-1562

Project: Wigington Petroleum

Date Received: 12/30/13
Work Order: 13-12-2050
Preparation: N/A
Method: Ferric Iron by Calc
Units: mg/L

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW-6	**13-12-2050-1-E**	**12/30/13 11:30**	**Aqueous**	**N/A**	**N/A**	**01/07/14 14:48**	

Parameter	Result	RL	DF	Qualifiers
Ferric Iron	2.67	0.100	1	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW-7	**13-12-2050-2-E**	**12/30/13 12:15**	**Aqueous**	**N/A**	**N/A**	**01/07/14 14:48**	

Parameter	Result	RL	DF	Qualifiers
Ferric Iron	1.62	0.100	1	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW-14	**13-12-2050-3-E**	**12/30/13 12:40**	**Aqueous**	**N/A**	**N/A**	**01/07/14 14:48**	

Parameter	Result	RL	DF	Qualifiers
Ferric Iron	9.60	0.100	1	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW-18	**13-12-2050-4-E**	**12/30/13 14:15**	**Aqueous**	**N/A**	**N/A**	**01/07/14 14:48**	

Parameter	Result	RL	DF	Qualifiers
Ferric Iron	36.8	0.100	1	

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RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Calscience Environmental Laboratories, Inc.

Analytical Report

SCS Engineers
8799 Balboa Avenue, Suite 290
San Diego, CA 92123-1562
Project: Wigington Petroleum

Date Received: 12/30/13
Work Order: 13-12-2050

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix
MW-6	**13-12-2050-1**	**12/30/13 11:30**	**Aqueous**

Parameter	Results	RL	DF	Qualifiers	Units	Date Prepared	Date Analyzed	Method
Redox Potential	110	-800	1		mV	12/30/13	12/30/13	ASTM D 1498
Nitrate (as N)	8.3	0.10	1		mg/L	N/A	12/30/13	EPA 300.0
Sulfate	270	5.0	5		mg/L	N/A	12/31/13	EPA 300.0
Iron (II)	ND	0.100	1		mg/L	12/30/13	12/30/13	SM 3500-FeB
pH	7.16	0.01	1	BV,BU	pH units	N/A	12/30/13	SM 4500 H+ B
o-Phosphate (as P)	ND	0.10	1		mg/L	N/A	12/30/13	SM 4500 P B/E
Ammonia (as N)	0.17	0.10	1		mg/L	01/02/14	01/02/14	SM 4500-NH3 B/C
Dissolved Oxygen	2.91	0.0100	1	BV,BU	mg/L	12/30/13	12/30/13	SM 4500-O G
Carbon Dioxide	67	1.0	1		mg/L	N/A	12/30/13	SM4500-CO2D

MW-7	**13-12-2050-2**	**12/30/13 12:15**	**Aqueous**

Parameter	Results	RL	DF	Qualifiers	Units	Date Prepared	Date Analyzed	Method
Redox Potential	120	-800	1		mV	12/30/13	12/30/13	ASTM D 1498
Nitrate (as N)	15	0.50	5		mg/L	N/A	12/31/13	EPA 300.0
Sulfate	230	5.0	5		mg/L	N/A	12/31/13	EPA 300.0
Iron (II)	ND	0.100	1		mg/L	12/30/13	12/30/13	SM 3500-FeB
pH	6.89	0.01	1	BV,BU	pH units	N/A	12/30/13	SM 4500 H+ B
o-Phosphate (as P)	0.13	0.10	1		mg/L	N/A	12/30/13	SM 4500 P B/E
Ammonia (as N)	0.17	0.10	1		mg/L	01/02/14	01/02/14	SM 4500-NH3 B/C
Dissolved Oxygen	2.98	0.0100	1	BV,BU	mg/L	12/30/13	12/30/13	SM 4500-O G
Carbon Dioxide	100	5.0	1		mg/L	N/A	12/30/13	SM4500-CO2D

MW-14	**13-12-2050-3**	**12/30/13 12:40**	**Aqueous**

Parameter	Results	RL	DF	Qualifiers	Units	Date Prepared	Date Analyzed	Method
Redox Potential	-160	-800	1		mV	12/30/13	12/30/13	ASTM D 1498
Nitrate (as N)	ND	0.10	1		mg/L	N/A	12/30/13	EPA 300.0
Sulfate	22	1.0	1		mg/L	N/A	12/30/13	EPA 300.0
Iron (II)	10.4	0.200	2		mg/L	12/30/13	12/30/13	SM 3500-FeB
pH	6.67	0.01	1	BV,BU	pH units	N/A	12/30/13	SM 4500 H+ B
o-Phosphate (as P)	ND	0.10	1		mg/L	N/A	12/30/13	SM 4500 P B/E
Ammonia (as N)	0.22	0.10	1		mg/L	01/02/14	01/02/14	SM 4500-NH3 B/C
Dissolved Oxygen	1.72	0.0100	1	BV,BU	mg/L	12/30/13	12/30/13	SM 4500-O G
Carbon Dioxide	240	5.0	1		mg/L	N/A	12/30/13	SM4500-CO2D

Return to Contents

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Calscience Environmental Laboratories, Inc.

Analytical Report

SCS Engineers
8799 Balboa Avenue, Suite 290
San Diego, CA 92123-1562
Project: Wigington Petroleum

Date Received: 12/30/13
Work Order: 13-12-2050

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix
MW-18	**13-12-2050-4**	**12/30/13 14:15**	**Aqueous**

Comment(s): (68) - Dilution analysis was performed outside the recommended holding time.

Parameter	Results	RL	DF	Qualifiers	Units	Date Prepared	Date Analyzed	Method
Redox Potential	85	-800	1		mV	12/30/13	12/30/13	ASTM D 1498
Nitrate (as N) (68)	12	0.50	5	BU	mg/L	N/A	01/08/14	EPA 300.0
Sulfate (68)	290	5.0	5		mg/L	N/A	01/08/14	EPA 300.0
Iron (II)	ND	0.100	1		mg/L	12/30/13	12/30/13	SM 3500-FeB
pH	6.81	0.01	1	BV,BU	pH units	N/A	12/30/13	SM 4500 H+ B
o-Phosphate (as P)	ND	0.10	1		mg/L	N/A	12/30/13	SM 4500 P B/E
Ammonia (as N)	0.11	0.10	1		mg/L	01/02/14	01/02/14	SM 4500-NH3 B/C
Dissolved Oxygen	6.36	0.0100	1	BV,BU	mg/L	12/30/13	12/30/13	SM 4500-O G
Carbon Dioxide	93	1.0	1		mg/L	N/A	12/30/13	SM4500-CO2D

Method Blank						**N/A**		**Aqueous**
Parameter	Results	RL	DF	Qualifiers	Units	Date Prepared	Date Analyzed	Method
Nitrate (as N)	ND	0.10	1		mg/L	N/A	12/30/13	EPA 300.0
Sulfate	ND	1.0	1		mg/L	N/A	12/30/13	EPA 300.0
Nitrate (as N)	ND	0.10	1		mg/L	N/A	12/31/13	EPA 300.0
Sulfate	ND	1.0	1		mg/L	N/A	12/31/13	EPA 300.0
Nitrate (as N)	ND	0.10	1		mg/L	N/A	01/08/14	EPA 300.0
Sulfate	ND	1.0	1		mg/L	N/A	01/08/14	EPA 300.0
Iron (II)	ND	0.100	1		mg/L	12/30/13	12/30/13	SM 3500-FeB
o-Phosphate (as P)	ND	0.10	1		mg/L	N/A	12/30/13	SM 4500 P B/E
Ammonia (as N)	ND	0.10	1		mg/L	01/02/14	01/02/14	SM 4500-NH3 B/C

Return to Contents

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Calscience Environmental Laboratories, Inc.

Quality Control - Spike/Spike Duplicate

SCS Engineers
8799 Balboa Avenue, Suite 290
San Diego, CA 92123-1562

Project: Wigington Petroleum

Date Received: 12/30/13
Work Order: 13-12-2050
Preparation: N/A
Method: EPA 300.0

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
13-12-2033-2	**Sample**	**Aqueous**	**IC 7**	**N/A**	**12/30/13 18:57**	**131230S02**
13-12-2033-2	**Matrix Spike**	**Aqueous**	**IC 7**	**N/A**	**12/30/13 19:13**	**131230S02**
13-12-2033-2	**Matrix Spike Duplicate**	**Aqueous**	**IC 7**	**N/A**	**12/30/13 19:28**	**131230S02**

Parameter	Sample Conc.	Spike Added	MS Conc.	MS %Rec.	MSD Conc.	MSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
Nitrate (as N)	5.742	500.0	518.8	103	516.8	102	80-120	0	0-20	
Sulfate	1826	5000	6494	93	6481	93	80-120	0	0-20	

Return to Contents

RPD: Relative Percent Difference. CL: Control Limits

Calscience Environmental Laboratories, Inc.

Quality Control - Spike/Spike Duplicate

SCS Engineers
8799 Balboa Avenue, Suite 290
San Diego, CA 92123-1562

Project: Wigington Petroleum

Date Received: 12/30/13
Work Order: 13-12-2050
Preparation: N/A
Method: EPA 300.0

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
14-01-0266-4	**Sample**	**Aqueous**	**IC 7**	**N/A**	**01/08/14 15:19**	**140108S01**
14-01-0266-4	**Matrix Spike**	**Aqueous**	**IC 7**	**N/A**	**01/08/14 16:25**	**140108S01**
14-01-0266-4	**Matrix Spike Duplicate**	**Aqueous**	**IC 7**	**N/A**	**01/08/14 16:57**	**140108S01**

Parameter	Sample Conc.	Spike Added	MS Conc.	MS %Rec.	MSD Conc.	MSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
Nitrate (as N)	24.64	500.0	550.5	105	551.0	105	80-120	0	0-20	
Sulfate	141.0	5000	5459	106	5464	106	80-120	0	0-20	

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RPD: Relative Percent Difference. CL: Control Limits

Calscience Environmental Laboratories, Inc.

Quality Control - Spike/Spike Duplicate

SCS Engineers
8799 Balboa Avenue, Suite 290
San Diego, CA 92123-1562

Project: Wigington Petroleum

Date Received: 12/30/13
Work Order: 13-12-2050
Preparation: N/A
Method: SM 3500-FeB
Page 3 of 5

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
13-12-2033-2	**Sample**	**Aqueous**	**UV 9**	**12/30/13**	**12/30/13 19:28**	**D1230FES1**
13-12-2033-2	**Matrix Spike**	**Aqueous**	**UV 9**	**12/30/13**	**12/30/13 19:28**	**D1230FES1**
13-12-2033-2	**Matrix Spike Duplicate**	**Aqueous**	**UV 9**	**12/30/13**	**12/30/13 19:28**	**D1230FES1**

Parameter	Sample Conc.	Spike Added	MS Conc.	MS %Rec.	MSD Conc.	MSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
Iron (II)	ND	1.000	0.9600	96	1.000	100	70-130	4	0-25	

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RPD: Relative Percent Difference. CL: Control Limits

Calscience Environmental Laboratories, Inc.

Quality Control - Spike/Spike Duplicate

SCS Engineers
8799 Balboa Avenue, Suite 290
San Diego, CA 92123-1562

Project: Wigington Petroleum

Date Received: 12/30/13
Work Order: 13-12-2050
Preparation: N/A
Method: SM 4500 P B/E
Page 4 of 5

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
MW-14	**Sample**	**Aqueous**	**UV 8**	**N/A**	**12/30/13 19:40**	**D1230OPS2**
MW-14	**Matrix Spike**	**Aqueous**	**UV 8**	**N/A**	**12/30/13 19:40**	**D1230OPS2**
MW-14	**Matrix Spike Duplicate**	**Aqueous**	**UV 8**	**N/A**	**12/30/13 19:40**	**D1230OPS2**

Parameter	Sample Conc.	Spike Added	MS Conc.	MS %Rec.	MSD Conc.	MSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
o-Phosphate (as P)	ND	0.4000	0.3980	100	0.3990	100	70-130	0	0-25	

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RPD: Relative Percent Difference. CL: Control Limits

Calscience Environmental Laboratories, Inc.

Quality Control - Spike/Spike Duplicate

SCS Engineers
8799 Balboa Avenue, Suite 290
San Diego, CA 92123-1562

Project: Wigington Petroleum

Date Received: 12/30/13
Work Order: 13-12-2050
Preparation: EPA 3010A Total
Method: EPA 6010B
Page 5 of 5

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
MW-6	**Sample**	**Aqueous**	**ICP 7300**	**12/31/13**	**01/03/14 18:42**	**131231SA2**
MW-6	**Matrix Spike**	**Aqueous**	**ICP 7300**	**12/31/13**	**01/03/14 18:44**	**131231SA2**
MW-6	**Matrix Spike Duplicate**	**Aqueous**	**ICP 7300**	**12/31/13**	**01/03/14 18:45**	**131231SA2**

Parameter	Sample Conc.	Spike Added	MS Conc.	MS %Rec.	MSD Conc.	MSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
Iron	2.671	0.5000	3.179	4X	3.166	4X	65-149	4X	0-21	Q
Manganese	0.5692	0.5000	1.102	107	1.095	105	86-116	1	0-7	

Return to Contents

RPD: Relative Percent Difference. CL: Control Limits

Calscience Environmental Laboratories, Inc.

Quality Control - Sample Duplicate

SCS Engineers
8799 Balboa Avenue, Suite 290
San Diego, CA 92123-1562

Project: Wigington Petroleum

Date Received: 12/30/13
Work Order: 13-12-2050
Preparation: N/A
Method: RSK-175M

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	Duplicate Batch Number
MW-14	**Sample**	**Aqueous**	**GC 52**	**N/A**	**12/31/13 13:15**	**131231D01**
MW-14	**Sample Duplicate**	**Aqueous**	**GC 52**	**N/A**	**12/31/13 15:50**	**131231D01**

Parameter	Sample Conc.	DUP Conc.	RPD	RPD CL	Qualifiers
Methane	2871	3150	9	0-20	

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RPD: Relative Percent Difference. CL: Control Limits

Calscience Environmental Laboratories, Inc.

Quality Control - Sample Duplicate

SCS Engineers
8799 Balboa Avenue, Suite 290
San Diego, CA 92123-1562

Project: Wigington Petroleum

Date Received: 12/30/13
Work Order: 13-12-2050
Preparation: N/A
Method: ASTM D 1498
Page 2 of 5

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	Duplicate Batch Number
MW-7	**Sample**	**Aqueous**	**ISE 1**	**12/30/13 00:00**	**12/30/13 20:40**	**D1230RDD1**
MW-7	**Sample Duplicate**	**Aqueous**	**ISE 1**	**12/30/13 00:00**	**12/30/13 20:40**	**D1230RDD1**

Parameter	Sample Conc.	DUP Conc.	RPD	RPD CL	Qualifiers
Redox Potential	116.8	116.1	1	0-20	

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RPD: Relative Percent Difference. CL: Control Limits

Calscience Environmental Laboratories, Inc.

Quality Control - Sample Duplicate

SCS Engineers
8799 Balboa Avenue, Suite 290
San Diego, CA 92123-1562

Project: Wigington Petroleum

Date Received: 12/30/13
Work Order: 13-12-2050
Preparation: N/A
Method: SM 4500 H+ B
Page 3 of 5

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	Duplicate Batch Number
13-12-2041-1	**Sample**	**Aqueous**	**PH 1**	**N/A**	**12/30/13 18:58**	**D1230PHD1**
13-12-2041-1	**Sample Duplicate**	**Aqueous**	**PH 1**	**N/A**	**12/30/13 18:58**	**D1230PHD1**

Parameter	Sample Conc.	DUP Conc.	RPD	RPD CL	Qualifiers
pH	6.980	6.960	0	0-25	

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RPD: Relative Percent Difference. CL: Control Limits

Calscience Environmental Laboratories, Inc.

Quality Control - Sample Duplicate

SCS Engineers
8799 Balboa Avenue, Suite 290
San Diego, CA 92123-1562

Project: Wigington Petroleum

Date Received: 12/30/13
Work Order: 13-12-2050
Preparation: N/A
Method: SM 4500-O G
Page 4 of 5

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	Duplicate Batch Number
MW-6	**Sample**	**Aqueous**	**BOD 1**	**12/30/13 00:00**	**12/30/13 18:55**	**D1230DOD1**
MW-6	**Sample Duplicate**	**Aqueous**	**BOD 1**	**12/30/13 00:00**	**12/30/13 18:55**	**D1230DOD1**

Parameter	Sample Conc.	DUP Conc.	RPD	RPD CL	Qualifiers
Dissolved Oxygen	2.910	2.950	1	0-25	

RPD: Relative Percent Difference. CL: Control Limits

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Calscience Environmental Laboratories, Inc.

Quality Control - Sample Duplicate

SCS Engineers
8799 Balboa Avenue, Suite 290
San Diego, CA 92123-1562

Project: Wigington Petroleum

Date Received: 12/30/13
Work Order: 13-12-2050
Preparation: N/A
Method: SM4500-CO2D
Page 5 of 5

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	Duplicate Batch Number
MW-6	**Sample**	**Aqueous**	**PH1/BUR03**	**N/A**	**12/30/13 19:36**	**D1230CO2D4**
MW-6	**Sample Duplicate**	**Aqueous**	**PH1/BUR03**	**N/A**	**12/30/13 19:36**	**D1230CO2D4**

Parameter	Sample Conc.	DUP Conc.	RPD	RPD CL	Qualifiers
Carbon Dioxide	67.13	67.13	0	0-25	

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RPD: Relative Percent Difference. CL: Control Limits

Calscience Environmental Laboratories, Inc.

Quality Control - LCS/LCSD

SCS Engineers
8799 Balboa Avenue, Suite 290
San Diego, CA 92123-1562

Project: Wigington Petroleum

Date Received: 12/30/13
Work Order: 13-12-2050
Preparation: N/A
Method: RSK-175M

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-12-663-2062	**LCS**	**Aqueous**	**GC 52**	**N/A**	**12/31/13 10:03**	**131231L01**
099-12-663-2062	**LCSD**	**Aqueous**	**GC 52**	**N/A**	**12/31/13 10:30**	**131231L01**

Parameter	Spike Added	LCS Conc.	LCS %Rec.	LCSD Conc.	LCSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
Methane	98.50	90.93	92	90.79	92	80-120	0	0-20	

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RPD: Relative Percent Difference. CL: Control Limits

Calscience Environmental Laboratories, Inc.

Quality Control - LCS

SCS Engineers
8799 Balboa Avenue, Suite 290
San Diego, CA 92123-1562

Project: Wigington Petroleum

Date Received: 12/30/13
Work Order: 13-12-2050
Preparation: N/A
Method: EPA 300.0

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS Batch Number
099-12-906-4305	**LCS**	**Aqueous**	**IC 7**	**N/A**	**12/30/13 17:25**	**131230L02**

Parameter	Spike Added	Conc. Recovered	LCS %Rec.	%Rec. CL	Qualifiers
Nitrate (as N)	5.000	4.943	99	90-110	
Sulfate	50.00	47.84	96	90-110	

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RPD: Relative Percent Difference. CL: Control Limits

Calscience Environmental Laboratories, Inc.

Quality Control - LCS/LCSD

SCS Engineers
8799 Balboa Avenue, Suite 290
San Diego, CA 92123-1562

Project: Wigington Petroleum

Date Received: 12/30/13
Work Order: 13-12-2050
Preparation: N/A
Method: EPA 300.0

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-12-906-4306	**LCS**	**Aqueous**	**IC 7**	**N/A**	**12/31/13 02:27**	**131230L03**
099-12-906-4306	**LCSD**	**Aqueous**	**IC 7**	**N/A**	**12/31/13 02:43**	**131230L03**

Parameter	Spike Added	LCS Conc.	LCS %Rec.	LCSD Conc.	LCSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
Nitrate (as N)	5.000	4.924	98	4.998	100	90-110	1	0-15	
Sulfate	50.00	47.79	96	47.89	96	90-110	0	0-15	

RPD: Relative Percent Difference. CL: Control Limits

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Calscience Environmental Laboratories, Inc.

Quality Control - LCS

SCS Engineers
8799 Balboa Avenue, Suite 290
San Diego, CA 92123-1562

Project: Wigington Petroleum

Date Received: 12/30/13
Work Order: 13-12-2050
Preparation: N/A
Method: EPA 300.0

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS Batch Number
099-12-906-4313	**LCS**	**Aqueous**	**IC 7**	**N/A**	**01/08/14 12:20**	**140108L01**

Parameter	Spike Added	Conc. Recovered	LCS %Rec.	%Rec. CL	Qualifiers
Nitrate (as N)	5.000	4.887	98	90-110	
Sulfate	50.00	49.45	99	90-110	

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RPD: Relative Percent Difference. CL: Control Limits

Calscience Environmental Laboratories, Inc.

Quality Control - LCS

SCS Engineers
8799 Balboa Avenue, Suite 290
San Diego, CA 92123-1562

Project: Wigington Petroleum

Date Received: 12/30/13
Work Order: 13-12-2050
Preparation: N/A
Method: SM 3500-FeB
Page 5 of 8

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS Batch Number
099-05-111-4751	**LCS**	**Aqueous**	**UV 9**	**12/30/13**	**12/30/13 19:28**	**D1230FEL1**

Parameter	Spike Added	Conc. Recovered	LCS %Rec.	%Rec. CL	Qualifiers
Iron (II)	1.000	0.9700	97	80-120	

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RPD: Relative Percent Difference. CL: Control Limits

Calscience Environmental Laboratories, Inc.

Quality Control - LCS/LCSD

SCS Engineers
8799 Balboa Avenue, Suite 290
San Diego, CA 92123-1562

Project: Wigington Petroleum

Date Received: 12/30/13
Work Order: 13-12-2050
Preparation: N/A
Method: SM 4500 P B/E
Page 6 of 8

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-05-084-747	**LCS**	**Aqueous**	**UV 8**	**N/A**	**12/30/13 19:40**	**D1230OPL2**
099-05-084-747	**LCSD**	**Aqueous**	**UV 8**	**N/A**	**12/30/13 19:40**	**D1230OPL2**

Parameter	Spike Added	LCS Conc.	LCS %Rec.	LCSD Conc.	LCSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
o-Phosphate (as P)	0.4000	0.4080	102	0.4000	100	80-120	2	0-20	

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RPD: Relative Percent Difference. CL: Control Limits

Calscience Environmental Laboratories, Inc.

Quality Control - LCS/LCSD

SCS Engineers
8799 Balboa Avenue, Suite 290
San Diego, CA 92123-1562

Project: Wigington Petroleum

Date Received: 12/30/13
Work Order: 13-12-2050
Preparation: N/A
Method: SM 4500-NH3 B/C
Page 7 of 8

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-12-814-1775	**LCS**	**Aqueous**	**BUR05**	**01/02/14**	**01/02/14 14:21**	**E0102NH3L1**
099-12-814-1775	**LCSD**	**Aqueous**	**BUR05**	**01/02/14**	**01/02/14 14:21**	**E0102NH3L1**

Parameter	Spike Added	LCS Conc.	LCS %Rec.	LCSD Conc.	LCSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
Ammonia (as N)	5.000	4.704	94	4.648	93	80-120	1	0-20	

Return to Contents

RPD: Relative Percent Difference. CL: Control Limits

Calscience Environmental Laboratories, Inc.

Quality Control - LCS

SCS Engineers
8799 Balboa Avenue, Suite 290
San Diego, CA 92123-1562

Project: Wigington Petroleum

Date Received: 12/30/13
Work Order: 13-12-2050
Preparation: EPA 3010A Total
Method: EPA 6010B
Page 8 of 8

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS Batch Number
097-01-003-13926	**LCS**	**Aqueous**	**ICP 7300**	**12/31/13**	**01/03/14 16:23**	**131231LA2**

Parameter	Spike Added	Conc. Recovered	LCS %Rec.	%Rec. CL	Qualifiers
Iron	0.5000	0.5127	103	80-120	
Manganese	0.5000	0.5368	107	80-120	

Return to Contents

RPD: Relative Percent Difference. CL: Control Limits

Calscience Environmental Laboratories, Inc.

Sample Analysis Summary Report

Work Order: 13-12-2050 Page 1 of 1

Method	Extraction	Chemist ID	Instrument	Analytical Location
ASTM D 1498	N/A	686	ISE 1	1
EPA 300.0	N/A	650	IC 7	1
EPA 300.0	N/A	811	IC 7	1
EPA 6010B	EPA 3010A Total	469	ICP 7300	1
Ferric Iron by Calc	N/A	776	N/A	1
RSK-175M	N/A	888	GC 52	2
RSK-175M	N/A	896	GC 52	2
SM 3500-FeB	N/A	686	UV 9	1
SM 4500 H+ B	N/A	688	PH 1	1
SM 4500 P B/E	N/A	848	UV 8	1
SM 4500-NH3 B/C	N/A	685	BUR05	1
SM 4500-O G	N/A	689	BOD 1	1
SM4500-CO2D	N/A	688	PH1/BUR03	1

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Calscience Environmental Laboratories, Inc.

Glossary of Terms and Qualifiers

Work Order: 13-12-2050 Page 1 of 1

Qualifiers	Definition
*	See applicable analysis comment.
<	Less than the indicated value.
>	Greater than the indicated value.
1	Surrogate compound recovery was out of control due to a required sample dilution. Therefore, the sample data was reported without further clarification.
2	Surrogate compound recovery was out of control due to matrix interference. The associated method blank surrogate spike compound was in control and, therefore, the sample data was reported without further clarification.
3	Recovery of the Matrix Spike (MS) or Matrix Spike Duplicate (MSD) compound was out of control due to suspected matrix interference. The associated LCS recovery was in control.
4	The MS/MSD RPD was out of control due to suspected matrix interference.
5	The PDS/PDSD or PES/PESD associated with this batch of samples was out of control due to suspected matrix interference.
6	Surrogate recovery below the acceptance limit.
7	Surrogate recovery above the acceptance limit.
B	Analyte was present in the associated method blank.
BU	Sample analyzed after holding time expired.
BV	Sample received after holding time expired.
E	Concentration exceeds the calibration range.
ET	Sample was extracted past end of recommended max. holding time.
HD	The chromatographic pattern was inconsistent with the profile of the reference fuel standard.
HDH	The sample chromatographic pattern for TPH matches the chromatographic pattern of the specified standard but heavier hydrocarbons were also present (or detected).
HDL	The sample chromatographic pattern for TPH matches the chromatographic pattern of the specified standard but lighter hydrocarbons were also present (or detected).
J	Analyte was detected at a concentration below the reporting limit and above the laboratory method detection limit. Reported value is estimated.
JA	Analyte positively identified but quantitation is an estimate.
ME	LCS Recovery Percentage is within Marginal Exceedance (ME) Control Limit range (+/- 4 SD from the mean).
ND	Parameter not detected at the indicated reporting limit.
Q	Spike recovery and RPD control limits do not apply resulting from the parameter concentration in the sample exceeding the spike concentration by a factor of four or greater.
SG	The sample extract was subjected to Silica Gel treatment prior to analysis.
X	% Recovery and/or RPD out-of-range.
Z	Analyte presence was not confirmed by second column or GC/MS analysis.
	Solid - Unless otherwise indicated, solid sample data is reported on a wet weight basis, not corrected for % moisture. All QC results are reported on a wet weight basis.
	Any parameter identified in 40CFR Part 136.3 Table II that is designated as "analyze immediately" with a holding time of <= 15 minutes (40CFR-136.3 Table II, footnote 4), is considered a "field" test and the reported results will be qualified as being received outside of the stated holding time unless received at the laboratory within 15 minutes of the collection time.
	A calculated total result (Example: Total Pesticides) is the summation of each component concentration and/or, if "J" flags are reported, estimated concentration. Component concentrations showing not detected (ND) are summed into the calculated total result as zero concentrations.

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Calscience Environmental Laboratories, Inc.
7440 LINCOLN WAY
GARDEN GROVE, CA 92841-1427
TEL: (714) 895-5494 . FAX: (714) 894-7501

CHAIN OF CUSTODY RECORD

DATE: 12/30/13
PAGE: 1 OF 1

LABORATORY CLIENT: SCS Engineers
ADDRESS: 8799 Balboa Avenue, suite 290
CITY: San Diego, CA 92123
TEL: 858-571-5500
E-MAIL: ccrosby@scsengineers.com chouser@scsengineers.com

CLIENT PROJECT NAME / NUMBER: Wigington Petroleum
PROJECT CONTACT: Chuck Houser
SAMPLER(S): (PRINT) Chris Crosby / George Liddle

P.O. NO.: 01208473.00
QUOTE NO.:
LAB USE ONLY: 13-12-2050

TURNAROUND TIME
☐ SAME DAY ☐ 24 HR ☐ 48HR ☐ 72 HR ☐ 5 DAYS ☒ NORMAL

SPECIAL REQUIREMENTS (ADDITIONAL COSTS MAY APPLY)
☐ RWQCB REPORTING ☐ ARCHIVE SAMPLES UNTIL ___/___/___

SPECIAL INSTRUCTIONS

REQUESTED ANALYSIS

LAB USE ONLY	SAMPLE ID	SAMPLING DATE	SAMPLING TIME	Matrix	#Cont	D.O. (SM 4500 OG)	Nitrate, Sulfate (EPA 300.0)	Fe, Mn (6010B)	Ferrous Iron (SM 3500 FeB)	Ferric Iron	pH (SM 4500 H+B)	Methane (RSK-175)	CO2 (SM 4500-CO2)	Redox Potential (ASTM D-1498)	Ammonia (SM 4500 NH3 B/C)	Phosphate (SM 4500 P B/E)
1	MW-6	12/30/13	1130	W	9	X	X	X	X	X	X	X	X	X	X	X
2	MW-7		1215	W	9	X	X	X	X	X	X	X	X	X	X	X
3	MW-14		1240	W	9	X	X	X	X	X	X	X	X	X	X	X
4	MW-18		1415	W	9	X	X	X	X	X	X	X	X	X	X	X
				W	9	X	X	X	X	X	X	X	X	X	X	X

Relinquished by: (Signature) George Lee Liddle, III SCS (~~CALSCIENCE~~)	Received by / Affiliation: (Signature) CCL	Date: 12/30/13	Time: 1415
Relinquished by: (Signature)	Received by / Affiliation: (Signature) CCL	Date: 12/30/13	Time: 1820
Relinquished by: (Signature)	Received by / Affiliation: (Signature)	Date:	Time:

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Calscience Environmental Laboratories, Inc.

WORK ORDER #: 13-12-2050

SAMPLE RECEIPT FORM

Cooler 1 of 1

CLIENT: SCS DATE: 12/30/13

TEMPERATURE: Thermometer ID: SC2 (Criteria: 0.0 °C – 6.0 °C, not frozen except sediment/tissue)

Temperature 1.7 °C - 0.2 °C (CF) = 1.5 °C ☑ Blank ☐ Sample

☐ Sample(s) outside temperature criteria (PM/APM contacted by: _____).

☐ Sample(s) outside temperature criteria but received on ice/chilled on same day of sampling.

☐ Received at ambient temperature, placed on ice for transport by Courier.

Ambient Temperature: ☐ Air ☐ Filter Checked by: 671

CUSTODY SEALS INTACT:

☐ Cooler ☐_____ ☐ No (Not Intact) ☑ Not Present ☐ N/A Checked by: 671

☐ Sample ☐_____ ☐ No (Not Intact) ☑ Not Present Checked by: 836

SAMPLE CONDITION:	Yes	No	N/A
Chain-Of-Custody (COC) document(s) received with samples	☑	☐	☐
COC document(s) received complete	☑	☐	☐
☐ Collection date/time, matrix, and/or # of containers logged in based on sample labels.			
☐ No analysis requested. ☐ Not relinquished. ☐ No date/time relinquished.			
Sampler's name indicated on COC	☑	☐	☐
Sample container label(s) consistent with COC	☑	☐	☐
Sample container(s) intact and good condition	☑	☐	☐
Proper containers and sufficient volume for analyses requested	☑	☐	☐
Analyses received within holding time	☑	☐	☐
Aqueous samples received within 15-minute holding time			
☑ pH ☐ Residual Chlorine ☑ Dissolved Sulfides 836 12/30/13 ☑ Dissolved Oxygen	☐	☑	☐
Proper preservation noted on COC or sample container	☑	☐	☐
☐ Unpreserved vials received for Volatiles analysis			
Volatile analysis container(s) free of headspace	☑	☐	☐
Tedlar bag(s) free of condensation	☐	☐	☑

CONTAINER TYPE:

Solid: ☐4ozCGJ ☐8ozCGJ ☐16ozCGJ ☐Sleeve (_____) ☐EnCores® ☐TerraCores® ☐_____

Aqueous: ☐VOA ☑VOAh (2) ☐VOA**na$_2$** ☐125AGB ☐125AGB**h** ☐125AGB**p** ☐1AGB ☐1AGB**na$_2$** ☑1AGB**s**

☑500AGB ☐500AGJ ☐500AGJ**s** ☑250AGB (2) ☐250CGB ☐250CGB**s** ☐1PB ☐1PB**na** ☐500PB

☐250PB ☑250PB**n** ☑125PB (2) ☐125PB**znna** ☐100PJ ☐100PJ**na$_2$** ☐_____ ☐_____ ☐_____

Air: ☐Tedlar® ☐Canister **Other:** ☐_____ **Trip Blank Lot#:**_____ Labeled/Checked by: 836

Container: C: Clear **A:** Amber **P:** Plastic **G:** Glass **J:** Jar **B:** Bottle **Z:** Ziploc/Resealable Bag **E:** Envelope Reviewed by: 836 12/30/13 735

Preservative: h: HCL **n:** HNO_3 **na$_2$:**$Na_2S_2O_3$ **na:** NaOH **p:** H_3PO_4 **s:** H_2SO_4 **u:** Ultra-pure **znna:** $ZnAc_2$+NaOH **f:** Filtered Scanned by: 739

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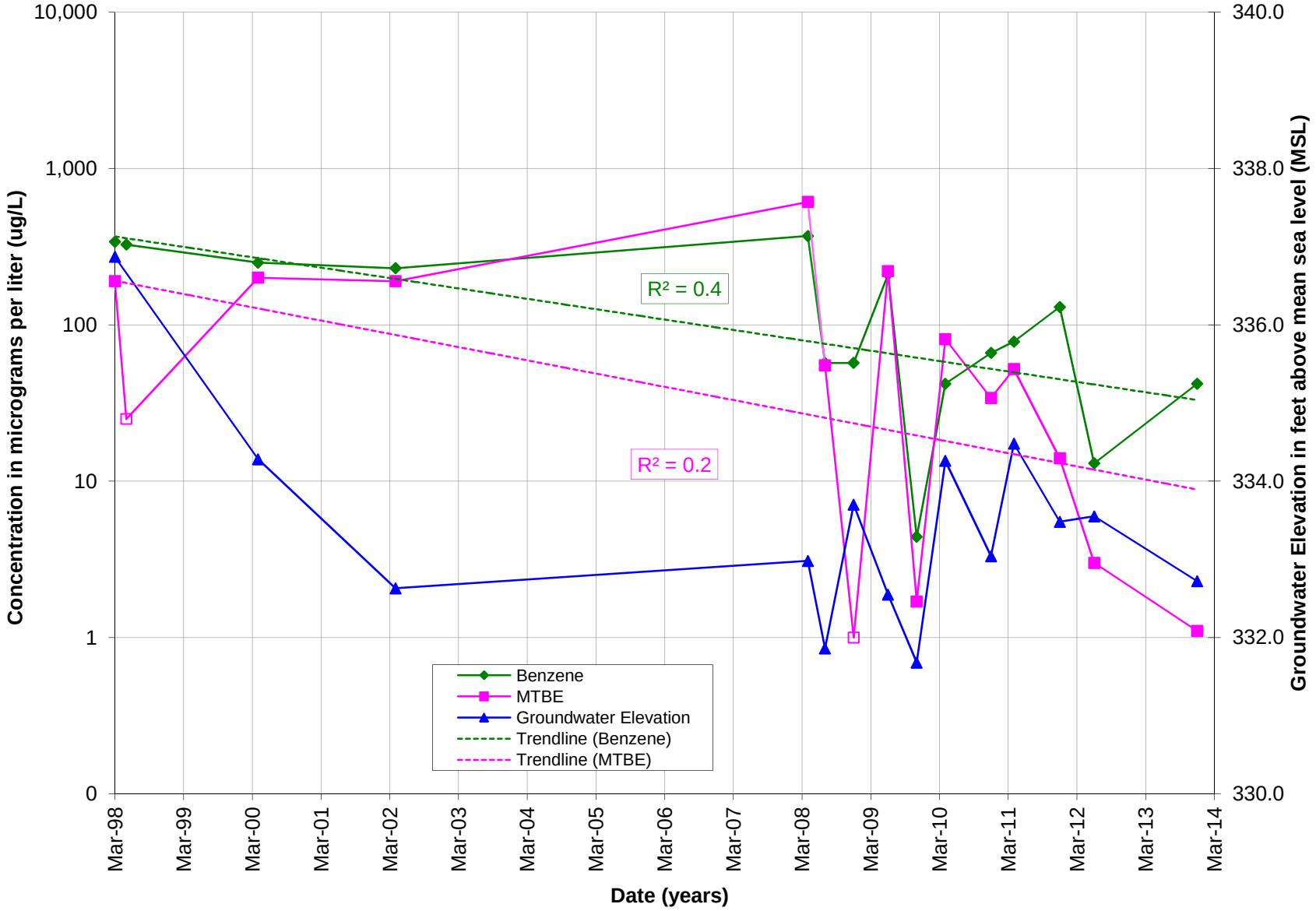
APPENDIX D

HYDROGRAPHS

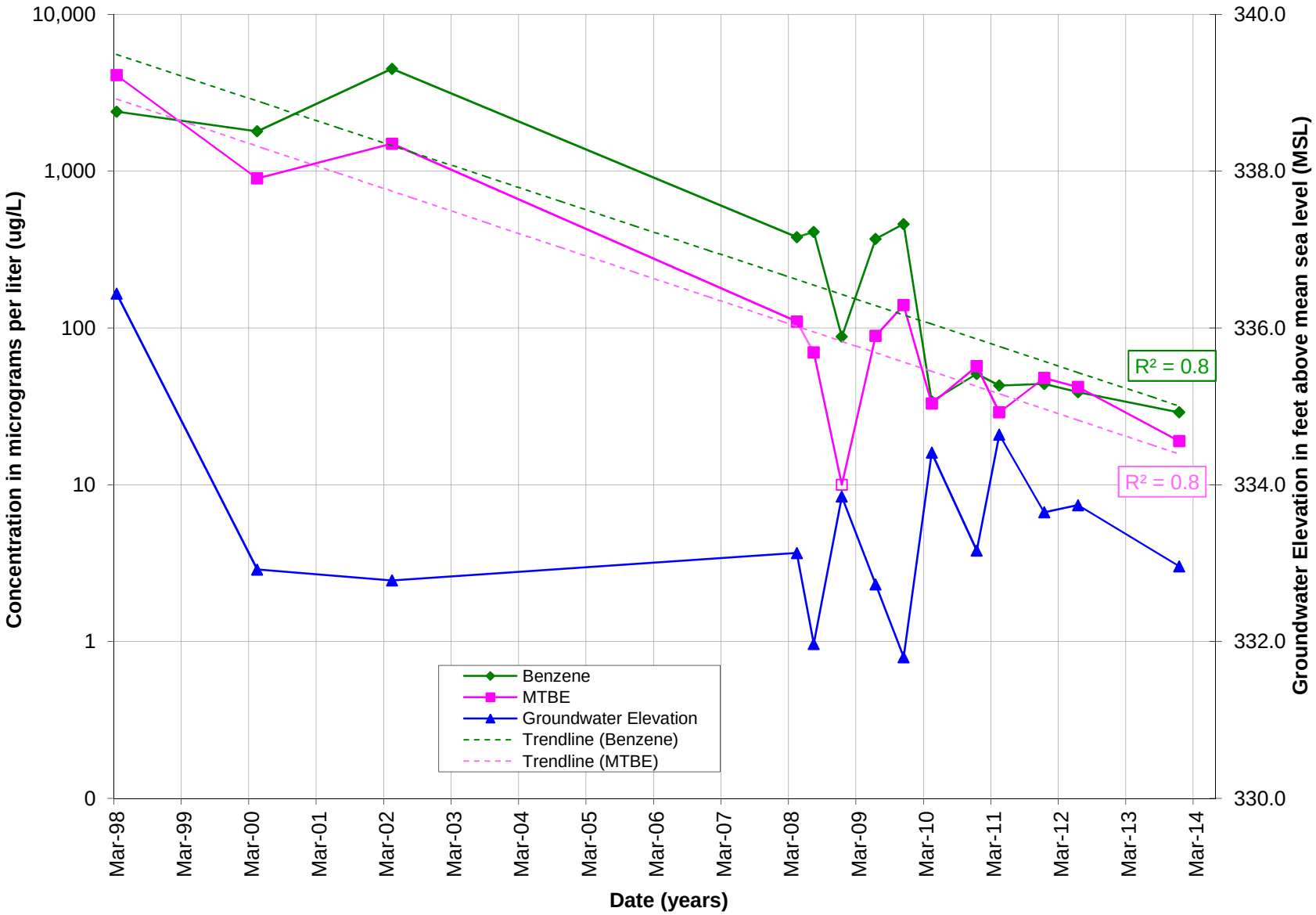
MW-1
Benzene and MTBE Concentrations and Groundwater Elevation versus Time
Wigington Petroleum
11427 Woodside Avenue, Santee, California



SCS ENGINEERS

Hollow points represent half of the detection limit

MW-4
Benzene and MTBE Concentrations and Groundwater Elevation versus Time
Wigington Petroleum
11427 Woodside Avenue, Santee, California



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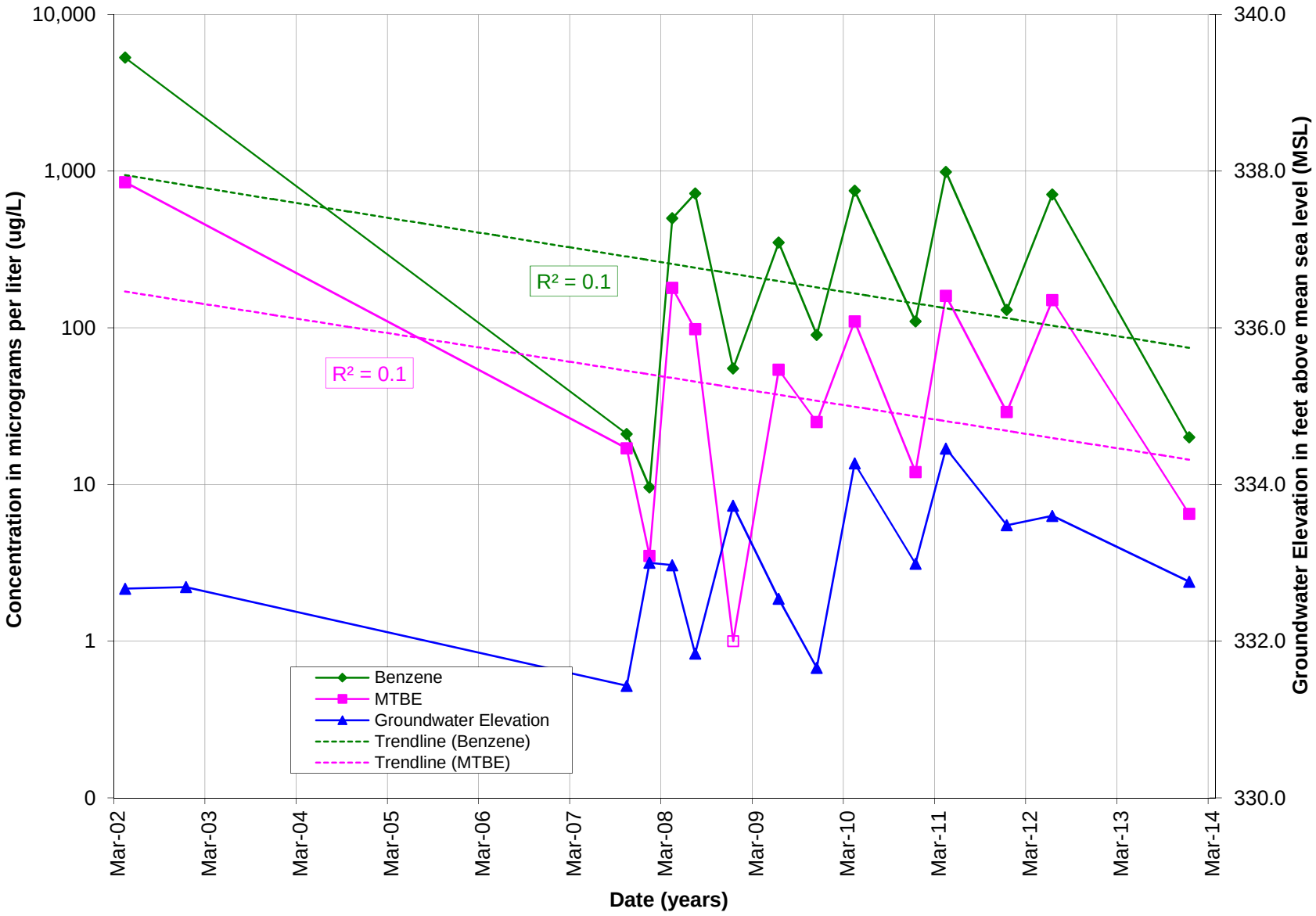
Wigington Petroleum
11427 Woodside Avenue, Santee, California



SCS ENGINEERS

Hollow points represent half of the detection limit

MW-7
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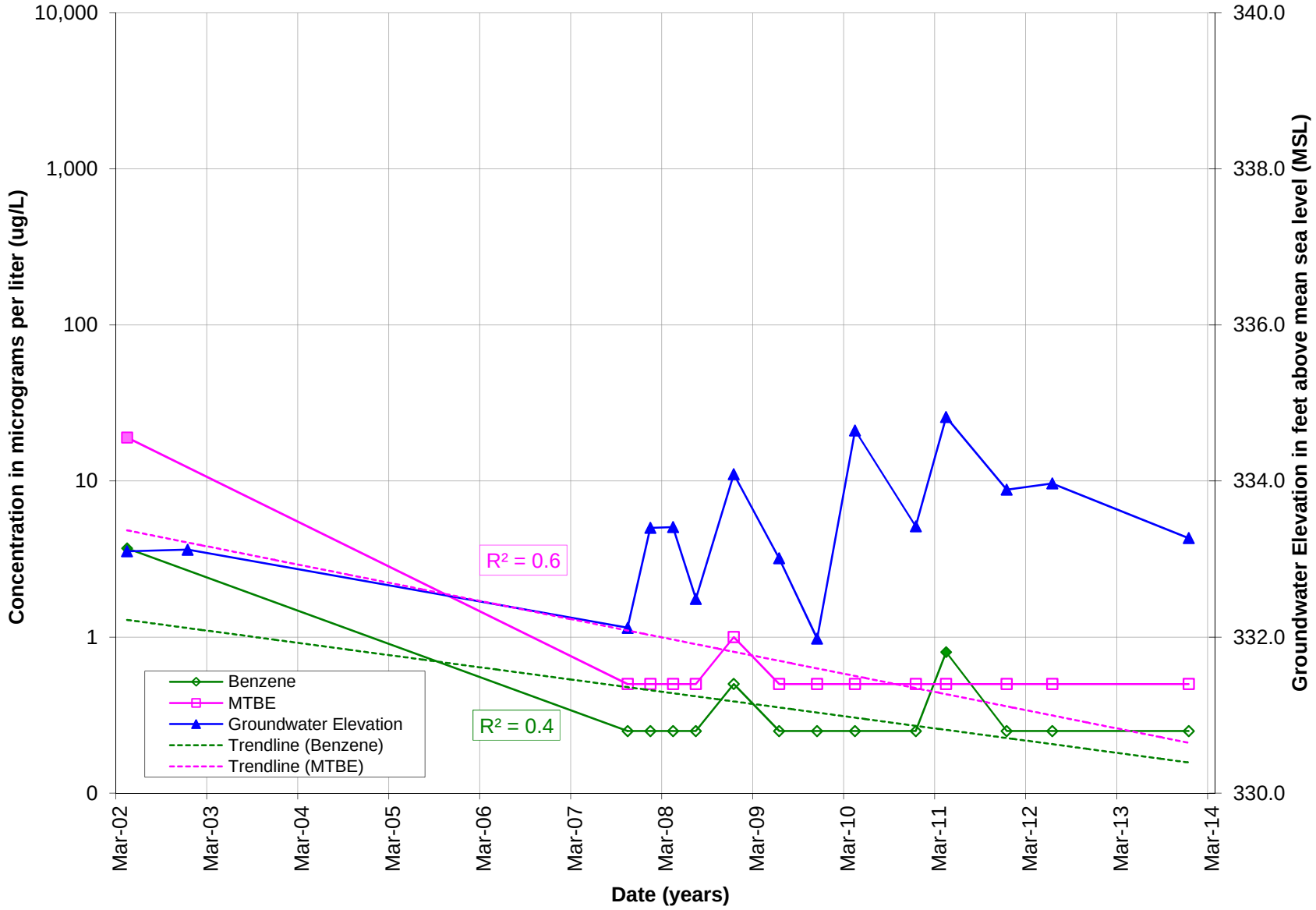
Wigington Petroleum
11427 Woodside Avenue, Santee, California



SCS ENGINEERS

Hollow points represent half of the detection limit

MW-8
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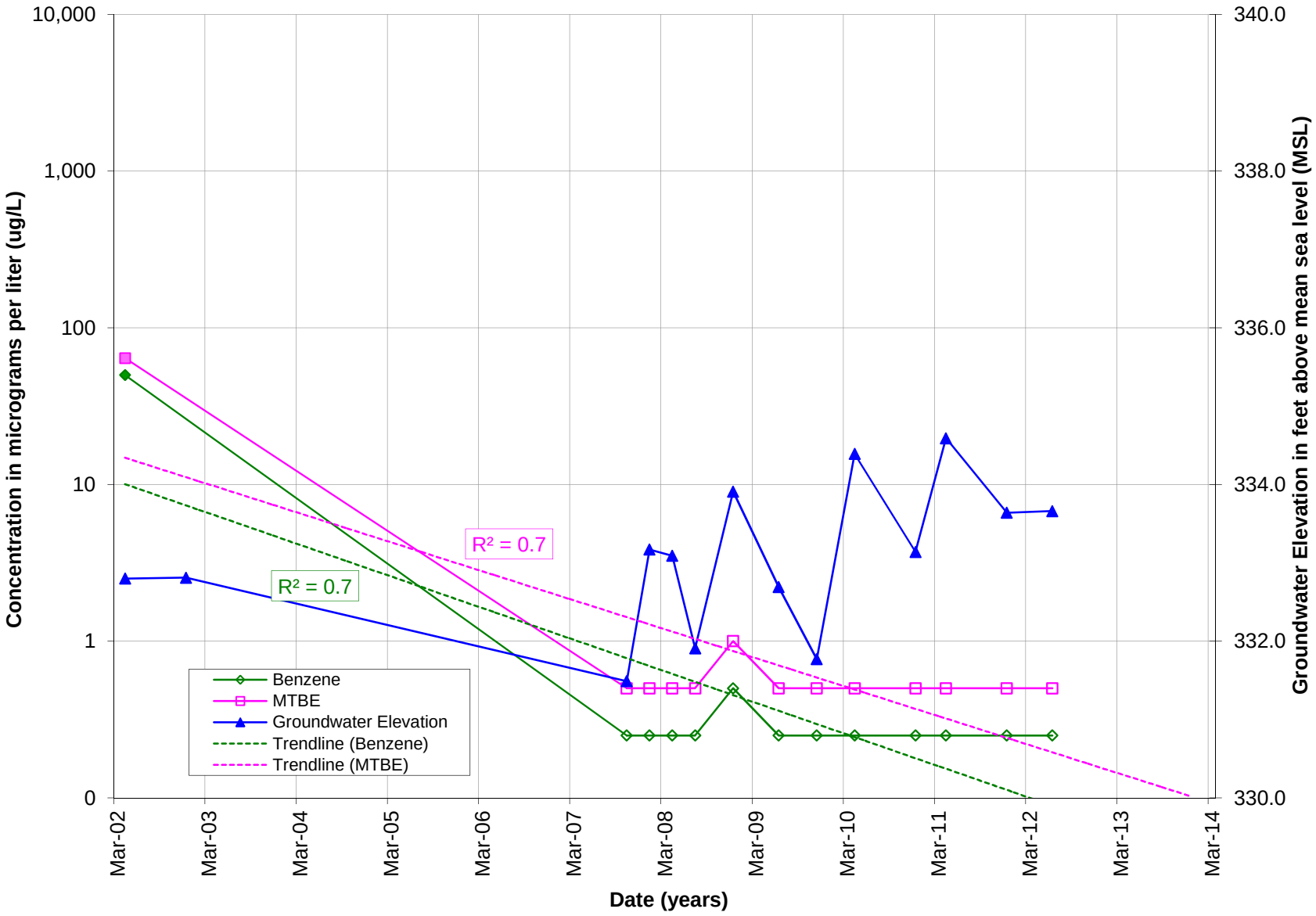
Wigington Petroleum
11427 Woodside Avenue, Santee, California



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Hollow points represent half of the detection limit

MW-9
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Wigington Petroleum
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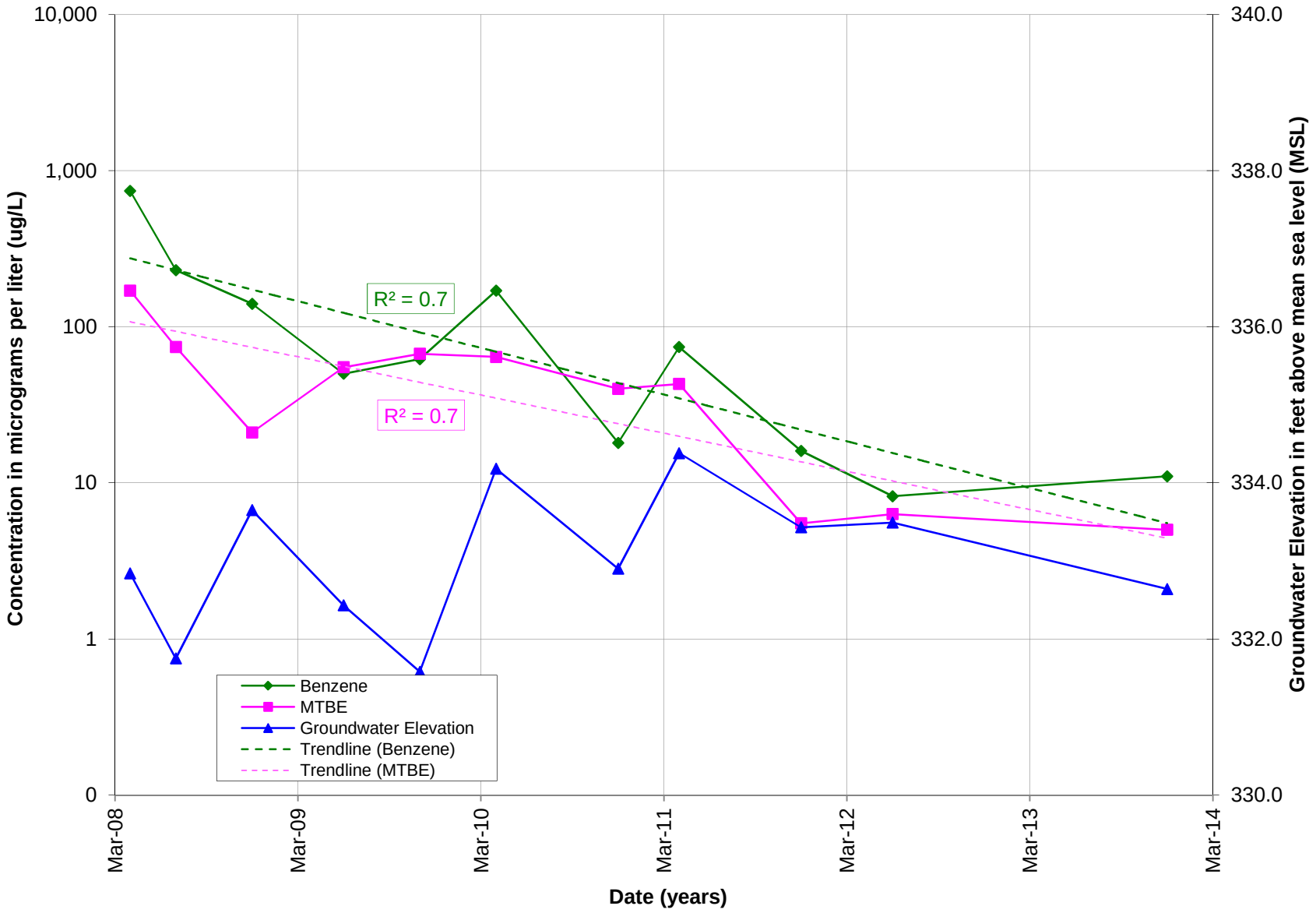

SCS ENGINEERS

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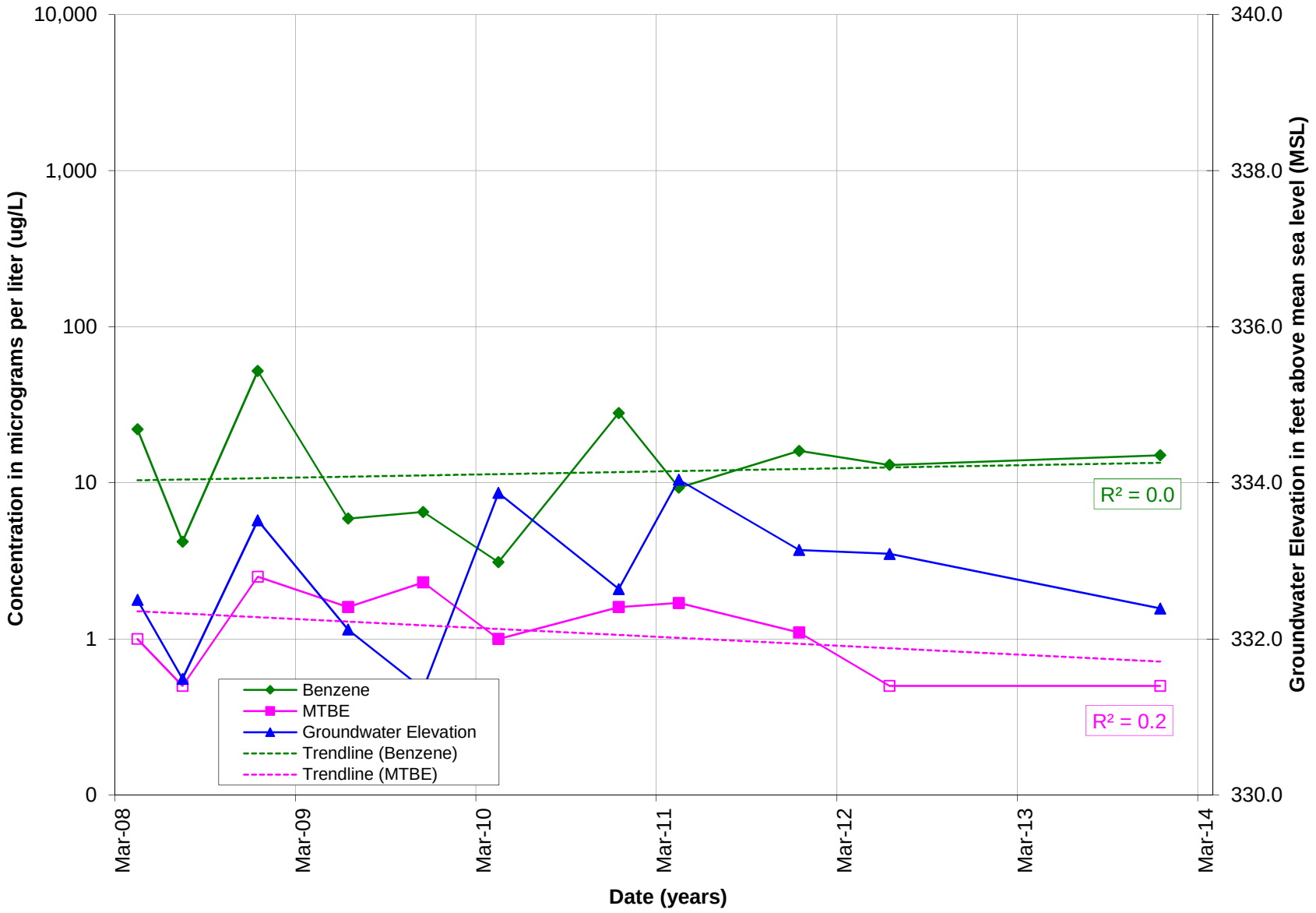
Wigington Petroleum
11427 Woodside Avenue, Santee, California



SCS ENGINEERS

Hollow points represent half of the detection limit

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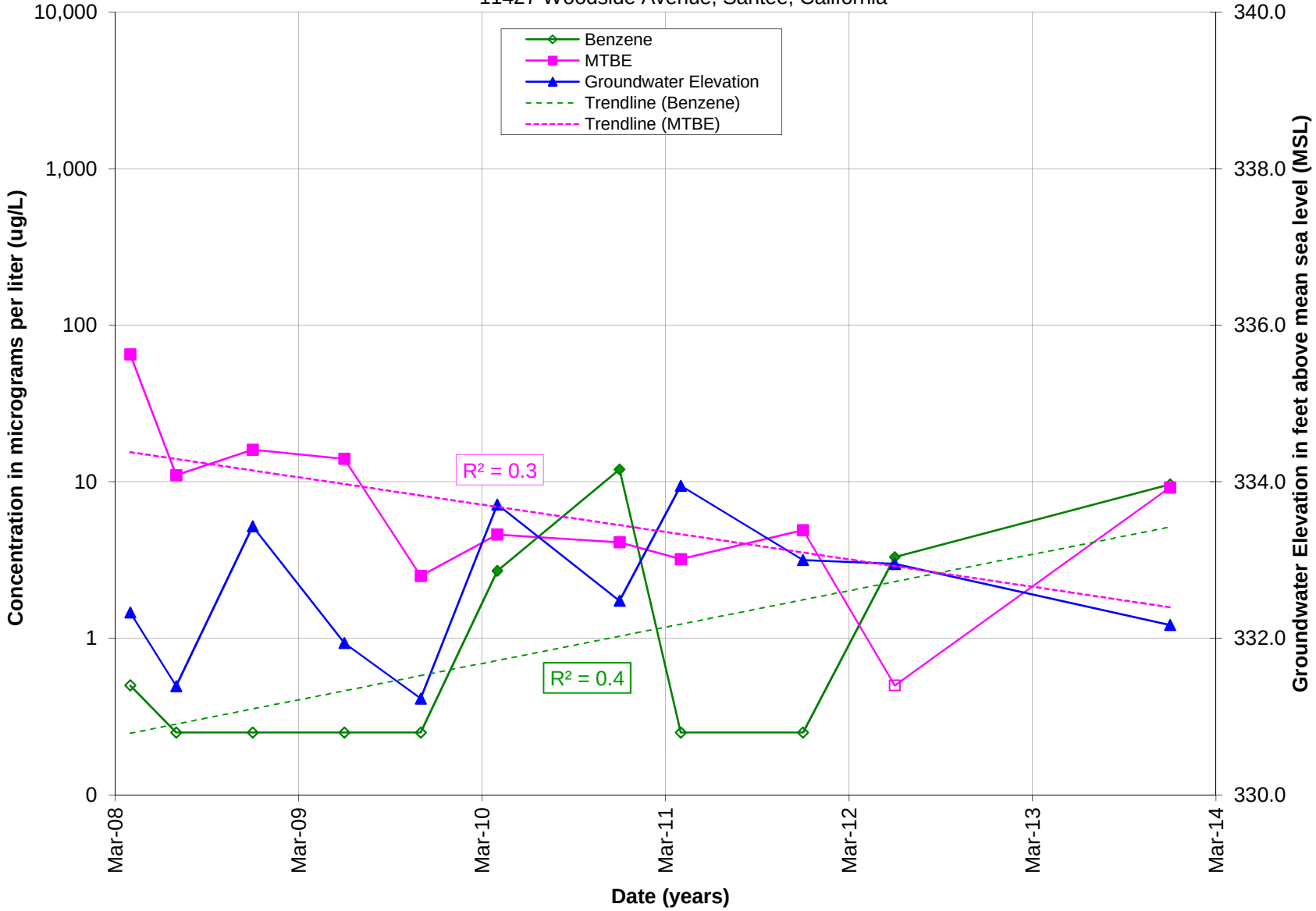
Wigington Petroleum
11427 Woodside Avenue, Santee, California



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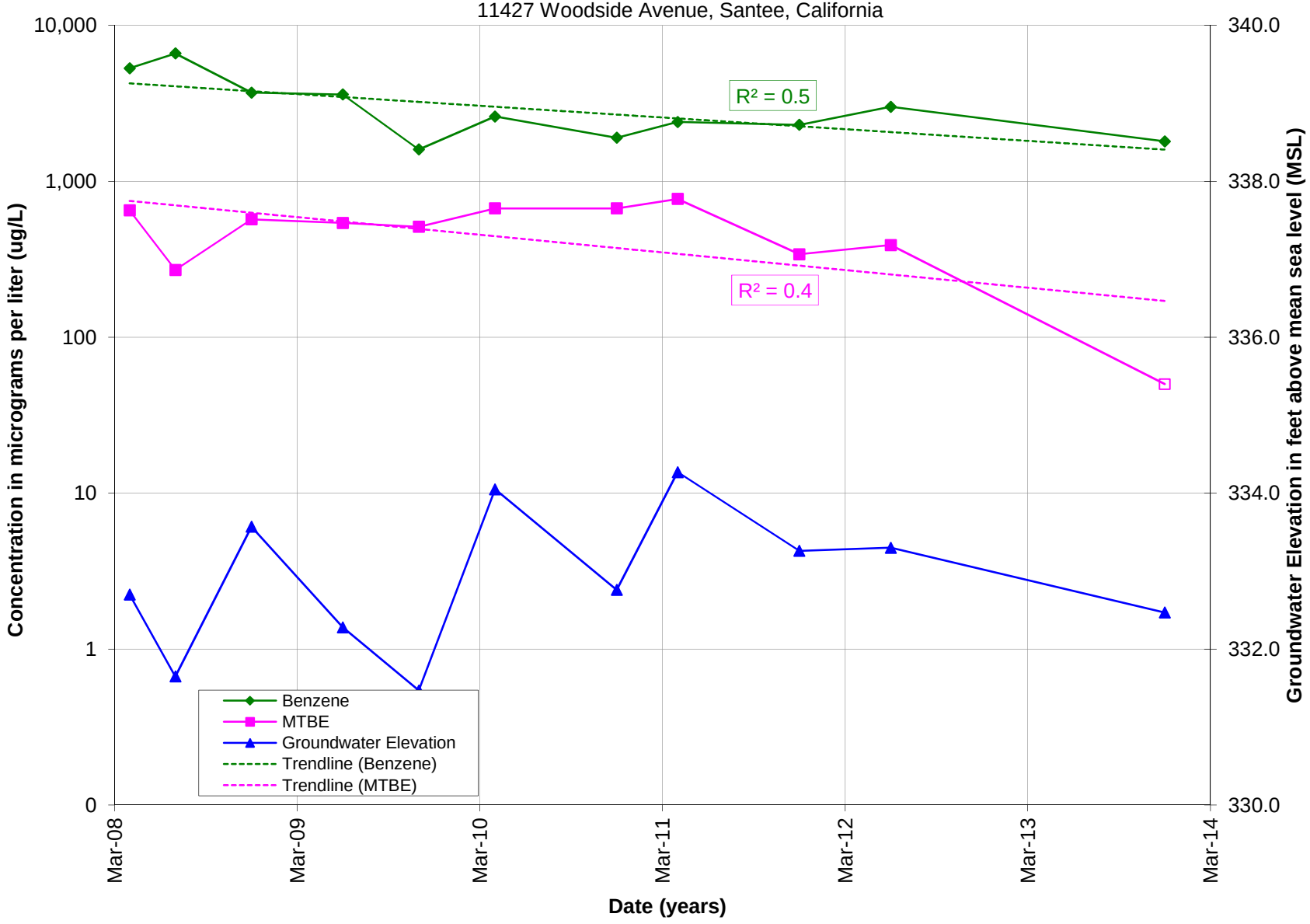
Wigington Petroleum
11427 Woodside Avenue, Santee, California



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MW-15
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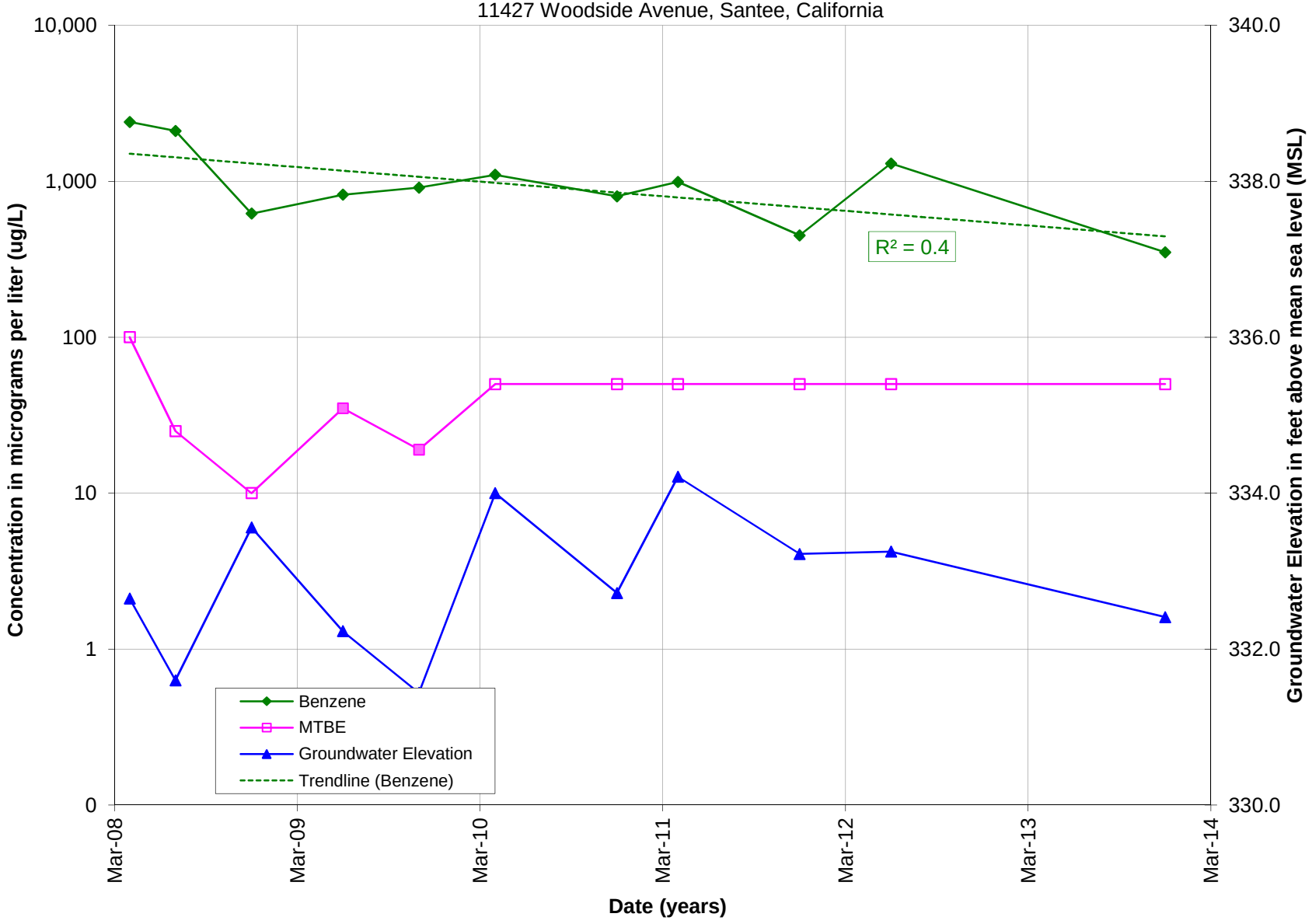
Wigington Petroleum
11427 Woodside Avenue, Santee, California



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MW-16
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Wigington Petroleum
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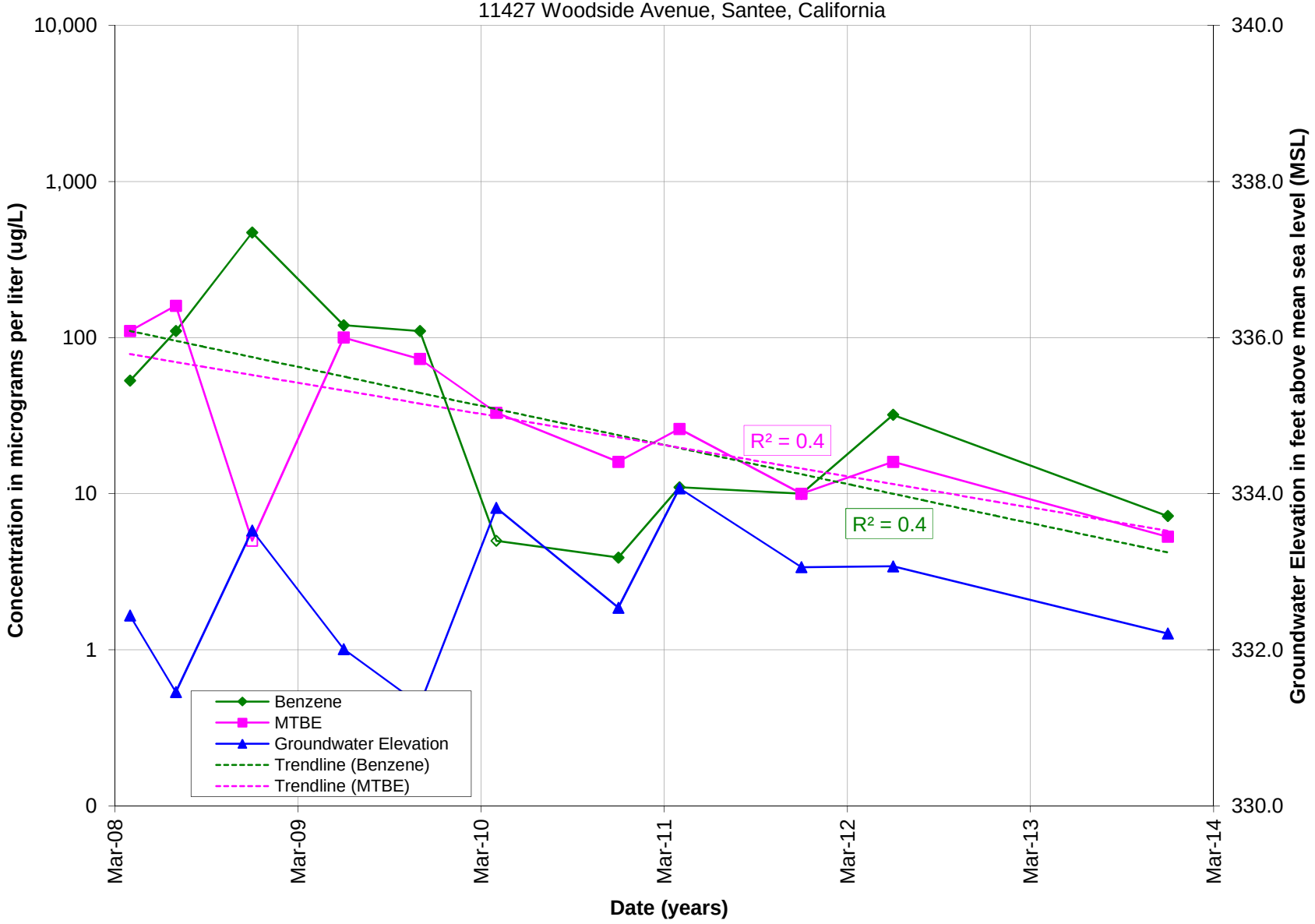

SCS ENGINEERS

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MW-18
Benzene and MTBE Concentrations and Groundwater Elevation versus Time
Wigington Petroleum
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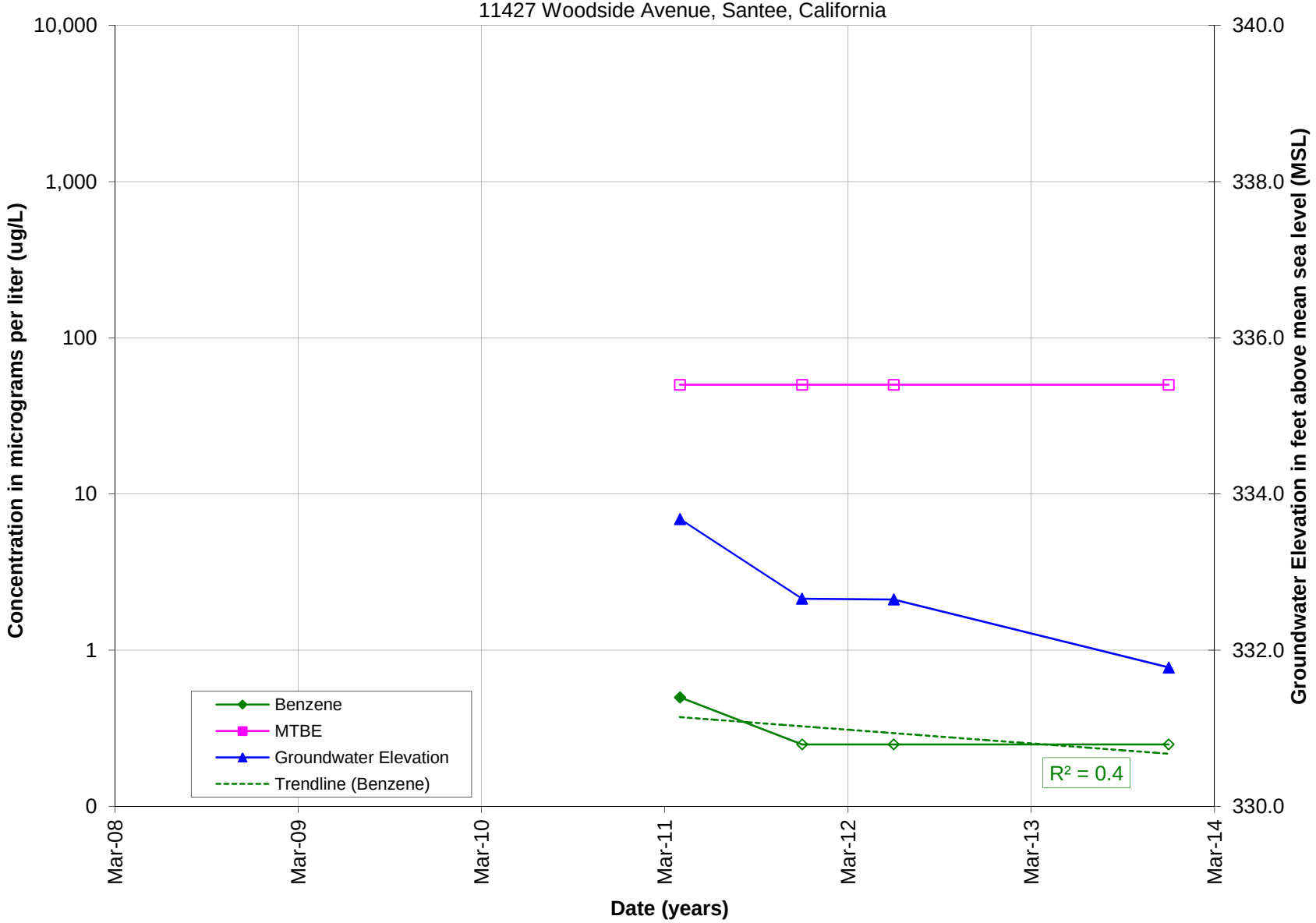

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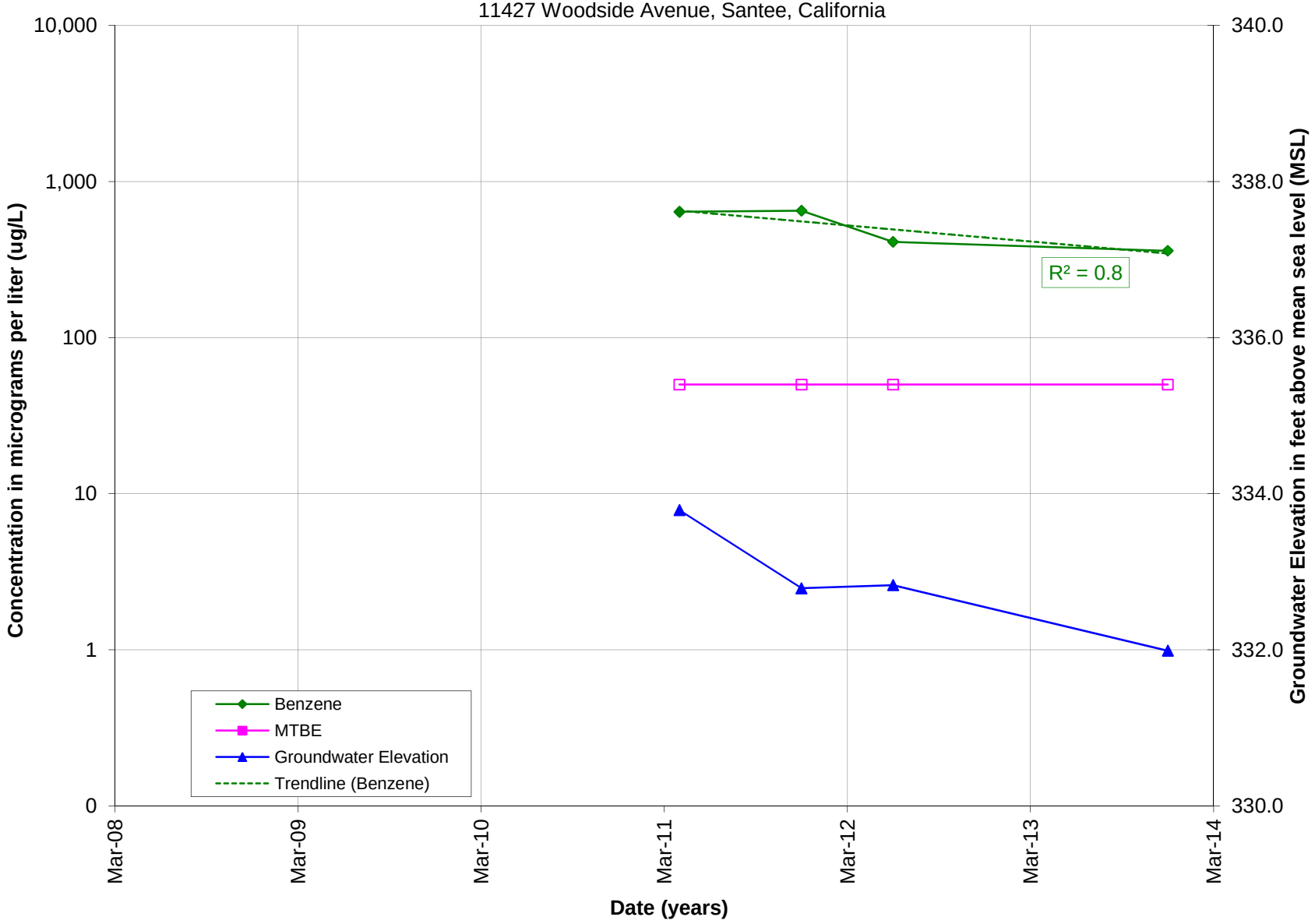
MW-19
Benzene and MTBE Concentrations and Groundwater Elevation versus Time
Wigington Petroleum
11427 Woodside Avenue, Santee, California



SCS ENGINEERS

Hollow points represent half of the detection limit

SCS ENGINEERS

Corrective Action Plan

11427 Woodside Avenue

Santee, California

(DEH CASE #H19469-001)

Presented to:

Mr. James Clay
County of San Diego
Department of Environmental Health
P.O. Box 129261
San Diego, California 92112-9261

Presented by:

SCS ENGINEERS
8799 Balboa Avenue, Suite 290
San Diego, California 92123
(858) 571-5500

March 30, 2015
Project Number: 01208473.00

March 30, 2015
Project No. 01208473.00

Mr. James Clay
Senior Hydrogeologist
Department of Environmental Health
Site Assessment and Mitigation Program
County of San Diego
P.O. Box 129261
San Diego, California 92112-9261

Subject: Corrective Action Plan (CAP)
DEH File Number: H19469-001

Site: 11427 Woodside Avenue
Santee, California

Dear Mr. Clay:

SCS Engineers (SCS) is pleased to present this Corrective Action Plan (CAP) prepared in accordance with the guidelines set forth in Section 7 of the current County of San Diego Department of Environmental Health (DEH) Site Assessment and Mitigation Program (SAM) Manual. These guidelines are based on the California Code of Regulations, Title 23, Division 3, Chapter 16, Article 11. The CAP was also prepared in accordance with Exhibit 00 and SSC1 to the contract with the Client (Wigington Petroleum, Inc.).

Should you have any questions regarding this Report, please do not hesitate to call the undersigned at (858) 571-5500.

Sincerely,

Alissa Barrow, EIT
Staff Engineer
SCS ENGINEERS

Charles E. Houser, CHg 945
Project Manager
SCS ENGINEERS

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Enclosures
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1 BACKGROUND

GENERAL INFORMATION

The Site is located at 11427 Woodside Avenue in the City of Santee, San Diego County, California (Site, Figure 1). The Site is currently occupied by a commercial fuel and oil facility (Figure 2). Between 1987 and 1998, 13 underground storage tanks (USTs) were reportedly removed from the Site. Analysis of soil samples collected during the UST removals indicated that a release of petroleum hydrocarbons had occurred from the UST system. The County of San Diego, Department of Environmental Health (DEH), Hazardous Materials Management Division (HMMD) directed that corrective measures be taken regarding the release.

A summary of the previous environmental assessments conducted at the Site follows:

- In 1988, EnecoTech Southwest, Inc. (EnecoTech) reported that four USTs were removed from the Site.

- EnecoTech conducted assessment activities at the Site between 1988 and 2005. A total of 18 borings and 7 groundwater monitoring wells (MW-1 through MW-4 and MW-6 through MW-8) were drilled and sampled by EnecoTech. An existing 12-inch diameter concrete-cased water production well inside the Site building was labeled MW-5 and was also sampled during the monitoring events in March 1998 and April 2002.

- On August 19, 1993, the HMMD issued a Notice of Violation to El Capitan Oil Co. requiring corrective action relative to the release. The DEH Site Assessment and Mitigation Program (SAM) reportedly assumed oversight responsibility of the UST assessment and mitigation in mid-1993.

- EnecoTech reported that single-walled product piping was removed from the Site in October 1997.

- In April 1998, soil samples collected by EnecoTech from the areas where nine USTs were reportedly removed from the Site indicated a release of petroleum hydrocarbons.

- On March 14, 2000, EnecoTech produced a workplan titled, *Work Plan for Environmental Services*, which proposed the installation of two additional groundwater monitoring wells. SAM reportedly directed that four groundwater monitoring wells be installed in a letter dated May 8, 2000. EnecoTech installed only three wells, wells MW-6 and MW-7 on February 26, 2001, and well MW-8 on April 19, 2002.

- Based on the results of EnecoTech's Site assessment activities, groundwater beneath the Site was interpreted to have been impacted by petroleum hydrocarbons from on-Site releases.

- On March 25, 2005, EnecoTech submitted a workplan for additional Site assessment, which proposed the installation of nine additional groundwater monitoring wells both on and off Site.

- In 2006, Petra Geotechnical Inc. (Petra) was retained to conduct the Site assessment work. The SAM Program approved EnecoTech's workplan in a letter, dated October 10, 2007. Petra proposed one well be installed in addition to the nine wells proposed by EnecoTech. The SAM Program agreed that an additional well was needed and requested a revised workplan. Petra submitted an addendum to the revised workplan, dated December 21, 2007, to include the installation of a tenth groundwater monitoring well. SAM approved the revised workplan in a letter, dated January 15, 2008.

- On October 25, 2007, Petra identified phase-separated hydrocarbons (PSH) in monitoring wells MW-2, MW-3, and MW-4. Petra submitted a workplan to SAM titled, *Workplan for High Vacuum Dual Phase Extraction Pilot Test and Interim Remediation*, dated December 24, 2007. The SAM Program approved the workplan in a letter dated, January 16, 2008.

- Petra conducted a 33-day high-vacuum, dual-phase extraction (HVDPE) pilot test between January 22 and February 24, 2008. Approximately 3,255 pounds of petroleum hydrocarbons were removed and treated during the pilot test. During the pilot test, nine new monitoring wells (MW-9 through MW-17) were installed. The locations of these wells (MW-9 through MW-17) and previously existing wells (MW-1 through MW-8) are depicted on Figure 2. In April 2008, monitoring wells MW-1 through MW-4 and MW-6 through MW-17 were sampled.

- On July 25, 2008, Petra submitted a *Workplan for Well Maintenance and Well Destruction* to SAM to destroy well MW-5 and reconstruct the well heads for several monitoring wells. SAM approved this workplan in a letter, dated September 4, 2008. It is SCS's understanding that Petra subsequently destroyed MW-5.

- On July 13, 2009, SAM issued a letter that called for the reduction of the frequency of groundwater monitoring from quarterly to semi-annually, occurring during the second and fourth quarters.

- In 2009, SCS Engineers (SCS) was retained to conduct further groundwater monitoring and Site assessment beginning with the second quarter 2009 (2Q2009) groundwater monitoring event. SCS performed groundwater monitoring and sampling at the Site on June 2009 (2Q2009), November 2009 (4Q2009), April 2010 (2Q2010), and December 2010 (4Q2010).

- On February 19, 2010, SCS submitted a focused HVDPE pilot test workplan. SAM responded in a letter, dated March 16, 2010, stating that, prior to conducting remedial testing, an on-Site health risk assessment and delineation of the groundwater contamination should be completed.

- On April 26, 2010, SCS submitted a *Workplan for a Soil Vapor Survey and Health Risk Assessment* to SAM. SAM approved this workplan in a letter dated, May 18, 2010. Additionally, on April 26, 2010, SCS submitted a *Site Assessment Workplan* to SAM to install two additional groundwater monitoring wells (MW-18 and MW-19) in order to delineate the downgradient (westerly) and southerly extent of dissolved petroleum

hydrocarbons in groundwater from the release at the Site. SAM approved this workplan in a letter dated, May 19, 2010.

- On April 28, 2011, SCS submitted a report titled, *Soil Vapor Survey and Health Risk Assessment* to SAM describing the installation and sampling activities of five nested soil vapor probes (SV1 through SV5) near the Site building conducted in March and April 2011. SAM concurred with SCS's conclusions in a letter, dated May 9, 2011, that there is a low likelihood that a significant health risk exists in connection with the concentrations of petroleum hydrocarbons in soil vapor beneath the on-Site building.

- On August 18, 2011, SCS submitted a report to SAM titled *Additional Site Assessment and Semi-Annual Groundwater Monitoring Report 2Q2011* describing the installation of two groundwater monitoring wells (MW-18 and MW-19) installed in March 2011 and the semi-annual sampling event conducted in April 2011. That report indicated that additional assessment was needed to the south of well MW-19.

- On May 18, 2012, SCS submitted a workplan for additional assessment south of well MW-19 at the Site. SAM issued a letter on May 29, 2012, granting approval of the workplan.

- SCS conducted groundwater monitoring and sampling during the fourth quarter of 2011 and, on February 13, 2012, submitted a report titled *Semi-Annual Groundwater Monitoring, Fourth Quarter 2011, 11427 Woodside Avenue, Santee, California*.

- During the second quarter 2012 groundwater monitoring event, PSH with the appearance of red-dyed diesel fuel was measured in well MW-10. Similar PSH has subsequently been monitored in wells MW-2, MW-3, MW-13, and MW-17. A separate DEH Voluntary Assistance Program (VAP) case (Case No. H19469-005) was opened on September 12, 2012 to address the release of red-dyed diesel from the on-Site above ground storage tank (AST) system.

- On December 11, 2013, the DEH issued a letter stating, "Based on current contaminant trends in groundwater, DEH staff is eliminating the requirement for the cross-gradient well/boring proposed in the May 18, 2012 *Workplan for Additional Site Assessment*." The letter goes on to state that an additional round of groundwater sampling should be conducted and to prepare a Corrective Action Plan (CAP).

- During December 2013 (4Q2013), SCS conducted groundwater monitoring and sampling and, on April 4, 2014, submitted a report titled *Semi-Annual Groundwater Monitoring, Fourth Quarter 2013, 11427 Woodside Avenue, Santee, California*.

- Based on recent groundwater sampling data, concentrations of dissolved petroleum hydrocarbons in on-Site wells have decreased substantially. As regards petroleum hydrocarbons as gasoline, it appears that the HVDPE pilot test conducted in early 2008 has been successful in substantially reducing the mass of residual gasoline in soil at the Site.

1 SITE DESCRIPTION SUMMARY

Site Name:	Wigington Petroleum
Site Owner:	Wigington Petroleum, Inc.
Site Address:	11427 Woodside Avenue, Santee, California
DEH Case Number:	H19469-001
Cleanup Fund Claim Number:	912
Global ID:	T0607303173

2 OBJECTIVE

The objective of this scope of services is to prepare a Corrective Action Plan (CAP) for the Site. The California Code of Regulations (CCR), Title 23, Division 3, Chapter 16, Article 11 requires that a CAP must address the following:

- Assess the nature and extent of petroleum hydrocarbon-bearing soil and a description of the hydrogeologic and geologic characteristics of the Site; the physical and chemical characteristics of the contaminant; potential inhalation, dermal, and explosion hazards; migration potential of the contaminant; an assessment of impacts; a feasibility study; and an assessment of applicable cleanup levels.

- Suggest appropriate cleanup levels for the Site in accordance with the CCR and appropriate guidelines.

- Evaluate the feasibility and effectiveness of remediation alternatives designed to adequately and cost-effectively protect human health, safety, and the environment, and to meet Site cleanup goals for soil.

- Propose a corrective action method for the Site.

According to this section of the CCR, “cost-effective” refers to actions that achieve similar or greater water quality benefits at an equal or lesser cost than other corrective actions.

3 CORRECTIVE ACTION PLAN

ASSESSMENT OF IMPACTS

Hydrologic and Geologic Characteristics of the Site

Site Topography

The Site is located in the central portion of San Diego County in the City of Santee (Figure 1). Highlands are present to the south of the Site. Escondido Creek is located approximately 1,500 feet northwest of the Site and flows toward the southwest.

Based on the survey of the monitoring wells at the Site, the Site is located at an elevation of approximately 362 to 367 feet above mean sea level. Topography at the Site is essentially flat.

Site Geology

Regional Geologic Characteristics

The Site is located within the Peninsular Ranges Geomorphic Province of Southern California. This province is typified by northwest to southeast-trending mountain ranges approximately parallel to the San Andreas and related regional fault systems. The Peninsular Ranges are generally characterized by granitic rocks of the Peninsular Ranges batholith and associated metamorphic rocks. Sedimentary rocks ranging in age from Cretaceous to Pleistocene form the San Diego embayment and coastal terraces west of the batholith.

As interpreted from a geologic map prepared by T. H. Rogers (*Geologic Map of California, Santa Ana Sheet*, 1965, CDMG Geologic Map Series), the Site is underlain by Pleistocene-aged nonmarine sediments.

Site Geologic Characteristics

Geologic materials encountered at the Site included both soil (topsoil/residual soil) and bedrock (weathered granitic rock) units. Please refer to Appendix A for boring logs for the Site.

Fill Soil

This unit was encountered in wells MW-13, MW-15, and MW-16 and was interpreted by Petra to be derived from the local alluvial soils. This unit generally consisted of loose, brown to olive-brown to dark yellowish-brown, dry to moist, fine- to very coarse-grained sand with some gravel and asphalt fragments.

Alluvium

This unit generally consisted of brown to olive-brown, moist to wet, interbedded silty to clayey, fine- to very coarse-grained sand, with some gravel. This unit was interpreted to extend from the surface to depths ranging from approximately 10 feet (well MW-10) to 41.5 feet below ground surface (bgs) (wells MW-14, MW-15, and MW-16).

Residual Soil

This unit generally consisted of earth material derived from in-situ weathering of granitic bedrock, and consisted of dark brown to dark reddish-brown, moist, fine- to medium-grained

clayey sand with some coarse-grained sand and gravel. This unit was encountered in MW-10, MW-17, and MW-13 at depths of approximately 10, 20, and 30 feet bgs, respectively.

Weathered Granitic Rock

This unit generally consisted of dark yellowish-brown to dark olive-brown, hard to very hard, weathered crystalline granitic rock. This unit was encountered in MW-10 and MW-17 at approximately 30 feet bgs and 45 feet bgs, respectively.

Hydrogeology

Based on review of a document titled, *Water Quality Control Plan, San Diego Basin - Region 9*, prepared by the San Diego Regional Water Quality Control Board (RWQCB), dated September 1994, the Site is interpreted to be located within the Santee Hydrologic Sub Area (7.12) of the Lower San Diego Hydrologic Area (7.10) of the San Diego Hydrologic Unit (7.00). According to the RWQCB, the groundwater in this hydrologic unit has been classified as having existing beneficial uses for municipal and domestic supply, agricultural supply, industrial service supply, and industrial process supply purposes.

Groundwater Conditions

Based on the most recent groundwater monitoring data for the Site, groundwater has been encountered at depths ranging from approximately 29 to 33 feet bgs. Groundwater elevation data through December 2013 is included in Table 1. Shallow groundwater has been interpreted to flow generally towards the west to southwest, with a potentiometric surface gradient interpreted to range from approximately 0.001 to 0.004 (Figure 3).

Contaminant Characteristics and Their Impacts

The major constituent of concern (CoC) that is present at the Site in groundwater and soil is gasoline. The information below is based on the following reference materials: *Dangerous Properties of Industrial Materials, Fifth Edition*, N. Irving Sax (1979); *Dangerous Properties of Industrial Materials, Sixth Edition*, N. Irving Sax (1984); and *Hawley's Condensed Chemical Dictionary, Eleventh Edition*, Sax, N.I. and Lewis, R.J., Jr. (1987), *NIOSH Pocket Guide to Chemical Hazards* and a material safety data sheet (MSDS) for MTBE, and *MTBE Remediation Handbook* edited by Ellen E. Moyer and Paul T. Kostecki (2003).

Gasoline

Gasoline is a complex blend of petroleum hydrocarbons primarily composed of paraffins, napthenes, aromatics, and olefins, and its volatile constituents benzene, toluene, ethylbenzene, and xylenes, and, more recently, fuel oxygenates such as methyl tertiary butyl ether (MTBE) and ethanol. It is a colorless to red liquid with a petroleum odor. It is a flammable liquid with a high volatility and its vapors are heavier than air. Information regarding gasoline is presented in the table below.

When exposure to gasoline occurs, eye, nose, and throat irritation; headache; nausea; drowsiness; and dizziness may possibly occur. In open areas, ventilation is usually adequate to minimize prolonged breathing of high gasoline vapor concentrations. The aromatic constituents of gasoline, including toluene, ethylbenzene, and xylenes, may be potentially carcinogenic in

laboratory animals. Benzene, another common aromatic constituent of gasoline, is a known human carcinogen. A hazard assessment of these compounds is also presented in the table below.

Hazard Assessment of Gasoline Compounds

Chemical Name CAS Number	Routes of Entry	Published Exposure Limits Category/Concentration/Source
Gasoline (Blend)(No CAS Number)	Inhalation	TLV/300 ppm 8-hr. TWA, 500 ppm STEL/ACGIH
Benzene 71-43-2	Inhalation Dermal/Eye Contact Ingestion	PEL/1 ppm 8-hr. TWA/OSHA
Toluene 108-88-3		TLV/100 ppm 8-hr. TWA, 150 ppm STEL/ACGIH
Ethylbenzene 100-41-4		TLV/100 ppm 8-hr. TWA, 125 ppm STEL/ACGIH
Xylenes 1330-20-7		TLV/100 ppm 8-hr. TWA, 150 ppm STEL/ACGIH
MTBE 1634-04-4	Dermal Ingestion	TLV/40 ppm 8-hr. TWA/ACGIH

Notes:
CAS number = chemical abstract substance number. This is an "identifier" number within a universal numbering system for chemical substances.
TLV = threshold limit value in parts per million (ppm). This is the time-weighted concentration for a normal 8-hour work day and a 40-hour work week, to which nearly all workers may be repeatedly exposed, day-after-day, without adverse effect.
PEL = permissible exposure limit. This is the time-weighted concentration in parts per million (PPM) for a normal 8-hour work day and a 40-hour work week, to which nearly all workers may be repeatedly exposed, day-after-day, without adverse effect.
TWA = time-weighted average (usually 8 hours).
STEL = short-term exposure limit. This is the 15-minute time-weighted average (TWA) exposure that should not be exceeded at any time during a work day even if the 8-hour TWA is within the TLV-TWA.
ACGIH = American Conference of Governmental Industrial Hygienists.

When certain proportions of a combustible vapor are mixed with air and a source of ignition is present, an explosion can occur. The range of concentrations within which this will occur with gasoline vapor is 1.3 percent to 8 percent. Therefore, under normal conditions, the lowest percentage of the material in the air in which an explosion will occur is the lower explosive limit (LEL) or 1.3 percent, and the highest percentage of the material in the air in which an explosion will occur is the upper explosive limit (UEL) or 8 percent. Gasoline has a flash point of -45ºC or -49ºF. Extreme caution must be taken to prevent sources of ignition from coming into contact with gasoline vapors.

BTEX and MTBE

Benzene, toluene, ethylbenzene, and xylenes (BTEX) and MTBE are volatile chemicals found in varying concentrations in gasoline. They are colorless liquids with strong aromatic petroleum hydrocarbon-like odors. They are all flammable and are moderately volatile, and their vapors are heavier than air. MTBE, until it was banned in California gasoline, was found in varying concentrations in gasoline. It is described as a clear, colorless liquid with turpene odor. It is reported to be highly soluble in water.

MTBE was added to gasoline as an octane booster, and to improve air quality. When exposure to MTBE occurs, coughing, shortness of breath, dizziness, intoxication, eye redness, tearing and discomfort, skin rash and itching, and nausea and vomiting may possibly occur. Health hazards associated with MTBE may include minor skin and eye irritation, mild gastrointestinal tract irritation (if swallowed), and, with prolonged or repeated inhalation of vapor, irritation of respiratory tract and central nervous system effects.

Exposure to BTEX and MTBE in excess of the recommended exposure limits can cause eye, nose, and throat irritation and can produce a narcotic effect on the central nervous system. Symptoms of exposure at these concentrations include headache, nausea, drowsiness, dizziness, and loss of coordination. Prolonged exposure at these concentrations can result in unconsciousness and coma. Benzene is reported to be dermally toxic. Skin exposure may contribute to other routes of exposure, such as ingestion with hand-to-mouth contact. BTEX and MTBE are judged likely to defat the skin.

There is some evidence to indicate that repeated and prolonged exposure to BTEX and MTBE may result in a condition known as "solvent syndrome," characterized by reversible central nervous system damage. There is also some evidence to indicate that toluene may sensitize the heart, predisposing exposure victims to cardiac arrhythmias.

Benzene is a known human carcinogen, and has been shown to cause leukemia, blood disorders, and chromosome damage in humans, and birth defects in laboratory animals. MTBE is considered in California to be a known animal carcinogen, and possible human carcinogen. MTBE is reported to produce renal tumors, Leydig cell tumors, and liver and kidney tumors in laboratory animals.

Release Mechanisms

The recognized release mechanisms at the Site include an unauthorized release from up to 13 USTs and their related piping and dispenser systems.

Based on the data collected at the Site to date, petroleum hydrocarbons appear to have migrated from the former location of the USTs to the soil and groundwater at the Site. However, based on the reductions in dissolved petroleum hydrocarbons in groundwater in on-Site wells, there appears to be a low potential for further migration of petroleum hydrocarbons from petroleum hydrocarbon-bearing soil in the vadose zone to the capillary fringe and subsequently to groundwater.

In general, the potential for human and ecological exposure to hazardous substances depends on whether a known source can lead to exposure via a number of different exposure pathways. In SCS's opinion, the only potentially complete exposure pathway at the Site is soil, although exposure to soil is judged unlikely since portions of the Site are paved or under structures, and Site operations do not entail contact with on-Site soils.

Migration Pathways

Under unconfined groundwater conditions, petroleum hydrocarbons would be expected to migrate vertically from the source (USTs) to groundwater, and laterally along the water table. Historically, the water table has fluctuated between approximately two and four feet in various wells at the Site. Assuming unconfined conditions at the Site, the groundwater table is located in the alluvium over the majority of the Site, and in the residuum and weathered granitic rock near the southeastern corner of the Site. Groundwater generally occurs at depths ranging from approximately 29 to 33 feet bgs, with seasonal fluctuations of up to 2 to 3 feet in individual wells. Generally, it appears that petroleum hydrocarbons have migrated laterally from the former USTs and, with rising and falling groundwater, have developed a "smear zone" where the highest concentrations of TPH in soil occur.

Exposure Pathways

Subsurface Utilities and Surface Drainages

Based on the measured depth to groundwater (approximately 29 feet or more), and the limited extent of the dissolved petroleum hydrocarbon plume, it is highly unlikely that surface water and subsurface utilities have been impacted by the release.

Sensitive Receptors

The Site is located within a hydrologic subarea with beneficial uses. Groundwater resources are known to be used in the vicinity of the Site, therefore the presence of groundwater production wells was investigated within a half-mile radius of the Site. The State Geotracker database, San Diego County Department of Environmental Health, Land & Water Quality Division (LWQD), State of California Department of Water Resources (DWR), and United States Geological Survey (USGS) records were searched to identify the presence of production wells within the designated search radius from the Site. The records copy obtained from the DWR did not indicate that there are any production wells within approximately ½ mile of the Site.

According to the USGS web site (http://waterdata.usgs.gov/nwis), there are no groundwater supply wells within one-half mile of the Site. The information obtained from Geotracker (http://www.geotracker.swrcb.ca.gov/) indicated one well in within one-half mile of the Site, located approximately 0.25 mile northwest of the Site. However, the well is located crossgradient of the Site, and well outside the petroleum hydrocarbon plume (Appendix B).

In an email on January 10, 2015, Mr. Scott Rosecrans of the LWQD indicated that the only production well permits within one-half mile of the Site were associated with a property located approximately 0.24 mile east of the Site. Due to the distance and direction from the Site with respect to the groundwater flow direction (upgradient), it is unlikely that a well in the location indicated by LWQD would be impacted by the release from the Site.

The DWR provided various information on groundwater supply wells for irrigation, domestic, municipal, and industrial purposes. However, the records provided by the DWR indicated that all of these supply wells were outside the search radius of approximately ½ mile of the Site. In addition, the DWR provided records for three wells dated prior to 1919; however, these records did not indicate either the purpose or location of the wells.

Copies of the DEH and DWR report summaries and well logs are not included due to their designation as confidential; however, they can be provided separately from this Report upon request to the RWQCB.

In addition, sensitive receptors within one-half mile of the Site were researched using a Google Earth® map search to investigate sensitive receptors including hospitals, schools, daycare centers, retirement facilities, and medical facilities.

Giggles and Smiles Day Care is located at 11316 North Woodside Avenue, approximately 0.18 mile southwest of the Site. Based on the analytical data for the Site, this facility is located well outside the petroleum hydrocarbon plume (Appendix B).

No other potential sensitive receptors are located within a one-half mile radius of the Site. Therefore, there is a low likelihood of potential risk to sensitive receptors in the vicinity from the Site. Please refer to Appendix B for a map of the search area with the plotted facilities discussed above.

Copies of the DEH and DWR report summaries and well logs are not included due to their designation as confidential; however, they can be provided separately from this Report upon request from the DEH.

Inhalation Hazard

Groundwater occurs at a depth of approximately 29 to 33 feet bgs at the Site. Groundwater also exhibits high dissolved petroleum hydrocarbons concentrations in several wells at the Site. During March 2011, SCS conducted a soil vapor survey consisting of installation and sampling of 5 soil vapor sampling probes at depths of 5 and 10 feet bgs. Soil vapor samples were collected from each location at each depth on two occasions in March and April 2011. The results of that sampling were included in a report titled "Soil Vapor Survey and Health Risk Assessment," dated April 28, 2011, prepared by SCS (included in Appendix C). Concentrations of benzene, ethylbenzene, and MTBE were reported above their respective laboratory reporting limits in the soil vapor beneath the Site (Figure 4). Therefore, a health risk assessment was conducted using the SAM Vapor Risk Model (Appendix C).

The estimated cancer risk from the human health risk assessment for petroleum hydrocarbons at the Site is 8.18 E-07 (less than 1.00 E-06). This result indicates that there is a low likelihood that a significant human health risk exists due to possible exposure to the petroleum hydrocarbon vapors detected beneath the Site. The calculated hazard index for petroleum hydrocarbons at the Site is from 1.11 E-03 to 2.09 E-03 (less than 1). This result indicates that there is a low likelihood of a non-carcinogenic risk due to possible exposure to the petroleum hydrocarbon vapors detected beneath the Site.

Dermal and Ingestion Exposure Hazard

Because the majority of the area of petroleum hydrocarbon-bearing soil in the vicinity of the former and existing abandoned-in-place USTs is covered by either asphalt or concrete paving (hardscape), or Site structures, SCS judges that there are no complete pathways for dermal contact with, or ingestion of, petroleum hydrocarbon-bearing soil. Dermal absorption by direct contact with soil or groundwater at the Site is judged to be unlikely, unless excavation is required for future Site construction. This should be reevaluated if the Site land use changes or if construction is proposed, and appropriate mitigation measures employed, as needed.

Explosion Hazard

The occurrence of an explosion due to gasoline vapors in shallow soil-vapor is judged unlikely for the same reasons the inhalation hazard is judged unlikely, as discussed above. The soil vapor survey, as discussed above, assisted in the evaluation of the potential for an explosion hazard to exist at the Site.

Migration Potential

Petroleum hydrocarbons are migrating in groundwater at the Site. Dissolved MTBE has migrated with groundwater approximately 600 feet downgradient from the former USTs. PSH has been limited to the vicinity of the former USTs in wells MW-2 and MW-3, and has not been present (except for the red-dyed diesel fuel believed to be from a recent release from the on-Site AST system and covered under a separate case) since the HVDPE event conducted in January and February, 2008.

Primary sources of dissolved petroleum hydrocarbons in groundwater are the former leaking UST systems, petroleum hydrocarbon-bearing soil in contact with groundwater, and PSH in groundwater. Leaking USTs have been removed. Therefore, this primary source no longer exists.

Based on Site data presented in Figure 5, petroleum hydrocarbon-bearing soil is still present in portions of the Site, and may be in contact with groundwater. Therefore, such soil may still provide a source of dissolved petroleum hydrocarbons. Likewise, PSH (as gasoline), though not detected in the most recent groundwater sampling, would provide a source of dissolved petroleum hydrocarbons in groundwater if it is still present.

Delineation of Petroleum Hydrocarbon-Bearing Soil

Soil analytical data for the Site is summarized on Figures 5 through 7 and in Tables 2 and 3.

Interpreted Horizontal Extent of Petroleum Hydrocarbon-Bearing Soil

Figure 6 depicts the approximate extent of petroleum hydrocarbon-bearing soil that may be affecting groundwater as it comes into contact with these zones. Based on analytical soil data for the Site, the horizontal extent of petroleum hydrocarbon-impacted soil has been fully assessed. The area of petroleum-hydrocarbon impacted soil is interpreted to extend approximately 260 feet west/southwest from the northwestern area of the Site (Figure 5).

Interpreted Vertical Extent of Petroleum Hydrocarbon-Bearing Soil

Figure 7 includes cross sections which depict the approximate vertical extent of petroleum hydrocarbon-bearing soil. The vertical extent of petroleum hydrocarbon-bearing soil has not been completely assessed, based on petroleum-hydrocarbon concentrations at 40 feet bgs in MW-6. However, in general, petroleum hydrocarbons are interpreted to have migrated vertically downward through the vadose zone and, upon reaching the capillary fringe and groundwater surface, have spread laterally in the direction of groundwater flow. Because petroleum hydrocarbons are less dense than water, significant migration of petroleum hydrocarbons below the historical low water table is unlikely.

Estimated Volume of Petroleum Hydrocarbon-Bearing Soil

Based on a review and evaluation of existing soil sample analytical data, SCS has estimated the extent of petroleum hydrocarbon-bearing soil in the subsurface of the Site (Figures 6 through 9).

The volume of petroleum hydrocarbon-bearing soil in the subsurface of the Site was estimated based on interpreted lateral extents and depth intervals in which petroleum detections were reported. The areas of the interpreted lateral extents with impacted soil were obtained with a calibrated digital planimeter and were multiplied by the depth intervals that petroleum hydrocarbon detections were observed/interpreted to produce a volume estimate. Figure 6 depicts the interpreted areas and thicknesses of petroleum hydrocarbon-impacted soil. Each area was measured three times with the planimeter to calculate an average, which was then multiplied by the associated thickness.

The total volume of petroleum hydrocarbon-impacted soil associated with the former USTs at the Site is estimated to be approximately 19,650 cubic yards.

Residual Saturation

Specific retention is defined as the maximum percentage by volume of liquids retained after gravity drainage. Above this maximum percentage, or above "residual saturation," non-aqueous phase liquids (NAPLs) may be mobile. At concentrations less than the residual saturation, NAPLs are captured within the soil structure due to surface tension characteristics and capillary forces. This concept is relevant to contaminant fate and transport in the vadose zone at the Site.

A comparison of the soil characteristics and reported concentrations of petroleum hydrocarbons reported to be present in soil samples collected from the Site to those presented in the DEH SAM Manual with respect to residual saturation indicates that it is likely that some petroleum hydrocarbon-bearing soil associated with the former USTs at the Site is at concentrations above the residual saturation.

The following table depicts a comparison of residual saturation to the highest reported concentrations of petroleum hydrocarbons reported to be present in each soil boring location at the Site.

Comparison of Residual Saturation
to the Highest Reported Concentrations of Petroleum Hydrocarbons

Formation	Sample ID	Generalized Soil Type	Site Soil Sample Concentrations	
			Gasoline (TPHg) (mg/kg)	Diesel (TPHd) (mg/kg)
DEH Reference Residual Saturation Values		**Silty Sand**	**5,600**	**10,000**
		Fine Sand	**2,900**	**5,400**
		Course Sand	**2,300**	**4,400**
Alluvium	B-1-32'	Fine to coarse sand	**8,600**	2,100
	B-3-32' **	Fine to coarse sand	**4,000**	**6,700**
	B-4-32' *	Fine to medium sand	**11,000**	**24,000**
	B-4-34'	Coarse sand	**3,900**	**12,000**
	B-8-32'	Fine to medium sand	**3,400**	760
	B-9-33'	Fine to coarse sand	**2,600**	**4,900**
	B-12-34'	Coarse sand	**3,800**	2,700
	B-17-32' *	Medium to coarse sand	**7,800**	**13,000**
	MW-6-30'	Silty, clayey sand	**5,900**	NA
	MW-8-34.5'	Medium to coarse sand	**3,800**	NA

Notes:
Reference: Site Assessment and Mitigation (SAM) Manual.
Bold values are estimated to be above the residual saturation of the corresponding soil type.

mg/kg = milligrams per kilogram.
NA = Not analyzed for the particular constituent
*, **: Although these samples are interpreted to above the residual saturation, they are located within (*) or just outside (**) the free product plume of red-dye diesel associated with a release covered under a different case.

As shown in the table above, potentially ten soil samples collected from the Site have concentrations suggesting the soil is above residual saturation. However, three of these soil samples are located within the plume of red-dye diesel associated with a recent release covered under a different case. Figure 6 depicts the extent of the red-dye diesel free product plume according to the most recent status report (Status Report, First Quarter 2014) prepared by Ardent Environmental and dated April 8, 2014.

Delineation of Petroleum Hydrocarbon-Bearing Groundwater

Groundwater analytical data for the Site is summarized on Figures 8 through 11 and in Table 4.

Petroleum hydrocarbons have been assessed by obtaining horizontal control in all directions. Please refer to Figure 9 for groundwater sample analytical results from June 2009 through December 2013. Detectable petroleum hydrocarbons were reported in wells MW-11, MW-14, MW-15, and MW-19.

The extent of petroleum hydrocarbons is delineated to the north of the former USTs by wells MW-7, MW-8. Please note that, although MW-11 exhibited TPH concentrations, based on the lack of or relatively low petroleum hydrocarbon concentrations in wells between the source area and MW-11 (MW-4, MW-6, MW-7, MW-8, and MW-9), as well as the distance and direction (approximately 300 feet northwest [i.e., crossgradient]), it appears that the petroleum hydrocarbons in MW-11 may be from a different source.

The extent of petroleum hydrocarbons was delineated to the east by wells MW-10 and MW-13, which now contain free product as a result of the red-dyed diesel fuel from the recent release covered under a separate case, but which have historically had non-detectable concentrations of petroleum hydrocarbons.

The extent of petroleum hydrocarbons is delineated to the south by wells MW-17, and to the west by wells MW-12, MW-16, and MW-18.

All control wells had either non-detectable concentrations or concentrations below MCLs, or were reported at concentrations low enough that when extrapolated from data closer to the source, indicate these wells are near the boundaries of the plume.

Hydrographs and Concentration Trends

Hydrographs based on Site groundwater data through fourth quarter 2013 are included in Appendix D and consist of time series plots of the reported benzene and MTBE with groundwater elevations versus time for wells MW-1, MW-4, MW-6 through MW-9, MW-11, MW-12, MW-14, MW-15, MW-16, MW-18, and MW-19. Hydrographs for MW-2, MW-3, MW-10, MW-13, and MW-17 were not included due to the current presence of PSH. Linear regression trendlines of the benzene and MTBE concentrations are depicted on each hydrograph, as appropriate, with the calculated R-squared (R^2) value.

The R-squared values indicate the *goodness-of-fit* of the trend line. R-squared values between 0.7 and 1.0 are significant, between 0.3 and 0.7 are moderately significant, and between 0.0 and 0.3 are weakly significant. Over time, significant data gaps are present, limiting the ability to calculate representative data trends from several wells. Two significant data gaps occur between samplings events May 1988 and March 1998 and between April 2002 and October 2007. For illustration purposes, samples with no detectable concentration of benzene or MTBE were plotted at one-half of the laboratory reporting limit. Please note that the laboratory reporting limits have changed for benzene and MTBE over time; therefore, some wells may show detectable concentrations that are below previous laboratory reporting limits.
The following table summarized the results from the hydrographs:

Benzene and MTBE Concentration Trends

Well	Benzene Trendline	MTBE Trendline	Correlation with GW Elevation	Benzene/MTBE Above MCL	Comment
MW-1	Decreasing R^2=0.4	Decreasing R^2=0.2	No	Yes	Benzene within historical range. MTBE near historic low.
MW-2	NA	NA	NA	NA	PSH detected since October 2012.
MW-3	NA	NA	NA	NA	PSH detected since October 2012.
MW-4	Decreasing R^2=0.8	Decreasing R^2=0.8	Inverse (2008-2012)	Yes	Benzene at historical low. MTBE within historical range.
MW-5	Abandoned by Petra				
MW-6	Decreasing R^2=0.1	Decreasing R^2=0.1	Yes, since June 2009	Yes	Benzene and MTBE within historical range.
MW-7	Decreasing R^2=0.4	Decreasing R^2=0.6	NA	No	Benzene and MTBE below laboratory reporting limit.
MW-8	Decreasing R^2=0.7	Decreasing R^2=0.7	NA	No	Benzene and MTBE below laboratory reporting limit.
MW-9	Decreasing R^2=0.7	Decreasing R^2=0.7	Benzene – Weak MTBE – No	Yes/No	Benzene near historic low. MTBE at historic low.
MW-10	NA	NA	NA	NA	PSH detected since June 2012.
MW-11	Stable to Increasing R^2=0.0	Decreasing R^2=0.2	No	Yes/No	Benzene within historical range. MTBE below MCL since installation and below laboratory reporting limit since June 2012.
MW-12	Increasing R^2=0.4	Decreasing R^2=0.3	No	Yes/No	Benzene within historical range. MTBE below MCL since Nov. 2009.
MW-13	NA	NA	NA	NA	PSH detected since October 2012.
MW-14	Decreasing R^2=0.5	Decreasing R^2=0.4	No	Benzene – Yes MTBE – <100	Benzene within historical range. MTBE below laboratory reporting limit.
MW-15	Decreasing R^2=0.4	NA*	No	Benzene – Yes MTBE – <100	Benzene near historic low. MTBE below laboratory reporting limits since April 2010.

Well	Benzene Trendline	MTBE Trendline	Correlation with GW Elevation	Benzene/MTBE Above MCL	Comment
MW-16	Decreasing R^2=0.4	Decreasing R^2=0.4	No	Yes/No	Benzene within historical range. MTBE at historic low.
MW-17	NA	NA	NA	NA	PSH detected since October 2012.
MW-18	Decreasing R^2=0.4	NA	No	Benzene – No MTBE – <100	Benzene below laboratory reporting limits since Dec. 2011. MTBE below laboratory reporting limits since installation.
MW-19	Decreasing R^2=0.8	NA	No	Benzene – Yes MTBE – <100	Historical low for benzene. MTBE below laboratory reporting limits since installation.

Notes:
MCL's = Maximum contaminant levels, California Code of Regulations, Section 64444.5, dated February 12, 2014.
MCL for benzene = 1 ug/L; MCL for MTBE = 13 ug/L.
GW = Groundwater
NA = Not applicable either due to values below laboratory reporting limits or due to the presence of PSH
ND = Not detected above laboratory reporting limit
MTBE = Methyl tertiary butyl ether
ug/L = Micrograms per liter
* = MTBE trendline not calculated for MW-15 due to increased laboratory reporting limit

Based on the hydrographs, the dissolved petroleum hydrocarbon plume is generally decreasing. All wells exhibit decreasing MTBE trends, and with the exception of wells MW-11 and MW-12, which are located across State Route 67 and may be from a different release (please refer to the Delineation of Petroleum Hydrocarbon-Bearing Groundwater section above), all wells exhibit decreasing benzene trends.

DETERMINATION OF APPLICABLE CLEANUP LEVELS

Because the Site is located within a beneficial use groundwater basin, Site cleanup levels for groundwater are maximum contaminant levels (MCLs). Soil cleanup levels would be levels below residual saturation based on soil types present at the Site. Once levels are below residual saturation levels, petroleum hydrocarbons would not easily leach from impacted soil into infiltrating waters or groundwater. Based upon our previous experience with similar sites, SCS proposes the following cleanup levels:

- Groundwater - Primary drinking water standard MCLs for groundwater (benzene concentration of 1.0 µg/L and MTBE concentrations of 13.0 µg/L).

- Soil – Cleanup to levels below residual saturation levels.

SCS believes that, once source cleanup has been completed, as discussed below, and soil concentrations are below residual saturation levels thus minimizing leaching of additional contamination into groundwater, natural attenuation processes will eventually (within a "reasonable" time frame, consistent with State Water Resources Control Board Order WQ-98-04

UST [Petition of Matthew Walker]) result in the cleanup goals and the groundwater basin beneficial uses will be protected.

FEASIBILITY STUDY

Low Threat Closure Policy Criteria

The State Water Resources Control Board (SWRCB) has adopted the Low Threat Closure Policy (LTCP) which provides general and media-specific criteria under which a case qualifies for closure. LTCP criteria which the Site does not meet include the following:

General Criteria

- "Secondary Source has been removed to the extent practicable" – As discussed above, it is likely that soil with petroleum hydrocarbon concentrations above residual saturation exists at the Site. Such soil is considered to be a secondary source, therefore, additional removal of petroleum hydrocarbons from such soil may be warranted, *if practicable*.

Media-Specific Criteria – Groundwater

Due to the defined length of the groundwater plume (approximately 600 feet), scenarios number 1 through 3 under the groundwater-specific criteria are not met. Scenario number 4 requires that the plume length be less than 1,000 feet, and is therefore considered here.

- "The contaminant plume that exceeds water quality objectives is less than 1,000 feet in length." – The Site appears to meet this criterion.

- "There is no free product." – Free product, or PSH, associated with the release of gasoline from the former USTs has been removed to the extent practicable. Therefore, the Site meets this criterion.

- "The nearest existing water supply well or surface water body is greater than 1,000 feet from the defined plume boundary." – The San Diego River is approximately 725 feet north-northwest of the edge of the dissolved benzene plume with concentrations greater than 100 ug/l. and approximately 575 feet north-northwest of the dissolved MTBE plume with concentrations greater than 10 ug/l. Therefore, the Site does not meet this criterion.

- "The dissolved concentrations of benzene is less than 1,000 ug/l, and the dissolved concentration of MTBE is less than 1,000 ug/l." – The dissolved benzene concentration in well MW-14, located just west of the Site, is 2,400 ug/l. Therefore the Site does not meet this criterion.

Feasibility Study

There are two objectives which the corrective action will need to achieve for the Site:

1) Removal or reduction of concentrations of petroleum hydrocarbon-bearing soil to effect "source removal" and minimize migration of petroleum hydrocarbons into groundwater as PSH and dissolved-phase contamination.

2) Removal or reduction of concentrations of petroleum hydrocarbons in groundwater to MCLs.

The following table considers a range of remedial strategies and the potential success of the strategy for the Site.

Remedial Strategies

Remedial Method	Description	Site-Specific Limitations/Considerations
Monitored Natural Attenuation	No active measures are taken to remediate the Site. Passive monitoring is used to assess the effectiveness of natural attenuation processes degrading the contaminants.	• Concern regarding remaining mass of hydrocarbons in soil • Relatively to very high concentrations of dissolved petroleum hydrocarbons • Recent presence of PSH in some Site wells • Extended time for remediation through natural attenuation (RNA) may allow plume expansion downgradient
HVDPE and Monitored Natural Attenuation	High-vacuum, dual-phase extraction for removal of petroleum hydrocarbons from subsurface soil and groundwater. Upon removal of petroleum hydrocarbons to the extent practicable, monitor trends in groundwater contamination to demonstrate that contaminants are degrading naturally.	• Will require one additional well • Undetected or undelineated source areas may require more extraction work than anticipated

Alternative 1: Monitored Natural Attenuation

This method would involve the application of the principle of remediation through natural attenuation (RNA) or passive bioremediation to allow the dissolved-phase petroleum hydrocarbons to degrade and attenuate naturally. Lawrence Livermore National Laboratories (LLNL) reported in the mid-1990s that petroleum hydrocarbons will naturally degrade in the subsurface, due to the activities of plume attenuation and micro-organisms which consume petroleum hydrocarbons as part of their natural food source. Consequently, the LLNL report stated that "plume length stability is often reached at a distance from the source shorter than would be expected without considering natural biodegradation." Recommendations of the 1995 LLNL report include:

- Utilize passive bioremediation as a remediation alternative whenever possible;

- Modify State Water Resources Control Board (SWRCB) policies to allow risk-based decision making and risk-based cleanup goals higher than MCLs for leaking underground fuel tank (LUFT) cleanups; and

- Require risk-based decision making (specifically, a modified American Society for Testing and Materials [ASTM] risk-based corrective action [RBCA] approach) for LUFT cleanups that emphasize passive bioremediation.

The acceptability of such approaches depends on a given site meeting certain criteria to be classified as "low risk" (either low-risk soil-only impacts or low-risk groundwater impacts). These criteria were outlined in a memorandum prepared by the RWQCB (dated April 1, 1996). Based on the "low-risk" groundwater case criteria outlined in the April 1, 1996, memorandum, the Site would be classified as "low-risk." This is due to the following site characteristics:

- The Site has exhibited only dissolved-phase petroleum hydrocarbons in groundwater and the plume does not appear to be migrating;
- The Site has been adequately characterized;
- The Site is located inside the California Water Authority (CWA) service area footprint in San Diego County; and
- There are no known production wells in the general vicinity of the Site.
- The previously completed soil vapor survey and human health risk assessment confirms that the Site presents no significant risk to human health.

To evaluate the applicability of using remediation by natural attenuation, the Site must be adequately assessed and groundwater monitoring locations must include an up-gradient monitoring point (e.g., MW-7), two or more monitoring points within the plume (e.g., MW-6 and MW-14) and a downgradient monitoring point (e.g., MW-18).

Feasibility and Cost Effectiveness

The plume is generally decreasing and groundwater resources (sensitive receptors) are not impacted by the release at the Site. Although the Site does not meet several criteria of the LTCP, due to the recent red-dyed diesel fuel release and PSH associated with that release, meeting the LTCP criteria using active remediation methods may not be feasible.

The total estimated project cost for this option would be approximately $40,000 for two rounds of groundwater sampling including RNA analysis, calculation of degradation rates, natural attenuation analysis, and reporting. Please note that this cost does not include the abandonment of the existing wells.

Alternative 2: High-Vacuum, Dual-Phase Extraction (HVDPE) with Monitored Natural Attenuation

This method enhances vapor extraction technology by applying a high vacuum to effect recovery of both vapor and liquids from the extraction wells. This method can be effective and has two advantages over conventional vapor extraction, namely, the extraction system can maintain a pre-selected static water level to target capillary fringe "smear-zone" soils and the high vacuum is able to overcome soil pore suction forces, thus inducing greater flow toward the extraction well. SCS estimates that one additional extraction well would be required to provide adequate

coverage of the source area. HVDPE would be used to provide aggressive cleanup of the source area. Once the source area has been cleaned up to the extent practicable, the Site would fit the criteria that would allow remaining cleanup by monitored natural attenuation as described above.

Feasibility and Cost Effectiveness

The feasibility of this remedial method has been demonstrated by the effectiveness of the pilot test and interim remedial action. The dissolved petroleum hydrocarbon plume is already generally decreasing. However, as noted above, red-dyed diesel fuel PSH from a recent release from the on-Site AST system (covered under a separate case) is currently present in five wells at the Site. If HVDPE were used at the Site, care would have to be taken to select appropriate wells for extraction so that the red-dye diesel plume is not affected (i.e., the extraction could accelerate migration of the red-dye diesel plume).

The estimated cost of HVDPE and monitored natural attenuation would include installation of one additional extraction well, pre-remediation natural attenuation analysis, up to two 30-day HVDPE events using a mobile HVDPE system, approximately one to two months between events, and one year of post-remediation monitoring including natural attenuation analysis. When cleanup goals are achieved, the remaining wells would need to be abandoned.

The total estimated project cost for this option is $255,000 to $275,000, including groundwater sampling, two 30-day HVDPE events, and reporting. Please note that this cost does not include the abandonment of the existing wells.

4 SELECTED REMEDIAL ALTERNATIVE

Although technically feasible, costs associated with implementation of HVDPE at the Site are substantial, could potentially expand the plume of red-dye diesel PSH at the Site, and does not appear necessary because, as stated above, the dissolved petroleum hydrocarbon plume is already decreasing. SCS has selected monitored natural attenuation as the most cost-effective and technically feasible strategy for the Site. Should monitored natural attenuation prove inadequate to achieve Site cleanup goals, then the second remedial option, HDVPE and monitored natural attenuation, would be implemented.

5 CORRECTIVE ACTION WORKPLAN

An implementation workplan has been included in this CAP. This workplan includes a detailed description of the scope of work that would be used for implementation of HVDPE.

OBJECTIVES

The objectives of the proposed scope of services are to conduct two rounds of groundwater monitoring and sampling at the Site in accordance with DEH guidelines, and confirm that RNA is occurring at the Site.

SCOPE OF SERVICES

Preparation for Fieldwork

Site Health and Safety Plan

A health and safety plan for work conducted at the Site and workers within the exclusion zone is required pursuant to the regulations found in 29 Code of Federal Regulations (CFR) Part 1910.120 and California Code of Regulations (CCR), Title 8, Section 5192. Therefore, the existing health and safety plan will be revised as necessary for the proposed work scope, and will outline the potential chemical and physical hazards that may be encountered during drilling and sampling activities. The appropriate personal protective equipment and emergency response procedures for the anticipated site-specific chemical and physical hazards will be detailed in this plan. SCS and contracted personnel involved with the proposed field work will be required to read and sign this document in order to encourage proper health and safety practices.

Project Management, Subcontractor Management, Scheduling

Prior to mobilizing for field work, SCS will schedule the subcontractors including, but not limited to, the laboratory. This task also includes time to coordinate and manage subcontractors, such as the analytical laboratory, to secure the necessary specialized equipment, and to prepare for field mobilization.

Groundwater Monitoring and Sampling

With the exception of well MW-8, all Site wells (17 wells) will be monitored for depth to groundwater and for the presence of PSH. CalTrans has recently restricted access to well MW-8, which is in the CalTrans right-of-way, until a new access agreement is negotiated; therefore, MW-8 will not be sampled during the proposed sampling events. Wells with measurable PSH will not be sampled. For budgetary purposes SCS has assumed five wells (MW-2, MW-3, MW-10, MW-13, and MW-17) will likely have PSH and will not be sampled.

Wells without measurable PSH will be purged and sampled in accordance with DEH guidelines. For budgetary purposes SCS has assumed thirteen Site wells will be sampled. Collected groundwater samples will be decanted into laboratory-supplied vials, labeled, and submitted to a State-accredited laboratory for analysis. Chain-of-custody procedures will be implemented for sample tracking. Samples will be analyzed for TPHg and TPHd in accordance with the California Department of Health Services Leaking Underground Fuel Tank (CA DHS LUFT) Method, and for BTEX, MTBE, oxygenates, and naphthalene in accordance with EPA Method 8260B. A written analytical report will be provided by the laboratory upon completion of the sample testing.

Analysis of Natural Attenuation Parameters

In addition to analyzing groundwater samples from all wells for TPH, BTEX, MTBE, and oxygenates, groundwater samples from selected wells will be analyzed for natural attenuation parameters outlined in Table 7-1, Section 7, page 7-12 of the SAM Manual. Groundwater samples from upgradient well MW-7, source area wells MW-6 and MW-14, and downgradient

well MW-18 will be analyzed for these parameters. The purpose of this analysis will be to evaluate whether natural attenuation is occurring at the Site.

Groundwater Monitoring Report Preparation

Based on the results of the groundwater sampling and RNA analysis, one report (Report) per event will be prepared in accordance with DEH guidelines. The Report will include figures depicting the monitoring well locations, groundwater sample analytical results, laboratory reports, chain-of-custody records, and appropriate support documentation.

The Report will be peer reviewed and signed by the appropriately licensed professionals. The work conducted at the Site will be overseen by a California-state registered Professional Geologist.

Electronic Delivery Format (EDF) Reporting

Pursuant to State law, an electronic delivery format (EDF) report with the groundwater sample analytical results, water level measurements, and a PDF copy of the report will be prepared and submitted to the State of California GeoTracker database.

Disposal of Purge Water and Decon Water

Rinsate water and purged groundwater generated during sampling will be placed in DOT 55-gallon drums, labeled, and stored on-Site pending evaluation of recycling options. SCS assumes that 7 drums of water will be generated for disposal per sampling event.

6 REPORT USAGE AND FUTURE SITE CONDITIONS

This Report is intended for the sole usage of the Client and parties designated by SCS. Use of this Report is subject to the provisions of the fully executed Contract between the Client and SCS. Any third party usage of this Report shall be subject to the provisions of the Contract and any unauthorized misuse of or reliance upon the Report shall be without risk or liability to SCS.

The conclusions of this Report are judged to be relevant at the time the work described in this Report was conducted. Future conditions may differ and this Report should not be relied upon to represent future Site conditions unless a qualified consultant familiar with the practice of leaking UST assessment and remediation in San Diego County is consulted to assess the necessity of updating this Report.

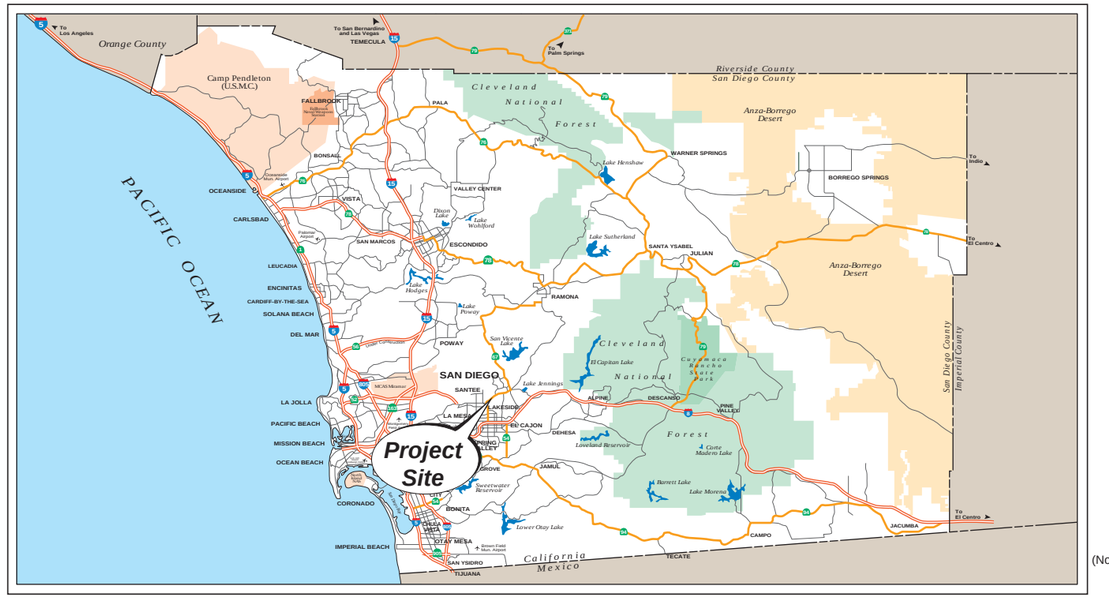
Although this Corrective Action Plan has attempted to assess the likely impacts and best remediation alternatives relative to a release from USTs at the Site, potential sources of impact may have escaped detection for reasons which include, but are not limited to: 1) inadequate or inaccurate information rightfully provided to SCS by third parties, such as public agencies and other outside sources; 2) the limited scope of this Assessment; and 3) the presence of undetected, unknown, or unreported environmental releases.

7 LIKELIHOOD STATEMENTS

Statements of "likelihood" have been made in this report. Likelihood statements are based on professional judgments of SCS. The term "likelihood," as used herein, pertains to the probability of a match between the prediction for an event and its actual occurrence. The likelihood statement assigns a measure for a "degree of belief" for the match between the prediction for the event and the actual occurrence of the event.

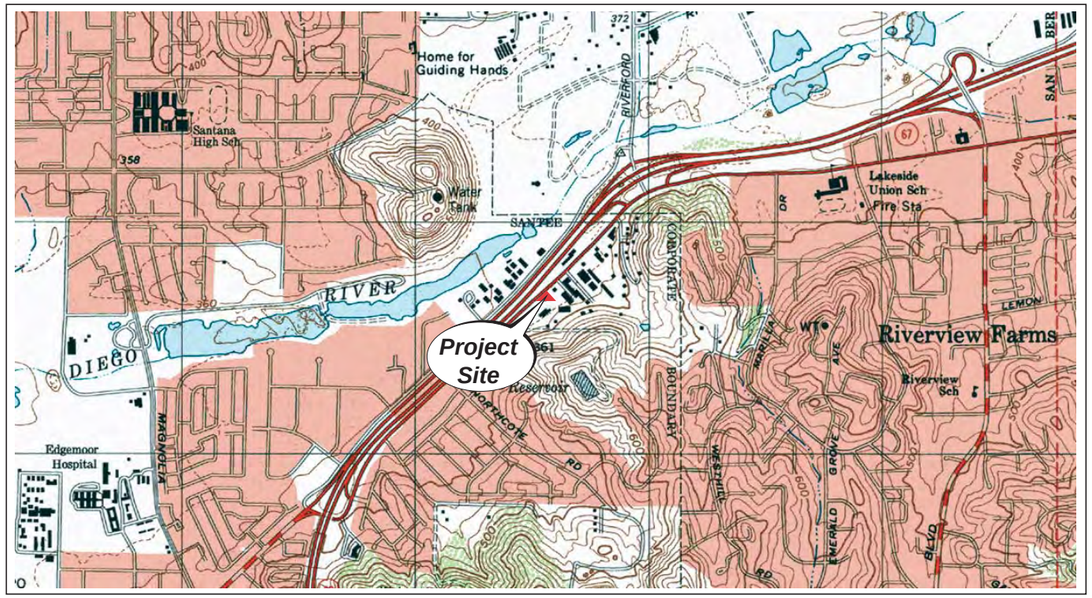
The likelihood statements in this Report are made qualitatively (expressed in words). The qualitative terms can be approximately related to quantitative percentages. The term "low likelihood" is used by SCS to approximate a percentage range of 10 to 20 percent; the term "moderate likelihood" refers to an approximate percentage range of 40 to 60 percent; and the term "high likelihood" refers to an approximate percentage range of 80 to 90 percent.

FIGURES



North (Not to scale)

REGIONAL SITE LOCATION



North

Reference:
U.S.G.S. 7.5 Minute Quadrangle map
El Cajon, California - 1996

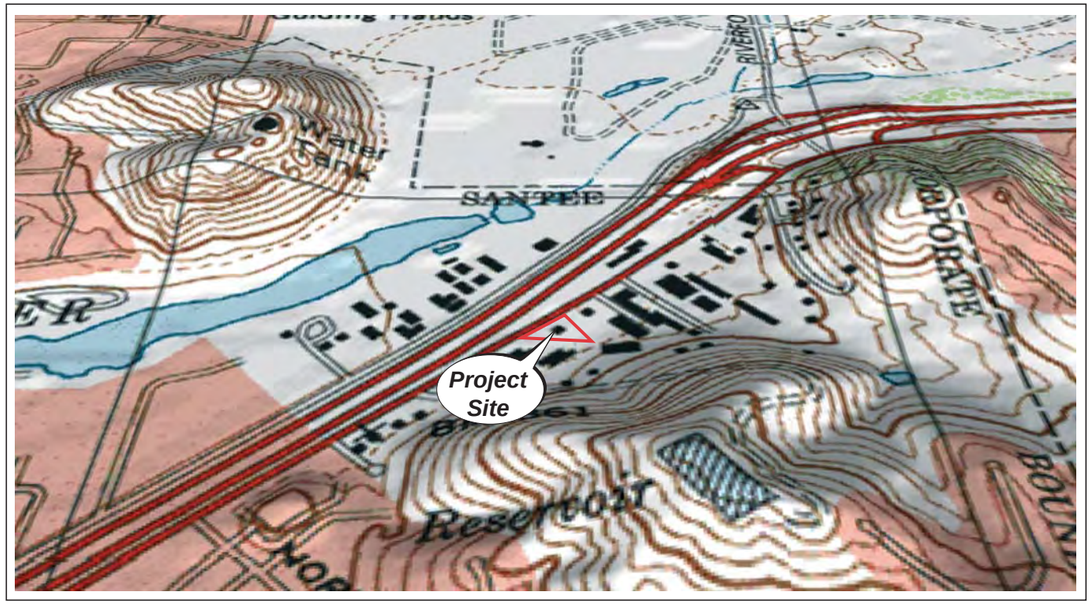
2-DIMENSIONAL SITE LOCATION

0 1,000 2,000 3,000
Approximate Graphic Scale in Feet

North (Not to scale)

Reference:
Google Earth Aerial Photograph
Santee, California - December 2014

SITE AERIAL PHOTOGRAPH



North (Not to scale)

Reference:
U.S.G.S. 7.5 Minute Quadrangle map
El Cajon, California - 1996

3-DIMENSIONAL SITE LOCATION

Disclaimer: This figure is based on available data. Actual conditions may differ. All locations and dimensions are approximate.

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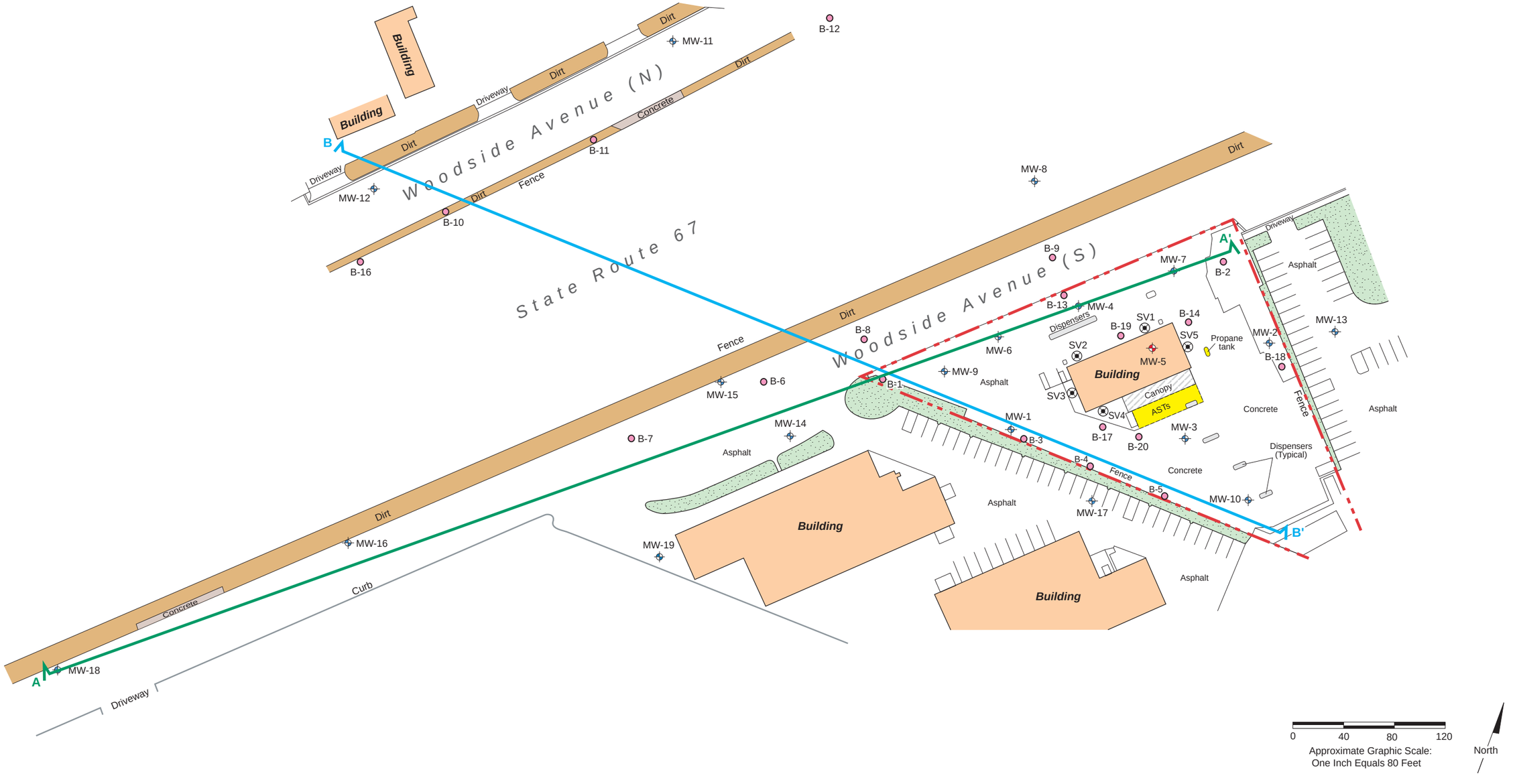
4-WAY SITE LOCATION MAP

Wigington Oil
11427 Woodside Avenue
Santee, California

Project No.: 01208473.00

Figure 1

Date Drafted: 2/5/15



EXPLANATION

- Approximate Site boundary
- MW-16 — Groundwater monitoring well location
- B-16 — Approximate location of exploratory boring, performed by EnecoTech (2003).
- Soil vapor sampling location
- MW-5 — Well destroyed
- A A' — Cross-section location

AST = aboveground storage tank

Disclaimer: This figure is based on available data. Actual conditions may differ. All locations and dimensions are approximate.

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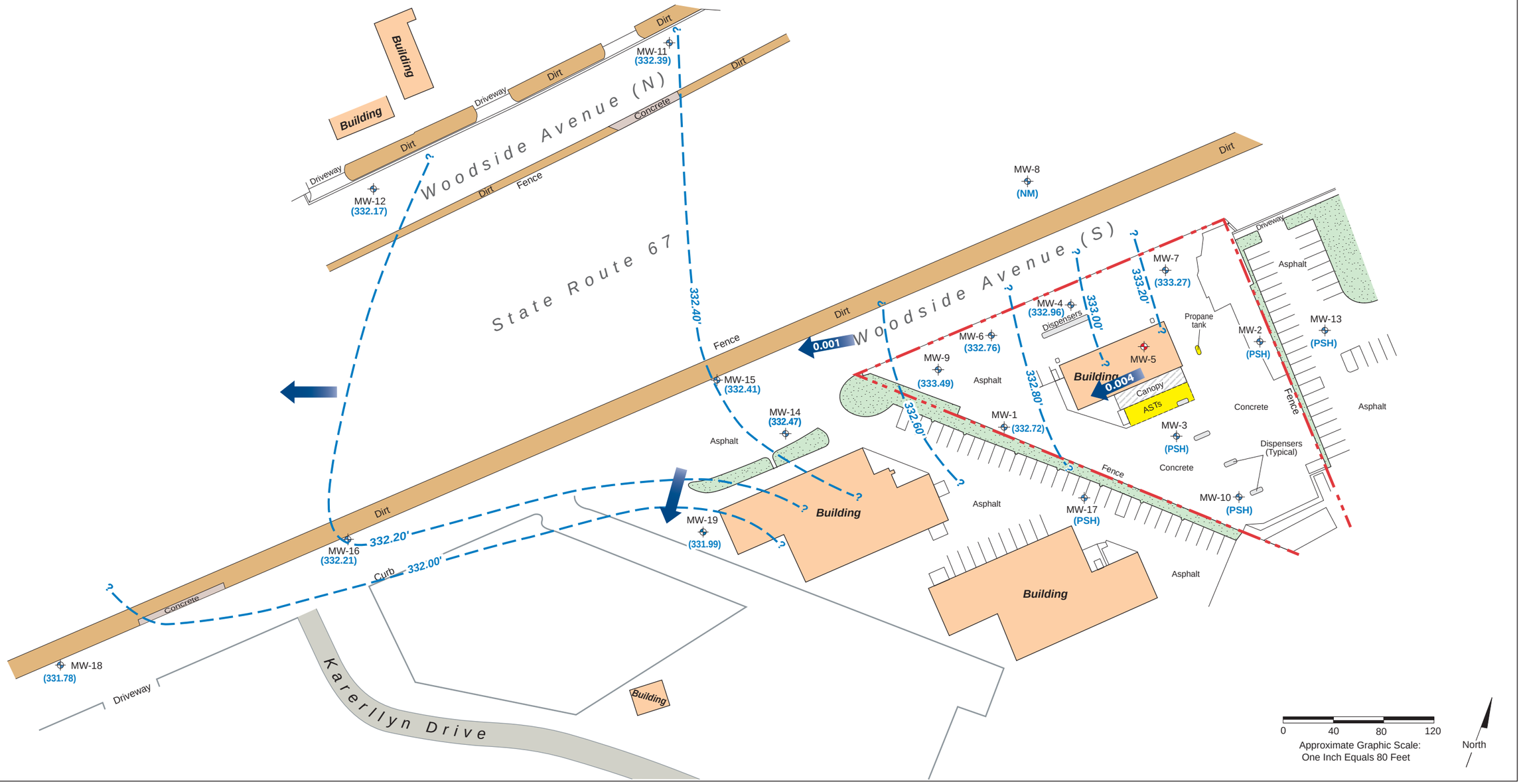
SITE MAP WITH CROSS-SECTION LOCATIONS

Wigington Oil
11427 Woodside Avenue
Santee, California

Project No.: 01208473.00

Figure 2

Date Drafted: 2/3/15



EXPLANATION

- Approximate Site boundary
- MW-5 — Well destroyed
- MW-16 (332.21) — Groundwater monitoring well location with groundwater elevation in feet above mean sea level.
- 0.001 — Interpreted direction of groundwater flow and estimated groundwater gradient.
- 334.50' — Estimated groundwater contour in feet above mean sea level.

Disclaimer: This figure is based on available data. Actual conditions may differ. All locations and dimensions are approximate.

AST = aboveground storage tank
PSH = phase-separated hydrocarbons

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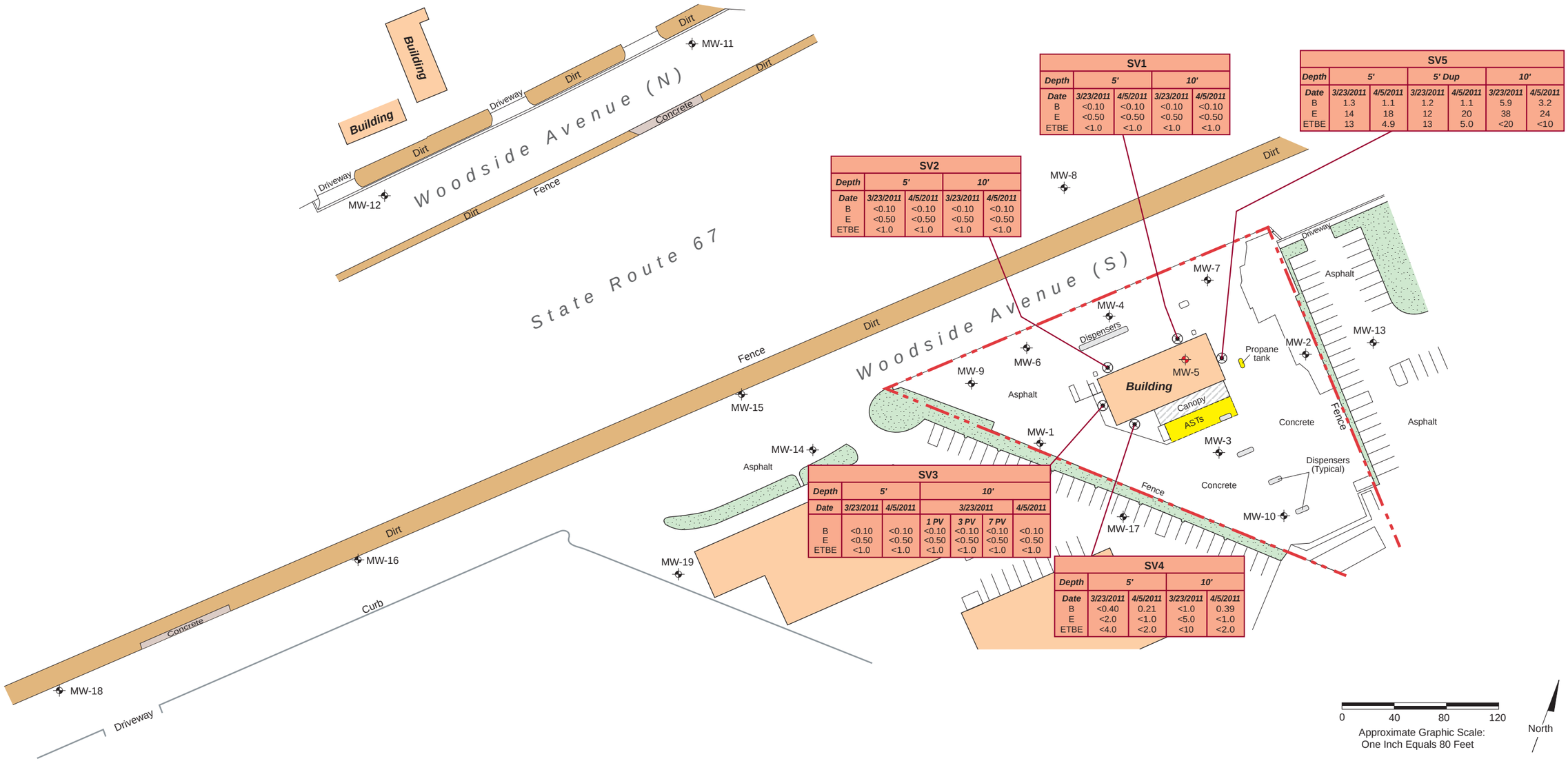
GROUNDWATER ELEVATION MAP
DECEMBER 2013

Wigington Oil
11427 Woodside Avenue
Santee, California

Project No.: 01208473.00

Figure 3

Date Drafted: 2/6/14



SV1				
Depth	5'		10'	
Date	3/23/2011	4/5/2011	3/23/2011	4/5/2011
B	<0.10	<0.10	<0.10	<0.10
E	<0.50	<0.50	<0.50	<0.50
ETBE	<1.0	<1.0	<1.0	<1.0

SV5						
Depth	5'		5' Dup		10'	
Date	3/23/2011	4/5/2011	3/23/2011	4/5/2011	3/23/2011	4/5/2011
B	1.3	1.1	1.2	1.1	5.9	3.2
E	14	18	12	20	38	24
ETBE	13	4.9	13	5.0	<20	<10

SV2				
Depth	5'		10'	
Date	3/23/2011	4/5/2011	3/23/2011	4/5/2011
B	<0.10	<0.10	<0.10	<0.10
E	<0.50	<0.50	<0.50	<0.50
ETBE	<1.0	<1.0	<1.0	<1.0

SV3							
Depth	5'		10'				
Date	3/23/2011	4/5/2011	3/23/2011			4/5/2011	
			1 PV	3 PV	7 PV		
B	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	
E	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	
ETBE	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	

SV4				
Depth	5'		10'	
Date	3/23/2011	4/5/2011	3/23/2011	4/5/2011
B	<0.40	0.21	<1.0	0.39
E	<2.0	<1.0	<5.0	<1.0
ETBE	<4.0	<2.0	<10	<2.0

EXPLANATION

MW-16 — Groundwater monitoring well location

MW-5 — Well destroyed

Soil vapor sampling location

Approximate Site boundary

SV4				
Depth	5'		10'	
Date	3/23/2011	4/5/2011	3/23/2011	4/5/2011
B	<0.40	0.21	<1.0	0.39
E	<2.0	<1.0	<5.0	<1.0
ETBE	<4.0	<2.0	<10	<2.0

Soil vapor samples collected by SCS Engineers. Soil vapor samples, with depth in feet below grade, analyzed for benzene, toluene, ethylbenzene, and xylenes (BTEX) and fuel oxygenates by EPA Method 8260B. Results reported in micrograms per liter (µg/L). < indicates concentration not reported above indicated reporting limit. Only analytes with concentrations reported above the laboratory reporting limit are listed here; refer to laboratory report for a complete list of analytes.

B = benzene
E = ethylbenzene
ETBE = ethyl tertiary butyl ether
QA/QC = quality assurance and quality control
PV = purge volume
Dup = duplicate sample

AST = aboveground storage tank

Disclaimer: This figure is based on available data. Actual conditions may differ. All locations and dimensions are approximate.

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SOIL VAPOR ANALYTICAL RESULTS

Wigington Oil
11427 Woodside Avenue
Santee, California

Project No.: 01208473.00

Figure 4

Date Drafted: 2/3/15

EXPLANATION

- Approximate Site boundary
- Historical soil sample location
- MW-16 — Groundwater monitoring well location
- MW-5 — Well destroyed

Disclaimer: This figure is based on available data. Actual conditions may differ. All locations and dimensions are approximate.

T4		
Depth	TPHg	TPHd
10	**820**	<10

Samples collected by EnecoTech Inc. Soil sample, with depth in feet below grade, analyzed for gasoline- and diesel-range total petroleum hydrocarbons (TPHg/TPHd, respectively) by DHS LUFT Method; selected samples analyzed for total recoverable petroleum hydrocarbons (TRPH) by EPA Method 418.1. TPH and TRPH results reported in milligrams per kilogram (mg/kg). **Bold** numbers indicate sample results above the laboratory reporting limit. < indicates results less than the laboratory reporting limit; number indicates individual analyte reporting limit.

AST = aboveground storage tank

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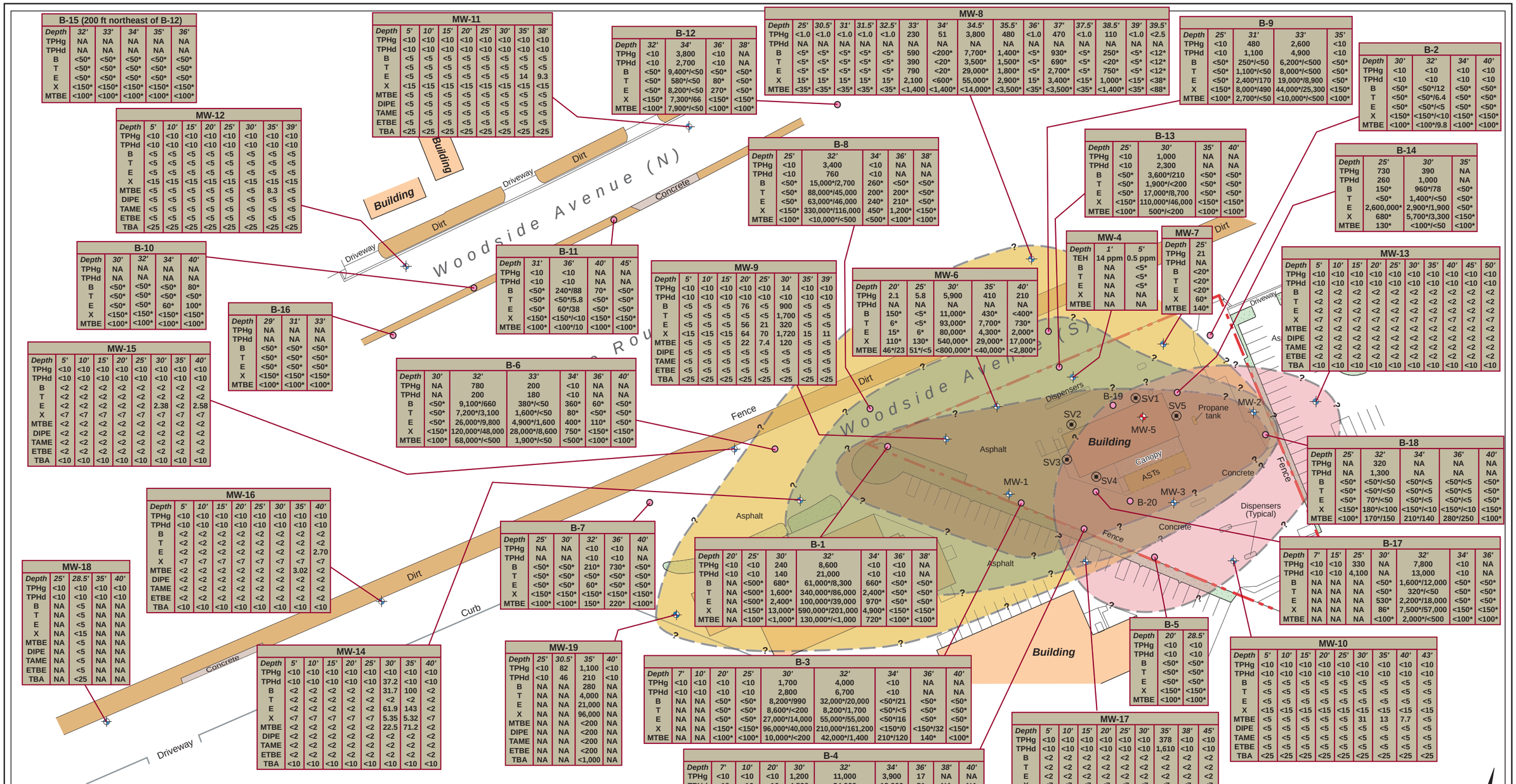
SOIL SAMPLE ANALYTICAL RESULTS 1988 TO 1998

Wigington Oil
11427 Woodside Avenue
Santee, California

Project No.: 01208473.00

Figure 5

Date Drafted: 2/4/15



B-15 (200 ft northeast of B-12)

Depth	32'	33'	34'	35'	36'
TPHg	NA	NA	NA	NA	NA
TPHd	NA	NA	NA	NA	NA
B	<50*	<50*	<50*	<50*	<50*
T	<50*	<50*	<50*	<50*	<50*
E	<50*	<50*	<50*	<50*	<50*
X	<150*	<150*	<150*	<150*	<150*
MTBE	<100*	<100*	<100*	<100*	<100*

MW-11

Depth	5'	10'	15'	20'	25'	30'	35'	38'
TPHg	<10	<10	<10	<10	<10	<10	<10	<10
TPHd	<10	<10	<10	<10	<10	<10	<10	<10
B	<5	<5	<5	<5	<5	<5	<5	<5
T	<5	<5	<5	<5	<5	<5	<5	<5
E	<5	<5	<5	<5	<5	<5	<5	<5
X	<15	<15	<15	<15	<15	<15	14	9.3
MTBE	<5	<5	<5	<5	<5	<5	<5	<5
DIPE	<5	<5	<5	<5	<5	<5	<5	<5
TAME	<5	<5	<5	<5	<5	<5	<5	<5
ETBE	<5	<5	<5	<5	<5	<5	<5	<5
TBA	<25	<25	<25	<25	<25	<25	<25	<25

B-12

Depth	32'	34'	36'	38'
TPHg	<10	3,800	<10	NA
TPHd	<10	2,700	<10	NA
B	<50*	9,400*/<50	<50*	<50*
T	<50*	580*/<50	80*	<50*
E	<50*	8,200*/<50	270*	<50*
X	<150*	7,300*/66	<150*	<150*
MTBE	<100*	7,900*/<50	<100*	<100*

MW-8

Depth	25'	30.5'	31'	31.5'	32.5'	33'	34'	34.5'	35.5'	36'	37'	37.5'	38.5'	39'	39.5'
TPHg	<1.0	<1.0	<1.0	<1.0	<1.0	230	51	3,800	480	<1.0	470	<1.0	110	<1.0	<2.5
TPHd	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
B	<5*	<5*	<5*	<5*	<5*	590	<200*	7,700*	1,400*	<5*	930*	<5*	250*	<5*	<12*
T	<5*	<5*	<5*	<5*	<5*	390	<20*	3,500*	1,500*	<5*	690*	<5*	<20*	<5*	<12*
E	<5*	<5*	<5*	<5*	<5*	790	<20*	29,000*	1,800*	<5*	2,700*	<5*	750*	<5*	<12*
X	15*	15*	15*	15*	15*	2,100	<600*	55,000*	2,900*	15*	3,400*	<15*	1,000*	<15*	<38*
MTBE	<35*	<35*	<35*	<35*	<35*	<1,400	<1,400*	<14,000*	<3,500*	<35*	<3,500*	<35*	<1,400*	<35*	<88*

B-9

Depth	25'	31'	33'	35'
TPHg	<10	480	2,600	<10
TPHd	<10	1,100	4,900	<10
B	<50*	250*/<50	6,200*/<500	<50*
T	<50*	1,100*/<50	8,000*/<500	<50*
E	<50*	2,400*/170	19,000*/8,900	<50*
X	<150*	8,000*/490	44,000*/25,300	<150*
MTBE	<100*	2,700*/<50	<10,000*/<500	<100*

B-2

Depth	30'	32'	34'	40'
TPHg	<10	<10	<10	<10
TPHd	<10	<10	<10	<10
B	<50*	<50*/12	<50*	<50*
T	<50*	<50*/6.4	<50*	<50*
E	<50*	<50*/<5	<50*	<50*
X	<150*	<150*/<10	<150*	<150*
MTBE	<100*	<100*/9.8	<100*	<100*

MW-12

Depth	5'	10'	15'	20'	25'	30'	35'	39'
TPHg	<10	<10	<10	<10	<10	<10	<10	<10
TPHd	<10	<10	<10	<10	<10	<10	<10	<10
B	<5	<5	<5	<5	<5	<5	<5	<5
T	<5	<5	<5	<5	<5	<5	<5	<5
E	<5	<5	<5	<5	<5	<5	<5	<5
X	<15	<15	<15	<15	<15	<15	<15	<15
MTBE	<5	<5	<5	<5	<5	<5	8.3	<5
DIPE	<5	<5	<5	<5	<5	<5	<5	<5
TAME	<5	<5	<5	<5	<5	<5	<5	<5
ETBE	<5	<5	<5	<5	<5	<5	<5	<5
TBA	<25	<25	<25	<25	<25	<25	<25	<25

B-8

Depth	25'	32'	34'	36'	38'
TPHg	<10	3,400	<10	NA	NA
TPHd	<10	760	<10	NA	NA
B	<50*	15,000*/2,700	260*	<50*	<50*
T	<50*	88,000*/45,000	200*	200*	<50*
E	<50*	63,000*/46,000	240*	210*	<50*
X	<150*	330,000*/116,000	450*	1,200*	<150*
MTBE	<100*	<10,000*/<500	<500*	<100*	<100*

B-13

Depth	25'	30'	35'	40'
TPHg	<10	1,000	NA	NA
TPHd	<10	2,300	NA	NA
B	<50*	3,600*/210	<50*	<50*
T	<50*	1,900*/<200	<50*	<50*
E	<50*	17,000*/8,700	<50*	<50*
X	<150*	110,000*/46,000	<150*	<150*
MTBE	<100*	500*/<200	<100*	<100*

B-14

Depth	25'	30'	35'
TPHg	730	390	NA
TPHd	260	1,000	NA
B	150*	960*/78	<50*
T	<50*	1,400*/<50	<50*
E	2,600,000*	2,900*/1,900	<50*
X	680*	5,700*/3,300	<150*
MTBE	130*	<100*/<50	<100*

B-10

Depth	30'	32'	34'	40'
TPHg	NA	NA	NA	NA
TPHd	NA	NA	NA	NA
B	<50*	<50*	<50*	80*
T	<50*	<50*	<50*	<50*
E	<50*	<50*	60*	100*
X	<150*	<150*	<150*	<150*
MTBE	<100*	<100*	<100*	<100*

B-11

Depth	31'	36'	40'	45'
TPHg	<10	<10	NA	NA
TPHd	<10	<10	NA	NA
B	<50*	240*/88	70*	<50*
T	<50*	<50*/5.8	<50*	<50*
E	<50*	60*/38	<50*	<50*
X	<150*	<150*/<10	<150*	<150*
MTBE	<100*	<100*/10	<100*	<100*

MW-9

Depth	5'	10'	15'	20'	25'	30'	35'	39'
TPHg	<10	<10	<10	<10	<10	14	<10	<10
TPHd	<10	<10	<10	<10	<10	<10	<10	<10
B	<5	<5	<5	76	<5	900	<5	<5
T	<5	<5	<5	<5	<5	1,700	<5	<5
E	<5	<5	<5	56	21	320	<5	<5
X	<15	<15	<15	64	70	1,720	15	11
MTBE	<5	<5	<5	22	7.4	120	<5	<5
DIPE	<5	<5	<5	<5	<5	<5	<5	<5
TAME	<5	<5	<5	<5	<5	<5	<5	<5
ETBE	<5	<5	<5	<5	<5	<5	<5	<5
TBA	<25	<25	<25	<25	<25	<25	<25	<25

MW-6

Depth	20'	25'	30'	35'	40'
TPHg	2.1	5.8	5,900	410	210
TPHd	NA	NA	NA	NA	NA
B	150*	<5*	11,000*	430*	<400*
T	6*	<5*	93,000*	7,700*	730*
E	15*	6*	80,000*	4,300*	2,000*
X	110*	130*	540,000*	29,000*	17,000*
MTBE	46*/23	51*/<5	<800,000*	<40,000*	<2,800*

MW-4

Depth	1'	5'
TEH	14 ppm	0.5 ppm
B	NA	<5*
T	NA	<5*
E	NA	<5*
X	NA	<5*
MTBE	NA	NA

MW-7

Depth	25'
TPHg	21
TPHd	NA
B	<20*
T	<20*
E	<20*
X	60*
MTBE	140*

MW-13

Depth	5'	10'	15'	20'	25'	30'	35'	40'	45'	50'
TPHg	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
TPHd	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
B	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
T	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
E	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
X	<7	<7	<7	<7	<7	<7	<7	<7	<7	<7
MTBE	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
DIPE	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
TAME	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
ETBE	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
TBA	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10

B-16

Depth	29'	31'	33'
TPHg	NA	NA	NA
TPHd	NA	NA	NA
B	<50*	<50*	<50*
T	<50*	<50*	<50*
E	<50*	<50*	<50*
X	<150*	<150*	<150*
MTBE	<100*	<100*	<100*

MW-15

Depth	5'	10'	15'	20'	25'	30'	35'	40'
TPHg	<10	<10	<10	<10	<10	<10	<10	<10
TPHd	<10	<10	<10	<10	<10	<10	<10	<10
B	<2	<2	<2	<2	<2	<2	<2	<2
T	<2	<2	<2	<2	<2	<2	<2	<2
E	<2	<2	<2	<2	<2	2.38	<2	2.58
X	<7	<7	<7	<7	<7	<7	<7	<7
MTBE	<2	<2	<2	<2	<2	<2	<2	<2
DIPE	<2	<2	<2	<2	<2	<2	<2	<2
TAME	<2	<2	<2	<2	<2	<2	<2	<2
ETBE	<2	<2	<2	<2	<2	<2	<2	<2
TBA	<10	<10	<10	<10	<10	<10	<10	<10

B-6

Depth	30'	32'	33'	34'	36'	40'
TPHg	NA	780	200	<10	NA	NA
TPHd	NA	200	180	<10	NA	NA
B	<50*	9,100*/660	380*/<50	360*	60*	<50*
T	<50*	7,200*/3,100	1,600*/<50	80*	<50*	<50*
E	<50*	26,000*/9,800	4,900*/1,600	400*	110*	<50*
X	<150*	120,000*/48,000	28,000*/8,600	750*	<150*	<150*
MTBE	<100*	68,000*/<500	1,900*/<50	<500*	<100*	<100*

MW-16

Depth	5'	10'	15'	20'	25'	30'	35'	40'
TPHg	<10	<10	<10	<10	<10	<10	<10	<10
TPHd	<10	<10	<10	<10	<10	<10	<10	<10
B	<2	<2	<2	<2	<2	<2	<2	<2
T	<2	<2	<2	<2	<2	<2	<2	<2
E	<2	<2	<2	<2	<2	<2	<2	<2
X	<7	<7	<7	<7	<7	<7	<7	<7
MTBE	<2	<2	<2	<2	<2	<2	<2	<2
DIPE	<2	<2	<2	<2	<2	<2	<2	<2
TAME	<2	<2	<2	<2	<2	<2	<2	<2
ETBE	<2	<2	<2	<2	<2	<2	<2	<2
TBA	<10	<10	<10	<10	<10	<10	<10	<10

B-7

Depth	25'	30'	32'	36'	40'
TPHg	NA	NA	<10	<10	NA
TPHd	NA	NA	<10	<10	NA
B	<50*	<50*	210*	730*	<50*
T	<50*	<50*	<50*	<50*	<50*
E	<50*	<50*	60*	<50*	<50*
X	<150*	<150*	<150*	<150*	<150*
MTBE	<100*	<100*	150*	220*	<100*

B-1

Depth	20'	25'	30'	32'	34'	36'	38'
TPHg	<10	<10	240	8,600	<10	<10	NA
TPHd	<10	<10	140	21,000	<10	<10	NA
B	NA	<500*	680*	61,000*/8,300	660*	<50*	<50*
T	NA	<500*	1,600*	340,000*/86,000	2,400*	<50*	<50*
E	NA	<500*	2,400*	100,000*/39,000	970*	<50*	<50*
X	NA	<150*	13,000*	590,000*/201,000	4,900*	<150*	<150*
MTBE	NA	<100*	<1,000*	130,000*/<1,000	720*	<100*	<100*

MW-19

Depth	25'	30.5'	35'	40'
TPHg	<10	82	1,100	<10
TPHd	<10	46	210	<10
B	NA	NA	280	NA
T	NA	NA	4,000	NA
E	NA	NA	21,000	NA
X	NA	NA	96,000	NA
MTBE	NA	NA	<200	NA
DIPE	NA	NA	<200	NA
TAME	NA	NA	<200	NA
ETBE	NA	NA	<200	NA
TBA	NA	NA	<1,000	NA

B-3

Depth	7'	10'	20'	25'	30'	32'	34'	36'	40'
TPHg	<10	<10	<10	<10	1,700	4,000	<10	NA	NA
TPHd	<10	<10	<10	<10	2,800	6,700	<10	NA	NA
B	NA	NA	<50*	<50*	8,200*/990	32,000*/20,000	<50*/21	<50*	<50*
T	NA	NA	<50*	<50*	8,600*/<200	8,200*/1,700	<50*/<5	<50*	<50*
E	NA	NA	<50*	<50*	27,000*/14,000	55,000*/55,000	<50*/16	<50*	<50*
X	NA	NA	<150*	<150*	96,000*/40,000	210,000*/161,200	<150*/0	<150*/32	<150*
MTBE	NA	NA	<100*	<100*	10,000*/<200	42,000*/1,400	210*/120	140*	<100*

B-4

Depth	7'	10'	20'	30'	32'	34'	36'	38'	40'
TPHg	<10	<10	<10	1,200	11,000	3,900	17	NA	NA
TPHd	<10	<10	<10	4,500	24,000	12,000	51	NA	NA
B	<50*	<50*	<50*	460*	14,000*/1,900	840*	50*	110*	<50*
T	<50*	<50*	<50*	130*	11,000*/1,600	1,200*	<50*	<50*	<50*
E	<50*	<50*	<50*	8,100*	35,000*/6,400	11,000*	<50*	<50*	<50*
X	<150*	<150*	<150*	19,000*	110,000*/17,000	18,000*	<150*	<150*	<150*
MTBE	<100*	<100*	<100*	390*	<50,000*/<1,000	2,600*	400*	350*	240*

MW-17

Depth	5'	10'	15'	20'	25'	30'	35'	38'	45'
TPHg	<10	<10	<10	<10	<10	<10	378	<10	<10
TPHd	<10	<10	<10	<10	<10	<10	1,610	<10	<10
B	<2	<2	<2	<2	<2	<2	<2	<2	<2
T	<2	<2	<2	<2	<2	<2	<2	<2	<2
E	<2	<2	<2	<2	<2	<2	<2	<2	<2
X	<7	<7	<7	<7	<7	<7	<7	<7	<7
MTBE	<2	<2	<2	<2	<2	<2	<2	<2	<2
DIPE	<2	<2	<2	<2	<2	<2	<2	<2	<2
TAME	<2	<2	<2	<2	<2	<2	<2	<2	<2
ETBE	<2	<2	<2	<2	<2	<2	<2	<2	<2
TBA	<10	<10	<10	<10	<10	<10	<10	<10	<10

B-5

Depth	20'	28.5'
TPHg	<10	<10
TPHd	<10	<10
B	<50*	<50*
T	<50*	<50*
E	<50*	<50*
X	<150*	<150*
MTBE	<100*	<100*

MW-10

Depth	5'	10'	15'	20'	25'	30'	35'	40'	43'
TPHg	<10	<10	<10	<10	<10	<10	<10	<10	<10
TPHd	<10	<10	<10	<10	<10	<10	<10	<10	<10
B	<5	<5	<5	<5	<5	<5	<5	<5	<5
T	<5	<5	<5	<5	<5	<5	<5	<5	<5
E	<5	<5	<5	<5	<5	<5	<5	<5	<5
X	<15	<15	<15	<15	<15	<15	<15	<15	<15
MTBE	<5	<5	<5	<5	<5	31	13	7.7	<5
DIPE	<5	<5	<5	<5	<5	<5	<5	<5	<5
TAME	<5	<5	<5	<5	<5	<5	<5	<5	<5
ETBE	<5	<5	<5	<5	<5	<5	<5	<5	<5
TBA	<25	<25	<25	<25	<25	<25	<25	<25	<25

MW-18

Depth	25'	28.5'	35'	40'
TPHg	<10	<10	<10	<10
TPHd	<10	<10	<10	<10
B	NA	<5	NA	NA
T	NA	<5	NA	NA
E	NA	<5	NA	NA
X	NA	<15	NA	NA
MTBE	NA	<5	NA	NA
DIPE	NA	<5	NA	NA
TAME	NA	<5	NA	NA
ETBE	NA	<5	NA	NA
TBA	NA	<25	NA	NA

MW-14

Depth	5'	10'	15'	20'	25'	30'	35'	40'
TPHg	<10	<10	<10	<10	<10	37.2	<10	<10
TPHd	<10	<10	<10	<10	<10	<2	<2	<2
B	<2	<2	<2	<2	<2	31.7	100	<2
T	<2	<2	<2	<2	<2	<2	<2	<2
E	<2	<2	<2	<2	<2	61.9	143	<2
X	<7	<7	<7	<7	<7	5.35	5.32	<7
MTBE	<2	<2	<2	<2	<2	22.5	71.2	<2
DIPE	<2	<2	<2	<2	<2	<2	<2	<2
TAME	<2	<2	<2	<2	<2	<2	<2	<2
ETBE	<2	<2	<2	<2	<2	<2	<2	<2
TBA	<10	<10	<10	<10	<10	<10	<10	<10

0 40 80 120

Approximate Graphic Scale:
One Inch Equals 80 Feet

North

EXPLANATION

MW-16 — Groundwater monitoring well location

MW-5 — Well destroyed

Soil vapor sampling location

MW-7

Depth	25'
TPHg	21
TPHd	NA
B	<20*
T	<20*
E	<20*
X	60*
MTBE	140*

Soil samples collected by SCS Engineers in 2011, Petra Geotechnical, Inc. in 2008, and Eneco Tech Southwest, Inc. from 2001 to 2002. Soil samples, with depth in feet below grade, analyzed for total petroleum hydrocarbons as gasoline (TPHg) and diesel (TPHd) by EPA Method 8015 or DHS LUFT method; volatile organic compounds (VOCs) by EPA Method 8260B unless otherwise noted. Total extractable hydrocarbons (TEH) measured in parts per million (ppm). * indicates soil samples analyzed by EPA Method 8021. All results reported in micrograms per kilogram (µg/kg). < indicates concentration not detected above laboratory reporting limits for relevant analyte and analytical method. NA indicates sample not analyzed.

TPHg = total petroleum hydrocarbons as gasoline
TPHd = total petroleum hydrocarbons as diesel
B = benzene
T = toluene
E = ethylbenzene
X = xylenes
TEH = total extractable hydrocarbons
MTBE = methyl tertiary buty ether
DIPE = Di-isopropyl ether
TAME = Tertiary amyl methyl ether
ETBE = Ethyl tertiary butyl ether
TBA = Tertiary butyl alcohol

Approximate Site boundary

B-16 — Approximate location of exploratory boring, performed by EnecoTech (2003).

AST = aboveground storage tank

Approximate extent of petroleum hydrocarbon-bearing soil with an approximate thickness of 1 foot

Approximate extent of petroleum hydrocarbon-bearing soil with an approximate thickness of 5 feet

Approximate extent of petroleum hydrocarbon-bearing soil with an approximate thickness of 10 feet

Interpreted extent of free product according to Hazard Management Consulting, "April 2014"

Disclaimer: This figure is based on available data. Actual conditions may differ. All locations and dimensions are approximate.

SCS ENGINEERS
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8799 Balboa Avenue, Suite 290
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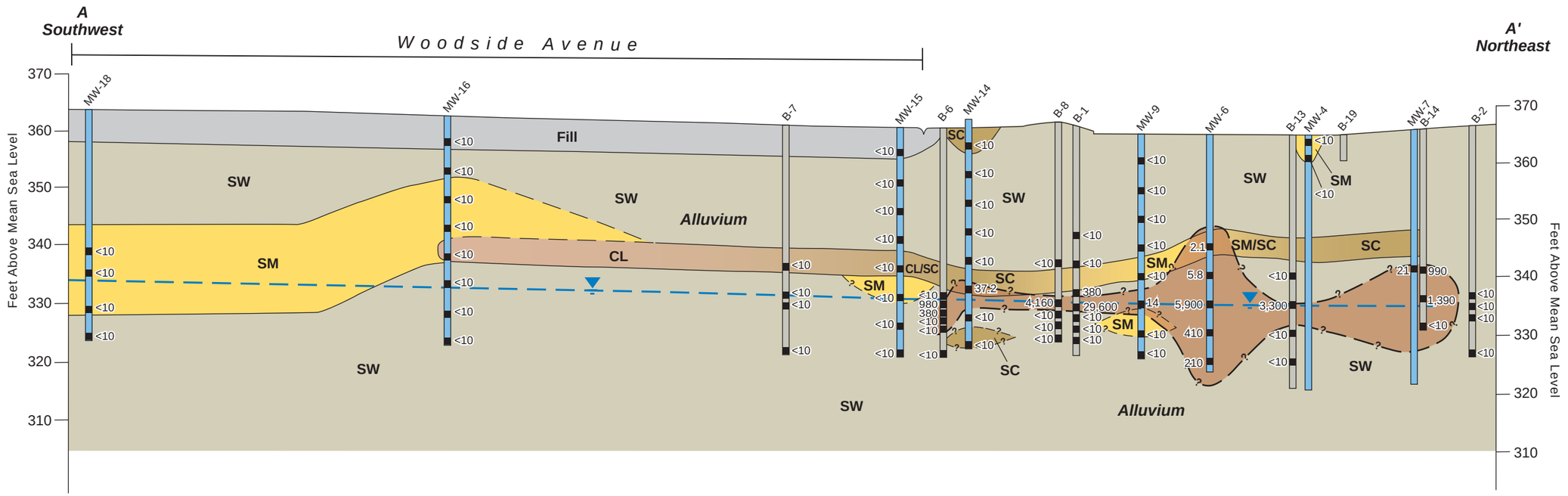
SOIL SAMPLE ANALYTICAL RESULTS

Wigington Oil
11427 Woodside Avenue
Santee, California

Project No.: 01208473.00

Figure 6

Date Drafted: 2/4/15



EXPLANATION

Borings with soil sample locations and total petroleum hydrocarbon (TPH) concentrations above the laboratory reporting limit. All results reported in micrograms per liter (µg/L).

Total petroleum hydrocarbon-bearing soil

Approximate Vertical Graphic Scale:
One Inch Equals 20 feet

Approximate Horizontal Graphic Scale:
One Inch Equals 80 feet

Disclaimer: This figure is based on available data. Actual conditions may differ. All locations and dimensions are approximate.

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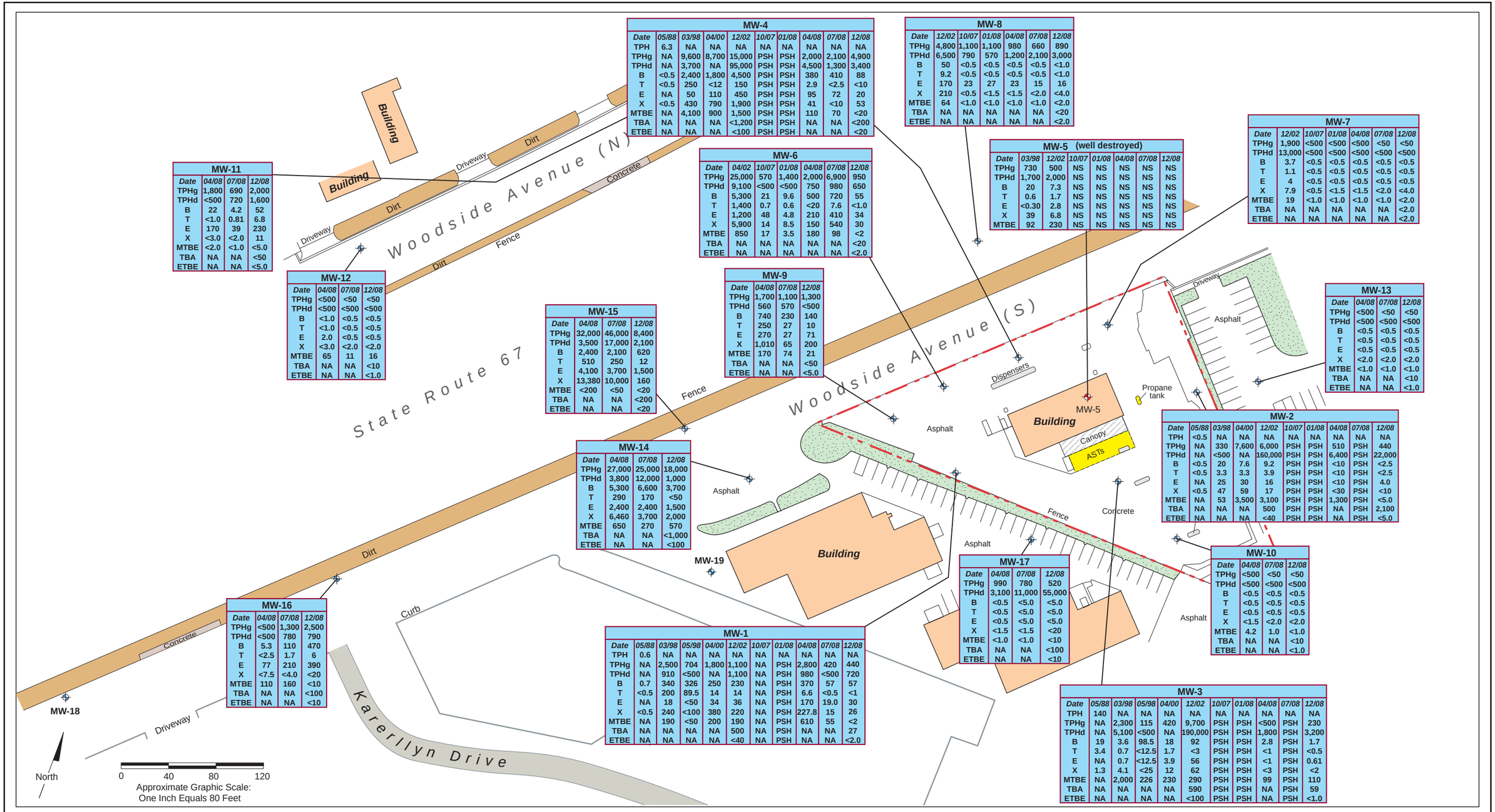
CROSS-SECTIONS A - A' AND B - B'
Wigington Oil
11427 Woodside Avenue
Santee, California

Project No.: 01208473.00

Figure 7

Date Drafted: 2/3/15



MW-4

Date	05/88	03/98	04/00	12/02	10/07	01/08	04/08	07/08	12/08
TPH	6.3	NA	NA	NA	NA	NA	NA	NA	NA
TPHg	NA	9,600	8,700	15,000	PSH	PSH	2,000	2,100	4,900
TPHd	NA	3,700	NA	95,000	PSH	PSH	4,500	1,300	3,400
B	<0.5	2,400	1,800	4,500	PSH	PSH	380	410	88
T	<0.5	250	<12	150	PSH	PSH	2.9	<2.5	<10
E	NA	50	110	450	PSH	PSH	95	72	20
X	<0.5	430	790	1,900	PSH	PSH	41	<10	53
MTBE	NA	4,100	900	1,500	PSH	PSH	110	70	<20
TBA	NA	NA	NA	<1,200	PSH	PSH	NA	NA	<200
ETBE	NA	NA	NA	<100	PSH	PSH	NA	NA	<20

MW-8

Date	12/02	10/07	01/08	04/08	07/08	12/08
TPHg	4,800	1,100	1,100	980	660	890
TPHd	6,500	790	570	1,200	2,100	3,000
B	50	<0.5	<0.5	<0.5	<0.5	<1.0
T	9.2	<0.5	<0.5	<0.5	<0.5	<1.0
E	170	23	27	23	15	16
X	210	<0.5	<1.5	<1.5	<2.0	<4.0
MTBE	64	<1.0	<1.0	<1.0	<1.0	<2.0
TBA	NA	NA	NA	NA	NA	<20
ETBE	NA	NA	NA	NA	NA	<2.0

MW-11

Date	04/08	07/08	12/08
TPHg	1,800	690	2,000
TPHd	<500	720	1,600
B	22	4.2	52
T	<1.0	0.81	6.8
E	170	39	230
X	<3.0	<2.0	11
MTBE	<2.0	<1.0	<5.0
TBA	NA	NA	<50
ETBE	NA	NA	<5.0

MW-6

Date	04/02	10/07	01/08	04/08	07/08	12/08
TPHg	25,000	570	1,400	2,000	6,900	950
TPHd	9,100	<500	<500	750	980	650
B	5,300	21	9.6	500	720	55
T	1,400	0.7	0.6	<20	7.6	<1.0
E	1,200	48	4.8	210	410	34
X	5,900	14	8.5	150	540	30
MTBE	850	17	3.5	180	98	<2
TBA	NA	NA	NA	NA	NA	<20
ETBE	NA	NA	NA	NA	NA	<2.0

MW-5 (well destroyed)

Date	03/98	12/02	10/07	01/08	04/08	07/08	12/08
TPHg	730	500	NS	NS	NS	NS	NS
TPHd	1,700	2,000	NS	NS	NS	NS	NS
B	20	7.3	NS	NS	NS	NS	NS
T	0.6	1.7	NS	NS	NS	NS	NS
E	<0.30	2.8	NS	NS	NS	NS	NS
X	39	6.8	NS	NS	NS	NS	NS
MTBE	92	230	NS	NS	NS	NS	NS

MW-7

Date	12/02	10/07	01/08	04/08	07/08	12/08
TPHg	1,900	<500	<500	<500	<50	<50
TPHd	13,000	<500	<500	<500	<500	<500
B	3.7	<0.5	<0.5	<0.5	<0.5	<0.5
T	1.1	<0.5	<0.5	<0.5	<0.5	<0.5
E	4	<0.5	<0.5	<0.5	<0.5	<0.5
X	7.9	<0.5	<1.5	<1.5	<2.0	<4.0
MTBE	19	<1.0	<1.0	<1.0	<1.0	<2.0
TBA	NA	NA	NA	NA	NA	<2.0
ETBE	NA	NA	NA	NA	NA	<2.0

MW-12

Date	04/08	07/08	12/08
TPHg	<500	<50	<50
TPHd	<500	<500	<500
B	<1.0	<0.5	<0.5
T	<1.0	<0.5	<0.5
E	2.0	<0.5	<0.5
X	<3.0	<2.0	<2.0
MTBE	65	11	16
TBA	NA	NA	<10
ETBE	NA	NA	<1.0

MW-9

Date	04/08	07/08	12/08
TPHg	1,700	1,100	1,300
TPHd	560	570	<500
B	740	230	140
T	250	27	10
E	270	27	71
X	1,010	65	200
MTBE	170	74	21
TBA	NA	NA	<50
ETBE	NA	NA	<5.0

MW-15

Date	04/08	07/08	12/08
TPHg	32,000	46,000	8,400
TPHd	3,500	17,000	2,100
B	2,400	2,100	620
T	510	250	12
E	4,100	3,700	1,500
X	13,380	10,000	160
MTBE	<200	<50	<20
TBA	NA	NA	<200
ETBE	NA	NA	<20

MW-13

Date	04/08	07/08	12/08
TPHg	<500	<50	<50
TPHd	<500	<500	<500
B	<0.5	<0.5	<0.5
T	<0.5	<0.5	<0.5
E	<0.5	<0.5	<0.5
X	<2.0	<2.0	<2.0
MTBE	<1.0	<1.0	<1.0
TBA	NA	NA	<10
ETBE	NA	NA	<1.0

MW-14

Date	04/08	07/08	12/08
TPHg	27,000	25,000	18,000
TPHd	3,800	12,000	1,000
B	5,300	6,600	3,700
T	290	170	<50
E	2,400	2,400	1,500
X	6,460	3,700	2,000
MTBE	650	270	570
TBA	NA	NA	<1,000
ETBE	NA	NA	<100

MW-2

Date	05/88	03/98	04/00	12/02	10/07	01/08	04/08	07/08	12/08
TPH	<0.5	NA	NA	NA	NA	NA	NA	NA	NA
TPHg	NA	330	7,600	6,000	PSH	PSH	510	PSH	440
TPHd	NA	<500	NA	160,000	PSH	PSH	6,400	PSH	22,000
B	<0.5	20	7.6	9.2	PSH	PSH	<10	PSH	<2.5
T	<0.5	3.3	3.3	3.9	PSH	PSH	<10	PSH	<2.5
E	NA	25	30	16	PSH	PSH	<10	PSH	4.0
X	<0.5	47	59	17	PSH	PSH	<30	PSH	<10
MTBE	NA	53	3,500	3,100	PSH	PSH	1,300	PSH	<5.0
TBA	NA	NA	NA	500	PSH	PSH	NA	PSH	2,100
ETBE	NA	NA	NA	<40	PSH	PSH	NA	PSH	<5.0

MW-10

Date	04/08	07/08	12/08
TPHg	<500	<50	<50
TPHd	<500	<500	<500
B	<0.5	<0.5	<0.5
T	<0.5	<0.5	<0.5
E	<0.5	<0.5	<0.5
X	<1.5	<2.0	<2.0
MTBE	4.2	1.0	<1.0
TBA	NA	NA	<10
ETBE	NA	NA	<1.0

MW-17

Date	04/08	07/08	12/08
TPHg	990	780	520
TPHd	3,100	11,000	55,000
B	<0.5	<5.0	<5.0
T	<0.5	<5.0	<5.0
E	<0.5	<5.0	<5.0
X	<1.5	<1.5	<20
MTBE	<1.0	<1.0	<10
TBA	NA	NA	<100
ETBE	NA	NA	<10

MW-1

Date	05/88	03/98	05/98	04/00	12/02	10/07	01/08	04/08	07/08	12/08
TPH	0.6	NA	NA	NA	NA	NA	NA	NA	NA	NA
TPHg	NA	2,500	704	1,800	1,100	NA	PSH	2,800	420	440
TPHd	NA	910	<500	NA	1,100	NA	PSH	980	<500	720
B	0.7	340	326	250	230	NA	PSH	370	57	57
T	<0.5	200	89.5	14	14	NA	PSH	6.6	<0.5	<1
E	NA	18	<50	34	36	NA	PSH	170	19.0	30
X	<0.5	240	<100	380	220	NA	PSH	227.8	15	26
MTBE	NA	190	<50	200	190	NA	PSH	610	55	<2
TBA	NA	NA	NA	NA	500	NA	PSH	NA	NA	27
ETBE	NA	NA	NA	NA	<40	NA	PSH	NA	NA	<2.0

MW-3

Date	05/88	03/98	05/98	04/00	12/02	10/07	01/08	04/08	07/08	12/08
TPH	140	NA	NA	NA	NA	NA	NA	NA	NA	NA
TPHg	NA	2,300	115	420	9,700	PSH	PSH	<500	PSH	230
TPHd	NA	5,100	<500	NA	190,000	PSH	PSH	1,800	PSH	3,200
B	19	3.6	98.5	18	92	PSH	PSH	2.8	PSH	1.7
T	3.4	0.7	<12.5	1.7	<3	PSH	PSH	<1	PSH	<0.5
E	NA	0.7	<12.5	3.9	56	PSH	PSH	<1	PSH	0.61
X	1.3	4.1	<25	12	62	PSH	PSH	<3	PSH	<2
MTBE	NA	2,000	226	230	290	PSH	PSH	99	PSH	110
TBA	NA	NA	NA	NA	590	PSH	PSH	NA	PSH	59
ETBE	NA	NA	NA	NA	<100	PSH	PSH	NA	PSH	<1.0

MW-16

Date	04/08	07/08	12/08
TPHg	<500	1,300	2,500
TPHd	<500	780	790
B	5.3	110	470
T	<2.5	1.7	6
E	77	210	390
X	<7.5	<4.0	<20
MTBE	110	160	<10
TBA	NA	NA	<100
ETBE	NA	NA	<10

EXPLANATION

MW-17 — Groundwater monitoring well location

MW-5 — Well destroyed

MW-16

Date	04/08	07/08	12/08	05/09	11/09
TPHg	<500	1,300	2,500	<500	570
TPHd	<500	780	790	<500	<500
B	5.3	110	470	120	110
T	<2.5	1.7	6	16	2.5
E	77	210	390	220	6.5
X	<7.5	<4.0	<20	33	10.5
MTBE	110	160	<10	100	73
TBA	NA	NA	<100	170	<5.0
ETBE	NA	NA	<10	<20	<1.0

Groundwater samples collected by SCS Engineers beginning in June 2009; Petra Geotechnical, Inc. from October 2007 to December 2008; and Eneco Tech Southwest, Inc. from May 1988 to December 2002. Groundwater samples analyzed for total petroleum hydrocarbons by CA DHS LUFT Method; volatile organic compounds (VOCs) by EPA Method 8260B. All results reported in micrograms per liter (ug/L). < indicates concentration not reported above indicated reporting limit for relevant analyte and analytical method. NA indicates sample not analyzed. PSH indicates phase-separated hydrocarbons. Refer to laboratory reports for full listing of VOCs analyzed.

TPH = total petroleum hydrocarbons
TPHg = total petroleum hydrocarbons as gasoline
TPHd = total petroleum hydrocarbons as diesel
B = benzene
T = toluene
E = ethylbenzene
X = xylenes
MTBE = methyl tertiary buty ether
TBA = tertiary butyl alcohol
ETBE = Ethyl tertiary butyl ether

AST = aboveground storage tank

Disclaimer: This figure is based on available data. Actual conditions may differ. All locations and dimensions are approximate.

SCS ENGINEERS
Environmental Consultants
8799 Balboa Avenue, Suite 290
San Diego, California 92123

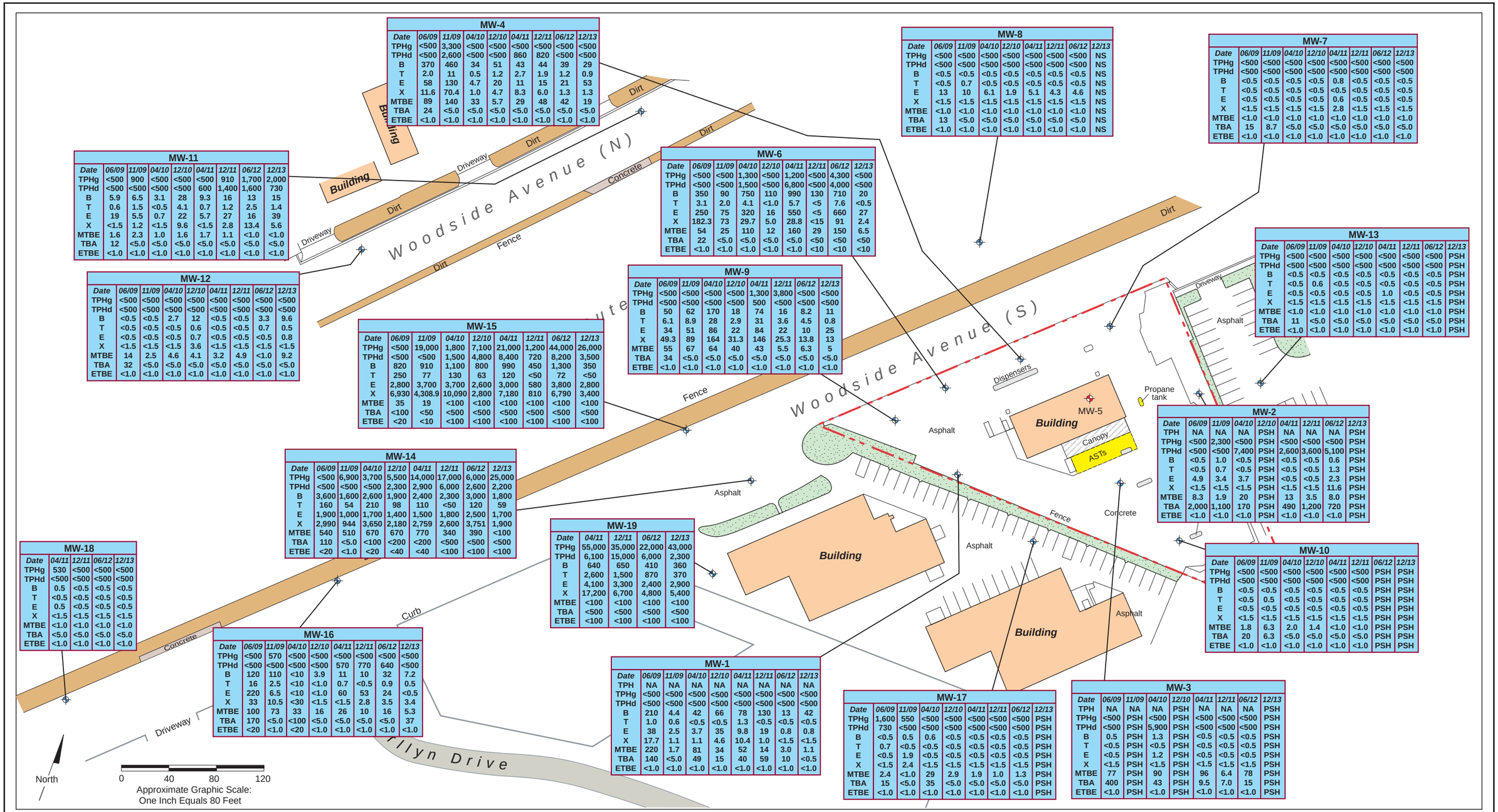
HISTORICAL GROUNDWATER SAMPLE ANALYTICAL RESULTS (1988 THRU 2008)

Wigington Oil
11427 Woodside Avenue
Santee, California

Project No.: 01208473.00

Figure 8

Date Drafted: 2/3/15



MW-4

Date	06/09	11/09	04/10	12/10	04/11	12/11	06/12	12/13
TPHg	<500	3,300	<500	<500	<500	<500	<500	<500
TPHd	<500	2,600	<500	<500	860	820	<500	<500
B	370	460	34	51	43	44	39	29
T	2.0	11	0.5	1.2	2.7	1.9	1.2	0.9
E	58	130	4.7	20	11	15	21	53
X	11.6	70.4	1.0	4.7	8.3	6.0	1.3	1.3
MTBE	89	140	33	5.7	29	48	42	19
TBA	24	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
ETBE	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0

MW-8

Date	06/09	11/09	04/10	12/10	04/11	12/11	06/12	12/13
TPHg	<500	<500	<500	<500	<500	<500	<500	NS
TPHd	<500	<500	<500	<500	<500	<500	<500	NS
B	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	NS
T	<0.5	0.7	<0.5	<0.5	<0.5	<0.5	<0.5	NS
E	13	10	6.1	1.9	5.1	4.3	4.6	NS
X	<1.5	<1.5	<1.5	<1.5	<1.5	<1.5	<1.5	NS
MTBE	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	NS
TBA	13	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	NS
ETBE	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	NS

MW-7

Date	06/09	11/09	04/10	12/10	04/11	12/11	06/12	12/13
TPHg	<500	<500	<500	<500	<500	<500	<500	<500
TPHd	<500	<500	<500	<500	<500	<500	<500	<500
B	<0.5	<0.5	<0.5	<0.5	0.8	<0.5	<0.5	<0.5
T	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
E	<0.5	<0.5	<0.5	<0.5	0.6	<0.5	<0.5	<0.5
X	<1.5	<1.5	<1.5	<1.5	2.8	<1.5	<1.5	<1.5
MTBE	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
TBA	15	8.7	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
ETBE	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0

MW-11

Date	06/09	11/09	04/10	12/10	04/11	12/11	06/12	12/13
TPHg	<500	900	<500	<500	<500	910	1,700	2,000
TPHd	<500	<500	<500	<500	600	1,400	1,600	730
B	5.9	6.5	3.1	28	9.3	16	13	15
T	0.6	1.5	<0.5	4.1	0.7	1.2	2.5	1.4
E	19	5.5	0.7	22	5.7	27	16	39
X	<1.5	1.2	<1.5	9.6	<1.5	2.8	13.4	5.6
MTBE	1.6	2.3	1.0	1.6	1.7	1.1	<1.0	<1.0
TBA	12	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
ETBE	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0

MW-6

Date	06/09	11/09	04/10	12/10	04/11	12/11	06/12	12/13
TPHg	<500	<500	1,300	<500	1,200	<500	4,300	<500
TPHd	<500	<500	1,500	<500	6,800	<500	4,000	<500
B	350	90	750	110	990	130	710	20
T	3.1	2.0	4.1	<1.0	5.7	<5	7.6	<0.5
E	250	75	320	16	550	<5	660	27
X	182.3	73	29.7	5.0	28.8	<15	91	2.4
MTBE	54	25	110	12	160	29	150	6.5
TBA	22	<5.0	<5.0	<5.0	<5.0	<50	<50	<50
ETBE	<1.0	<1.0	<1.0	<1.0	<1.0	<10	<10	<10

MW-13

Date	06/09	11/09	04/10	12/10	04/11	12/11	06/12	12/13
TPHg	<500	<500	<500	<500	<500	<500	<500	PSH
TPHd	<500	<500	<500	<500	<500	<500	<500	PSH
B	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	PSH
T	<0.5	0.6	<0.5	<0.5	<0.5	<0.5	<0.5	PSH
E	<0.5	<0.5	<0.5	<0.5	1.0	<0.5	<0.5	PSH
X	<1.5	<1.5	<1.5	<1.5	<1.5	<1.5	<1.5	PSH
MTBE	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	PSH
TBA	11	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	PSH
ETBE	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	PSH

MW-12

Date	06/09	11/09	04/10	12/10	04/11	12/11	06/12	12/13
TPHg	<500	<500	<500	<500	<500	<500	<500	<500
TPHd	<500	<500	<500	<500	<500	<500	<500	<500
B	<0.5	<0.5	2.7	12	<0.5	<0.5	3.3	9.6
T	<0.5	<0.5	<0.5	0.6	<0.5	<0.5	0.7	0.5
E	<0.5	<0.5	<0.5	0.7	<0.5	<0.5	<0.5	0.8
X	<1.5	<1.5	<1.5	3.6	<1.5	<1.5	<1.5	<1.5
MTBE	14	2.5	4.6	4.1	3.2	4.9	<1.0	9.2
TBA	32	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
ETBE	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0

MW-9

Date	06/09	11/09	04/10	12/10	04/11	12/11	06/12	12/13
TPHg	<500	<500	<500	<500	1,300	3,800	<500	<500
TPHd	<500	<500	<500	<500	500	<500	<500	<500
B	50	62	170	18	74	16	8.2	11
T	6.1	8.9	28	2.9	31	3.6	4.5	0.8
E	34	51	86	22	84	22	10	25
X	49.3	89	164	31.3	146	25.3	13.8	13
MTBE	55	67	64	40	43	5.5	6.3	5
TBA	34	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
ETBE	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0

MW-15

Date	06/09	11/09	04/10	12/10	04/11	12/11	06/12	12/13
TPHg	<500	19,000	1,800	7,100	21,000	1,200	44,000	26,000
TPHd	<500	<500	1,500	4,800	8,400	720	8,200	3,500
B	820	910	1,100	800	990	450	1,300	350
T	250	77	130	63	120	<50	72	<50
E	2,800	3,700	3,700	2,600	3,000	580	3,800	2,800
X	6,930	4,308.9	10,090	2,800	7,180	810	6,790	3,400
MTBE	35	19	<100	<100	<100	<100	<100	<100
TBA	<100	<50	<500	<500	<500	<500	<500	<500
ETBE	<20	<10	<100	<100	<100	<100	<100	<100

MW-2

Date	06/09	11/09	04/10	12/10	04/11	12/11	06/12	12/13
TPH	NA	NA	NA	PSH	NA	NA	NA	PSH
TPHg	<500	2,300	<500	PSH	<500	<500	<500	PSH
TPHd	<500	<500	7,400	PSH	2,600	3,600	5,100	PSH
B	<0.5	1.0	<0.5	PSH	<0.5	<0.5	0.6	PSH
T	<0.5	0.7	<0.5	PSH	<0.5	<0.5	1.3	PSH
E	4.9	3.4	3.7	PSH	<0.5	<0.5	2.3	PSH
X	<1.5	<1.5	<1.5	PSH	<1.5	<1.5	11.6	PSH
MTBE	8.3	1.9	20	PSH	13	3.5	8.0	PSH
TBA	2,000	1,100	170	PSH	490	1,200	720	PSH
ETBE	<1.0	<1.0	<1.0	PSH	<1.0	<1.0	<1.0	PSH

MW-14

Date	06/09	11/09	04/10	12/10	04/11	12/11	06/12	12/13
TPHg	<500	6,900	3,700	5,500	14,000	17,000	6,000	25,000
TPHd	<500	<500	<500	2,300	2,900	6,000	2,600	2,200
B	3,600	1,600	2,600	1,900	2,400	2,300	3,000	1,800
T	160	54	210	98	110	<50	120	59
E	1,900	1,000	1,700	1,400	1,500	1,800	2,500	1,700
X	2,990	944	3,650	2,180	2,759	2,600	3,751	1,900
MTBE	540	510	670	670	770	340	390	<100
TBA	110	<5.0	<100	<200	<200	<500	<500	<500
ETBE	<20	<1.0	<20	<40	<40	<100	<100	<100

MW-19

Date	04/11	12/11	06/12	12/13
TPHg	55,000	35,000	22,000	43,000
TPHd	6,100	15,000	6,000	2,300
B	640	650	410	360
T	2,600	1,500	870	370
E	4,100	3,300	2,400	2,900
X	17,200	6,700	4,800	5,400
MTBE	<100	<100	<100	<100
TBA	<500	<500	<500	<500
ETBE	<100	<100	<100	<100

MW-10

Date	06/09	11/09	04/10	12/10	04/11	12/11	06/12	12/13
TPHg	<500	<500	<500	<500	<500	<500	PSH	PSH
TPHd	<500	<500	<500	<500	<500	<500	PSH	PSH
B	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	PSH	PSH
T	<0.5	0.5	<0.5	<0.5	<0.5	<0.5	PSH	PSH
E	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	PSH	PSH
X	<1.5	<1.5	<1.5	<1.5	<1.5	<1.5	PSH	PSH
MTBE	1.8	6.3	2.0	1.4	<1.0	<1.0	PSH	PSH
TBA	20	6.3	<5.0	<5.0	<5.0	<5.0	PSH	PSH
ETBE	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	PSH	PSH

MW-18

Date	04/11	12/11	06/12	12/13
TPHg	530	<500	<500	<500
TPHd	<500	<500	<500	<500
B	0.5	<0.5	<0.5	<0.5
T	<0.5	<0.5	<0.5	<0.5
E	0.5	<0.5	<0.5	<0.5
X	<1.5	<1.5	<1.5	<1.5
MTBE	<1.0	<1.0	<1.0	<1.0
TBA	<5.0	<5.0	<5.0	<5.0
ETBE	<1.0	<1.0	<1.0	<1.0

MW-16

Date	06/09	11/09	04/10	12/10	04/11	12/11	06/12	12/13
TPHg	<500	570	<500	<500	<500	<500	<500	<500
TPHd	<500	<500	<500	<500	570	770	640	<500
B	120	110	<10	3.9	11	10	32	7.2
T	16	2.5	<10	<1.0	0.7	<0.5	0.9	0.5
E	220	6.5	<10	<1.0	60	53	24	<0.5
X	33	10.5	<30	<1.5	<1.5	2.8	3.5	3.4
MTBE	100	73	33	16	26	10	16	5.3
TBA	170	<5.0	<100	<5.0	<5.0	<5.0	<5.0	37
ETBE	<20	<1.0	<20	<1.0	<1.0	<1.0	<1.0	<1.0

MW-1

Date	06/09	11/09	04/10	12/10	04/11	12/11	06/12	12/13
TPH	NA	NA	NA	NA	NA	NA	NA	NA
TPHg	<500	<500	<500	<500	<500	<500	<500	<500
TPHd	<500	<500	<500	<500	<500	<500	<500	<500
B	210	4.4	42	66	78	130	13	42
T	1.0	0.6	<0.5	<0.5	1.3	<0.5	<0.5	<0.5
E	38	2.5	3.7	35	9.8	19	0.8	0.8
X	17.7	1.1	1.1	4.6	10.4	1.0	<1.5	<1.5
MTBE	220	1.7	81	34	52	14	3.0	1.1
TBA	140	<5.0	49	15	40	59	10	<0.5
ETBE	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0

MW-17

Date	06/09	11/09	04/10	12/10	04/11	12/11	06/12	12/13
TPHg	1,600	550	<500	<500	<500	<500	<500	PSH
TPHd	730	<500	<500	<500	<500	<500	<500	PSH
B	<0.5	0.5	0.6	<0.5	<0.5	<0.5	<0.5	PSH
T	0.7	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	PSH
E	<0.5	1.9	<0.5	<0.5	<0.5	<0.5	<0.5	PSH
X	<1.5	2.4	<1.5	<1.5	<1.5	<1.5	<1.5	PSH
MTBE	2.4	<1.0	29	2.9	1.9	1.0	1.3	PSH
TBA	15	<5.0	35	<5.0	<5.0	<5.0	<5.0	PSH
ETBE	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	PSH

MW-3

Date	06/09	11/09	04/10	12/10	04/11	12/11	06/12	12/13
TPH	NA	NA	NA	PSH	NA	NA	NA	PSH
TPHg	<500	PSH	<500	PSH	<500	<500	<500	PSH
TPHd	<500	PSH	5,900	PSH	<500	<500	<500	PSH
B	0.5	PSH	1.3	PSH	<0.5	<0.5	<0.5	PSH
T	<0.5	PSH	<0.5	PSH	<0.5	<0.5	<0.5	PSH
E	<0.5	PSH	1.2	PSH	<0.5	<0.5	<0.5	PSH
X	<1.5	PSH	<1.5	PSH	<1.5	<1.5	<1.5	PSH
MTBE	77	PSH	90	PSH	96	6.4	78	PSH
TBA	400	PSH	43	PSH	9.5	7.0	15	PSH
ETBE	<1.0	PSH	<1.0	PSH	<1.0	<1.0	<1.0	PSH

EXPLANATION

MW-17 — Groundwater monitoring well location

MW-5 — Well destroyed

MW-16

Date	04/08	07/08	12/08	06/09	11/09
TPHg	<500	1,300	2,500	<500	570
TPHd	<500	780	790	<500	<500
B	5.3	110	470	120	110
T	<2.5	1.7	6	16	2.5
E	77	210	390	220	6.5
X	<7.5	<4.0	<20	33	10.5
MTBE	110	160	<10	100	73
TBA	NA	NA	<100	170	<5.0
ETBE	NA	NA	<10	<20	<1.0

Groundwater samples collected by SCS Engineers beginning in June 2009; Petra Geotechnical, Inc. from October 2007 to December 2008; and Eneco Tech Southwest, Inc. from May 1988 to December 2002. Groundwater samples analyzed for total petroleum hydrocarbons by CA DHS LUFT Method; volatile organic compounds (VOCs) by EPA Method 8260B. All results reported in micrograms per liter (ug/L). < indicates concentration not reported above indicated reporting limit for relevant analyte and analytical method. NA indicates sample not analyzed. PSH indicates phase-separated hydrocarbons. Refer to laboratory reports for full listing of VOCs analyzed.

TPH = total petroleum hydrocarbons
TPHg = total petroleum hydrocarbons as gasoline
TPHd = total petroleum hydrocarbons as diesel
B = benzene
T = toluene
E = ethylbenzene
X = xylenes
MTBE = methyl tertiary buty ether
TBA = tertiary butyl alcohol
ETBE = Ethyl tertiary butyl ether

AST = aboveground storage tank

Disclaimer: This figure is based on available data. Actual conditions may differ. All locations and dimensions are approximate.

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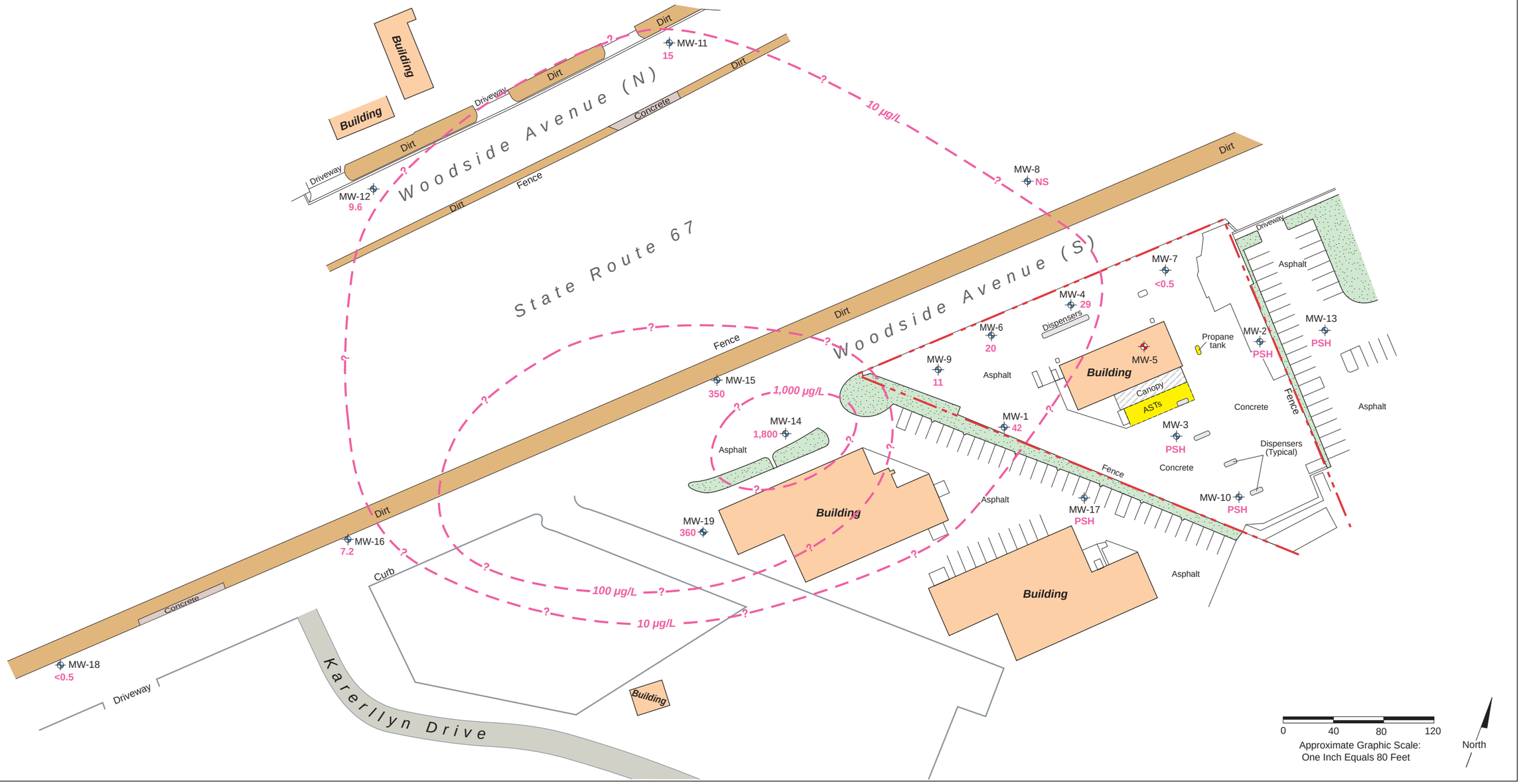
GROUNDWATER SAMPLE ANALYTICAL RESULTS 2009 THROUGH 2013

Wigington Oil
11427 Woodside Avenue
Santee, California

Project No.: 01208473.00

Figure 9

Date Drafted: 2/3/15



EXPLANATION

MW-16 / 7.2 — Groundwater monitoring well location with reported concentrations of benzene reported in micrograms per liter (µg/L). < indicates not reported above laboratory reporting limit for given analyte.

MW-5 — Well destroyed

100 µg/L — Iso-concentration of benzene reported in µg/L. Dashed where estimated, queried where inferred.

AST = aboveground storage tank
PSH = phase-separated hydrocarbons

Disclaimer: This figure is based on available data. Actual conditions may differ. All locations and dimensions are approximate.

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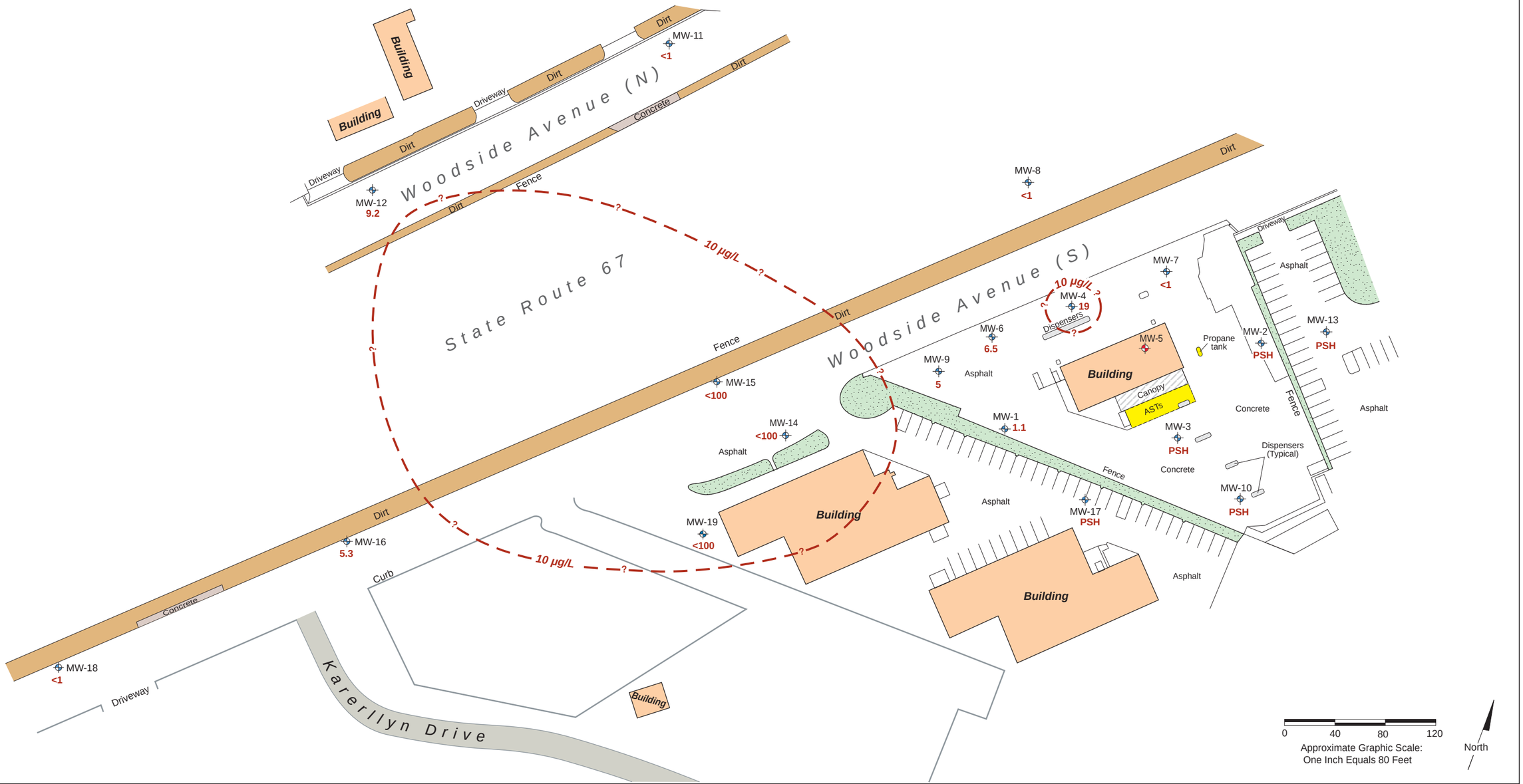
ISO-CONCENTRATION CONTOURS OF BENZENE IN SHALLOW GROUNDWATER - DECEMBER 2013

Wigington Oil
11427 Woodside Avenue
Santee, California

Project No.: 01208473.00

Figure 10

Date Drafted: 2/3/15



EXPLANATION

MW-16 / 5.3 — Groundwater monitoring well location with reported concentrations of methyl tertiary butyl ether (MTBE) reported in micrograms per liter (µg/L). < indicates not reported above laboratory detection limit for given analyte.

MW-5 — Well destroyed

100 — Iso-concentration of MTBE reported in µg/L. Dashed where estimated, queried where inferred.

AST = aboveground storage tank
PSH = phase-separated hydrocarbons

Disclaimer: This figure is based on available data. Actual conditions may differ. All locations and dimensions are approximate.

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ISO-CONCENTRATION CONTOURS OF MTBE IN SHALLOW GROUNDWATER - DECEMBER 2013

Wigington Oil
11427 Woodside Avenue
Santee, California

Project No.: 01208473.00

Figure 11

Date Drafted: 2/3/15

TABLES

Table 1
(Page 1 of 4)
Groundwater Elevation Data
11427 Woodside Avenue
Santee, California

Groundwater Monitoring Well	Wellhead Elevation (feet above msl) and Depth of Screen (feet below grade)	Date Measured	Depth to Groundwater (feet below TOC)	Groundwater Elevation (feet above msl)
MW-1	363.90 (22-42)	05/25/88	28.73	335.17
		03/10/98	27.03	336.87
		04/05/00	29.62	334.28
	362.84 (22-42)	04/26/02	30.21	332.63
		12/03/02	30.19	332.65
		10/26/07	NM	NM
		01/17/08	PSH	PSH
		04/18/08	29.86	332.98
		07/28/08	30.98	331.86
		12/29/08	29.14	333.70
		06/18/09	30.29	332.55
		11/17/09	31.15	331.69
		04/20/10	28.58	334.26
		12/20/10	29.80	333.04
		04/04/11	28.36	334.48
MW-2	365.40 (24-44)	05/25/88	30.03	335.37
		03/10/98	28.75	336.65
		04/05/00	32.23	333.17
	365.08 (24-44)	04/26/02	31.72	333.36
		12/03/02	31.84	333.24
		10/26/07	PSH	PSH
		01/17/08	PSH	PSH
		04/18/08	31.06	334.02
		07/28/08	PSH	PSH
		12/29/08	31.50	333.58
		06/18/09	31.56	333.52
		11/17/09	32.86	332.22
		04/20/10	29.08	336.00
		12/20/10	PSH	PSH
		04/04/11	29.41	335.67
MW-3	366.07 (24.5-44.5)	05/25/88	30.83	335.24
		03/10/98	28.25	337.82
		04/05/00	36.65	329.42
	364.16 (24.5-44.5)	04/26/02	31.37	332.79
		12/03/02	31.32	332.84
		10/26/07	PSH	PSH
		01/17/08	PSH	PSH
		04/18/08	30.91	333.25
		07/28/08	PSH	PSH
		12/29/08	30.54	333.62
		06/18/09	31.33	332.83
		11/17/09	PSH	PSH
		04/20/10	29.54	334.62
		12/20/10	PSH	PSH
		04/04/11	29.32	334.84

Table 1
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Groundwater Elevation Data
11427 Woodside Avenue
Santee, California

Groundwater Monitoring Well	Wellhead Elevation (feet above msl) and Depth of Screen (feet below grade)	Date Measured	Depth to Groundwater (feet below TOC)	Groundwater Elevation (feet above msl)
MW-4	362.90 (22-42)	05/25/88	27.68	335.22
		03/10/98	26.46	336.44
		04/05/00	29.98	332.92
	362.38 (22-42)	04/26/02	29.60	332.78
		12/03/02	29.43	332.95
		10/26/07	PSH	PSH
		01/17/08	PSH	PSH
		04/18/08	29.25	333.13
		07/28/08	30.41	331.97
		12/29/08	28.53	333.85
		06/18/09	29.65	332.73
		11/17/09	30.58	331.80
		04/20/10	27.97	334.41
		12/20/10	29.22	333.16
		04/04/11	27.74	334.64
MW-5	NM	03/10/98	27.50	NM
	363.42 (unknown)	04/26/02	30.39	333.03
		12/03/02	30.50	332.92
		10/26/07	31.72	331.70
		01/17/08	NM	NM
		04/18/08	31.07	332.35
		07/28/08	NM	NM
		12/29/08	NM	NM
		Well Destroyed		
MW-6	362.44 (17-42)	04/26/02	29.77	332.67
		12/03/02	29.75	332.69
		10/26/07	31.01	331.43
		01/17/08	29.44	333.00
		04/18/08	29.47	332.97
		07/28/08	30.60	331.84
		12/29/08	28.71	333.73
		06/18/09	29.90	332.54
		11/17/09	30.78	331.66
		04/20/10	28.17	334.27
		12/20/10	29.45	332.99
		04/04/11	27.98	334.46
MW-7	362.57 (17-42)	04/26/02	29.47	333.10
		12/03/02	29.45	333.12
		10/26/07	30.45	332.12
		01/17/08	29.17	333.40
		04/18/08	29.16	333.41
		07/28/08	30.08	332.49
		12/29/08	28.48	334.09
		06/18/09	29.56	333.01
		11/17/09	30.59	331.98
		04/20/10	27.92	334.65
		12/20/10	29.15	333.42
		04/04/11	27.75	334.82

Table 1
(Page 3 of 4)
Groundwater Elevation Data
11427 Woodside Avenue
Santee, California

Groundwater Monitoring Well	Wellhead Elevation (feet above msl) and Depth of Screen (feet below grade)	Date Measured	Depth to Groundwater (feet below TOC)	Groundwater Elevation (feet above msl)
MW-8	364.51 (20.5-40.5)	04/26/02	31.71	332.80
		12/03/02	31.70	332.81
		10/26/07	33.02	331.49
		01/17/08	31.34	333.17
		04/18/08	31.42	333.09
		07/28/08	32.60	331.91
		12/29/08	30.60	333.91
		06/18/09	31.82	332.69
		11/17/09	32.74	331.77
		04/20/10	30.12	334.39
		12/20/10	31.37	333.14
		04/04/11	29.92	334.59
MW-9	362.33 (34-39)	04/18/08	29.49	332.84
		07/28/08	30.58	331.75
		12/29/08	28.68	333.65
		06/18/09	29.90	332.43
		11/17/09	30.75	331.58
		04/20/10	28.15	334.18
		12/20/10	29.43	332.90
		04/04/11	27.95	334.38
MW-10	367.28 (25-40)	04/18/08	32.52	334.76
		07/29/08	33.65	333.63
		12/29/08	32.62	334.66
		06/18/09	32.75	334.53
		11/17/09	33.97	333.31
		04/20/10	30.83	336.45
		12/20/10	32.10	335.18
		04/04/11	30.26	337.02
MW-11	362.48 (23-38)	04/18/08	29.98	332.50
		07/29/08	30.99	331.49
		12/29/08	28.96	333.52
		06/18/09	30.36	332.12
		11/17/09	31.12	331.36
		04/20/10	28.61	333.87
		12/20/10	29.84	332.64
		04/04/11	28.44	334.04
MW-12	361.88 (24-39)	04/18/08	29.55	332.33
		07/29/08	30.49	331.39
		12/29/08	28.45	333.43
		06/18/09	29.94	331.94
		11/17/09	30.65	331.23
		04/20/10	28.17	333.71
		12/20/10	29.40	332.48
		04/04/11	27.93	333.95
MW-13	366.91 (25-45)	04/21/08	32.77	334.14
		07/30/08	34.08	332.83
		12/29/08	32.54	334.37
		06/18/09	33.17	333.74
		11/17/09	34.33	332.58
		04/20/10	31.35	335.56
		12/20/10	32.71	334.20
		04/04/11	31.24	335.67

Table 1
(Page 4 of 4)
Groundwater Elevation Data
11427 Woodside Avenue
Santee, California

Groundwater Monitoring Well	Wellhead Elevation (feet above msl) and Depth of Screen (feet below grade)	Date Measured	Depth to Groundwater (feet below TOC)	Groundwater Elevation (feet above msl)
MW-14	**362.79 (23-38)**	04/21/08	30.09	332.70
		07/30/08	31.14	331.65
		12/29/08	29.22	333.57
		06/18/09	30.51	332.28
		11/17/09	31.32	331.47
		04/20/10	28.74	334.05
		12/20/10	30.03	332.76
		04/04/11	28.52	334.27
MW-15	**362.36 (23.5-38.5)**	04/21/08	29.91	332.65
		07/30/08	30.96	331.60
		12/29/08	28.80	333.56
		06/18/09	30.13	332.23
		11/17/09	30.92	331.44
		04/20/10	28.36	334.00
		12/20/10	29.64	332.72
		04/04/11	28.15	334.21
MW-16	**362.48 (24-39)**	04/21/08	30.04	332.44
		07/30/08	31.02	331.46
		12/29/08	28.95	333.53
		06/18/09	30.47	332.01
		11/17/09	31.18	331.30
		04/20/10	28.66	333.82
		12/20/10	29.94	332.54
		04/04/11	28.41	334.07
MW-17	**367.97 (24.5-44.5)**	04/21/08	34.97	333.00
		07/30/08	36.08	331.89
		12/29/08	34.34	333.63
		06/18/09	35.38	332.59
		11/17/09	36.23	331.74
		04/20/10	33.63	334.34
		12/20/10	34.93	333.04
		04/04/11	33.40	334.57
MW-18	NS	04/04/11	28.60	NS
MW-19	NS	04/04/11	31.28	NS

Notes:
MSL = mean sea level
TOC = top of well casing
PSH = phase-separated hydrocarbons present in well, therefore groundwater elevation was not calculated
NM = well not measured
NS = well not surveyed
Wells were surveyed by Southern California Survey initially on April 26, 2002 and updated on March 28, 2008.

Table 2 (Page 1 of 5)
Soil Sample Analytical Results
for Total Petroleum Hydrocarbons
11427 Woodside Avenue, Santee, California

Sample Number	Soil Boring	Depth (Feet below grade)	Date	TPHg (mg/kg)	TPHd (mg/kg)
B1-20	B1	20	12/3/2002	<10	<10
B1-25		25		<10	<10
B1-30		30		**240**	**140**
B1-32		32		**8,600**	**2,100**
B1-34		34		<10	<10
B1-36		36		<10	<10
B2-30	B2	30	12/3/2002	<10	<10
B2-32		32		<10	<10
B2-34		34		<10	<10
B2-40		40		<10	<10
B3-7	B3	7	12/3/2002	<10	<10
B3-10		10		<10	<10
B3-20		20		<10	<10
B3-25		25		<10	<10
B3-30		30		**1,700**	**2,800**
B3-32		32		**4,000**	**6,700**
B3-34		34		<10	<10
B4-7	B4	7	12/3/2002	<10	<10
B4-10		10		<10	<10
B4-20		20		<10	<10
B4-30		30		**1,200**	**4,500**
B4-32		32		**11,000**	**24,000**
B4-34		34		**3,900**	**12,000**
B4-36		36		**17**	**51**
B5-20	B5	20	12/4/2002	<10	<10
B5-28.5		28.5		<10	<10
B6-32	B6	32	12/4/2002	**780**	**200**
B6-33		33		**200**	**180**
B6-34		34		<10	<10
B7-32	B7	32	12/4/2002	<10	<10
B7-36		36		<10	<10
B8-25	B8	25	12/4/2002	<10	<10
B8-32		32		**3,400**	**760**
B8-34		34		<10	<10
B9-25	B9	25	12/4/2002	<10	<10
B9-31		31		**480**	**1,100**
B9-33		33		**2,600**	**4,900**
B9-35		35		<10	<10
B11-36	B11	36	12/5/2002	<10	<10
B11-40		40		<10	<10
B12-32	B12	32	12/5/2002	<10	<10
B12-34		34		**3,800**	**2,700**
B12-36		36		<10	<10
B13-30	B13	30	12/6/2002	**1,000**	**2,300**
B13-35		35		<10	<10
B14-25	B14	25	12/6/2002	**730**	**260**
B14-30		30		**390**	**1,000**

Table 2 (Page 2 of 5)
Soil Sample Analytical Results
for Total Petroleum Hydrocarbons
11427 Woodside Avenue, Santee, California

Sample Number	Soil Boring	Depth (Feet below grade)	Date	TPHg (mg/kg)	TPHd (mg/kg)
B17-7	B17	7	12/6/2002	<10	<10
B17-15		15		<10	<10
B17-25		25		**330**	**4,100**
B17-32		32		**7,800**	**13,000**
B17-34		34		<10	<10
B18-32	B18	32	12/6/2002	**320**	**1,300**
T1-1-15.5'	Tank 1	15.5	4/29/1998	<10	<10
T1-2-15'	Tank 1	15	4/29/1998	**400**	**2,000**
T2-1-14'	Tank 2	14	4/29/1998	<10	**11**
T2-2-16'	Tank 2	16	4/29/1998	<10	<10
T3-6.4'	Tank 3	6.4	4/29/1998	Total Recoverable Hydrocarbons - **4,300**	
T3-9.5'	Tank 3	9.5	4/29/1998	**220**	**1,200**
T4-10'	Tank 4	10	4/29/1998	**820**	<10
T5-E-6.3'	Tank 5	6.3	4/29/1998	Total Recoverable Hydrocarbons - **260**	
T5-W-6'	Tank 5	6	4/29/1998	Total Recoverable Hydrocarbons -**5,900**	
T6-E-16'	Tank 6	16	4/29/1998	<10	**1,100**
T6-W-16.5'	Tank 6	16.5	4/29/1998	<10	**1,800**
T7-E-16'	Tank 7	16	4/29/1998	<10	**800**
T7-W-16'	Tank 7	16	4/29/1998	<10	**23,000**
T8-E-16'	Tank 8	16	4/29/1998	<10	**25**
T8-W-16'	Tank 8	16	4/29/1998	<10	**1,900**
T9-E-15.5'	Tank 9	15.5	4/29/1998	<10	**30**
T9-W-17'	Tank 9	17	4/29/1998	<10	**4,200**
P1-4.0'	Piping	4	4/29/1998	<10	**370**
P1	NA		10/7/1997	**43**	**9,799**
P2	NA		10/7/1997	**175**	**21, 218**
P3	NA		10/7/1997	<10	<10
P4	NA		10/7/1997	**30**	**9,584**
P5	NA		10/7/1997	**65**	**3,025**
P6	NA		10/7/1997	**136**	**6,624**
P7	NA		10/7/1997	**467**	**13,372**
P8	NA		10/7/1997	**2,279**	**10,632**
P9	NA		10/7/1997	**3,043**	**5,759**
P10	NA		10/7/1997	**224**	**115,444**
BH-01	BH-01	20.5	April 1988	<0.5	<0.5
BH-02	BH-02	15.5	April 1988	<0.5	<0.5
BH-03	BH-03	15	April 1988	<0.5	<0.5
BH-03		30		<0.5	**46**
BH-04	BH-04	30	April 1988	<0.5	<0.5
BH-05	BH-05	30	April 1988	<0.5	<0.5
BH-06	BH-06	10	April 1988	**360**	<0.5
BH-06		30		**280**	<0.5
BH-07	BH-07	5	April 1988	<0.5	<0.5
BH-07		15		**2.4**	<0.5
BH-07		30		<0.5	<0.5
BH-08	BH-08	20	April 1988	**4.2**	<0.5
BH-08		30		**440**	<0.5
BH-09	BH-09	30	April 1988	<0.5	<0.5

Table 2 (Page 3 of 5)
Soil Sample Analytical Results
for Total Petroleum Hydrocarbons
11427 Woodside Avenue, Santee, California

Sample Number	Soil Boring	Depth (Feet below grade)	Date	TPHg (mg/kg)	TPHd (mg/kg)
BH-10	BH-10	5	April 1988	<0.5	<0.5
BH-10		30		<0.5	<0.5
BH-11	BH-11	5	April 1988	<0.5	<0.5
BH-11		30		<0.5	<0.5
550-15 *	550 / T 20		5/25/1988	Total Extractable Hydrocarbons - <0.5	
550-2B *	550 / T 20		5/25/1988	Total Extractable Hydrocarbons - **1,100**	
550-3B *	550 / T 20		5/25/1988	Total Extractable Hydrocarbons - **59**	
880-1BI *	880 / T 23		5/25/1988	Total Extractable Hydrocarbons - **600**	
880-2 *	880 / T 23		5/25/1988	Total Extractable Hydrocarbons - **110**	
1000-1B *	1000 / T 11		5/25/1988	Total Extractable Hydrocarbons - <0.5	
5K-B *	5000 / T 19		5/25/1988	Total Extractable Hydrocarbons - **110**	
5K-S *	5000 / T 19		5/25/1988	Total Extractable Hydrocarbons - **1,300**	
Buy Wright #1 *			8/18/1988	Total Extractable Hydrocarbons - <0.5	
Buy Wright #2 *			8/18/1988	Total Extractable Hydrocarbons - <0.5	
Buy Wright #3 *			8/18/1988	Total Extractable Hydrocarbons - <0.5	
MW-1	NA	NA	NA	NA	NA
MW-2	NA	NA	NA	NA	NA
MW-3	NA	NA	NA	NA	NA
MW4-1	MW-4	1	4/30/1988	Total Extractable Hydrocarbons - **14**	
MW4-5		5		Total Extractable Hydrocarbons - **0.5**	
MW6-20'	MW-6	20	3/1/2001	**2.1**	--
MW6-25'		25		**5.8**	--
MW6-30'		30		**5,900**	--
MW6-35'		35		**410**	--
MW6-40'		40		**210**	--
MW7-25'	MW-7	25	3/7/2001	**21**	--
MW8-25	MW-8	25	4/26/2002	<1.0	--
MW8-30.5		30.5		<1.0	--
MW8-31		31		<1.0	--
MW8-31.5		31.5		<1.0	--
MW8-32.5		32.5		<1.0	--
MW8-33		33		**230**	--
MW8-34		34		**51**	--
MW8-34.5		34.5		**3,800**	--
MW8-35.5		35.5		**480**	--
MW8-36		36		<1.0	--
MW8-37		37		**470**	--
MW8-37.5		37.5		<1.0	--
MW8-38.5		38.5		**110**	--
MW8-39		39		<1.0	--
MW8-39.5		39.5		<2.5	--
MW-9-5	MW-9	5	2/4/2008	<10	<10
MW-9-10		10		<10	<10
MW-9-15		15		<10	<10
MW-9-20		20		<10	<10
MW-9-25		25		<10	<10
MW-9-30		30		**14**	<10
MW-9-35		35		<10	<10
MW-9-39		39		<10	<10

Table 2 (Page 4 of 5)
Soil Sample Analytical Results
for Total Petroleum Hydrocarbons
11427 Woodside Avenue, Santee, California

Sample Number	Soil Boring	Depth (Feet below grade)	Date	TPHg (mg/kg)	TPHd (mg/kg)
MW-10-5	MW-10	5	2/4/2008	<10	<10
MW-10-10		10		<10	<10
MW-10-15		15		<10	<10
MW-10-20		20		<10	<10
MW-10-25		25		<10	<10
MW-10-30		30		<10	<10
MW-10-35		35		<10	<10
MW-10-40		40		<10	<10
MW-10-43		43		<10	<10
MW-11-5	MW-11	5	2/8/2008	<10	<10
MW-11-10		10		<10	<10
MW-11-15		15		<10	<10
MW-11-20		20		<10	<10
MW-11-25		25		<10	<10
MW-11-30		30		<10	<10
MW-11-35		35		<10	<10
MW-11-38		38		<10	<10
MW-12-5	MW-12	5	2/8/2008	<10	<10
MW-12-10		10		<10	<10
MW-12-15		15		<10	<10
MW-12-20		20		<10	<10
MW-12-25		25		<10	<10
MW-12-30		30		<10	<10
MW-12-35		35		<10	<10
MW-12-39		39		<10	<10
MW-13-5	MW-13	5	2/18/2008	<10	<10
MW-13-10		10		<10	<10
MW-13-15		15		<10	<10
MW-13-20		20		<10	<10
MW-13-25		25		<10	<10
MW-13-30		30		<10	<10
MW-13-35		35		<10	<10
MW-13-40		40		<10	<10
MW-13-45		45		<10	<10
MW-13-50		50		<10	<10
MW-14-5	MW-14	5	2/18/2008	<10	<10
MW-14-10		10		<10	<10
MW-14-15		15		<10	<10
MW-14-20		20		<10	<10
MW-14-25		25		<10	<10
MW-14-30		30		<10	**37.2**
MW-14-35		35		<10	<10
MW-14-40		40		<10	<10

Table 2 (Page 5 of 5)
Soil Sample Analytical Results
for Total Petroleum Hydrocarbons
11427 Woodside Avenue, Santee, California

Sample Number	Soil Boring	Depth (Feet below grade)	Date	TPHg (mg/kg)	TPHd (mg/kg)
MW-15-5	MW-15	5	2/19/2008	<10	<10
MW-15-10		10		<10	<10
MW-15-15		15		<10	<10
MW-15-20		20		<10	<10
MW-15-25		25		<10	<10
MW-15-30		30		<10	<10
MW-15-35		35		<10	<10
MW-15-40		40		<10	<10
MW-16-5	MW-16	5	2/19/2008	<10	<10
MW-16-10		10		<10	<10
MW-16-15		15		<10	<10
MW-16-20		20		<10	<10
MW-16-25		25		<10	<10
MW-16-30		30		<10	<10
MW-16-35		35		<10	<10
MW-16-40		40		<10	<10
MW-17-5	MW-17	5	2/19/2008	<10	<10
MW-17-10		10		<10	<10
MW-17-15		15		<10	<10
MW-17-20		20		<10	<10
MW-17-25		25		<10	<10
MW-17-30		30		<10	<10
MW-17-35		35		**378**	**1,610**
MW-17-38		38		<10	<10
MW-17-45		45		<10	<10
MW-18-25	MW-18	25	3/23/2011	<10	<10
MW-18-28.5		28.5		<10	<10
MW-18-35		35		<10	<10
MW-18-40		40		<10	<10
MW-19-25	MW-19	25	3/23/2011	<10	<10
MW-19-30.5		30.5		**82**	**46**
MW-19-35		35		**1,100**	**210**
MW-19-40		40		<10	<10

Notes:

Samples dated March 2011 (MW-18 and MW-19) were collected by SCS Engineers.

Samples dated February 2008 were collected by Petra Geotechnical, Inc.

Samples dated April 1988 to December 2002 were collected by EnecoTech, Inc.

Concentrations reported in milligrams per kilogram (mg/kg).

TPHg = Total petroleum hydrocarbons - gasoline range (C6 to C10), in accordance with DHS LUFT Method.

TPHd = Total petroleum hydrocarbons - diesel range (C10 to C28), in accordance with DHS LUFT Method.

< indicates the reported concentration was not above the laboratory reporting limit for the relevant analytical method.

Bold font indicates concentration above the laboratory reporting limit.

-- indicates sample was not analyzed for the relavant analyte.

NA indicates that soil sample results were not available and were likely not collected for wells MW-1 to MW-3.

Merged cell indicates Total Recoverable Petroleum Hydrocarbons or Total Extractable Hydrocarbons.

* SCS was unable to obtain location information for this sample; therefore, the data is not included in figures.

Table 3 (Page 1 of 8)
Soil Sample Analytical Results for Volatile Organic Compounds
11427 Woodside Avenue, Santee, California

Sample Number	Date	Analytical Method	Benzene (µg/kg)	Toluene (µg/kg)	Ethylbenzene (µg/kg)	Total Xylenes (µg/kg)	MTBE (µg/kg)	DIPE (µg/kg)	TAME (µg/kg)	ETBE (µg/kg)	TBA (µg/kg)
B1-25	12/3/2002	8021	<50	<50	<50	<150	<100	--	--	--	--
B1-30		8021	**680**	**1,600**	**2,400**	**13,000**	<1,000	--	--	--	--
B1-32		8021	**61,000**	**340,000**	**100,000**	**590,000**	**130,000**	--	--	--	--
		8260	**8,300**	**86,000**	**39,000**	**201,000**	<1,000	--	--	--	--
B1-34		8021	**660**	**2,400**	**970**	**4,900**	**720**	--	--	--	--
B1-36		8021	<50	<50	<50	<150	<100	--	--	--	--
B1-38		8021	<50	<50	<50	<150	<100	--	--	--	--
B2-30	12/3/2002	8021	<50	<50	<50	<150	<100	--	--	--	--
B2-32		8021	<50	<50	<50	<150	<100	--	--	--	--
		8260	**12**	**6.4**	<5	<10	**9.8**	--	--	--	--
B2-34		8021	<50	<50	<50	<150	<100	--	--	--	--
B2-40		8021	<50	<50	<50	<150	<100	--	--	--	--
B3-20	12/3/2002	8021	<50	<50	<50	<150	<100	--	--	--	--
B3-25		8021	<50	<50	<50	<150	<100	--	--	--	--
B3-30		8021	**8,200**	**8,600**	**27,000**	**96,000**	**10,000**	--	--	--	--
		8260	**990**	<200	**14,000**	**40,000**	<200	--	--	--	--
B3-32		8021	**32,000**	**8,200**	**55,000**	**210,000**	**42,000**	--	--	--	--
		8260	**20,000**	**1,700**	**55,000**	**161,200**	**1,400**	--	--	--	--
B3-34		8021	<50	<50	<50	<150	**210**	--	--	--	--
		8260	**21**	<5	**16**	0	**120**	--	--	--	--
B3-36		8021	<50	<50	<50	<150	**140**	--	--	--	--
		8260	--	--	--	**32**	--	--	--	--	--
B3-40		8021	<50	<50	<50	<150	<100	--	--	--	--

Table 3 (Page 2 of 8)
Soil Sample Analytical Results for Volatile Organic Compounds
11427 Woodside Avenue, Santee, California

Sample Number	Date	Analytical Method	Benzene (µg/kg)	Toluene (µg/kg)	Ethylbenzene (µg/kg)	Total Xylenes (µg/kg)	MTBE (µg/kg)	DIPE (µg/kg)	TAME (µg/kg)	ETBE (µg/kg)	TBA (µg/kg)
B4-7	12/3/2002	8021	<50	<50	<50	<150	<100	--	--	--	--
B4-10		8021	<50	<50	<50	<150	<100	--	--	--	--
B4-20		8021	<50	<50	<50	<150	<100	--	--	--	--
B4-30		8021	**460**	**130**	**8,100**	**19,000**	**390**	--	--	--	--
B4-32		8021	**14,000**	**11,000**	**35,000**	**110,000**	<50,000	--	--	--	--
		8260	**1,900**	**1,600**	**6,400**	**17,000**	<1,000	--	--	--	--
B4-34		8021	**840**	**1,200**	**11,000**	**18,000**	**2,600**	--	--	--	--
B4-36		8021	**50**	<50	<50	<150	**400**	--	--	--	--
B4-38		8021	**110**	<50	<50	<150	**350**	--	--	--	--
B4-40		8021	<50	<50	<50	<150	**240**	--	--	--	--
B5-20	12/4/2002	8021	<50	<50	<50	<150	<100	--	--	--	--
B5-28.5		8021	<50	<50	<50	<150	<100	--	--	--	--
B6-30	12/4/2002	8021	<50	<50	<50	<150	<100	--	--	--	--
B6-32		8021	**9,100**	**7,200**	**26,000**	**120,000**	**68,000**	--	--	--	--
		8260	**660**	**3,100**	**9,800**	**48,000**	<500	--	--	--	--
B6-33		8021	**380**	**1,600**	**4,900**	**28,000**	**1,900**	--	--	--	--
		8260	<50	<50	**1,600**	**8,600**	<50	--	--	--	--
B6-34		8021	**360**	**80**	**400**	**750**	<500	--	--	--	--
B6-36		8021	**60**	<50	**110**	<150	<100	--	--	--	--
B6-40		8021	<50	<50	<50	<150	<100	--	--	--	--
B7-25	12/4/2002	8021	<50	<50	<50	<150	<100	--	--	--	--
B7-30		8021	<50	<50	<50	<150	<100	--	--	--	--
B7-32		8021	**210**	<50	**60**	<150	**150**	--	--	--	--
B7-36		8021	**730**	<50	<50	<150	**220**	--	--	--	--
B7-40		8021	<50	<50	<50	<150	<100	--	--	--	--
B8-25	12/4/2002	8021	<50	<50	<50	<150	<100	--	--	--	--
B8-32		8021	**15,000**	**88,000**	**63,000**	**330,000**	<10,000	--	--	--	--
		8260	**2,700**	**45,000**	**46,000**	**116,000**	<500	--	--	--	--
B8-34		8021	**260**	**200**	**240**	**450**	<500	--	--	--	--
B8-36		8021	<50	**200**	**210**	**1,200**	<100	--	--	--	--
B8-38		8021	<50	<50	<50	<150	<100	--	--	--	--

Table 3 (Page 3 of 8)
Soil Sample Analytical Results for Volatile Organic Compounds
11427 Woodside Avenue, Santee, California

Sample Number	Date	Analytical Method	Benzene (µg/kg)	Toluene (µg/kg)	Ethylbenzene (µg/kg)	Total Xylenes (µg/kg)	MTBE (µg/kg)	DIPE (µg/kg)	TAME (µg/kg)	ETBE (µg/kg)	TBA (µg/kg)
B9-25	12/4/2002	8021	<50	<50	<50	<150	<100	--	--	--	--
B9-31		8021	**250**	**1,100**	**2,400**	**8,000**	**2,700**	--	--	--	--
		8260	<50	<50	**170**	**490**	<50	--	--	--	--
B9-33		8021	**6,200**	**8,000**	**19,000**	**44,000**	<10,000	--	--	--	--
		8260	<500	<500	**8,900**	**25,300**	<500	--	--	--	--
B9-35		8021	<50	<50	<50	<150	<100	--	--	--	--
B10-30	12/5/2002	8021	<50	<50	<50	<150	<100	--	--	--	--
B10-32		8021	<50	<50	<50	<150	<100	--	--	--	--
B10-34		8021	<50	<50	**60**	<150	<100	--	--	--	--
B10-40		8021	**80**	<50	**100**	<150	<100	--	--	--	--
B11-31	12/5/2002	8021	<50	<50	<50	<150	<100	--	--	--	--
B11-36		8021	**240**	<50	**60**	<150	<100	--	--	--	--
		8260	**88**	**5.8**	**38**	<10	**10**	--	--	--	--
B11-40		8021	**70**	<50	<50	<150	<100	--	--	--	--
B11-45		8021	<50	<50	<50	<150	<100	--	--	--	--
B12-32	12/5/2002	8021	<50	<50	<50	<150	<100	--	--	--	--
B12-34		8021	**9,400**	**580**	**8,200**	**7,300**	**7,900**	--	--	--	--
		8260	<50	<50	<50	**66**	<50	--	--	--	--
B12-36		8021	<50	**80**	**270**	<150	<500	--	--	--	--
B12-38		8021	<50	<50	<50	<150	<100	--	--	--	--
B13-25	12/6/2002	8021	<50	<50	<50	<150	<100	--	--	--	--
B13-30		8021	**3,600**	**1,900**	**17,000**	**110,000**	**500**	--	--	--	--
		8260	**210**	<200	**8,700**	**46,000**	<200	--	--	--	--
B13-35		8021	<50	<50	<50	<150	<100	--	--	--	--
B13-40		8021	<50	<50	<50	<150	<100	--	--	--	--
B14-25	12/6/2002	8021	**150**	<50	**2,600,000**	**680**	**130**	--	--	--	--
B14-30		8021	**960**	**1,400**	**2,900**	**5,700**	<100	--	--	--	--
		8260	**78**	<50	**1,900**	**3,300**	<50	--	--	--	--
B14-35		8021	<50	<50	<50	<150	<100	--	--	--	--

Table 3 (Page 4 of 8)
Soil Sample Analytical Results for Volatile Organic Compounds
11427 Woodside Avenue, Santee, California

Sample Number	Date	Analytical Method	Benzene (µg/kg)	Toluene (µg/kg)	Ethylbenzene (µg/kg)	Total Xylenes (µg/kg)	MTBE (µg/kg)	DIPE (µg/kg)	TAME (µg/kg)	ETBE (µg/kg)	TBA (µg/kg)
B15-32	12/6/2002	8021	<50	<50	<50	<150	<100	--	--	--	--
B15-33		8021	<50	<50	<50	<150	<100	--	--	--	--
B15-34		8021	<50	<50	<50	<150	<100	--	--	--	--
B15-35		8021	<50	<50	<50	<150	<100	--	--	--	--
B15-36		8021	<50	<50	<50	<150	<100	--	--	--	--
B16-29	12/6/2002	8021	<50	<50	<50	<150	<100	--	--	--	--
B16-31		8021	<50	<50	<50	<150	<100	--	--	--	--
B16-33		8021	<50	<50	<50	<150	<100	--	--	--	--
B17-30	12/6/2002	8021	<50	<50	**530**	**86**	<100	--	--	--	--
B17-32		9021	**1,600**	**320**	**2,200**	**7,500**	**2,000**	--	--	--	--
		8260	**12,000**	<500	**18,000**	**57,000**	<500	--	--	--	--
B17-34		8021	<50	<50	<50	<150	<100	--	--	--	--
B17-36		8021	<50	<50	<50	<150	<100	--	--	--	--
B18-25	12/6/2002	8021	<50	<50	<50	<150	<100	--	--	--	--
B18-32		8021	<50	<50	**70**	**180**	**170**	--	--	--	--
		8260	<50	<50	<50	<100	**150**	--	--	--	--
B18-34		8021	<50	<50	<50	<150	**210**	--	--	--	--
		8260	<5	<5	<5	<10	**140**	--	--	--	--
B18-36		8021	<50	<50	<50	<150	**280**	--	--	--	--
		8260	<5	<5	<5	<10	**250**	--	--	--	--
B18-40		8021	<50	<50	<50	<150	<100	--	--	--	--
BH-06	April 1988	8020M	<500	<500	--	<500	--	--	--	--	--
BH-07	April 1988	8020M	<500	<500	--	<500	--	--	--	--	--
BH-08	April 1988	8020M	<500	<500	--	<500	--	--	--	--	--
BH-09	April 1988	8020M	<500	<500	--	<500	--	--	--	--	--
BH-10	April 1988	8020M	<500	<500	--	<500	--	--	--	--	--
BH-11	April 1988	8020M	<500	<500	--	<500	--	--	--	--	--
BH-11		8020M	<500	<500	--	<500	--	--	--	--	--
550-2B *	5/25/1988	8020M	**65,000**	**475,000**	--	**130,000**	--	--	--	--	--
550-3B *	5/25/1988	8020M	<500	**8,000**	--	**9,000**	--	--	--	--	--

Table 3 (Page 5 of 8)
Soil Sample Analytical Results for Volatile Organic Compounds
11427 Woodside Avenue, Santee, California

Sample Number	Date	Analytical Method	Benzene (µg/kg)	Toluene (µg/kg)	Ethylbenzene (µg/kg)	Total Xylenes (µg/kg)	MTBE (µg/kg)	DIPE (µg/kg)	TAME (µg/kg)	ETBE (µg/kg)	TBA (µg/kg)
880-1BI *	5/25/1988	8020M	<500	**3,500**	--	**40,000**	--	--	--	--	--
1000-1B *	5/25/1988	8020M	<500	<500	--	<500	--	--	--	--	--
5K-B *	5/25/1988	8020M	<500	<500	--	<500	--	--	--	--	--
Buy Wright #2 *	8/18/1988	8020	<0.5	<0.5	--	<0.5	--	--	--	--	--
T1-1-15.5'	4/29/1998	8020	**120**	**950**	**11,000**	**64,000**	**3,700**	--	--	--	--
MW-1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-3	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW4-5	4/30/1998	8021	<0.5	<0.5	<0.5	--	--	--	--	--	--
MW6-20	3/1/2001	8021	**150**	**6**	**15**	**110**	**46**	--	--	--	--
		8260	--	--	--	--	**23**	--	--	--	--
MW6-25		8021	<5	<5	**6**	**130**	**51**	--	--	--	--
		8260	--	--	--	--	<5	--	--	--	--
MW6-30		8021	**11,000**	**93,000**	**80,000**	**540,000**	<800,000	--	--	--	--
MW6-35		8021	**430**	**7,700**	**4,300**	**29,000**	<40,000	--	--	--	--
MW6-40		8021	<400	**730**	**2,000**	**17,000**	<2,800	--	--	--	--
MW7-25	3/7/2001	8021	<20	<20	<20	**60**	**140**	--	--	--	--
MW8-25	4/26/2002	8021	<5	<5	<5	**15**	<35	--	--	--	--
MW8-30.5		8021	<5	<5	<5	**15**	<35	--	--	--	--
MW8-31		8021	<5	<5	<5	**15**	<35	--	--	--	--
MW8-31.5		8021	<5	<5	<5	**15**	<35	--	--	--	--
MW8-32.5		8021	<5	<5	<5	**15**	<35	--	--	--	--
MW8-33		8021	**590**	**390**	**790**	**2,100**	<1,400	--	--	--	--
MW8-34		8021	<200	<200	<200	<600	<1,400	--	--	--	--
MW8-34.5		8021	**7,700**	**3,500**	**29,000**	**55,000**	<14,000	--	--	--	--
MW8-35.5		8021	**1,400**	**1,500**	**1,800**	**2,900**	<3,500	--	--	--	--
MW8-36		8021	<5	<5	<5	<15	<35	--	--	--	--
MW8-37		8021	**930**	**690**	**2,700**	**3,400**	<3,500	--	--	--	--
MW8-37.5		8021	<5	<5	<5	<15	<35	--	--	--	--
MW8-38.5		8021	**250**	<200	**750**	**1,000**	<1,400	--	--	--	--
MW8-39		8021	<5	<5	<5	<15	<35	--	--	--	--
MW8-39.5		8021	<12	<12	<12	<38	<88	--	--	--	--

Table 3 (Page 6 of 8)
Soil Sample Analytical Results for Volatile Organic Compounds
11427 Woodside Avenue, Santee, California

Sample Number	Date	Analytical Method	Benzene (µg/kg)	Toluene (µg/kg)	Ethylbenzene (µg/kg)	Total Xylenes (µg/kg)	MTBE (µg/kg)	DIPE (µg/kg)	TAME (µg/kg)	ETBE (µg/kg)	TBA (µg/kg)
MW-9-5	2/4/2008	8260	< 5.0	< 5.0	< 5.0	< 15.0	< 5.0	< 5.0	< 5.0	< 5.0	< 25
MW-9-10		8260	< 5.0	< 5.0	< 5.0	< 15.0	< 5.0	< 5.0	< 5.0	< 5.0	< 25
MW-9-15		8260	< 5.0	< 5.0	< 5.0	< 15.0	< 5.0	< 5.0	< 5.0	< 5.0	< 25
MW-9-20		8260	**76**	< 5.0	**56**	**64**	**22**	< 5.0	< 5.0	< 5.0	< 25
MW-9-25		8260	< 5.0	< 5.0	**21**	**70**	**7.4**	< 5.0	< 5.0	< 5.0	< 25
MW-9-30		8260	**900**	**1,700**	**320**	**1,720**	**120**	< 5.0	< 5.0	< 5.0	< 25
MW-9-35		8260	< 5.0	< 5.0	< 5.0	**15**	< 5.0	< 5.0	< 5.0	< 5.0	< 25
MW-9-39		8260	< 5.0	< 5.0	< 5.0	**11**	< 5.0	< 5.0	< 5.0	< 5.0	< 25
MW-10-5	2/4/2008	8260	< 5.0	< 5.0	< 5.0	< 15.0	< 5.0	< 5.0	< 5.0	< 5.0	< 25
MW-10-10		8260	< 5.0	< 5.0	< 5.0	< 15.0	< 5.0	< 5.0	< 5.0	< 5.0	< 25
MW-10-15		8260	< 5.0	< 5.0	< 5.0	< 15.0	< 5.0	< 5.0	< 5.0	< 5.0	< 25
MW-10-20		8260	< 5.0	< 5.0	< 5.0	< 15.0	< 5.0	< 5.0	< 5.0	< 5.0	< 25
MW-10-25		8260	< 5.0	< 5.0	< 5.0	< 15.0	< 5.0	< 5.0	< 5.0	< 5.0	< 25
MW-10-30		8260	< 5.0	< 5.0	< 5.0	< 15.0	**31**	< 5.0	< 5.0	< 5.0	< 25
MW-10-35		8260	< 5.0	< 5.0	< 5.0	< 15.0	**13**	< 5.0	< 5.0	< 5.0	< 25
MW-10-40		8260	< 5.0	< 5.0	< 5.0	< 15.0	**7.7**	< 5.0	< 5.0	< 5.0	< 25
MW-10-43		8260	< 5.0	< 5.0	< 5.0	< 15.0	< 5.0	< 5.0	< 5.0	< 5.0	< 25
MW-11-5	2/8/2008	8260	< 5.0	< 5.0	< 5.0	< 15.0	< 5.0	< 5.0	< 5.0	< 5.0	< 25
MW-11-10		8260	< 5.0	< 5.0	< 5.0	< 15.0	< 5.0	< 5.0	< 5.0	< 5.0	< 25
MW-11-15		8260	< 5.0	< 5.0	< 5.0	< 15.0	< 5.0	< 5.0	< 5.0	< 5.0	< 25
MW-11-20		8260	< 5.0	< 5.0	< 5.0	< 15.0	< 5.0	< 5.0	< 5.0	< 5.0	< 25
MW-11-25		8260	< 5.0	< 5.0	< 5.0	< 15.0	< 5.0	< 5.0	< 5.0	< 5.0	< 25
MW-11-30		8260	< 5.0	< 5.0	< 5.0	< 15.0	< 5.0	< 5.0	< 5.0	< 5.0	< 25
MW-11-35		8260	< 5.0	< 5.0	**14**	< 15.0	< 5.0	< 5.0	< 5.0	< 5.0	< 25
MW-11-38		8260	< 5.0	< 5.0	**9.3**	< 15.0	< 5.0	< 5.0	< 5.0	< 5.0	< 25
MW-12-5	2/8/2008	8260	< 5.0	< 5.0	< 5.0	< 15.0	< 5.0	< 5.0	< 5.0	< 5.0	< 25
MW-12-10		8260	< 5.0	< 5.0	< 5.0	< 15.0	< 5.0	< 5.0	< 5.0	< 5.0	< 25
MW-12-15		8260	< 5.0	< 5.0	A	< 15.0	< 5.0	< 5.0	< 5.0	< 5.0	< 25
MW-12-20		8260	< 5.0	< 5.0	< 5.0	< 15.0	< 5.0	< 5.0	< 5.0	< 5.0	< 25
MW-12-25		8260	< 5.0	< 5.0	< 5.0	< 15.0	< 5.0	< 5.0	< 5.0	< 5.0	< 25
MW-12-30		8260	< 5.0	< 5.0	< 5.0	< 15.0	< 5.0	< 5.0	< 5.0	< 5.0	< 25
MW-12-35		8260	< 5.0	< 5.0	< 5.0	< 15.0	**8.3**	< 5.0	< 5.0	< 5.0	< 25
MW-12-39		8260	< 5.0	< 5.0	< 5.0	< 15.0	< 5.0	< 5.0	< 5.0	< 5.0	< 25

Table 3 (Page 7 of 8)
Soil Sample Analytical Results for Volatile Organic Compounds
11427 Woodside Avenue, Santee, California

Sample Number	Date	Analytical Method	Benzene (µg/kg)	Toluene (µg/kg)	Ethylbenzene (µg/kg)	Total Xylenes (µg/kg)	MTBE (µg/kg)	DIPE (µg/kg)	TAME (µg/kg)	ETBE (µg/kg)	TBA (µg/kg)
MW-13-5	2/18/2008	8260	< 2.0	< 2.0	< 2.0	< 7.0	< 2.0	< 2.0	< 2.0	< 2.0	< 10
MW-13-10		8260	< 2.0	< 2.0	< 2.0	< 7.0	< 2.0	< 2.0	< 2.0	< 2.0	< 10
MW-13-15		8260	< 2.0	< 2.0	< 2.0	< 7.0	< 2.0	< 2.0	< 2.0	< 2.0	< 10
MW-13-20		8260	< 2.0	< 2.0	< 2.0	< 7.0	< 2.0	< 2.0	< 2.0	< 2.0	< 10
MW-13-25		8260	< 2.0	< 2.0	< 2.0	< 7.0	< 2.0	< 2.0	< 2.0	< 2.0	< 10
MW-13-30		8260	< 2.0	< 2.0	< 2.0	< 7.0	< 2.0	< 2.0	< 2.0	< 2.0	< 10
MW-13-35		8260	< 2.0	< 2.0	< 2.0	< 7.0	< 2.0	< 2.0	< 2.0	< 2.0	< 10
MW-13-40		8260	< 2.0	< 2.0	< 2.0	< 7.0	< 2.0	< 2.0	< 2.0	< 2.0	< 10
MW-13-45		8260	< 2.0	< 2.0	< 2.0	< 7.0	< 2.0	< 2.0	< 2.0	< 2.0	< 10
MW-13-50		8260	< 2.0	< 2.0	< 2.0	< 7.0	< 2.0	< 2.0	< 2.0	< 2.0	< 10
MW-14-5	2/18/2008	8260	< 2.0	< 2.0	< 2.0	< 7.0	< 2.0	< 2.0	< 2.0	< 2.0	< 10
MW-14-10		8260	< 2.0	< 2.0	< 2.0	< 7.0	< 2.0	< 2.0	< 2.0	< 2.0	< 10
MW-14-15		8260	< 2.0	< 2.0	< 2.0	< 7.0	< 2.0	< 2.0	< 2.0	< 2.0	< 10
MW-14-20		8260	< 2.0	< 2.0	< 2.0	< 7.0	< 2.0	< 2.0	< 2.0	< 2.0	< 10
MW-14-25		8260	< 2.0	< 2.0	< 2.0	< 7.0	< 2.0	< 2.0	< 2.0	< 2.0	< 10
MW-14-30		8260	**31.7**	< 2.0	**61.9**	**5.35**	**22.5**	< 2.0	< 2.0	< 2.0	< 10
MW-14-35		8260	**100**	< 2.0	**143**	**5.32**	**71.2**	< 2.0	< 2.0	< 2.0	< 10
MW-14-40		8260	< 2.0	< 2.0	< 2.0	< 7.0	< 2.0	< 2.0	< 2.0	< 2.0	< 10
MW-15-5	2/19/2008	8260	< 2.0	< 2.0	< 2.0	< 7.0	< 2.0	< 2.0	< 2.0	< 2.0	< 10
MW-15-10		8260	< 2.0	< 2.0	< 2.0	< 7.0	< 2.0	< 2.0	< 2.0	< 2.0	< 10
MW-15-15		8260	< 2.0	< 2.0	< 2.0	< 7.0	< 2.0	< 2.0	< 2.0	< 2.0	< 10
MW-15-20		8260	< 2.0	< 2.0	< 2.0	< 7.0	< 2.0	< 2.0	< 2.0	< 2.0	< 10
MW-15-25		8260	< 2.0	< 2.0	< 2.0	< 7.0	< 2.0	< 2.0	< 2.0	< 2.0	< 10
MW-15-30		8260	< 2.0	< 2.0	**2.38**	< 7.0	< 2.0	< 2.0	< 2.0	< 2.0	< 10
MW-15-35		8260	< 2.0	< 2.0	< 2.0	< 7.0	< 2.0	< 2.0	< 2.0	< 2.0	< 10
MW-15-40		8260	< 2.0	< 2.0	**2.58**	< 7.0	< 2.0	< 2.0	< 2.0	< 2.0	< 10
MW-16-5	2/19/2008	8260	< 2.0	< 2.0	< 2.0	< 7.0	< 2.0	< 2.0	< 2.0	< 2.0	< 10
MW-16-10		8260	< 2.0	< 2.0	< 2.0	< 7.0	< 2.0	< 2.0	< 2.0	< 2.0	< 10
MW-16-15		8260	< 2.0	< 2.0	< 2.0	< 7.0	< 2.0	< 2.0	< 2.0	< 2.0	< 10
MW-16-20		8260	< 2.0	< 2.0	< 2.0	< 7.0	< 2.0	< 2.0	< 2.0	< 2.0	< 10
MW-16-25		8260	< 2.0	< 2.0	< 2.0	< 7.0	< 2.0	< 2.0	< 2.0	< 2.0	< 10
MW-16-30		8260	< 2.0	< 2.0	< 2.0	< 7.0	< 2.0	< 2.0	< 2.0	< 2.0	< 10
MW-16-35		8260	< 2.0	< 2.0	< 2.0	< 7.0	**3.02**	< 2.0	< 2.0	< 2.0	< 10
MW-16-40		8260	< 2.0	< 2.0	**2.70**	< 7.0	< 2.0	< 2.0	< 2.0	< 2.0	< 10

Table 3 (Page 8 of 8)
Soil Sample Analytical Results for Volatile Organic Compounds
11427 Woodside Avenue, Santee, California

Sample Number	Date	Analytical Method	Benzene (µg/kg)	Toluene (µg/kg)	Ethylbenzene (µg/kg)	Total Xylenes (µg/kg)	MTBE (µg/kg)	DIPE (µg/kg)	TAME (µg/kg)	ETBE (µg/kg)	TBA (µg/kg)
MW-17-5	2/19/2008	8260	< 2.0	< 2.0	< 2.0	< 7.0	< 2.0	< 2.0	< 2.0	< 2.0	< 10
MW-17-10		8260	< 2.0	< 2.0	< 2.0	< 7.0	< 2.0	< 2.0	< 2.0	< 2.0	< 10
MW-17-15		8260	< 2.0	< 2.0	< 2.0	< 7.0	< 2.0	< 2.0	< 2.0	< 2.0	< 10
MW-17-20		8260	< 2.0	< 2.0	< 2.0	< 7.0	< 2.0	< 2.0	< 2.0	< 2.0	< 10
MW-17-25		8260	< 2.0	< 2.0	< 2.0	< 7.0	< 2.0	< 2.0	< 2.0	< 2.0	< 10
MW-17-30		8260	< 2.0	< 2.0	< 2.0	< 7.0	< 2.0	< 2.0	< 2.0	< 2.0	< 10
MW-17-35		8260	< 2.0	< 2.0	< 2.0	< 7.0	< 2.0	< 2.0	< 2.0	< 2.0	< 10
MW-17-38		8260	< 2.0	< 2.0	< 2.0	< 7.0	< 2.0	< 2.0	< 2.0	< 2.0	< 10
MW-17-45		8260	< 2.0	< 2.0	< 2.0	< 7.0	< 2.0	< 2.0	< 2.0	< 2.0	< 10
MW-18-28.5'	3/23/2011	8260	< 5.0	< 5.0	< 5.0	< 15	< 5.0	< 5.0	< 5.0	< 5.0	< 25
MW-19-35'	3/23/2011	8260	**280**	**4,000**	**21,000**	**96,000**	< 200	< 200	< 200	< 200	< 1,000

Notes:

Samples dated March 2011 (MW-18 and MW-19) were collected by SCS Engineers.

Samples dated February 2008 were collected by Petra Geotechnical, Inc.

Samples dated April 1988 to December 2002 were collected by EnecoTech, Inc.

Concentrations reported in micrograms per kilogram (µg/kg).

Soil samples analyzed for benzene, toluene, ethylbenzene, and xylenes (BTEX), and methyl tertiary butyl ether (MTBE), di-isopropyl ether (DIPE), ethyl tertiary butyl ether

< indicates the reported concentration was not above the laboratory reporting limit for the relevant analytical method.

Bold font indicates concentration above the laboratory reporting limit.

-- indicates sample was not analyzed for the relavant analyte

NA indicates that soil sample results were not available and were likely not collected for wells MW-1 to MW-3

* SCS was unable to obtain location information for this sample; therefore, the data is not included in figures.

Table 4
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Groundwater Analytical Data for TPH and VOCs
11427 Woodside Avenue, Santee, California

Well Number	Sample Date	TPH	TPHg (µg/L)	TPHd (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Xylenes (µg/L)	MTBE (µg/L)	ETBE (µg/L)	TAME (µg/L)	TBA (µg/L)	DIPE (µg/L)
MW-1 (installed 5/11/88)	05/25/88	0.6	NA	NA	**0.7**	< 0.5	NA	< 0.5	NA	NA	NA	NA	NA
	03/10/98	NA	**2,500**	**910**	**340**	**200**	**18**	**240**	**190**	NA	NA	NA	NA
	05/18/98	NA	**704**	< 500	**326**	**89.5**	< 50.0	< 100	< 50.0	NA	NA	NA	NA
	04/05/00	NA	**1,800**	NA	**250**	**14**	**34**	**380**	**200**	NA	NA	NA	NA
	04/26/02	NA	**1,100**	**1,100**	**230**	**14**	**36**	**220**	**190**	< 40	< 40	**500**	< 40
	12/03/02	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	10/25/07	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	01/17/08	PSH	PSH	PSH	PSH	PSH	PSH	PSH	PSH	PSH	PSH	PSH	PSH
	04/18/08	NA	**2,800**	**980**	**370**	**6.6**	**170**	**227.8**	**610**	NA	NA	NA	NA
	07/28/08	NA	**420**	< 500	**57**	< 0.5	**19.0**	**15**	**55**	NA	NA	NA	NA
	12/29/08	NA	**440**	**720**	**57**	< 1.0	**30**	**26**	< 2.0	< 2.0	< 2.0	**27**	< 2.0
	06/18/09	NA	< 500	< 500	**210**	**1.0**	**38**	**17.7**	**220**	< 1.0	< 1.0	**140**	< 1.0
	11/17/09	NA	< 500	< 500	**4.4**	**0.6**	**2.5**	**1.1**	**1.7**	< 1.0	< 1.0	< 5.0	< 1.0
	04/20/10	NA	< 500	< 500	**42**	<0.5	**3.7**	**1.1**	**81**	< 1.0	< 1.0	**49**	< 1.0
	12/20/10	NA	< 500	< 500	**66**	<0.5	**35**	**4.6**	**34**	< 1.0	< 1.0	**15**	< 1.0
	04/04/11	NA	< 500	< 500	**78**	**1.3**	**9.8**	**10.4**	**52**	< 1.0	< 1.0	**40**	< 1.0
MW-2 (installed 5/12/88)	05/25/88	< 0.5	NA	NA	< 0.5	< 0.5	NA	< 0.5	NA	NA	NA	NA	NA
	03/10/98	NA	**330**	< 500	**20**	**3.3**	**25**	**47**	**53**	NA	NA	NA	NA
	04/04/00	NA	**7,600**	NA	**7.6**	**3.3**	**30**	**59**	**3,500**	NA	NA	NA	NA
	04/26/02	NA	**6,000**	**160,000**	**9.2**	**3.9**	**16**	**17**	**3,100**	< 40	< 40	**500**	< 40
	12/03/02	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	10/25/07	PSH	PSH	PSH	PSH	PSH	PSH	PSH	PSH	PSH	PSH	PSH	PSH
	01/17/08	PSH	PSH	PSH	PSH	PSH	PSH	PSH	PSH	PSH	PSH	PSH	PSH
	04/18/08	NA	**510**	**6,400**	< 10	< 10	< 10	< 30	**1,300**	NA	NA	NA	NA
	07/28/08	PSH	PSH	PSH	PSH	PSH	PSH	PSH	PSH	PSH	PSH	PSH	PSH
	12/30/08	NA	**440**	**22,000**	< 2.5	< 2.5	**4.0**	< 10	< 5.0	< 5.0	< 5.0	**2,100**	< 5.0
	06/19/09	NA	< 500	< 500	< 0.5	< 0.5	**4.9**	< 1.5	**8.3**	< 1.0	< 1.0	**2,000**	< 1.0
	11/18/09	NA	**2,300**	< 500	**1.0**	**0.7**	**3.4**	< 1.5	**1.9**	< 1.0	< 1.0	**1,100**	< 1.0
	04/21/10	NA	< 500	**7,400**	< 0.5	< 0.5	**3.7**	< 1.5	**20**	< 1.0	< 1.0	**170**	< 1.0
	12/20/10	PSH	PSH	PSH	PSH	PSH	PSH	PSH	PSH	PSH	PSH	PSH	PSH
	04/06/11	NA	< 500	**2,600**	< 0.5	< 0.5	< 0.5	< 1.5	**13**	< 1.0	< 1.0	**490**	< 1.0
MW-3 (installed 5/13/88)	05/25/88	**140**	NA	NA	**19**	**3.4**	NA	**1.3**	NA	NA	NA	NA	NA
	03/10/98	NA	**2,300**	**5,100**	**3.6**	**0.7**	**0.7**	**4.1**	**2,000**	NA	NA	NA	NA
	05/18/98	NA	**115**	< 500	**98.5**	< 12.5	< 12.5	< 25.0	**226**	NA	NA	NA	NA
	04/05/00	NA	**420**	NA	**18**	**1.7**	**3.9**	**12**	**230**	NA	NA	NA	NA
	04/26/02	NA	**9,700**	**190,000**	**92**	< 3.0	**56**	**62**	**590**	< 100	< 100	< 1,200	< 100
	12/03/02	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	10/25/07	PSH	PSH	PSH	PSH	PSH	PSH	PSH	PSH	PSH	PSH	PSH	PSH
	01/17/08	PSH	PSH	PSH	PSH	PSH	PSH	PSH	PSH	PSH	PSH	PSH	PSH
	04/18/08	NA	< 500	**1,800**	**2.8**	< 1.0	< 1.0	< 3.0	**99**	NA	NA	NA	NA
	07/28/08	PSH	PSH	PSH	PSH	PSH	PSH	PSH	PSH	PSH	PSH	PSH	PSH
	12/30/08	NA	**230**	**3,200**	**1.7**	< 0.5	**0.61**	< 2.0	**110**	< 1.0	< 1.0	**59**	< 1.0
	06/19/09	NA	< 500	< 500	**0.5**	< 0.5	< 0.5	< 1.5	**77**	< 1.0	< 1.0	**400**	< 1.0
	11/17/09	PSH	PSH	PSH	PSH	PSH	PSH	PSH	PSH	PSH	PSH	PSH	PSH
	04/21/10	NA	< 500	**5,900**	**1.3**	< 0.5	**1.2**	< 1.5	**90**	< 1.0	< 1.0	**43**	< 1.0
	12/20/10	PSH	PSH	PSH	PSH	PSH	PSH	PSH	PSH	PSH	PSH	PSH	PSH
	04/06/11	NA	< 500	< 500	< 0.5	< 0.5	< 0.5	< 1.5	**96**	< 1.0	< 1.0	**9.5**	< 1.0

Table 4
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Groundwater Analytical Data for TPH and VOCs
11427 Woodside Avenue, Santee, California

Well Number	Sample Date	TPH	TPHg (µg/L)	TPHd (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Xylenes (µg/L)	MTBE (µg/L)	ETBE (µg/L)	TAME (µg/L)	TBA (µg/L)	DIPE (µg/L)
MW-4 (installed 5/13/88)	05/25/88	**6.3**	NA	NA	< 0.5	< 0.5	NA	< 0.5	NA	NA	NA	NA	NA
	03/10/98	NA	**9,600**	**3,700**	**2,400**	250	**50**	430	**4,100**	NA	NA	NA	NA
	04/04/00	NA	**8,700**	NA	**1,800**	< 12	**110**	**790**	**900**	NA	NA	NA	NA
	04/26/02	NA	**15,000**	**95,000**	**4,500**	**150**	**450**	**1,900**	**1,500**	< 100	< 100	< 1,200	< 100
	12/03/02	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	10/25/07	PSH	PSH	PSH	PSH	PSH	PSH	PSH	PSH	PSH	PSH	PSH	PSH
	01/17/08	PSH	PSH	PSH	PSH	PSH	PSH	PSH	PSH	PSH	PSH	PSH	PSH
	04/18/08	NA	**2,000**	**4,500**	**380**	**2.9**	**95**	**41.0**	**110.0**	NA	NA	NA	NA
	07/28/08	NA	**2,100**	**1,300**	**410**	< 2.5	**72.0**	< 10	**70**	NA	NA	NA	NA
	12/30/08	NA	**4,900**	**3,400**	**88**	< 10	**20**	**53**	< 20	< 20	< 20	< 200	< 20
	06/18/09	NA	< 500	< 500	**370**	**2.0**	**58**	**11.6**	**89**	< 1.0	< 1.0	**24**	< 1.0
	11/18/09	NA	**3,300**	**2,600**	**460**	**11**	**130**	**70.4**	**140**	< 1.0	< 1.0	< 5.0	< 1.0
	04/21/10	NA	< 500	< 500	**34**	**0.5**	**4.7**	**1.0**	**33**	< 1.0	< 1.0	< 5.0	< 1.0
	12/23/10	NA	< 500	< 500	**51**	**1.2**	**20**	**4.7**	**57**	< 1.0	< 1.0	< 5.0	< 1.0
	04/05/11	NA	< 500	**860**	**43**	**2.7**	**11**	**8.3**	**29**	< 1.0	< 1.0	< 5.0	< 1.0
MW-5 (instalation unknown)	03/10/98	NA	**730**	**1,700**	**20**	**0.6**	< 0.30	**39**	**92**	NA	NA	NA	NA
	04/26/02	NA	**500**	**2,000**	**7.3**	**1.7**	**2.8**	**6.8**	**230**	NA	NA	NA	NA
	12/03/02	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	10/25/07	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	01/17/08	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	04/18/08	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	07/28/08	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	12/30/08	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	Well Destroyed												
MW-6 (installed 2/26/01)	04/26/02	NA	**25,000**	**9,100**	**5,300**	**1,400**	**1,200**	**5,900**	**850**	NA	NA	NA	NA
	12/03/02	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	10/25/07	NA	**570**	< 500	**21**	**0.7**	**48**	**14**	**17**	NA	NA	NA	NA
	01/17/08	NA	**1,400**	< 500	**9.6**	**0.6**	**4.8**	**8.5**	**3.5**	NA	NA	NA	NA
	04/18/08	NA	**2,000**	**750**	**500**	< 20	**210**	**150**	**180**	NA	NA	NA	NA
	07/28/08	NA	**6,900**	**980**	**720**	**7.6**	**410**	**540**	**98**	NA	NA	NA	NA
	12/30/08	NA	**950**	**650**	**55**	< 1.0	**34**	**30**	< 2.0	< 2.0	< 2.0	< 20	< 2.0
	06/19/09	NA	< 500	< 500	**350**	**3.1**	**250**	**182.3**	**54**	< 1.0	< 1.0	**22**	< 1.0
	11/18/09	NA	< 500	< 500	**90**	**2.0**	**75**	**73.0**	**25**	< 1.0	< 1.0	< 5.0	< 1.0
	04/21/10	NA	**1,300**	**1,500**	**750**	**4.1**	**320**	**29.7**	**110**	< 1.0	< 1.0	< 5.0	< 1.0
	12/20/10	NA	< 500	< 500	**110**	< 1.0	**16**	**5.0**	**12**	< 1.0	< 1.0	< 5.0	< 1.0
	04/05/11	NA	**1,200**	**6,800**	**990**	**5.7**	**550**	**28.8**	**160**	< 1.0	< 1.0	< 5.0	< 1.0

Table 4
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Groundwater Analytical Data for TPH and VOCs
11427 Woodside Avenue, Santee, California

Well Number	Sample Date	TPH	TPHg (µg/L)	TPHd (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Xylenes (µg/L)	MTBE (µg/L)	ETBE (µg/L)	TAME (µg/L)	TBA (µg/L)	DIPE (µg/L)
MW-7 (installed 2/26/01)	04/26/02	NA	**1,900**	**13,000**	**3.7**	**1.1**	**4**	**7.9**	**19**	NA	NA	NA	NA
	12/03/02	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	10/25/07	NA	< 500	< 500	< 0.5	< 0.5	< 0.5	< 1.5	< 1.0	NA	NA	NA	NA
	01/17/08	NA	< 500	< 500	< 0.5	< 0.5	< 0.5	< 1.5	< 1.0	NA	NA	NA	NA
	04/21/08	NA	< 500	< 500	< 0.5	< 0.5	< 0.5	< 1.5	< 1.0	NA	NA	NA	NA
	07/29/08	NA	< 50	< 500	< 0.5	< 0.5	< 0.5	< 1.5	< 1.0	NA	NA	NA	NA
	12/30/08	NA	< 50	< 500	< 1.0	< 1.0	< 1.0	< 3.0	< 2.0	< 2.0	< 2.0	< 20	< 2.0
	06/18/09	NA	< 500	< 500	< 0.5	< 0.5	< 0.5	< 1.5	< 1.0	< 1.0	< 1.0	**15**	< 1.0
	11/17/09	NA	< 500	< 500	< 0.5	< 0.5	< 0.5	< 1.5	< 1.0	< 1.0	< 1.0	**8.7**	< 1.0
	04/20/10	NA	< 500	< 500	< 0.5	< 0.5	< 0.5	< 1.5	< 1.0	< 1.0	< 1.0	< 5.0	< 1.0
	12/21/10	NA	< 500	< 500	< 0.5	< 0.5	< 0.5	< 1.5	< 1.0	< 1.0	< 1.0	< 5.0	< 1.0
	04/05/11	NA	< 500	< 500	**0.8**	< 0.5	**0.6**	**2.8**	< 1.0	< 1.0	< 1.0	< 5.0	< 1.0
MW-8 (installed 4/19/02)	04/26/02	NA	**4,800**	**6,500**	**50**	**9.2**	**170**	**210**	**64**	NA	NA	NA	NA
	12/03/02	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	10/26/07	NA	**1,100**	**790**	< 0.5	< 0.5	**23**	< 0.5	< 1.0	NA	NA	NA	NA
	01/17/08	NA	**1,100**	**570**	< 0.5	< 0.5	**27**	< 1.5	< 1.0	NA	NA	NA	NA
	04/21/08	NA	**980**	**1,200**	< 0.5	< 0.5	**23**	< 1.5	< 1.0	NA	NA	NA	NA
	07/29/08	NA	**660**	**2,100**	< 0.5	< 0.5	**15**	< 2.0	< 1.0	NA	NA	NA	NA
	12/30/08	NA	**890**	**3,000**	< 1.0	< 1.0	**16**	< 4.0	< 2.0	< 2.0	< 2.0	< 20	< 2.0
	06/18/09	NA	< 500	< 500	< 0.5	< 0.5	**13**	< 1.5	< 1.0	< 1.0	< 1.0	**13**	< 1.0
	11/17/09	NA	< 500	< 500	< 0.5	**0.7**	**10**	< 1.5	< 1.0	< 1.0	< 1.0	< 5.0	< 1.0
	04/20/10	NA	< 500	< 500	< 0.5	< 0.5	**6.1**	< 1.5	< 1.0	< 1.0	< 1.0	< 5.0	< 1.0
	12/23/10	NA	< 500	< 500	< 0.5	< 0.5	**1.9**	< 1.5	< 1.0	< 1.0	< 1.0	< 5.0	< 1.0
	04/05/11	NA	< 500	< 500	< 0.5	< 0.5	**5.1**	< 1.5	< 1.0	< 1.0	< 1.0	< 5.0	< 1.0
MW-9 (installed 2/4/08)	04/18/08	NA	**1,700**	**560**	**740**	**250**	**270**	**1,010**	**170**	NA	NA	NA	NA
	07/28/08	NA	**1,100**	**570**	**230**	**27**	**27**	**65**	**74**	NA	NA	NA	NA
	12/30/08	NA	**1,300**	< 500	**140**	**10**	**71**	**200**	**21**	< 5.0	< 5.0	< 50	< 5.0
	06/19/09	NA	< 500	< 500	**50**	**6.1**	**34**	**49.3**	**55**	< 1.0	< 1.0	**34**	< 1.0
	11/18/09	NA	< 500	< 500	**62**	**8.9**	**51**	**89**	**67**	< 1.0	< 1.0	< 5.0	< 1.0
	04/21/10	NA	< 500	< 500	**170**	**28**	**86**	**164**	**64**	< 1.0	< 1.0	< 5.0	< 1.0
	12/20/10	NA	< 500	< 500	**18**	**2.9**	**22**	**31.3**	**40**	< 1.0	< 1.0	< 5.0	< 1.0
	04/04/11	NA	**1,300**	**500**	**74**	**31**	**84**	**146**	**43**	< 1.0	< 1.0	< 5.0	< 1.0
MW-10 (installed 2/5/08)	04/18/08	NA	< 500	< 500	< 0.5	< 0.5	< 0.5	< 1.5	**4.2**	NA	NA	NA	NA
	07/29/08	NA	< 50	< 500	< 0.5	< 0.5	< 0.5	< 2.0	**1.0**	NA	NA	NA	NA
	12/30/08	NA	< 50	< 500	< 0.5	< 0.5	< 0.5	< 2.0	< 1.0	< 1.0	< 1.0	< 10	< 1.0
	06/18/09	NA	< 500	< 500	< 0.5	< 0.5	< 0.5	< 1.5	**1.8**	< 1.0	< 1.0	**20**	< 1.0
	11/17/09	NA	< 500	< 500	< 0.5	**0.5**	< 0.5	< 1.5	**6.3**	< 1.0	< 1.0	**6.3**	< 1.0
	04/20/10	NA	< 500	< 500	< 0.5	< 0.5	< 0.5	< 1.5	**2.0**	< 1.0	< 1.0	< 5.0	< 1.0
	12/20/10	NA	< 500	< 500	< 0.5	< 0.5	< 0.5	< 1.5	**1.4**	< 1.0	< 1.0	< 5.0	< 1.0
	04/05/11	NA	< 500	< 500	< 0.5	< 0.5	< 0.5	< 1.5	< 1.0	< 1.0	< 1.0	< 5.0	< 1.0

Table 4
(Page 4 of 5)
Groundwater Analytical Data for TPH and VOCs
11427 Woodside Avenue, Santee, California

Well Number	Sample Date	TPH	TPHg (µg/L)	TPHd (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Xylenes (µg/L)	MTBE (µg/L)	ETBE (µg/L)	TAME (µg/L)	TBA (µg/L)	DIPE (µg/L)
MW-11 (installed 2/8/08)	04/18/08	NA	**1,800**	< 500	**22**	< 1.0	**170**	< 3.0	< 2.0	NA	NA	NA	NA
	07/29/08	NA	**690**	**720**	**4.2**	**0.81**	**39**	< 2.0	< 1.0	NA	NA	NA	NA
	12/31/08	NA	**2,000**	**1,600**	**52**	**6.8**	**230**	**11**	< 5.0	< 5.0	< 5.0	< 50	< 5.0
	06/18/09	NA	< 500	< 500	**5.9**	**0.6**	**19**	< 1.5	**1.6**	< 1.0	< 1.0	**12**	< 1.0
	11/17/09	NA	**900**	< 500	**6.5**	**1.5**	**5.5**	**1.2**	**2.3**	< 1.0	< 1.0	< 5.0	< 1.0
	04/20/10	NA	< 500	< 500	**3.1**	< 0.5	**0.7**	< 1.5	**1.0**	< 1.0	< 1.0	< 5.0	< 1.0
	12/21/10	NA	< 500	< 500	**28**	**4.1**	**22**	**9.6**	**1.6**	< 1.0	< 1.0	< 5.0	< 1.0
	04/04/11	NA	< 500	**600**	**9.3**	**0.7**	**5.7**	< 1.5	**1.7**	< 1.0	< 1.0	< 5.0	< 1.0
MW-12 (installed 2/8/08)	04/18/08	NA	< 500	< 500	< 1.0	< 1.0	**2.0**	< 3.0	**65**	NA	NA	NA	NA
	07/29/08	NA	< 50	< 500	< 0.5	< 0.5	< 0.5	< 2.0	**11**	NA	NA	NA	NA
	12/31/08	NA	< 50	< 500	< 0.5	< 0.5	< 0.5	< 2.0	**16**	< 1.0	< 1.0	< 10	< 1.0
	06/18/09	NA	< 500	< 500	< 0.5	< 0.5	< 0.5	< 1.5	**14**	< 1.0	< 1.0	**32**	< 1.0
	11/17/09	NA	< 500	< 500	< 0.5	< 0.5	< 0.5	< 1.5	**2.5**	< 1.0	< 1.0	< 5.0	< 1.0
	04/20/10	NA	< 500	< 500	**2.7**	< 0.5	< 0.5	< 1.5	**4.6**	< 1.0	< 1.0	< 5.0	< 1.0
	12/23/10	NA	< 500	< 500	**12**	**0.6**	**0.7**	**3.6**	**4.1**	< 1.0	< 1.0	< 5.0	< 1.0
	04/04/11	NA	< 500	< 500	< 0.5	< 0.5	< 0.5	< 1.5	**3.2**	< 1.0	< 1.0	< 5.0	< 1.0
MW-13 (installed 2/18/08)	04/21/08	NA	< 500	< 500	< 0.5	< 0.5	< 0.5	< 2.0	< 1.0	NA	NA	NA	NA
	07/30/08	NA	< 50	< 500	< 0.5	< 0.5	< 0.5	< 2.0	< 1.0	NA	NA	NA	NA
	12/30/08	NA	< 50	< 500	< 0.5	< 0.5	< 0.5	< 2.0	< 1.0	< 1.0	< 1.0	< 10	< 1.0
	06/18/09	NA	< 500	< 500	< 0.5	< 0.5	< 0.5	< 1.5	< 1.0	< 1.0	< 1.0	**11**	< 1.0
	11/17/09	NA	< 500	< 500	< 0.5	**0.6**	< 0.5	< 1.5	< 1.0	< 1.0	< 1.0	< 5.0	< 1.0
	04/20/10	NA	< 500	< 500	< 0.5	< 0.5	< 0.5	< 1.5	< 1.0	< 1.0	< 1.0	< 5.0	< 1.0
	12/23/10	NA	< 500	< 500	< 0.5	< 0.5	< 0.5	< 1.5	< 1.0	< 1.0	< 1.0	< 5.0	< 1.0
	04/05/11	NA	< 500	< 500	< 0.5	< 0.5	**1.0**	< 1.5	< 1.0	< 1.0	< 1.0	< 5.0	< 1.0
MW-14 (installed 2/18/08)	04/21/08	NA	**27,000**	**3,800**	**5,300**	**290**	**2,400**	**6,460**	**650**	NA	NA	NA	NA
	07/30/08	NA	**25,000**	**12,000**	**6,600**	**170**	**2,400**	**3,700**	**270**	NA	NA	NA	NA
	12/31/08	NA	**18,000**	**1,000**	**3,700**	< 50	**1,500**	**2,000**	**570**	< 100	< 100	< 1,000	< 100
	06/19/09	NA	< 500	< 500	**3,600**	**160**	**1,900**	**2,990**	**540**	< 20	< 20	**110**	< 20
	11/18/09	NA	**6,900**	< 500	**1,600**	**54**	**1,000**	**944**	**510**	< 1.0	< 1.0	< 5.0	< 1.0
	04/20/10	NA	**3,700**	< 500	**2,600**	**210**	**1,700**	**3,650**	**670**	< 20	< 20	< 100	< 20
	12/20/10	NA	**5,500**	**2,300**	**1,900**	**98**	**1,400**	**2,180**	**670**	< 40	< 40	< 200	< 40
	04/05/11	NA	**14,000**	**2,900**	**2,400**	**110**	**1,500**	**2,759**	**770**	< 40	< 40	< 200	< 40
MW-15 (installed 2/19/08)	04/21/08	NA	**32,000**	**3,500**	**2,400**	**510**	**4,100**	**13,380**	< 200	NA	NA	NA	NA
	07/30/08	NA	**46,000**	**17,000**	**2,100**	**250**	**3,700**	**10,000**	< 50	NA	NA	NA	NA
	12/31/08	NA	**8,400**	**2,100**	**620**	**12**	**1,500**	**160**	< 20	< 20	< 20	< 200	< 20
	06/19/09	NA	< 500	< 500	**820**	**250**	**2,800**	**6,930**	**35**	< 20	< 20	< 100	< 20
	11/18/09	NA	**19,000**	< 500	**910**	**77**	**3,700**	**4,308.9**	**19**	< 10	< 10	< 50	< 10
	04/20/10	NA	**1,800**	**1,500**	**1,100**	**130**	**3,700**	**10,090**	< 100	< 100	< 100	< 500	< 100
	12/21/10	NA	**7,100**	**4,800**	**800**	**63**	**2,600**	**2,800**	< 100	< 100	< 100	< 500	< 100
	04/05/11	NA	**21,000**	**8,400**	**990**	**120**	**3,000**	**7,180**	< 100	< 100	< 100	< 500	< 100

Table 4
(Page 5 of 5)
Groundwater Analytical Data for TPH and VOCs
11427 Woodside Avenue, Santee, California

Well Number	Sample Date	TPH	TPHg (µg/L)	TPHd (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Xylenes (µg/L)	MTBE (µg/L)	ETBE (µg/L)	TAME (µg/L)	TBA (µg/L)	DIPE (µg/L)
MW-16 (installed 2/16/08)	04/21/08	NA	< 500	< 500	**53**	< 2.5	**77**	< 7.5	**110**	NA	NA	NA	NA
	07/30/08	NA	**1,300**	**780**	**110**	**1.7**	**210**	< 4.0	**160**	NA	NA	NA	NA
	12/31/08	NA	**2,500**	**790**	**470**	**6**	**390**	< 20	< 10	< 10	< 10	< 100	< 10
	06/19/09	NA	< 500	< 500	**120**	**16**	**220**	**33**	**100**	< 20	< 20	**170**	< 20
	11/18/09	NA	**570**	< 500	**110**	**2.5**	**65**	**10.5**	**73**	< 1.0	< 1.0	< 5.0	< 1.0
	04/20/10	NA	< 500	< 500	< 10	< 10	< 10	< 30	**33**	< 20	< 20	< 100	< 20
	12/21/10	NA	< 500	< 500	**3.9**	< 1.0	< 1.0	< 1.5	**16**	< 1.0	< 1.0	< 5.0	< 1.0
	04/04/11	NA	< 500	**570**	**11**	**0.7**	**60**	< 1.5	**26**	< 1.0	< 1.0	< 5.0	< 1.0
MW-17 (installed 2/19/08)	04/21/08	NA	**990**	**3,100**	< 0.5	< 0.5	< 0.5	< 1.5	< 1.0	NA	NA	NA	NA
	07/30/08	NA	**780**	**11,000**	< 5.0	< 5.0	< 5.0	< 1.5	< 1.0	NA	NA	NA	NA
	12/30/08	NA	**520**	**55,000**	< 5.0	< 5.0	< 5.0	< 20	< 10	< 10	< 10	< 100	< 10
	06/19/09	NA	**1,600**	**730**	< 0.5	**0.7**	< 0.5	< 1.5	**2.4**	< 1.0	< 1.0	**15**	< 1.0
	11/17/09	NA	**550**	< 500	**0.5**	< 0.5	**1.9**	**2.4**	< 1.0	< 1.0	< 1.0	< 5.0	< 1.0
	04/20/10	NA	< 500	< 500	**0.6**	< 0.5	< 0.5	< 1.5	**29**	< 1.0	< 1.0	**35**	< 1.0
	12/20/10	NA	< 500	< 500	< 0.5	< 0.5	< 0.5	< 1.5	**2.9**	< 1.0	< 1.0	< 5.0	< 1.0
	04/05/11	NA	< 500	< 500	< 0.5	< 0.5	< 0.5	< 1.5	**1.9**	< 1.0	< 1.0	< 5.0	< 1.0
MW-18 (installed 3/23/11)	04/04/11	NA	**530**	< 500	**0.5**	< 0.5	**0.5**	< 1.5	< 1.0	< 1.0	< 1.0	< 5.0	< 1.0
MW-19 (installed 3/23/11)	04/04/11	NA	**55,000**	**6,100**	**640**	**2,600**	**4,100**	**17,200**	< 100	< 100	< 100	< 500	< 100

Notes:

Groundwater samples collected by SCS Engineers from June 2009 through 2011.

Groundwater samples collected by Petra Geotechnical, Inc. from October 25, 2007 to December 31, 2008.

Groundwater samples collected by EnecoTech Southwest, Inc. from May 25, 1988 to December 3, 2002.

Results presented in micrograms per liter (µg/L).

Samples were analyzed for gasoline-range (TPHg), and diesel-range (TPHd) total petroleum hydrocarbons in general accordance with CA DHS LUFT Method; and benzene, toluene, ethylbenzene, and xylenes (BTEX), methyl tertiary butyl ether (MTBE), di-isopropyl ether (DIPE), ethyl-t-butyl ether (ETBE), tert-amyl methyl ether (TAME), and t-butanol (TBA) in general accordance with EPA Method 8260B.

< indicates not reported at a concentration above laboratory detection limit, and bold font indicates concentrations above the laboratory reporting limit.

NS indicates well not sampled.

NA indicates not analyzed for particular constituent-of-concern.

* indicates samples were analyzed by EPA Method 418.1 for total extractable hydrocarbons.

PSH = phase-separated hydrocarbons

APPENDICES

APPENDIX A
BORING LOGS

DEPTH, FT.	SAMPLES	OVA READINGS	LITHOLOGIC DESCRIPTION — MW-01
			0-30.0 SILTY SAND GRADING TO SAND; Brown, moist to wet, silty, very fine sand with < trace clay.
5			
			@ 9.0' Grades to a fine to medium sand with a trace coarse sand.
10			
			@ 13.0 Grades to a fine to medium sand with some coarse to very coarse sand.
15			
20			
			@ 25.0-26.0' Grey brown, moist, sandy (very fine) silty clay lense.
25			
			▽ 28.73' (05/25/88)
30			30.0-46.0 SILTY SANDY CLAY; Brown to grey brown, saturated, silty, sandy clay.
40			
			@ 44.0' Scattered gravels to 1" diameter.
45			Total Depth = 46.0'

PROJECT NAME
Buy Wright Oil

PROJECT NUMBER
185-001

GROUND SURFACE ELEVATION

DATE STARTED
5-11-88

DATE COMPLETED
5-11-88

FIELD ENGINEER
Rick Graff

DRILLERS
Morrison - G. Maxwell

DRILLING METHOD
Hollow Stem Auger

DRILL RIG
Ingersoll-Rand TH-10

EXPLORATORY HOLE LOCATION

ENECOTECH
San Diego, California

BUY WRIGHT OIL

PROJECT 11427 WOODSIDE
SAN TEE, CALIFORNIA

LITHOLOGIC LOG OF MONITORING WELL BORING

FILE NO. 185-001 DATE JUNE, 1988 FIGURE NO.

DEPTH, FT.	SAMPLES	OVA READINGS	LITHOLOGIC DESCRIPTION — MW-02	
			0-7'	SILTY SAND; brown, dry to moist, silty fine sand
	X	B.G.		
5			7-22'	SAND; light brown, fine to medium, sub-angular sand with a trace coarse and very fine sand.
10	X	B.G.		
15				
			17-18'	Silty clay lense
20				
			22'-46	SANDY SILT CLAY; Brown, moist to wet, sandy, silty clay
25				
			@ 27'	Increase in clay
30	X	B.G.	▽ 30.03' (05/25/88)	
40				
45				

Total Depth = 46.0'

PROJECT NAME
Buy Wright Oil

PROJECT NUMBER
185-001

GROUND SURFACE ELEVATION

DATE STARTED
05-12-88

DATE COMPLETED
05-12-88

FIELD ENGINEER
Rick Graff

DRILLERS
Morrison - G. Maxwell

DRILLING METHOD
Hollow Stem Auger

DRILL RIG
Ingersoll-Rand TH-10

EXPLORATORY HOLE LOCATION

ENECOTECH
San Diego, California

BUY WRIGHT OIL

LITHOLOGIC LOG OF MONITORING WELL BORING

PROJECT 11427 WOODSIDE
SAN TEE, CALIFORNIA

FILE NO. 185-001 DATE JUNE, 1988 FIGURE NO.

DEPTH, FT.	SAMPLES	OVA READINGS	LITHOLOGIC DESCRIPTION MW-03
			0-2.0 FILL; Light brown, dry, silty gravelly sand
			2.0-20' SAND; Light brown, moist, very fine to fine sand with a trace silt.
5			
10			
15			
20			20'-24.0' SANDY CLAY; Brown, moist, sandy (very fine) clay with occassional scattered gravel to 1" diameter.
			24.0-46.0 SILTY SAND; Dark brown, moist to wet, very fine to fine silty sand.
25			@25' SLIGHT HC ODOR
30			@30' STRONG HC ODOR
			▽ 30.83' (05/28/88)
40			
45			Total Depth = 46.0'

PROJECT NAME
Buy Wright Oil

PROJECT NUMBER
185-001

GROUND SURFACE ELEVATION
0'

DATE STARTED
5-13-88

DATE COMPLETED
5-13-88

FIELD ENGINEER
Rick Graff

DRILLERS
Morrison - G. Maxwell

DRILLING METHOD
Hollow Stem Auger

DRILL RIG
Ingersoll-Rand TH-10

EXPLORATORY HOLE LOCATION

ENECOTECH
San Diego, California

BUY WRIGHT OIL

LITHOLOGIC LOG OF MONITORING WELL BORING

PROJECT 11427 WOODSIDE
SAN TEE, CALIFORNIA

FILE NO. 185-001 DATE JUNE, 1988 FIGURE NO.

DEPTH, FT.	SAMPLES	OVA READINGS	LITHOLOGIC DESCRIPTION MW-04
			0-0.5 ASPHALT
			0.5-5.0 SILTY SAND; Brown, dry to moist, silty very fine sand.
5			5.0-18.0 SAND; Light brown, moist fine to medium sand with a trace coarse sand.
10			
15			
			18.0-22.0' SILTY SANDY CLAY; Grey brown, moist to wet, silty sandy clay.
20			
25			
			27.0-44.0' SAND; Light brown, fine to medium sand with a trace clay, trace silt.
30			▽ 27.68' (05/25/88)
40			
			Total Depth = 44.0'
45			

PROJECT NAME
Buy Wright Oil

PROJECT NUMBER
185-001

GROUND SURFACE ELEVATION

DATE STARTED
5-13-88

DATE COMPLETED
5-13-88

FIELD ENGINEER
Rick Graff

DRILLERS
Morrison - G. Maxwell

DRILLING METHOD
Hollow Stem Auger

DRILL RIG
Ingersoll-Rand TH-10

EXPLORATORY HOLE LOCATION

ENECOTECH
San Diego, California

BUY WRIGHT OIL
PROJECT 11427 WOODSIDE
SAN TEE, CALIFORNIA

LITHOLOGIC LOG OF MONITORING WELL BORING

FILE NO. 185-001 DATE JUNE, 1988 FIGURE NO.

LOCATION MAP
(Not to scale)

N

EnecoTech® ENVIRONMENTAL CONSULTANTS
6160 Fairmount Ave.
Suite "A"
San Diego, California 92120

BORING/WELL LOG I.D.: MW6

Date(s):	2/26/01			Project Name:	Wigington Petroleum
Start Time:	10:00	Finish Time:	12:45	Project Number:	02-01686-001
Logged By:	GB	Drilling Company:	THF		Page 1 of 2
Elevation: (ft. amsl)	Casing top 362.44	Vapor Detector:	PID	Drilling Method:	Hollow Stem Auger
Sampling Method:	Split Spoon Sampler				
Filter Pack: ____ Bags	N/A	Bentonite Seal: 4-50 lb Bags	N/A	Sanitary Seal: ____ Bags	N/A
Casing Type:	PVC	Diameter:	4"	Boring Dia.:	10"
Water Initial	29'				
Screen Type:	PVC	Slot Size: 0.020 "	Diameter:	4"	Total Depth: 42'
Water Final	N/A				

Depth (feet)	LITHOLOGIC DESCRIPTION UNIT: Color, moisture, rel. density, texture (USCS Symbol), details. Odor, variations.	Sample Depth /Blows	Sample Type	Sample Designation	Screen Type	Screen Vapor (ppm)	Time	Boring/Well Completion
0	6" Concrete							
5	Top Soil: Dark brown (10YR3/3), damp, loose, fine sand (SP). No PHO.	5 5 10	⊠	MW6-5'		0.0	10:15	
10		10 15 20	⊠	MW6-10'		0.0	10:20	
15		12 20 25	⊠	MW6-15'		0.0	10:23	
	Weathered Granitics: Very dark gray (10YR3/1), wet, loose clayey sands (SC). Slight PHO.	15 20 25	⊠	MW6-20'		16.0	10:28	
20								
	Weathered Granitics: Dark gray (10YR3/3), wet, loose, fine sands (SP). Slight PHO.	15 20 25	⊠	MW6-25'		16.0	10:30	
25								
	Approximate Water Table	20 25						
30	Saturated. Moderate PHO.	30	⊠	MW6-30'		245.0	10:36	

LEGEND

Sample Type	Screen Type		
⊠ Sleeve	A-Ambient	Concrete	Perforations
⊠ Grab	B-Bag	Bentonite Seal	Well Casing
⊠ Discard	C-Cuttings	Filter Pack	Locking Cap
■ No Recovery	H-Head Space	Contact - Dashed where inferred.	Water Table

Traffic Rated Well Cover

Drawn By:	Date:	Approved By:	Date:	RG Number:	Fig. No.:
MJL	3/2001		3/2001		

LOCATION MAP
(Not to scale)

N

EnecoTech
ENVIRONMENTAL CONSULTANTS
6160 Fairmount Ave.
Suite "A"
San Diego, California 92120

BORING/WELL LOG I.D.: MW6

Date(s):	2/26/01			Project Name:	Wigington Petroleum
Start Time:	10:00	Finish Time:	12:45	Project Number:	02-01686-001
Logged By:	GB	Drilling Company:	THF	Page	2 of 2
Elevation: (ft. amsl)	Casing top 362.44	Vapor Detector:	PID		
Drilling Method:	Hollow Stem Auger	Sampling Method:	Split Spoon Sampler		
Filter Pack: ____ Bags	N/A	Bentonite Seal: ____ Bags	N/A	Sanitary Seal: ____ Bags	N/A
Casing Type:	PVC	Diameter:	4"	Boring Dia.:	10"
Screen Type:	PVC	Slot Size: 0.020"	Diameter: 4"	Total Depth:	42'
Water Initial	29'	Water Final	N/A		

Depth (feet)	LITHOLOGIC DESCRIPTION UNIT: Color, moisture, rel. density, texture (USCS Symbol), details. Odor, variations.	Sample Depth /Blows	Sample Type	Sample Designation	Screen Type	Screen Vapor (ppm)	Time	Boring/Well Completion
30								
		50						
		50						
35		50		MW6 -35'		476.0	10:45	
		10						
		10						
40	Slight PHO.	10		MW6 - 40'		17.0	10:50	
	Total Depth=42 ft.							
45								
50								
55								
60								

LEGEND

Sample Type	Screen Type		
Sleeve	A-Ambient	Concrete	Perforations
Grab	B-Bag	Bentonite Seal	Well Casing
Discard	C-Cuttings	Filter Pack	Locking Cap
No Recovery	H-Head Space	Contact - Dashed where inferred.	Water Table

Traffic Rated Well Cover

Drawn By:	Date:	Approved By:	Date:	RG Number:	Fig. No.:
MJL	3/2001		3/2001		

LOCATION MAP
(Not to scale)

N

EnecoTech
ENVIRONMENTAL CONSULTANTS
6160 Fairmount Ave.
Suite "A"
San Diego, California 92120

BORING/WELL LOG I.D.: MW7

Date(s):	2/26/01			Project Name:	Wigington Petroleum
Start Time:	13:00	Finish Time:	16:45	Project Number:	02-01686-001
Logged By:	GB	Drilling Company:	THF	Page	1 of 2
Elevation: (ft. amsl)	Casing top 362.57	Vapor Detector:	PID	Drilling Method:	Hollow Stem Auger
Sampling Method:	Split Spoon Sampler				
Filter Pack: ____ Bags	N/A	Bentonite Seal: ____ Bags	N/A	Sanitary Seal: ____ Bags	N/A
Casing Type:	PVC	Diameter:	4"	Boring Dia.:	10"
Water Initial	29'				
Screen Type:	PVC	Slot Size:	0.020"	Diameter:	4"
Total Depth:	42'	Water Final	N/A		

Depth (feet)	LITHOLOGIC DESCRIPTION UNIT: Color, moisture, rel. density, texture (USCS Symbol), details. Odor, variations.	Sample Depth /Blows	Sample Type	Sample Designation	Screen Type	Screen Vapor (ppm)	Time	Boring/Well Completion
0	6" Concrete							
5	Top Soil: Dark brown (10YR3/3), damp, loose, fine sand (SP). No PHO.	5 8 10		MW7-5'		0.0	13:05	
10		6 10 12		MW7-10'		0.0	13:10	
15		8 10 12		MW7-15'		0.0	13:15	
20	Weathered Granitics: Very dark gray (10YR3/1), wet, loose clayey sands (SC). Slight PHO.	10 10 10		MW7-20'		2.0	13:20	
25	Weathered Granitics: Dark gray (10YR3/3), wet, loose, fine sands (SP). Slight PHO.	12 15 18		MW7-25'		20.4	13:30	
	Approximate Water Table							
30	Saturated. Moderate PHO.	20 20 20		MW7-30'		1.4	13:34	

LEGEND

Sample Type	Screen Type	
Sleeve	A-Ambient	Concrete
Grab	B-Bag	Bentonite Seal
Discard	C-Cuttings	Filter Pack
No Recovery	H-Head Space	Contact - Dashed where inferred.

Perforations
Well Casing
Locking Cap
Water Table

Traffic Rated Well Cover

Drawn By:	Date:	Approved By:	Date:	RG Number:	Fig. No.:
MJL	3/2001		3/2001		

LOCATION MAP
(Not to scale)

N

EnecoTech
ENVIRONMENTAL CONSULTANTS
6160 Fairmount Ave.
Suite "A"
San Diego, California 92120

BORING/WELL LOG I.D.: MW7

Date(s):	2/26/01			Project Name:	Wigington Petroleum
Start Time:	13:00	Finish Time:	16:45	Project Number:	02-01686-001
Logged By:	GB	Drilling Company:	THF	Page	2 of 2
Elevation: (ft. amsl)	Casingtop 362.57	Vapor Detector:	PID	Drilling Method:	Hollow Stem Auger
Sampling Method:	Split Spoon Sampler				
Filter Pack: ____ Bags	N/A	Bentonite Seal: ____ Bags	N/A	Sanitary Seal: ____ Bags	N/A
Casing Type:	PVC	Diameter:	4"	Boring Dia.:	10"
Water Initial	29'				
Screen Type:	PVC	Slot Size:	0.020"	Diameter:	4"
Total Depth:	42'	Water Final	N/A		

Depth (feet)	LITHOLOGIC DESCRIPTION UNIT: Color, moisture, rel. density, texture (USCS Symbol), details. Odor, variations.	Sample Depth /Blows	Sample Type	Sample Designation	Screen Type	Screen Vapor (ppm)	Time	Boring/Well Completion
30								
35	Weathered Granitics: Dark brown (10YR3/3), wet, very loose, fine sands (SP). No PHO.	15 22 25	Sleeve	MW7-35'		0.0	13:38	
40		15 15 15	Sleeve	MW7-40'		0.0	13:45	
	Total Depth=42 ft.							
45								
50								
55								
60								

LEGEND

Sample Type	Screen Type	
Sleeve	A-Ambient	Concrete
Grab	B-Bag	Bentonite Seal
Discard	C-Cuttings	Filter Pack
No Recovery	H-Head Space	Contact-Dashed where inferred.

Perforations
Well Casing
Locking Cap
Water Table

Traffic Rated Well Cover

Drawn By:	Date:	Approved By:	Date:	RG Number:	Fig. No.:
MJL	3/2001		3/2001		

LOCATION MAP
(Not to scale)

N

EnecoTech®
STRATEGIES FOR ENVIRONMENTAL RESPONSE

6160 Fairmount Ave.
Suite "A"
San Diego, California 92120

BORING/WELL LOG I.D.: MW8

Date(s): 4/19/02		Project Name:	Wigington Petroleum
Start Time: 08:45	Finish Time: 12:00	Project Number:	02-01686-001
Logged By: GB	Drilling Company: West Hazmat	Page 1 of 2	
Elevation: (ft. amsl) Casing top 364.51	Vapor Detector: PID	Drilling Method: Hollow Stem Auger 10"	Sampling Method: Split Spoon Sampler
Filter Pack: 9 Bags	Bentonite Seal: 2 Bags Grout	Sanitary Seal: 2 Bags Chips	
Casing Type: PVC	Diameter: 4"	Boring Dia.: 10"	Water Initial 35'
Screen Type: PVC	Slot Size: 0.020" Diameter: 4"	Total Depth: 40.5"	Water Final N/A

Depth (feet)	LITHOLOGIC DESCRIPTION UNIT: Color, moisture, rel. density, texture (USCS Symbol), details. Odor, variations.	Sample Depth /Blows	Sample Type	Sample Designation	Screen Type	Screen Vapor (ppm)	Time	Boring/Well Completion
0	Fill: Moderate yellowish brown (10YR5/4), damp, loose, fine to coarse sand (SW). Earthy odor. No PHO. Some gravel and debris.							
5	Alluvium: Dark yellowish brown (10YR4/2), damp, loose, fine to coarse sand (SW). Some gravel. No PHO.	5 5 10	⊠	Mw8-5'		0	09:50	
10		5 5 7	⊠	Mw8-10'		0	09:55	
15								
20	Alluvium: Becomes darker dusky brown (5YR2/2) and coarser. Earthy odor. No PHO.	10 12 12	⊠	Mw8-20'		0	10:00	
25	Alluvium: Dark yellowish brown (10YR4/2), damp, loose, medium to coarse sand (SP). Slight PHO.	10 11 12	⊠	Mw8-25'		18	10:05	
30		70	⊠	Mw8-30.5' Mw8-31.0'		5	10:15	

LEGEND

Sample Type	Screen Type		
⊠ Sleeve	A-Ambient	Concrete	Perforations
⊘ Grab	B-Bag	Bentonite Seal	Well Casing
⊘ Discard	C-Cuttings	Filter Pack	Locking Cap
■ No Recovery	H-Head Space	Contact - Dashed where inferred.	Water Table

Traffic Rated Well Cover

Drawn By: MJL	Date: 4/2002	Approved By: MJG	Date: 4/2002	RG Number: 4821	Fig. No.:

LOCATION MAP
(Not to scale)

N

EnecoTech
6160 Fairmount Ave.
Suite "A"
San Diego, California 92120

BORING/WELL LOG I.D.: MW8

Date(s): 4/19/02		Project Name: Wigington Petroleum	
Start Time: 08:45	Finish Time: 12:00	Project Number: 02-01686-001	
Logged By: GB	Drilling Company: West Hazmat	Page 2 of 2	
Elevation: (ft. amsl) Casing top 364.51	Vapor Detector: PID	Drilling Method: Hollow Stem Auger 10"	Sampling Method: Split Spoon Sampler
Filter Pack: 9 Bags	Bentonite Seal: 2 Bags Grout	Sanitary Seal: 2 Bags Chips	
Casing Type: PVC	Diameter: 4"	Boring Dia.: 10"	Water Initial 35'
Screen Type: PVC	Slot Size: 0.020" Diameter: 4"	Total Depth: 40.5"	Water Final N/A

Depth (feet)	LITHOLOGIC DESCRIPTION UNIT: Color, moisture, rel. density, texture (USCS Symbol), details. Odor, variations.	Sample Depth /Blows	Sample Type	Sample Designation	Screen Type	Screen Vapor (ppm)	Time	Boring/Well Completion
30	Becomes fine to medium and moist			MW8-31.5'		1	10:20	
				MW8-32.5'				
	Becomes medium to coarse and wet			MW8-33.5'		51	10:25	
35	Becomes grayish black (2), very strong PHO. Soil feels lubricated. Saturated.			MW8-34.5'		372	10:30	
				MW8-35.5'				
				MW8-36.5'		429	10:35	
				MW8-37.5'				
				MW8-38.5'		118	10:40	
40				MW8-39.5'		414	10:50	
	Total Depth = 40.5 ft.							
45								
50								
55								
60								

LEGEND

Sample Type: Sleeve; Grab; Discard; No Recovery

Screen Type: A-Ambient; B-Bag; C-Cuttings; H-Head Space

Concrete; Bentonite Seal; Filter Pack; Contact - Dashed where inferred.

Perforations; Well Casing; Locking Cap; Water Table

Traffic Rated Well Cover

Drawn By: MJL	Date: 4/2002	Approved By: MJG	Date: 4/2002	RG Number: 4821	Fig. No.:

PETRA EXPLORATION LOG

Project: **Wigington Oil H19469-001**		Boring No.: **MW-9**	
Location: **11427 Woodside Avenue, Santee**		Date: **2/4/08**	
Job No.: **252-06**	Drilling Method: **Hollow-Stem Auger**	Logged By: **DBS/CEH**	
Drilling Co.: **Test America**		Approved By:	

Depth (Feet)	Lith-ology	Material Description	Well Details	Water	Samples: Blows Per 6 in.	Samples: Run	Samples: Rec	Field and Laboratory Tests: Sample Name	Collection Time	Other Lab Tests
		Depth to Water: 28.87 ft. Total Depth of Boring: 40.5 ft.								
		Concrete 7".								
		ALLUVIUM (Qal) Sand (SW): dark olive brown (2.5Y 3/3), moist, loose; fine to coarse sand.								
5		Sand (SW): olive brown (2.5Y 4/3), moist, medium dense; fine to very coarse, interbedded sands and coarse sands.			8 9 11			MW-9 @5'	9:36 am	PID: 8.5 ppm
		Fine Sand with Some Gravels (SW/SP): (10YR 3/3).								
10		Sand (SW): yellowish brown (10YR 5/4), moist, medium dense; fine to coarse sand with some very coarse sand and small gravels.			11 12 15			MW-9 @10'	9:38 am	PID: 15.5 ppm
15		Sand (SW): brown (10YR 4/3), moist, medium dense; interbedded fine to medium sand with some coarse.			7 14 14			MW-9 @15'	9:47 am	PID: 12.1 ppm
20		Silty Fine Sand (SM): very dark gray (2.5Y 3/1), moist to wet, medium dense; fine sand with some medium sands, silt and possible trace clay.			8 10 16			MW-9 @ 20'	9:55 am	PID: 11.4 ppm

PLATE B-1

PETRA EXPLORATION LOG

Project: **Wigington Oil H19469-001**		Boring No.: **MW-9**	
Location: **11427 Woodside Avenue, Santee**		Date: **2/4/08**	
Job No.: **252-06**	Drilling Method: **Hollow-Stem Auger**	Logged By: **DBS/CEH**	
Drilling Co.: **Test America**		Approved By:	

Depth (Feet)	Lith-ology	Material Description Depth to Water: 28.87 ft. Total Depth of Boring: 40.5 ft.	Well Details	Water	Samples: Blows Per 6 in.	Samples: Run	Samples: Rec	Field and Laboratory Tests: Sample Name	Field and Laboratory Tests: Collection Time	Field and Laboratory Tests: Other Lab Tests
		Sand (SP): olive gray (5Y 5/2), moist, dense; poorly graded medium sands, hydrocarbon staining at 26', strong odor.			15 20 26			MW-9 @25'	10:02 am	PID: 22.6 ppm
		Gravel bed at 27'.								
		Static water at 28.87' 2/5/08 10:45 AM, water first encountered at 28'		▽						
30		Very coarse sand (SP).								
		Silty Sand (SM): black (5Y 2.5/1), wet, dense; fine sand with silt and trace clay, strong odor, staining.			8 13 42			MW-9 @30'	10:08 am	PID: 20.4 ppm
35		Sand (SP): dark yellow brown (10YR 4/4), wet/saturated, dense to very dense; coarse sand, slight odor.			10 20 31			MW-9 @35'	10:15 am	PID: 1.2 ppm
		Sand (SW): dark yellow brown (10YR 3/4), saturated, medium dense; well graded medium to very coarse sand.			5 9 12			MW-9 @39'	10:21 am	PID: 8.9 ppm
40		Total Depth = 40.5'								
		Groundwater first encountered @ 28'; static water @28.87'								
		WELL CONSTRUCTION: 4" Well set @ 39'								
		0-24' Blank Interval Sch. 40 PVC								
		24-39' Screen Interval (15') Sch 40 PVC (0.02 slot)								
		Traffic Rated Vault Box								
		0-3' Concrete Seal (2 cubic feet)								
		3-5' Hydrated Bentonite Chips (.9 cubic feet)								
		5-19' Groutwell (6.4 cubic feet)								
		19-22'Hydrated Bentonite Chips (1.4 cubic feet)								
		22-40.5' Sand Pack (8.25 cubic feet).								

ENVIRONMENTAL LOG - V2 252-06 WIGINGTON.GPJ PETRA.GDT 4/1/08

PLATE B-2

PETRA EXPLORATION LOG

Project: **Wigington Oil H19469-001**		Boring No.: **MW-10**	
Location: **11427 Woodside Avenue, Santee**		Date: **2/5/08**	
Job No.: **252-06**	Drilling Method: **Hollow-Stem Auger**	Logged By: **DBS**	
Drilling Co.: **Test America**		Approved By:	

Depth to Water: 33 ft. Total Depth of Boring: 44 ft.

Depth (Feet)	Lith-ology	Material Description	Well Details	Water	Samples: Blows Per 6 in.	Samples: Run	Samples: Rec	Field and Laboratory Tests: Sample Name	Collection Time	Other Lab Tests
		Concrete 8".								
		ALLUVIUM (Qal) Sand (SP): dark brown (7.5Y 3/2), moist, loose; fine sand with some silt, trace gravels.								
5		Sand (SW/SP): dark olive brown (2.5Y 3/3), slightly moist to moist, medium dense; medium course sands with some fines and small gravels.			5 9 14			MW-10 @5'	1:18 pm	PID: 0.0
		Sand (SP): olive brown (7.5Y 4/4), slightly damp, medium dense; medium sand.								
10		**RESIDUAL SOIL** Clayey Fine Sand with Silt (SC): dark brown (7.5YR 3/4), moist, dense; manganese staining.			8 18 21			MW-10 @10'	1:25 pm	PID: 0.0
15		Clayey Fine Sand with Silt (SC): dark reddish brown (5YR 3/4), moist, very dense.			18 31 38			MW-10 @15'	3:15 pm	PID: 0.0
20		Boulder @ 20'.			50/2"			MW-10 @20'	3:23 pm	PID:8.0, Partial Recovery ~1-2"

PLATE B-3

ENVIRONMENTAL LOG - V2 252-06 WIGINGTON.GPJ PETRA.GDT 4/1/08

PETRA EXPLORATION LOG

Project: **Wigington Oil H19469-001**		Boring No.: **MW-10**	
Location: **11427 Woodside Avenue, Santee**		Date: **2/5/08**	
Job No.: **252-06**	Drilling Method: **Hollow-Stem Auger**	Logged By: **DBS**	
Drilling Co.: **Test America**		Approved By:	

Depth (Feet)	Lith-ology	Material Description	Well Details	Water	Samples: Blows Per 6 in.	Samples: Run	Samples: Rec	Field and Laboratory Tests: Sample Name	Field and Laboratory Tests: Collection Time	Field and Laboratory Tests: Other Lab Tests
		Depth to Water: 33 ft. Total Depth of Boring: 44 ft.								
		Clayey Sand with Gravels (SC): dark brown (7.5 YR 3/3) to dark reddish brown, slightly moist, dense; fine to medium sand with clay and gravels/rock fragments.			12 16 21			MW-10 @25'	3:40 pm	PID:17.0 Partial Recovery ~1"
30		**BEDROCK - Weathered Granitics (Kgr)** Granite: dark yellowish brown (10YR 4/6), slightly moist, hard; Fe_2O_3 oxidation, can be scratched with knife.			50/3"			MW-10 @30'	4:03 pm	PID: 8.1, Auger broke ~4:15 At ~31'
		Groundwater @ 33' (12:40 pm 2/5).		▼						
35		Granite: dark yellowish brown (10YR 4/6), slightly moist, very hard; possible fracture at 36'; water encountered at 36' (12:20 pm 2/5).		▽	50/4"			MW-10 @35'	11:58 am	PID: 0.0 (2/5)
40		Granite: dark olive brown (2.5 Y 3/3), moist to very moist, hard.			50/5"			MW-10 @40'	12:15 pm	PID: 0.0 (2/5)
		@ 43' Granite: dark olive brown (2.5Y 3/3), moist to very moist, hard.			25 50/6"			MW-10 @43'	12:58 pm	PID: 0.0 (2/5)
		Total Depth = 44' Groundwater first encountered @ 33'; static water @ 36' WELL CONSTRUCTION: 4"Well set @ 40' 0-25' Blank Interval Sch. 40 PVC 25-40' Screen Interval (15') Sch 40 PVC (0.02 slot) Traffic Rated Vault Box 0-3' Concrete Seal (2 cubic feet) 3-5' Hydrated Bentonite Chips (.9 cubic feet) 5-19' Groutwell (6.4 cubic feet)								

ENVIRONMENTAL LOG - V2 252-06 WIGINGTON.GPJ PETRA.GDT 4/1/08

PLATE B-4

PETRA EXPLORATION LOG

Project: **Wigington Oil H19469-001**		Boring No.: **MW-10**	
Location: **11427 Woodside Avenue, Santee**		Date: **2/5/08**	
Job No.: **252-06**	Drilling Method: **Hollow-Stem Auger**	Logged By: **DBS**	
Drilling Co.: **Test America**		Approved By:	

Depth (Feet)	Lith-ology	Material Description	Well Details	Water	Samples: Blows Per 6 in.	Samples: Run	Samples: Rec	Field and Laboratory Tests: Sample Name	Field and Laboratory Tests: Collection Time	Field and Laboratory Tests: Other Lab Tests
		Depth to Water: 33 ft. Total Depth of Boring: 44 ft.								
		19-22'Hydrated Bentonite Chips (1.4 cubic feet) 22-40' Sand Pack (10.4 cubic feet).								

PLATE B-5

ENVIRONMENTAL LOG - V2 252-06 WIGINGTON.GPJ PETRA.GDT 4/1/08

PETRA EXPLORATION LOG

Project: **Wigington Oil H19469-001**		Boring No.: **MW-11**	
Location: **11424 N. Woodside Avenue, Santee**		Date: **2/8/08**	
Job No.: **252-06**	Drilling Method: **Hollow-Stem Auger**	Logged By: **DBS**	
Drilling Co.: **Test America**		Approved By:	

Depth (Feet)	Lith-ology	Material Description	Well Details	Water	Samples: Blows Per 6 in.	Samples: Run	Samples: Rec	Field and Laboratory Tests: Sample Name	Field and Laboratory Tests: Collection Time	Field and Laboratory Tests: Other Lab Tests
		Depth to Water: 28.93 ft. Total Depth of Boring: 39.5 ft.								
		A/C 3".								
		ALLUVIUM (Qal) Sand with Trace Clay/Silt (SW): dark brown (7.5YR 3/3), moist, loose to medium dense.								
5		Sand (SW): interbedded dark brown (7.5 YR 3/2) and dark olive gray (5Y 3/2), moist, medium dense to dense; coarse.			11 16 21			MW-11 @5'	9:50 am	PID: 4.3
10		Sand (SW): brown (10YR 4/3), moist, dense; coarse.			4 20 29			MW-11 @10'	9:58 am	PID: 0.0
15		Sand (SW): light yellow brown (2.5Y 6/3) to light olive brown (2.5Y 5/3), slightly moist, medium dense; interbedded coarse and medium sand.			6 7 11			MW-11 @15'	10:04 am	PID: 0.0
20		Sand with Some Gravels (SW): dark grayish brown (2.5Y 4/2), moist, dense; medium to very coarse sand with gravels and trace silt/clay.			12 21 25			MW-11 @20'	10:10 am	PID: 0.2

ENVIRONMENTAL LOG - V2 252-06 WIGINGTON.GPJ PETRA.GDT 4/1/08

PLATE B-6

PETRA EXPLORATION LOG

Project: **Wigington Oil H19469-001**		Boring No.: **MW-11**	
Location: **11424 N. Woodside Avenue, Santee**		Date: **2/8/08**	
Job No.: **252-06**	Drilling Method: **Hollow-Stem Auger**	Logged By: **DBS**	
Drilling Co.: **Test America**		Approved By:	

Depth (Feet)	Lith-ology	Material Description (Depth to Water: 28.93 ft. Total Depth of Boring: 39.5 ft.)	Well Details	Water	Samples: Blows Per 6 in.	Samples: Run	Samples: Rec	Field and Laboratory Tests: Sample Name	Collection Time	Other Lab Tests
		Sand (SW): light olive brown (2.5Y 5/3), very moist, medium dense to dense; coarse sand, porous.			7 18 22			MW-11 @25'	10:16 am	PID: 0.0
		Groundwater @ 28.93' (3:40 pm).		▼						
30		Sand (SW): olive brown (2.5Y 4/3), wet, medium dense; coarse sand, water first encountered @ ~30'.		▽	4 6 16			MW-11 @30'	10:30 am	PID: 0.0
35		Sand (SP/SW): very dark gray (5Y 3/1), wet, medium dense; fine to medium sand with some coarse; hydrocarbon odor.			8 6 16			MW-11 @35'	10:36 am	PID: 0.0
		Sand (SW): dark gray (5Y 4/1), wet, medium dense to dense; fine to very coarse sand, coarsens up, no odor.			6 20 20			MW-11 @38'	10:39 am	PID: 0.0
		Total Depth = 39.5' Groundwater first encountered @ 30.5'; static water @ 28.93' WELL CONSTRUCTION: 2" Well set @ 38' 0-23' Blank Interval Sch. 40 PVC 23-38' Screen Interval (15') Sch 40 PVC (0.02 slot) Traffic Rated Vault Box 0-3' Concrete Seal (1.5 cubic feet) 3-3.5' Hydrated Bentonite Chips (.16 cubic feet) 3.5-18' Groutwell (4.8 cubic feet) 18-21' Hydrated Bentonite Chips (1.4 cubic feet) 21-39.5' Sand Pack (5.9 cubic feet).								

ENVIRONMENTAL LOG - V2 252-06 WIGINGTON.GPJ PETRA.GDT 4/1/08

PLATE B-7

PETRA EXPLORATION LOG

Project: **Wigington Oil H19469-001**		Boring No.: **MW-12**	
Location: **11370 N. Woodside Avenue, Santee**		Date: **2/8/08**	
Job No.: **252-06**	Drilling Method: **Hollow-Stem Auger**	Logged By: **DBS**	
Drilling Co.: **Test America**		Approved By:	

Depth (Feet)	Lith-ology	Material Description	Well Details	Water	Samples: Blows Per 6 in.	Samples: Run	Samples: Rec	Field and Laboratory Tests: Sample Name	Field and Laboratory Tests: Collection Time	Field and Laboratory Tests: Other Lab Tests
		Depth to Water: 29.3 ft. Total Depth of Boring: 40.5 ft.								
		A/C 3".								
		ALLUVIUM (Qal) Clayey Sand (SC): dark brown (7.5YR 3/3), moist, loose; fine to medium sand with clay and trace gravels.								
5		Sand (SW): brown (10YR 5/3), dry to slightly moist,very dense; fine to coarse sand.			21 28 29			MW-12 @ 5'	2:26 pm	PID: 0.0
10		Sand (SW): grayish brown (10YR 5/2), slightly moist, medium dense.			14 15 8			MW-12 @ 10'	2:30 pm	PID: 0.0
15		Sand (SW): light olive brown (2.5Y 5/4), slightly moist to moist, medium dense; coarse sand with some fine to medium matrix sands (20%).			17 18 26			MW-12 @ 15'	2:35 pm	PID: 0.0
20		Sand (SP): very dark gray brown (2.5Y 3/2), moist, medium dense; poorly sorted fine to medium sands interbedded with some silty fine sands.			9 5 6			MW-12 @ 20'	2:40 pm	PID: 0.0

ENVIRONMENTAL LOG - V2 252-06 WIGINGTON.GPJ PETRA.GDT 4/1/08

PLATE B-8

PETRA EXPLORATION LOG

Project: **Wigington Oil H19469-001**		Boring No.: **MW-12**	
Location: **11370 N. Woodside Avenue, Santee**		Date: **2/8/08**	
Job No.: **252-06**	Drilling Method: **Hollow-Stem Auger**	Logged By: **DBS**	
Drilling Co.: **Test America**		Approved By:	

Depth (Feet)	Lith-ology	Material Description (Depth to Water: 29.3 ft. Total Depth of Boring: 40.5 ft.)	Well Details	Water	Samples: Blows Per 6 in.	Samples: Run	Samples: Rec	Field and Laboratory Tests: Sample Name	Collection Time	Other Lab Tests
		Sand (SP): light olive brown (2.5Y 5/4), moist, medium dense, medium to coarse sand; slight odor?.			10 10 14			MW-12 @ 25'	2:45 pm	PID: 0.0
		Groundwater @ 29.30' (3:05)		▼						
30		Water first encountered @ ~30' (2:50).		▽						
		Sand (SW): olive brown (2.5Y 4/3), saturated, dense to very dense; coarse sand, porous, possible slight odor.			9 24 25			MW-12 @ 30'	2:54 pm	PID: 0.0
35		Sand (SW): dark grayish brown (2.5Y 4/2), saturated, medium dense; fine to very coarse sand (>50% coarse) with some silt/clay, well graded, no odor.			4 12 19			MW-12 @ 35'	3:12 pm	PID: 0.0
		Same as @35' but very dense, slight odor.			17 28 36			MW-12 @ 39'	3:17 pm	PID: 2.8
40		Total Depth = 40.5'								
		Groundwater first encountered @ ~30'; static water @ 29.30'								
		WELL CONSTRUCTION: 2" Well set @ 38'								
		0-24' Blank Interval Sch. 40 PVC								
		24-39' Screen Interval (15') Sch 40 PVC (0.02 slot)								
		Traffic Rated Vault Box								
		0-3' Concrete Seal (1.5 cubic feet)								
		3-4' Hydrated Bentonite Chips (.33 cubic feet)								
		4-18.5' Groutwell (4.8 cubic feet)								
		18.5-21.5' Hydrated Bentonite Chips (1 cubic feet)								
		21.5-40.5' Sand Pack (6 cubic feet).								

ENVIRONMENTAL LOG - V2 252-06 WIGINGTON.GPJ PETRA.GDT 4/1/08

PLATE B-9

PETRA EXPLORATION LOG

Project: **Wigington Oil H19469-001**		Boring No.: **MW-13**	
Location: **11433 Woodside Avenue, Santee**		Date: **2/18/08**	
Job No.: **252-06**	Drilling Method: **Hollow-Stem Auger**	Logged By: **DBS**	
Drilling Co.: **Test America**		Approved By:	

Material Description — Depth to Water: 29.17 ft. Total Depth of Boring: 51.5 ft.

Depth (Feet)	Lithology	Material Description	Well Details	Water	Samples: Blows Per 6 in.	Samples: Run	Samples: Rec	Field and Laboratory Tests: Sample Name	Field and Laboratory Tests: Collection Time	Field and Laboratory Tests: Other Lab Tests
		A/C 5".								
		ARTIFICIAL FILL (Qaf) Sand (SW): brown, dry, loose. Concrete 2".								
		ALLUVIUM (Qal) SiltySand (SW): dark brown (10YR 3/3), moist, very loose; fine poorly graded sand with silt and trace clay.								
5		Silty Sand (SM): dark yellow brown (10YR 4/3), moist, loose to medium dense; fine sand with silt and trace clay.			5 6 7			MW-13 @5'	8:17 am	
10		Silty Sand (SM): olive brown (2.5Y 4/3), slightly moise, medium dense; fine sand.			6 6 9			MW-13 @10'	8:21 am	
15		Silty Sand (SM): dark olive brown (2.5Y 3/3) moist, medium dense; fine sand.			6 8 15			MW-13 @15'	9:10 am	PID: 0.0
20		Sand (SP): dark yellow brown (10YR 3/4), moist, medium dense; medium sand with silt and trace clay.			9 10 13			MW-13 @20'	9:16 am	PID: 0.0

ENVIRONMENTAL LOG - V2 252-06 WIGINGTON.GPJ PETRA.GDT 4/1/08

PLATE B-10

PETRA EXPLORATION LOG

Project: **Wigington Oil H19469-001**		Boring No.: **MW-13**	
Location: **11433 Woodside Avenue, Santee**		Date: **2/18/08**	
Job No.: **252-06**	Drilling Method: **Hollow-Stem Auger**	Logged By: **DBS**	
Drilling Co.: **Test America**		Approved By:	

Depth (Feet)	Lith-ology	Material Description Depth to Water: 29.17 ft. Total Depth of Boring: 51.5 ft.	Well Details	Water	Samples: Blows Per 6 in.	Samples: Run	Samples: Rec	Field and Laboratory Tests: Sample Name	Collection Time	Other Lab Tests
		Silty Sand (SP/SM): dark yellow brown (10YR 3/4), moist, medium dense; very similar to above but finer grained.			9 9 13			MW-13 @25'	10:20 am	PID: 0.0
		Groundwater @ 29.17' (3:45).		▼						
30		Clayey Sand (SW/SC): dark yellow brown (10YR 3/6), moist, very dense; well graded fine to very coarse sands in clayey matrix.			18 22 31			MW-13 @30'	10:26 am	PID: 0.0
35		Clayey Sand (SW/SC): dark brown (7.5YR 3/4), very moist to wet, dense.			10 15 21			MW-13 @35'	10:35 am	PID: 0.0
40		Clayey Sand (SC/CL): dark brown (7.5 YR 3/3): moist, loose to medium dense; fine sand.			3 3 3			MW-13 @40'	10:46 am	PID: 0.0
45		Groundwater first encountered @ ~45' (10:50)		▽						
		Clayey Sand to Sandy Clay (SC/CL): dark yellow brown (10YR 3/6), moist to wet, dense.			5 15 16			MW-13 @45'	10:53 am	PID: 0.0

ENVIRONMENTAL LOG - V2 252-06 WIGINGTON.GPJ PETRA.GDT 4/1/08

PLATE B-11

PETRA EXPLORATION LOG

Project: **Wigington Oil H19469-001**			Boring No.: **MW-13**
Location: **11433 Woodside Avenue, Santee**			Date: **2/18/08**
Job No.: **252-06**	Drilling Method: **Hollow-Stem Auger**		Logged By: **DBS**
Drilling Co.: **Test America**			Approved By:

Depth (Feet)	Lith-ology	Material Description	Well Details	Water	Samples: Blows Per 6 in.	Samples: Run	Samples: Rec	Field and Laboratory Tests: Sample Name	Field and Laboratory Tests: Collection Time	Field and Laboratory Tests: Other Lab Tests
		Depth to Water: 29.17 ft. Total Depth of Boring: 51.5 ft.								
		Clayey Sand with Silt (SP/SC): dark yellow brown (10YR 3/6) mottled with gray (10YR 5/1), moist to wet, medium dense; fine sand with clay and silt.			10 12 15			MW-13 @50'	11:30 am	PID: 0.0
		Total Depth = 51.5'								
		Groundwater first encountered @ 45'; static water @ 29.17'								
		WELL CONSTRUCTION: 2" Well set @45'								
		0-25' Blank Interval Sch. 40 PVC								
		25-45' Screen Interval (15') Sch 40 PVC (0.02 slot)								
		Traffic Rated Vault Box								
		0-3' Concrete Seal (1.5 cubic feet)								
		3-5' Hydrated Bentonite Chips (.65 cubic feet)								
		5-19' Groutwell (4.6 cubic feet)								
		19-22.5' Hydrated Bentonite Chips (1.15 cubic feet)								
		22.5-46' Sand Pack (7.7 cubic feet)								
		46-51.5' Hydrated Bentonite Chipes (1.4 cubic feet).								

ENVIRONMENTAL LOG - V2 252-06 WIGINGTON.GPJ PETRA.GDT 4/1/08

PLATE B-12

PETRA EXPLORATION LOG

Project: **Wigington Oil H19469-001**		Boring No.: **MW-14**	
Location: **11421 Woodside Avenue, Santee**		Date: **2/18/08**	
Job No.: **252-06**	Drilling Method: **Hollow-Stem Auger**	Logged By: **DBS**	
Drilling Co.: **Test America**		Approved By:	

Depth to Water: 29 ft. Total Depth of Boring: 41.5 ft.

Depth (Feet)	Lith-ology	Material Description	Well Details	Water	Samples: Blows Per 6 in.	Samples: Run	Samples: Rec	Field and Laboratory Tests: Sample Name	Field and Laboratory Tests: Collection Time	Field and Laboratory Tests: Other Lab Tests
		A/C 3".								
		ALLUVIUM (Qal) Clayey Sand (SP): dark olive brown (2.5Y 3/3), moist, loose.								
5		Sand (SP): olive brown (2.5Y 4/4), slightly moist, medium dense; poorly graded medium sands with some fine sand.			10 11 17			MW-14 @5'	2:10 pm	PID: 0.0
10		Sand (SW): light olive brown (2.5Y 5/3), moist, medium dense; fine to very coarse interbedded sands, salt and peper coloring.			8 11 12			MW-14 @10'	2:16 pm	PID: 0.0
15		Sand (SW): dark olive brown (2.5Y 3/3), moist, medium dense, medium to very coarse sands.			9 12 18			MW-14 @15'	2:23 pm	PID: 0.0
20		Sand (SP): grayish brown (2.5Y 5/2), moist, medium dense; fine to medium sands, moderately poorly graded.			7 12 14			MW-14 @20'	2:30 pm	PID: 0.0

PLATE B-13

ENVIRONMENTAL LOG - V2 252-06 WIGINGTON.GPJ PETRA.GDT 4/1/08

PETRA EXPLORATION LOG

Project: **Wigington Oil H19469-001**		Boring No.: **MW-14**	
Location: **11421 Woodside Avenue, Santee**		Date: **2/18/08**	
Job No.: **252-06**	Drilling Method: **Hollow-Stem Auger**	Logged By: **DBS**	
Drilling Co.: **Test America**		Approved By:	

Depth (Feet)	Lith-ology	Material Description	Well Details	Water	Samples: Blows Per 6 in.	Samples: Run	Samples: Rec	Field and Laboratory Tests: Sample Name	Field and Laboratory Tests: Collection Time	Field and Laboratory Tests: Other Lab Tests
		Depth to Water: 29 ft. Total Depth of Boring: 41.5 ft.								
		Sand with Some Clay/Silt (SW/SC): olive brown (2.5Y 4/3), moist, medium dense; fine to medium sand with trace very coarse sand.			8 12 15			MW-14 @25'	2:38 pm	PID: 0.0
		Groundwater first encountered @ ~29'.		▽						
30		Sand (SP): very dark gray (5Y 3/1), wet, medium dense; medium sand with hydrocarbon odor and staining.			6 9 11			MW-14 @30'	2:48 pm	PID: 0.0
35		Clayey Sand (SC): black (5Y 2.5/1), wet, dense to very dense; fine to medium sand, strong odor and staining.			14 25 41			MW-14 @35'	3:00 pm	PID: 0.0
40		Sand (SW): very dark gray (5Y 3/1), wet, very dense; coarse sand, hydrocarbon stains, no odor.			18 25 50/6			MW-14 @40'	3:05 pm	PID: 0.0
		Total Depth = 41.5' Groundwater first encountered @~29' WELL CONSTRUCTION: 4" Well set @ 38' 0-23' Blank Interval Sch. 40 PVC 23-38' Screen Interval (15') Sch 40 PVC (0.02 slot) Traffic Rated Vault Box 0-3' Concrete Seal (2 cubic feet) 3-5' Hydrated Bentonite Chips (.9 cubic feet) 5-18' Groutwell (6.0 cubic feet) 18-21'Hydrated Bentonite Chips (1.4 cubic feet) 21-41.5' Sand Pack (9.4 cubic feet).								

ENVIRONMENTAL LOG - V2 252-06 WIGINGTON.GPJ PETRA.GDT 4/1/08

PLATE B-14

PETRA EXPLORATION LOG

Project: **Wigington Oil H19469-001**		Boring No.: **MW-15**	
Location: **Road shoulder opposite 11421 Woodside Avenue, Santee**		Date: **2/19/08**	
Job No.: **252-06**	Drilling Method: **Hollow-Stem Auger**	Logged By: **DBS**	
Drilling Co.: **Test America**		Approved By:	

Depth (Feet)	Lith-ology	Material Description	Well Details	Water	Samples: Blows Per 6 in.	Samples: Run	Samples: Rec	Field and Laboratory Tests: Sample Name	Collection Time	Other Lab Tests
		Depth to Water: 28.85 ft. Total Depth of Boring: 41.5 ft.								
		Asphalt: 4".								
		FILL/ALLUVIUM (Qal) Sand (SP/SW): olive brown (2.5Y 4/4), moist, loose; fine to medium sand with trace fine.								
5		**ALLUVIUM (Qal)** Sand (SP/SW): olive brown (2.5 4/3), moist, medium dense; medium sand with few coarse sands, moderately graded.			5 9 7			MW-15 @5'	8:36 am	PID: 0.0
10		Sand (SW): olive brown (2.5Y 4/3), moist, medium dense; interbedded fine to very coarse sand.			5 7 11			MW-15 @10'	8:40 am	PID: 0.0
15		Sand (SW): mottled olive brown (2.5Y 4/3), moist, medium dense; interbedded fine sands with some coarse with iron oxide staining.			6 8 12			MW-15 @15'	8:44 am	PID: 0.0
20		Sandy Clay (CL): dark olive brown (2.5Y 2/3), moist, medium dense.			8 12 12			MW-15 @20'	8:48 am	PID: 0.0

PLATE B-15

ENVIRONMENTAL LOG - V2 252-06 WIGINGTON.GPJ PETRA.GDT 4/1/08

PETRA EXPLORATION LOG

Project: **Wigington Oil H19469-001**		Boring No.: **MW-15**	
Location: **Road shoulder opposite 11421 Woodside Avenue, Santee**		Date: **2/19/08**	
Job No.: **252-06**	Drilling Method: **Hollow-Stem Auger**	Logged By: **DBS**	
Drilling Co.: **Test America**		Approved By:	

Depth (Feet)	Lith-ology	Material Description (Depth to Water: 28.85 ft. Total Depth of Boring: 41.5 ft.)	Well Details	Water	Samples: Blows Per 6 in.	Run	Rec	Field and Laboratory Tests: Sample Name	Collection Time	Other Lab Tests
		Sand (SW).			10 4 4			MW-15 @25'	8:55 am	PID: 0.0
		Silty Sand (SM): very dark gray (5Y 3/1), moist, medium dense to loose; possible hydrocarbon staining.								
		Groundwater @ 28.85 (3:20).		▼						
30		Water first encountered @ ~30' (9:00) Very Coarse Sand (SW): dark gray (GLEY 1 4/N), wet, medium dense; strong odor, staining, fine to very coarse sands, well graded.		▽	5 11 16			MW-15 @30'	9:01 am	PID: 32.1
35		Sand (SW): dark gray (5Y 4/1), wet, very dense; coarse sands; staining and odor.			18 29 21			MW-15 @35'	9:10 am	PID: 28.2
40					8 13 23			MW-15 @40'	9:18 am	PID: 26.7
		Total Depth = 41.5' Groundwater first encountered @~30'; static water @ 28.85' WELL CONSTRUCTION: 2" Well set @ 38.5' 0-23.5' Blank Interval Sch. 40 PVC 23.5-38.5' Screen Interval (15') Sch 40 PVC (0.02 slot) Traffic Rated Vault Box 0-3' Concrete Seal (1.5 cubic feet) 3-5' Hydrated Bentonite Chips (.65 cubic feet) 5-17' Groutwell (3.9 cubic feet) 17-21' Hydrated Bentonite Chips (1 cubic feet) 21-41.5' Sand Pack (6.8 cubic feet).								

ENVIRONMENTAL LOG - V2 252-06 WIGINGTON.GPJ PETRA.GDT 4/1/08

PLATE B-16

PETRA EXPLORATION LOG

Project:	Wigington Oil H19469-001	Boring No.:	MW-16
Location:	Road shoulder opposite Karerllyn Dr. and Woodside Ave., Santee	Date:	2/16/08
Job No.:	252-06	Logged By:	DBS
Drilling Co.:	Test America	Approved By:	

Drilling Method: Hollow-Stem Auger

Depth to Water: 29.1 ft. Total Depth of Boring: 41.5 ft.

Depth (Feet)	Lith-ology	Material Description	Well Details	Water	Samples: Blows Per 6 in.	Samples: Run	Samples: Rec	Field and Laboratory Tests: Sample Name	Collection Time	Other Lab Tests
		A/C 8". Base 2". A/C.								
		ARTIFICIAL FILL (Qaf) Sand (SW): dark yellow brown (10YR 3/6), slightly moist, loose; fine to very coarse sand with some small gravels, A/C chunks.								
5		**ALLUVIUM (Qal)** Clayey Sand (SW/SC): dark brown (7.5YR 3/4), moist, loose; medium to very coarse sand with small gravels in clayey matrix.			2 3 5			MW-16 @5'	11:13 am	PID: 0.0
10		Silty Sand (SM): olive brown (2.5Y 4/4), moist, medium dense; fine sand with abundant silt, micaceous.			4 6 16			MW-16 @10'	11:18 am	PID: 0.0
15		Sand with Some Silt (SP/SM): olive brown (2.5Y 4/4), moist, medium dense; poorly graded fine sand with some silt.			6 8 8			MW-16 @15'	11:23 am	PID: 0.0
20		Sandy Silty Clay (CL): dark olive brown (2.5Y 3/3) very moist, loose to medium dense; silty clay with some fine sand.			2 8 6			MW-16 @20'	11:26 am	PID: 0.0

ENVIRONMENTAL LOG - V2 252-06 WIGINGTON.GPJ PETRA.GDT 4/1/08

PLATE B-17

PETRA EXPLORATION LOG

Project: **Wigington Oil H19469-001**		Boring No.:	**MW-16**
Location: **Road shoulder opposite Karerilyn Dr. and Woodside Ave., Santee**		Date:	**2/16/08**
Job No.: **252-06**	Drilling Method: **Hollow-Stem Auger**	Logged By:	**DBS**
Drilling Co.: **Test America**		Approved By:	

Depth (Feet)	Lith-ology	Material Description (Depth to Water: 29.1 ft. Total Depth of Boring: 41.5 ft.)	Well Details	Water	Samples: Blows Per 6 in.	Samples: Run	Samples: Rec	Field and Laboratory Tests: Sample Name	Collection Time	Other Lab Tests
		Sand (SW): light brownish gray (2.5Y 6/2), moist, medium dense; coarse to very coarse sands with some lenticular fine and silty/clayey lenses.			6 7 7			MW-16 @25'	11:30 am	PID: 0.0
		Groundwater @ 29.10 (3:40).		▽						
30		Sand (SW): light gray brown (2.5Y 6/2), wet, medium dense; medium to very coarse sands, mottled, no odor.			4 9 10			MW-16 @30'	11:35 am	PID: 0.0
35		Sand (SW): light olive brown (2.5Y 5/3), wet, medium dense to dense; coarse to very coarse sands with some fine to medium sands and possible trace silt, well graded.			8 8 21			MW-16 @35'	11:40 am	PID: 0.0
40		Sand (SW): dark gray (5Y 4/1), wet, medium dense; well graded coarse sand, possible hydrocarbon staining.			6 8 9			MW-16 @40'	11:43 am	PID: 4.0
		Total Depth = 41.5' Groundwater first encountered @ 29.1' WELL CONSTRUCTION: 2" Well set @ 39' 0-24' Blank Interval Sch. 40 PVC 24-39' Screen Interval (15') Sch 40 PVC (0.02 slot) Traffic Rated Vault Box 0-3' Concrete Seal (1.5 cubic feet) 3-3.5' Hydrated Bentonite Chips (.16 cubic feet) 3.5-18.5' Groutwell (5.6 cubic feet) 18.5-21.5' Hydrated Bentonite Chips (1 cubic feet) 21.5-41.5' Sand Pack (7.4 cubic feet).								

ENVIRONMENTAL LOG - V2 252-06 WIGINGTON.GPJ PETRA.GDT 4/1/08

PLATE B-18

PETRA EXPLORATION LOG

Project: **Wigington Oil H19469-001**		Boring No.: **MW-17**	
Location: **11421 Woodside Avenue, Santee**		Date: **2/19/08**	
Job No.: **252-06**	Drilling Method: **Hollow-Stem Auger**	Logged By: **DBS**	
Drilling Co.: **Test America**		Approved By:	

Depth to Water: 35.65 ft. Total Depth of Boring: 45 5 ft.

Depth (Feet)	Lith-ology	Material Description	Well Details	Water	Samples: Blows Per 6 in.	Samples: Run	Samples: Rec	Field and Laboratory Tests: Sample Name	Field and Laboratory Tests: Collection Time	Field and Laboratory Tests: Other Lab Tests
		A/C 2.5". Sand with Silt and Gravels (SW): olive brown (2.5Y 4/4); slightly moist, loose; fine to medium sand with some very coarse sand and some silt.								
		Clayey Sand to Silty Sand (SC/SM): dark brown (7.5YR 3/4 to 10YR 3/3); slightly moist, very loose.								
5		Sand with Some Clay (SW/SC); olive brown (2.5Y 4/4), slightly moist, loose; fine to very coarse sands with clayey matrix.			2 4 5			MW-17 @5'	2:05 pm	PID: 0.0
10		Sand (SW): light olive brown (2.5Y 5/4), slightly moist, medium dense; medium sand with coarse to very coarse.			5 7 7			MW-17 @10'	2:10 pm	PID: 0.0
15		Clayey Sand (SC): olive brown (2.5Y 4/3), moist, mediume dense; fine to medium sands with abundant clay (matrix), manganese staining.			2 5 7			MW-17 @15'	2:12 pm	PID: 0.0
20		**RESIDUAL SOIL** Clayey Sand (SW/SC): dark brown (7.5YR 3/4), moist, medium dense; residual soil/colluvium, well graded fine to medium sand with some coarse to very coarse sand and abundant clay.			5 9 14			MW-17 @20'	2:16 pm	PID: 0.0

PLATE B-19

PETRA EXPLORATION LOG

Project: **Wigington Oil H19469-001**		Boring No.: **MW-17**	
Location: **11421 Woodside Avenue, Santee**		Date: **2/19/08**	
Job No.: **252-06**	Drilling Method: **Hollow-Stem Auger**	Logged By: **DBS**	
Drilling Co.: **Test America**		Approved By:	

Depth (Feet)	Lith-ology	Material Description	Well Details	Water	Samples: Blows Per 6 in.	Samples: Run	Samples: Rec	Field and Laboratory Tests: Sample Name	Field and Laboratory Tests: Collection Time	Field and Laboratory Tests: Other Lab Tests
		Depth to Water: 35.65 ft. Total Depth of Boring: 45.5 ft.								
		Clayey Sand to Sandy Clay (SC/CL): dark brown (7.5YR 3/4), moist dense; fine sand with clay matrix with some coarse sand, mottled.			12 15 20			MW-17 @25'	2:20 pm	PID: 0.0
30		Same as above.			13 16 21			MW-17 @30'	2:24 pm	PID: 0.0
35		Groundwater @ 35.65' (3:50).		▼	6 20 25			MW-17 @35'	2:30 pm	PID: 12.8
		Clayey Sand (SC): very dark gray (2.5Y 3/1), very moist, dense; fine sands with abundant clay and some coarse, hydrocarbon odor and possible staining.								
		Groundwater first encountered @ 37.50' (3:30).		▽						
		Clayey Sand (SC): dark brown (7.5YR 3/4), moist to very moist, dense.			14 18 20			MW-17 @38'	2:35 pm	PID: 0.0
40										
45		**BEDROCK - Weathered Granitics (Kgr)**			50/4			MW-17 @45'	2:38 pm	PID: 0.0
		Granite.								
		Total Depth = 45.5'								
		Groundwater first encountered @ 37.50'; static water @ 35.65'								
		WELL CONSTRUCTION: 2" Well set @ 44.5'								
		0-24.5' Blank Interval Sch. 40 PVC								
		24.5-44.5' Screen Interval (15') Sch 40 PVC (0.02 slot)								

ENVIRONMENTAL LOG - V2 252-06 WIGINGTON.GPJ PETRA.GDT 4/1/08

PLATE B-20

PETRA EXPLORATION LOG

Project: **Wigington Oil H19469-001**		Boring No.: **MW-17**	
Location: **11421 Woodside Avenue, Santee**		Date: **2/19/08**	
Job No.: **252-06**	Drilling Method: **Hollow-Stem Auger**	Logged By: **DBS**	
Drilling Co.: **Test America**		Approved By:	

Depth (Feet)	Lith-ology	Material Description	Well Details	Water	Samples: Blows Per 6 in.	Samples: Run	Samples: Rec	Field and Laboratory Tests: Sample Name	Field and Laboratory Tests: Collection Time	Field and Laboratory Tests: Other Lab Tests
		Depth to Water: 35.65 ft. Total Depth of Boring: 45.5 ft.								
		Traffic Rated Vault Box 0-3' Concrete Seal (1.5 cubic feet) 3-4' Hydrated Bentonite Chips (.33 cubic feet) 4-18' Groutwell (4.6 cubic feet) 18-21' Hydrated Bentonite Chips (1 cubic foot) 21-45.5' Sand Pack (6.8 cubic feet).								

PLATE B-21

ENVIRONMENTAL LOG - V2 252-06 WIGINGTON.GPJ PETRA.GDT 4/1/08

SCS ENGINEERS

WELL LOG

Number: MW-18

8799 Balboa Avenue, Suite 290
San Diego, California 92123-1568

Client: Wiginton Petroleum

Job No: 01208473.00

Sheet: 1 of 1

SCS Representative: Chris Crosby

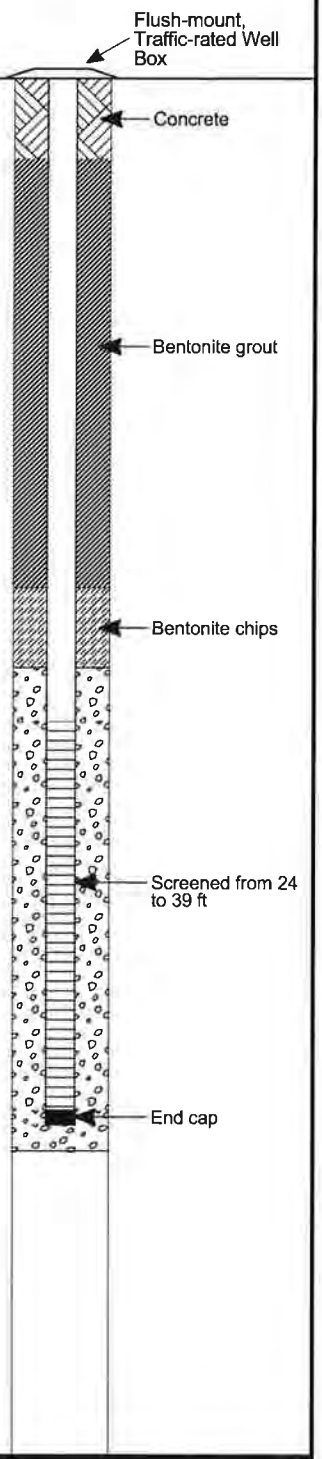
Location: 11427 Woodside Avenue, Santee, CA

Drilling Company: Cascade Drilling

Date Drilled:	Date Drafted:	Drilling / Sampling Method	Lat.:	Long:	Elev:
3/23/11	6/28/11	Hollow Stem Auger / Split Spoon Sampler	0	0	0.00
			Borehole Dia.: 8"	Casing Dia: 2"	Total Depth: 40.0

Depth (feet)	Sample Interval	Sample Number	Blow Counts	PID (ppm)	Lab Results gas/diesel/oil (mg/kg)	USCS Soil Class.	Graphic Log	Description (Formation, soil type, grain, minor soil component, moisture, density, odor, etc.)
0						Fill		4 inches ashpalt Artifical Fill (Qaf) Dark yellowish-brown (10 YR 3/6) SAND, fine- to coarse-grained, slightly moist, loose, no odor.
5	X		8 10 12	0.0		SW		ALLUVIUM (Qal) Olive brown (2.5 Y 4/4) SAND, fine- to coarse-grained, trace silt, moist, loose, no odor.
10	X		8 10 15	0.0				Same as above, fine-grained.
15	X		10 12 12	0.0		SP		Yellowish-brown (10 YR 5/6) SAND, fine- to medium-grained, trace silt, moist, loose, no odor
20	X		12 12 12	0.0				Dark olive brown (2.5 Y 3/3) SILTY SAND, very fine-grained, non-plastic, moist, loose, no odor.
25	X	MW18-25	10 10 17	0.0	<10/<10/NA	SM		Dark olive brown (2.5 Y 3/3) SILTY SAND with clay, very fine-grained, medium plasticity, moist, loose, no odor.
30	X	MW18-28.5	12 15 17 10 12 12	0.0 0.0	<10/<10/NA			Same as above, decreased clay, non-plastic, very moist Dark grayish-brown (2.5 Y 4/2) SAND, fine- to medium-grained, trace silt, wet, no odor.
35	X	MW18-35	12 15 15	0.0	<10/<10/NA	SW		Dark yellowish-brown (10 YR 3/6) SAND, fine- to coarse-grained, trace silt, wet, no odor.
40	X	MW18-40	10 11 12	0.0	<10/<10/NA			Boring termainted at 40 feet below grade.
45								
50								

Completion Detail



Logged By: Chris Crosby Title: Staff Professional Date: 3/23/11

Reviewed By: Chuck Houser License No: C.H.g. 945 Date: 6/20/11

SD_BORING_LOG WIGINGTON OIL WELL LOGS.GPJ GINT STD US.GDT 6/28/11

SCS ENGINEERS

WELL LOG

Number: MW-19

8799 Balboa Avenue, Suite 290
San Diego, California 92123-1568

Client: Wiginton Petroleum

Job No: 01208473.00

Sheet: 1 of 1

SCS Representative: Chris Crosby

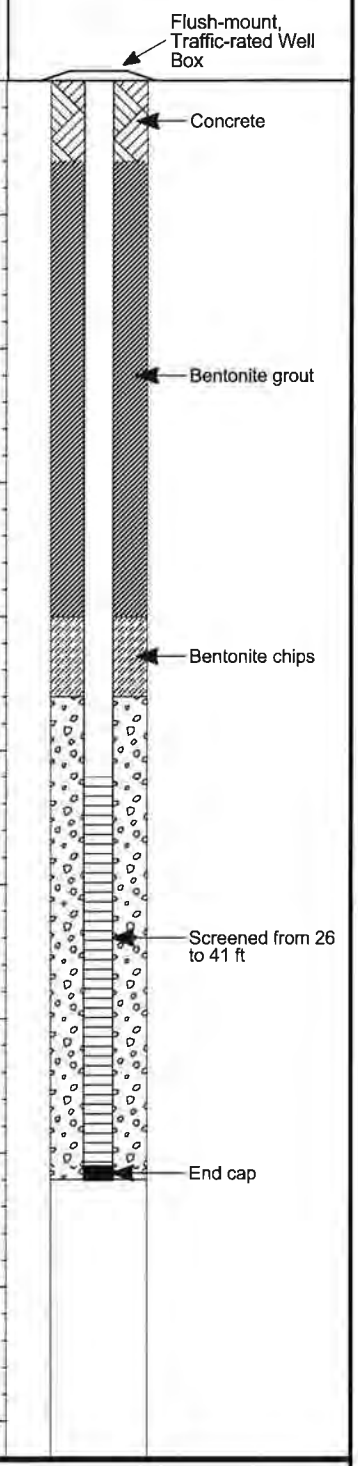
Location: 11427 Woodside Avenue, Santee, CA

Drilling Company: Cascade Drilling

Date Drilled:	Date Drafted:	Drilling / Sampling Method	Lat.:	Long:	Elev:
3/23/11	6/28/11	Hollow Stem Auger / Split Spoon Sampler	0	0	0.00
			Borehole Dia.: 8"	Casing Dia: 2"	Total Depth: 41.0

Depth (feet)	Sample Interval	Sample Number	Blow Counts	PID (ppm)	Lab Results gas/diesel/oil (mg/kg)	USCS Soil Class.	Graphic Log	Description (Formation, soil type, grain, minor soil component, moisture, density, odor, etc.)
0								3 inches asphalt.
								ALLUVIUM (Qal)
5	X		15 18 15	0.0				Dark brown (10 YR 3/3) SAND, fine-grained, trace silt, moist, loose, no odor.
10	X		8 10 10	0.0				Olive brown (2.5 Y 4/4) SAND, fine- to coarse-grained, trace silt, moist, loose, no odor.
15	X		10 12 12	0.0				Same as above, fine- to medium-grained.
20	X		12 12 12	0.0		SM		Dark olive brown (2.5 Y 3/3) SILTY SAND, very fine-grained, non-plastic, moist, loose, no odor.
25	X	MW19-25	8 10 10	0.0	<10/<10/NA			Dark olive brown (2.5 Y 3/3) SILTY SAND with clay, very fine-grained, medium plasticity.
30	X	MW19-30.5	10 12 15	203 115 46.7	82/46/NA			Dark grayish-brown (2.5 Y 4/2), SAND, fine- to medim-grained, trace silt, very moist, strong hydrocarbon odor.
35	X	MW19-35	10 10 10	0.0	1100/210/NA			Same as above, trace coarse-grained sand, wet.
40	X	MW19-40	8 8 10	0.0	<10/<10/NA			Grayish-brown (2.5 Y 5/2) SAND, fine- to coarse-grained, trace silt, wet, slight hydrocarbon odor.
								Boring terminated at 41 feet below grade.
45								
50								

Completion Detail



Logged By: Chris Crosby Title: Staff Professional Date: 3/23/11

Reviewed By: Chuck Houser License No: C.H.g. 945 Date: 6/20/11

SD_BORING_LOG WIGINGTON OIL WELL LOGS.GPJ GINT STD US.GDT 6/28/11

LOCATION MAP
(Not to scale)

N

See Figure 2 & 3

EnecoTech®
STRATEGIES FOR ENVIRONMENTAL RESPONSIBILITIES

6160 Fairmount Ave.
Suite "A"
San Diego, California 92120

BORING/WELL LOG I.D.: B1

Date(s): 12/3/02		Project Name: Wigington Petroleum	
Start Time: 08:30	Finish Time: 10:25	Project Number: 02-01686-001	
Logged By: EK	Drilling Company: HP Labs	Page 1 of 2	
Elevation: (ft. amsl) N/A	Vapor Detector: OVM580	Drilling Method: Direct Push	Sampling Method: 24" Split Spoon Sampler
Filter Pack: ____ Bags N/A	Bentonite Seal: 1 Bags Chips	Sanitary Seal: 6" Bags Concrete	
Casing Type: N/A	Diameter: N/A	Boring Dia.: 2"	Water Initial 32'
Screen Type: N/A	Slot Size: N/A Diameter: N/A	Total Depth: 40'	Water Final 30.10

Depth (feet)	LITHOLOGIC DESCRIPTION UNIT: Color, moisture, rel. density, texture (USCS Symbol), details. Odor, variations.	Sample Depth /Blows	Sample Type	Sample Designation	Screen Type	Screen Vapor (ppm)	Time	Boring/Well Completion
0	6" Concrete							
	ALLUVIUM: Moderate brown (5YR3/4), damp, fine to coarse sand (SW). No PHO.							
5	ALLUVIUM: Light brown (5YR5/6), damp, medium to coarse sand (SW). No PHO.			B1-7'	B	0.0	08:44	
	ALLUVIUM: Moderate brown (5YR3/4), damp, fine to coarse sand (SW) with clay binder. No PHO.			B1-8'				
10				B1-9.5' B1-10'	B	0.0	08:50	
15								
20	ALLUVIUM: Moderate brown (5YR3/4), damp, fine to medium sand (SW) with clay binder. No PHO.			B1-20'	B	0.0	09:00	
25				B1-25'	B	0.0	09:09	
30				B1-30'	B	854	09:19	

LEGEND

Sample Type	Screen Type		
Sleeve	A-Ambient	Concrete	Perforations
Grab	B-Bag	Bentonite Seal	Well Casing
Discard	C-Cuttings	Filter Pack	Locking Cap
No Recovery	H-Head Space	Contact - Dashed where inferred.	Water Table

Traffic Rated Well Cover

Drawn By:	Date:	Approved By:	Date:	RG Number:	Fig. No.:
MJL	December 2002	MJG	December 2002	4821	A1

LOCATION MAP
(Not to scale)

See Figure 2 & 3

EnecoTech®
STRATEGIES FOR ENVIRONMENTAL RESPONSIBILITIES

6160 Fairmount Ave.
Suite "A"
San Diego, California 92120

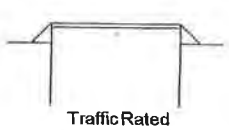
BORING/WELL LOG I.D.: B1

Date(s): 12/3/02		Project Name: Wigington Petroleum	
Start Time: 08:30	Finish Time: 10:25	Project Number: 02-01686-001	
Logged By: EK	Drilling Company: HP Labs	Page 2 of 2	
Elevation: (ft. amsl) N/A	Vapor Detector: OVM580	Drilling Method: Direct Push	Sampling Method: 24" Split Spoon Sampler
Filter Pack: ____ Bags N/A	Bentonite Seal: 1 Bags Chips	Sanitary Seal: 6" Bags Concrete	
Casing Type: N/A	Diameter: N/A	Boring Dia.: 2"	Water Initial 32'
Screen Type: N/A	Slot Size: N/A Diameter: N/A	Total Depth: 40'	Water Final 30.10

Depth (feet)	LITHOLOGIC DESCRIPTION UNIT: Color, moisture, rel. density, texture (USCS Symbol), details. Odor, variations.	Sample Depth /Blows	Sample Type	Sample Designation	Screen Type	Screen Vapor (ppm)	Time	Boring/Well Completion
30	ALLUVIUM: Light olive gray (5YR3/2), moist, fine to coarse sand (SW). Strong PHO.		☒	B1-32'	B	2,484	09:31	
	Saturated at 32 ft.		☒	B1-34'	B	1,680	09:41	
35	Shades to olive gray (5YR3/2) at 34 ft.		☒	B1-36'	B	105	09:54	
			☒	B1-38'	B	0.0	10:09	
40			☒	B1-40'	B	0.0	10:28	
	Total Depth=40 ft.							
45								
50								
55								
60								

LEGEND

Sample Type	Screen Type		
☒ Sleeve	A-Ambient	Concrete	Perforations
☒ Grab	B-Bag	Bentonite Seal	Well Casing
☒ Discard	C-Cuttings	Filter Pack	Locking Cap
■ No Recovery	H-Head Space	Contact - Dashed where inferred.	Water Table



Traffic Rated Well Cover

Drawn By: MJL	Date: December 2002	Approved By: MJG	Date: December 2002	RG Number: 4821	Fig. No.: A1

LOCATION MAP
(Not to scale)

N

See Figure 2 & 3

EnecoTech®
STRATEGIES FOR ENVIRONMENTAL RESPONSIBILITIES

6160 Fairmount Ave.
Suite "A"
San Diego, California 92120

BORING/WELL LOG I.D.: B2

Date(s): 12/3/02		Project Name:	Wigington Petroleum
Start Time: 11:00	Finish Time: 12:30	Project Number:	02-01686-001
Logged By: EK	Drilling Company: HP Labs	Page 1 of 2	
Elevation: (ft. amsl) N/A	Vapor Detector: OVM580	Drilling Method: DirectPush	Sampling Method: 24" Split Spoon Sampler

Filter Pack: ____ Bags	N/A	Bentonite Seal: 1 Bags	Chips	Sanitary Seal: 6" Bags	Concrete
Casing Type: N/A		Diameter: N/A		Boring Dia.: 2"	Water Initial 34'
Screen Type: N/A	Slot Size: N/A	Diameter: N/A		Total Depth: 40'	Water Final 30.40

Depth (feet)	LITHOLOGIC DESCRIPTION UNIT: Color, moisture, rel. density, texture (USCS Symbol), details. Odor, variations.	Sample Depth /Blows	Sample Type	Sample Designation	Screen Type	Screen Vapor (ppm)	Time	Boring/Well Completion
0	6" rock and gravel							
	ALLUVIUM: Moderate brown (5YR3/4), damp, fine to coarse sand (SW). No PHO.							
5								
				B2-7.0'	B	0.0	11:03	
10				B2-10'	B	0.0	11:06	
15								
20				B2-20'	B	0.0	11:15	
	ALLUVIUM: Moderate brown (5YR3/4), damp, fine to medium sand (SW) with clay binder. No PHO.							
25								
30				B1-30'	B	0.0	11:25	

LEGEND

Sample Type	Screen Type		
Sleeve	A-Ambient	Concrete	Perforations
Grab	B-Bag	Bentonite Seal	Well Casing
Discard	C-Cuttings	Filter Pack	Locking Cap
No Recovery	H-Head Space	Contact-Dashed where inferred.	Water Table

Traffic Rated Well Cover

Drawn By:	Date:	Approved By:	Date:	RG Number:	Fig. No.:
MJL	December 2002	MJG	December 2002	4821	A2

LOCATION MAP
(Not to scale)

N

See Figure 2 & 3

EnecoTech®
STRATEGIES FOR ENVIRONMENTAL RESPONSIBILITIES

6160 Fairmount Ave.
Suite "A"
San Diego, California 92120

BORING/WELL LOG I.D.: B2

Date(s):	12/3/02			Project Name:	Wigington Petroleum
Start Time:	11:00	Finish Time:	12:30	Project Number:	02-01686-001
Logged By:	EK	Drilling Company:	HP Labs	Page	2 of 2
Elevation: (ft. amsl)	N/A	Vapor Detector:	OVM580		
Drilling Method:	DirectPush			Sampling Method:	24" Split Spoon Sampler
Filter Pack: ____ Bags	N/A	Bentonite Seal: 1 Bags	Chips	Sanitary Seal: 6" Bags	Concrete
Casing Type:	N/A	Diameter:	N/A	Boring Dia.:	2"
Screen Type:	N/A	Slot Size: N/A	Diameter: N/A	Total Depth:	40'
				Water Initial	34'
				Water Final	30.40

Depth (feet)	LITHOLOGIC DESCRIPTION UNIT: Color, moisture, rel. density, texture (USCS Symbol), details. Odor, variations.	Sample Depth /Blows	Sample Type	Sample Designation	Screen Type	Screen Vapor (ppm)	Time	Boring/Well Completion
30								
				B2-32'	B	7.0	11:36	
	Saturated at 34 ft.			B2-34'	B	0.0	11:47	
35								
40				B2-40'	B	0.0	12:08	
45								
50								
55								
60								

LEGEND

Sample Type	Screen Type		
Sleeve	A-Ambient	Concrete	Perforations
Grab	B-Bag	Bentonite Seal	Well Casing
Discard	C-Cuttings	Filter Pack	Locking Cap
No Recovery	H-Head Space	Contact - Dashed where inferred.	Water Table

Traffic Rated Well Cover

Drawn By:	Date:	Approved By:	Date:	RG Number:	Fig. No.:
MJL	December 2002	MJG	December 2002	4821	A2

LOCATION MAP
(Not to scale)

N

See Figure 2 & 3

EnecoTech®
STRATEGIES FOR ENVIRONMENTAL RESPONSIBILITIES

6160 Fairmount Ave.
Suite "A"
San Diego, California 92120

BORING/WELL LOG I.D.: B3

Date(s): 12/3/02		Project Name: Wigington Petroleum	
Start Time: 12:45	Finish Time: 14:15	Project Number: 02-01686-001	
Logged By: EK	Drilling Company: HP Labs	Page 1 of 2	
Elevation: (ft. amsl) N/A	Vapor Detector: OVM580	Drilling Method: DirectPush	Sampling Method: 24" Split Spoon Sampler

Filter Pack: ____ Bags	N/A	Bentonite Seal: 1 Bags	Chips	Sanitary Seal: 6" Bags	Concrete		
Casing Type:	N/A		Diameter: N/A	Boring Dia.:	2"	Water Initial	32'
Screen Type:	N/A	Slot Size: N/A	Diameter: N/A	Total Depth:	40'	Water Final	30.60

Depth (feet)	LITHOLOGIC DESCRIPTION UNIT: Color, moisture, rel. density, texture (USCS Symbol), details. Odor, variations.	Sample Depth /Blows	Sample Type	Sample Designation	Screen Type	Screen Vapor (ppm)	Time	Boring/Well Completion
0	7" Concrete							
	ALLUVIUM: Moderate brown (5YR3/4), damp, fine to coarse sand (SW). No PHO.							
5			⊠	B3-7'	B	0.0	12:59	
10			⊠	B3-10'	B	0.0	13:02	
15			⊠					
20			⊠	B3-20'	B	7.0	13:10	
	ALLUVIUM: Light olive gray (5YR5/2), damp, fine to coarse sand (SW). Slight PHO.							
25	Strong PHO at 25 ft.		⊠	B3-25'	B	226	13:18	
30	With clay Binder at 30 ft.		⊠	B3-30'	B	354	13:26	

LEGEND

Sample Type	Screen Type		
⊠ Sleeve	A-Ambient	Concrete	Perforations
⊘ Grab	B-Bag	Bentonite Seal	Well Casing
⊘ Discard	C-Cuttings	Filter Pack	Locking Cap
■ No Recovery	H-Head Space	Contact - Dashed where inferred.	Water Table

Traffic Rated Well Cover

Drawn By:	Date:	Approved By:	Date:	RG Number:	Fig. No.:
MJL	December 2002	MJG	December 2002	4821	A3

LOCATION MAP
(Not to scale)

See Figure 2 & 3

EnecoTech®
STRATEGIES FOR ENVIRONMENTAL RESPONSIBILITIES

6160 Fairmount Ave.
Suite "A"
San Diego, California 92120

BORING/WELL LOG I.D.: B3

Date(s):	12/3/02			Project Name:	Wigington Petroleum
Start Time:	12:45	Finish Time:	14:15	Project Number:	02-01686-001
Logged By:	EK	Drilling Company:	HP Labs	Page	2 of 2
Elevation: (ft. amsl)	N/A	Vapor Detector:	OVM580	Drilling Method:	Direct Push
Sampling Method:	24" Split Spoon Sampler				
Filter Pack: ____ Bags	N/A	Bentonite Seal: 1 Bags	Chips	Sanitary Seal: 6" Bags	Concrete
Casing Type:	N/A	Diameter:	N/A	Boring Dia.:	2"
Water Initial	32'				
Screen Type:	N/A	Slot Size:	N/A	Diameter:	N/A
Total Depth:	40'	Water Final	30.60		

Depth (feet)	LITHOLOGIC DESCRIPTION UNIT: Color, moisture, rel. density, texture (USCS Symbol), details. Odor, variations.	Sample Depth /Blows	Sample Type	Sample Designation	Screen Type	Screen Vapor (ppm)	Time	Boring/Well Completion
30	With clay binder at 30 ft.							
	Saturated at 32 ft.			B3-32'	B	1,350	13:34	
				B3-34'	B	1,016	13:45	
35	No PHO at 36 ft.			B3-36'	B	0.0	13:57	
40				B3-40'	B	0.0	14:09	
	Ttotal Depth=40 ft.							
45								
50								
55								
60								

LEGEND

Sample Type	Screen Type		
Sleeve	A-Ambient	Concrete	Perforations
Grab	B-Bag	Bentonite Seal	Well Casing
Discard	C-Cuttings	Filter Pack	Locking Cap
No Recovery	H-Head Space	Contact - Dashed where inferred.	Water Table

Traffic Rated Well Cover

Drawn By:	MJL	Date:	December 2002	Approved By:	MJG	Date:	December 2002	RG Number:	4821	Fig. No.:	A3

LOCATION MAP
(Not to scale)

N

See Figure 2 & 3

EnecoTech®
STRATEGIES FOR ENVIRONMENTAL RESPONSIBILITIES

6160 Fairmount Ave.
Suite "A"
San Diego, California 92120

BORING/WELL LOG I.D.: B4

Date(s): 12/3/02		Project Name:	Wigington Petroleum
Start Time: 14:30	Finish Time: 16:15	Project Number:	02-01686-001
Logged By: EK	Drilling Company: HP Labs	Page	1 of 2
Elevation: (ft. amsl) N/A	Vapor Detector: OVM580	Drilling Method:	Direct Push
Sampling Method:	24" Split Spoon Sampler		
Filter Pack: ____ Bags	N/A	Bentonite Seal: 1 Bags	Chips
Sanitary Seal: 6" Bags	Concrete		
Casing Type: N/A	Diameter: N/A	Boring Dia.: 2"	Water Initial 32'
Screen Type: N/A	Slot Size: N/A	Diameter: N/A	Total Depth: 40'
Water Final 31.85			

Depth (feet)	LITHOLOGIC DESCRIPTION UNIT: Color, moisture, rel. density, texture (USCS Symbol), details. Odor, variations	Sample Depth /Blows	Sample Type	Sample Designation	Screen Type	Screen Vapor (ppm)	Time	Boring/Well Completion
0	7" Concrete							
	ALLUVIUM: Moderate brown (5YR3/4), damp, fine to coarse sand (SW). No PHO.							
5								
			☒	B4-7'	B	0.0	14:33	
10			☒	B4-10'	B	0.0	14:35	
15								
20			☒	B4-20'	B	0.0	14:43	
	ALLUVIUM: Light olive gray (5YR5/2), damp, fine to coarse sand (SW). Slight PHO.							
25								
30	Strong PHO at 30 ft.		☒	B4-30'	B	302	14:53	

LEGEND

Sample Type	Screen Type		
☒ Sleeve	A - Ambient	Concrete	Perforations
☒ Grab	B - Bag	Bentonite Seal	Well Casing
☒ Discard	C - Cuttings	Filter Pack	Locking Cap
■ No Recovery	H - Head Space	Contact - Dashed where inferred.	Water Table

Traffic Rated Well Cover

Drawn By:	Date:	Approved By:	Date:	RG Number:	Fig. No.:
MJL	December 2002	MJG	December 2002	4821	A4

LOCATION MAP
(Not to scale)

See Figure 2 & 3

EnecoTech®
STRATEGIES FOR ENVIRONMENTAL RESPONSIBILITIES

6160 Fairmount Ave.
Suite "A"
San Diego, California 92120

BORING/WELL LOG I.D.: B4

Date(s): 12/3/02		Project Name: Wigington Petroleum	
Start Time: 14:30	Finish Time: 16:15	Project Number: 02-01686-001	
Logged By: EK	Drilling Company: HP Labs	Page 2 of 2	
Elevation: (ft. amsl) N/A	Vapor Detector: OVM580	Drilling Method: DirectPush	Sampling Method: 24" Split Spoon Sampler
Filter Pack: ____ Bags N/A	Bentonite Seal: 1 Bags Chips	Sanitary Seal: 6" Bags Concrete	
Casing Type: N/A	Diameter: N/A	Boring Dia.: 2"	Water Initial 32'
Screen Type: N/A	Slot Size: N/A Diameter: N/A	Total Depth: 40'	Water Final 31.85

Depth (feet)	LITHOLOGIC DESCRIPTION UNIT: Color, moisture, rel. density, texture (USCS Symbol), details. Odor, variations.	Sample Depth /Blows	Sample Type	Sample Designation	Screen Type	Screen Vapor (ppm)	Time	Boring/Well Completion
30								
	ALLUVIUM: Dusky yellowish brown (10YR2/2), fine to medium sand (SW). Strong PHO.		⊠	B4-32'	B	528	15:03	
			⊠	B4-34'	B	580	15:14	
35	ALLUVIUM: Olive gray (5YR3/2), saturated, coarse sand (SP). Strong PHO.		⊠	B4-36'	B	268	15:25	
	Soil black (N1) at 36 ft.		⊠	B4-38'	B	0.0	15:36	
	Soil dusky brown at 38 ft.		⊠	B4-40'	B	0.0	15:50	
40								
45								
50								
55								
60								

LEGEND

Sample Type	Screen Type	
⊠ Sleeve	A-Ambient	Concrete
⊠ Grab	B-Bag	Bentonite Seal
⊠ Discard	C-Cuttings	Filter Pack
■ No Recovery	H-Head Space	Contact - Dashed where inferred.

Perforations
Well Casing
Locking Cap
Water Table

Traffic Rated Well Cover

Drawn By: MJL	Date: December 2002	Approved By: MJG	Date: December 2002	RG Number: 4821	Fig. No.: A4

LOCATION MAP
(Not to scale)

See Figure 2 & 3

EnecoTech®
STRATEGIES FOR ENVIRONMENTAL RESPONSIBILITIES

6160 Fairmount Ave.
Suite "A"
San Diego, California 92120

BORING/WELL LOG I.D.: B5

Date(s):	12/4/02			Project Name:	Wigington Petroleum
Start Time:	07:00	Finish Time:	08:00	Project Number:	02-01686-001
Logged By:	EK	Drilling Company:	HP Labs	Page	1 of 1
Elevation: (ft. amsl)	N/A	Vapor Detector:	OVM580		
Drilling Method:	Direct Push			Sampling Method:	24" Split Spoon Sampler
Filter Pack: ____ Bags	N/A	Bentonite Seal: 1 Bags	Chips	Sanitary Seal: 6" Bags	Concrete
Casing Type:	N/A	Diameter:	N/A	Boring Dia.:	2"
Screen Type:	N/A	Slot Size: N/A	Diameter: N/A	Total Depth:	28.5'
				Water Initial	NA
				Water Final	NA

Depth (feet)	LITHOLOGIC DESCRIPTION UNIT: Color, moisture, rel. density, texture (USCS Symbol), details. Odor, variations.	Sample Depth /Blows	Sample Type	Sample Designation	Screen Type	Screen Vapor (ppm)	Time	Boring/Well Completion
0	7" Concrete							
	ALLUVIUM: Moderate brown (5YR3/4), damp, fine to coarse sand (SW) with clay binder. No PHO.							
5			⊠	B5-7'	B	0.0	07:12	
10			⊠	B5-10'	B	0.0	07:21	
	ALLUVIUM: Dark yellowish brown (10YR4/2), damp, fine to coarse sand (SW). No PHO.							
15								
20			⊠	B5-20'	B	0.0	07:30	
	ALLUVIUM: Moderate brown (5YR3/4), damp, fine sandy clay (SC). No PHO.							
25								
	Refusal at 28.5 ft.		⊠	B5-28.5'	B	0.0	07:55	
	Total Depth= 28.5 ft.							
30								

LEGEND

Sample Type	Screen Type		
⊠ Sleeve	A-Ambient	Concrete	Perforations
⊠ Grab	B-Bag	Bentonite Seal	Well Casing
⊠ Discard	C-Cuttings	Filter Pack	Locking Cap
■ No Recovery	H-Head Space	Contact - Dashed where inferred.	Water Table

Traffic Rated Well Cover

Drawn By:	Date:	Approved By:	Date:	RG Number:	Fig. No.:
MJL	December 2002	MJG	December 2002	4821	A5

LOCATION MAP
(Not to scale)

N

See Figure 2 & 3

EnecoTech®
STRATEGIES FOR ENVIRONMENTAL RESPONSIBILITIES

6160 Fairmount Ave.
Suite "A"
San Diego, California 92120

BORING/WELL LOG I.D.: B6

Date(s): 12/4/02		Project Name: Wigington Petroleum	
Start Time: 09:15	Finish Time: 10:30	Project Number: 02-01686-001	
Logged By: EK	Drilling Company: HP Labs	Page 1 of 2	
Elevation: (ft. amsl) N/A	Vapor Detector: OVM580	Drilling Method: Direct Push	Sampling Method: 24" Split Spoon Sampler
Filter Pack: ____ Bags N/A	Bentonite Seal: 1 Bags Chips	Sanitary Seal: 6" Bags Concrete	
Casing Type: N/A	Diameter: N/A	Boring Dia.: 2"	Water Initial 32'
Screen Type: N/A	Slot Size: N/A Diameter: N/A	Total Depth: 40'	Water Final 30.5'

Depth (feet)	LITHOLOGIC DESCRIPTION UNIT: Color, moisture, rel. density, texture (USCS Symbol), details. Odor, variations.	Sample Depth /Blows	Sample Type	Sample Designation	Screen Type	Screen Vapor (ppm)	Time	Boring/Well Completion
0	4" Asphalt							
	ALLUVIUM: Moderate brown (5YR3/4), damp, fine to coarse sand (SW) with clay binder. No PHO.							
5	ALLUVIUM: Dark yellowish brown (10YR4/2), damp, coarse sand (SP). No PHO.							
10								
15								
20								
25								
30			⊠	B6-30'	B	0.0	09:30	

LEGEND

Sample Type	Screen Type	
⊠ Sleeve	A - Ambient	Concrete
⊘ Grab	B - Bag	Bentonite Seal
⊘ Discard	C - Cuttings	Filter Pack
■ No Recovery	H - Head Space	Contact - Dashed where inferred.

Perforations
Well Casing
Locking Cap
Water Table

Traffic Rated Well Cover

Drawn By:	Date:	Approved By:	Date:	RG Number:	Fig. No.:
MJL	December 2002	MJG	December 2002	4821	A6

LOCATION MAP
(Not to scale)

See Figure 2 & 3

EnecoTech®
STRATEGIES FOR ENVIRONMENTAL RESPONSIBILITIES

6160 Fairmount Ave.
Suite "A"
San Diego, California 92120

BORING/WELL LOG I.D.: B6

Date(s):	12/4/02			Project Name:	Wigington Petroleum
Start Time:	09:15	Finish Time:	10:30	Project Number:	02-01686-001
Logged By:	EK	Drilling Company:	HP Labs	Page	2 of 2
Elevation: (ft. amsl)	N/A	Vapor Detector:	OVM580		
Drilling Method:	Direct Push			Sampling Method:	24" Split Spoon Sampler
Filter Pack:	N/A Bags	Bentonite Seal:	1 Bags Chips	Sanitary Seal:	6" Bags Concrete
Casing Type:	N/A	Diameter:	N/A	Boring Dia.:	2"
Screen Type:	N/A	Slot Size:	N/A	Diameter:	N/A
				Total Depth:	40'
				Water Initial	32'
				Water Final	30.5'

Depth (feet)	LITHOLOGIC DESCRIPTION UNIT: Color, moisture, rel. density, texture (USCS Symbol), details. Odor, variations.	Sample Depth /Blows	Sample Type	Sample Designation	Screen Type	Screen Vapor (ppm)	Time	Boring/Well Completion
30	ALLUVIUM: Light olive gray (5YR5/2), moist, coarse sand (SP). Slight PHO.		☒	B6-32'	B	848	09:40	
	Groundwater at 32 ft.							
	Strong PHO at 32 and 34 ft.		☒	B6-34'	B	1,060	09:50	
35			☒	B6-36'	B	43	10:00	
40			☒	B6-40'	B	0.0	10:11	
	Total Depth=40 ft.							
45								
50								
55								
60								

LEGEND

Sample Type	Screen Type		
☒ Sleeve	A-Ambient	Concrete	Perforations
☒ Grab	B-Bag	Bentonite Seal	Well Casing
☒ Discard	C-Cuttings	Filter Pack	Locking Cap
■ No Recovery	H-Head Space	Contact - Dashed where inferred.	Water Table

Traffic Rated Well Cover

Drawn By:	Date:	Approved By:	Date:	RG Number:	Fig. No.:
MJL	December 2002	MJG	December 2002	4821	A6

LOCATION MAP
(Not to scale)

N

See Figure 2 & 3

EnecoTech®
STRATEGIES FOR ENVIRONMENTAL RESPONSIBILITIES

6160 Fairmount Ave.
Suite "A"
San Diego, California 92120

BORING/WELL LOG I.D.: B7

Date(s):	12/4/02			Project Name:	Wigington Petroleum
Start Time:	10:45	Finish Time:	12:15	Project Number:	02-01686-001
Logged By:	EK	Drilling Company:	HP Labs	Page	1 of 2
Elevation: (ft. a msl)	N/A	Vapor Detector:	OVM580	Drilling Method:	Direct Push
Sampling Method:	24" Split Spoon Sampler				
Filter Pack: ____ Bags	N/A	Bentonite Seal: 1 Bags	Chips	Sanitary Seal: 6" Bags	Concrete
Casing Type:	N/A	Diameter:	N/A	Boring Dia.:	2"
Water Initial	32'				
Screen Type:	N/A	Slot Size: N/A	Diameter: N/A	Total Depth:	40'
Water Final	30.5'				

Depth (feet)	LITHOLOGIC DESCRIPTION UNIT: Color, moisture, rel. density, texture (USCS Symbol), details. Odor, variations.	Sample Depth /Blows	Sample Type	Sample Designation	Screen Type	Screen Vapor (ppm)	Time	Boring/Well Completion
0	4" Asphalt							
	ALLUVIUM: Moderate brown (5YR4/3), damp, fine to coarse sand (SW). No PHO.							
25			☒	B7-25'	B	0.0	11:00	
30	ALLUVIUM: Light olive gray (5YR5/2), damp, coarse sand (SW). Slight PHO.		☒	B7-30'	B	0.0	11:10	

LEGEND

Sample Type	Screen Type		
☒ Sleeve	A-Ambient	Concrete	Perforations
☒ Grab	B-Bag	Bentonite Seal	Well Casing
☒ Discard	C-Cuttings	Filter Pack	Locking Cap
■ No Recovery	H-Head Space	Contact - Dashed where inferred.	Water Table

Traffic Rated Well Cover

Drawn By:	Date:	Approved By:	Date:	RG Number:	Fig. No.:
MJL	December 2002	MJG	December 2002	4821	A7

LOCATION MAP
(Not to scale)

N

See Figure 2 & 3

EnecoTech®
STRATEGIES FOR ENVIRONMENTAL RESPONSIBILITIES

6160 Fairmount Ave.
Suite "A"
San Diego, California 92120

BORING/WELL LOG I.D.: B7

Date(s): 12/4/02		Project Name:	Wigington Petroleum
Start Time: 10:45	Finish Time: 12:15	Project Number:	02-01686-001
Logged By: EK	Drilling Company: HP Labs	Page 2 of 2	
Elevation: (ft. amsl) N/A	Vapor Detector: OVM580	Drilling Method: Direct Push	Sampling Method: 24" Split Spoon Sampler
Filter Pack: ____ Bags N/A	Bentonite Seal: 1 Bags Chips	Sanitary Seal: 6" Bags Concrete	
Casing Type: N/A	Diameter: N/A	Boring Dia.: 2"	Water Initial 32'
Screen Type: N/A	Slot Size: N/A Diameter: N/A	Total Depth: 40'	Water Final 30.5'

Depth (feet)	LITHOLOGIC DESCRIPTION UNIT: Color, moisture, rel. density, texture (USCS Symbol), details. Odor, variations.	Sample Depth /Blows	Sample Type	Sample Designation	Screen Type	Screen Vapor (ppm)	Time	Boring/Well Completion
30								
			☒	B7-32'	B	0.0	11:18	
35			☒	B6-36'	B	28.0	11:30	
40			☒	B6-40'	B	0.0	11:43	
	Total Depth=40 ft.							
45								
50								
55								
60								

LEGEND

Sample Type	Screen Type		
☒ Sleeve	A-Ambient	Concrete	Perforations
⁄ Grab	B-Bag	Bentonite Seal	Well Casing
⁄ Discard	C-Cuttings	Filter Pack	Locking Cap
■ No Recovery	H-Head Space	Contact - Dashed where inferred.	Water Table

Traffic Rated Well Cover

Drawn By:	Date:	Approved By:	Date:	RG Number:	Fig. No.:
MJL	December 2002	MJG	December 2002	4821	A7

LOCATION MAP
(Not to scale)

See Figure 2 & 3

EnecoTech®
STRATEGIES FOR ENVIRONMENTAL RESPONSIBILITIES

6160 Fairmount Ave.
Suite "A"
San Diego, California 92120

BORING/WELL LOG I.D.: B8

Date(s):	12/4/02			Project Name:	Wigington Petroleum
Start Time:	12:30	Finish Time:	14:00	Project Number:	02-01686-001
Logged By:	EK	Drilling Company:	HP Labs	Page	1 of 2
Elevation: (ft. a msl)	N/A	Vapor Detector:	OVM580		
Drilling Method:	Direct Push			Sampling Method:	24" Split Spoon Sampler
Filter Pack: ____ Bags	N/A	Bentonite Seal: 1 Bags	Chips	Sanitary Seal: 6" Bags	Concrete
Casing Type:	N/A	Diameter:	N/A	Boring Dia.:	2"
Screen Type:	N/A	Slot Size: N/A	Diameter: N/A	Total Depth:	38'
				Water Initial	32'
				Water Final	30.5'

Depth (feet)	LITHOLOGIC DESCRIPTION UNIT: Color, moisture, rel. density, texture (USCS Symbol), details. Odor, variations.	Sample Depth /Blows	Sample Type	Sample Designation	Screen Type	Screen Vapor (ppm)	Time	Boring/Well Completion
0	4" Asphalt							
	ALLUVIUM: Moderate brown (5YR3/4), damp, fine to coarse sand (SW) with clay binders. No PHO.							
25			☒	B8-25'	B	0.0	13:02	
	ALLUVIUM: Olive gray (5YR3/2), damp, fine to medium sand (SW) with clay binder. Slight PHO.							
30								

LEGEND

Sample Type	Screen Type	
☒ Sleeve	A-Ambient	Concrete
☒ Grab	B-Bag	Bentonite Seal
☒ Discard	C-Cuttings	Filter Pack
■ No Recovery	H-Head Space	Contact - Dashed where inferred.

Perforations
Well Casing
Locking Cap
Water Table

Traffic Rated Well Cover

Drawn By:	Date:	Approved By:	Date:	RG Number:	Fig. No.:
MJL	December 2002	MJG	December 2002	4821	A8

LOCATION MAP
(Not to scale)

N

See Figure 2 & 3

EnecoTech®
STRATEGIES FOR ENVIRONMENTAL RESPONSIBILITIES

6160 Fairmount Ave.
Suite "A"
San Diego, California 92120

BORING/WELL LOG I.D.: B8

Date(s):	12/4/02			Project Name:	Wigington Petroleum
Start Time:	12:30	Finish Time:	14:00	Project Number:	02-01686-001
Logged By:	EK	Drilling Company:	HP Labs	Page	2 of 2
Elevation: (ft. amsl)	N/A	Vapor Detector:	OVM580	Drilling Method:	Direct Push
Sampling Method:	24" Split Spoon Sampler				
Filter Pack: ____ Bags	N/A	Bentonite Seal: 1 Bags	Chips	Sanitary Seal: 6" Bags	Concrete
Casing Type:	N/A	Diameter:	N/A	Boring Dia.:	2"
Water Initial	32'				
Screen Type:	N/A	Slot Size:	N/A	Diameter:	N/A
Total Depth:	38'	Water Final	30.5'		

Depth (feet)	LITHOLOGIC DESCRIPTION UNIT: Color, moisture, rel. density, texture (USCS Symbol), details. Odor, variations.	Sample Depth /Blows	Sample Type	Sample Designation	Screen Type	Screen Vapor (ppm)	Time	Boring/Well Completion
30	Saturated at 32 ft.							
	Strong PHO at 32 ft.		☒	B8-32'	B	782	13:12	
			☒	B8-34'	B	1,680	13:21	
35	Slight PHO at 36 ft.		☒	B8-36'	B	0.0	13:30	
	No odor at 38 ft.		☒	B8-38'	B	0.0	13:41	
	Total Depth=38 ft.							
40								
45								
50								
55								
60								

LEGEND

Sample Type	Screen Type	
☒ Sleeve	A - Ambient	Concrete
☒ Grab	B - Bag	Bentonite Seal
☒ Discard	C - Cuttings	Filter Pack
■ No Recovery	H - Head Space	Contact - Dashed where inferred.

Perforations
Well Casing
Locking Cap
Water Table

Traffic Rated Well Cover

Drawn By:	Date:	Approved By:	Date:	RG Number:	Fig. No.:
MJL	December 2002	MJG	December 2002	4821	A8

LOCATION MAP
(Not to scale)

See Figure 2 & 3

EnecoTech®
STRATEGIES FOR ENVIRONMENTAL RESPONSIBILITIES

6160 Fairmount Ave.
Suite "A"
San Diego, California 92120

BORING/WELL LOG I.D.: B9

Date(s):	12/4/02			Project Name:	Wigington Petroleum
Start Time:	14:00	Finish Time:	15:30	Project Number:	02-01686-001
Logged By:	EK	Drilling Company:	HP Labs		Page 1 of 2
Elevation: (ft. amsl)	N/A	Vapor Detector:	OVM580	Drilling Method:	Direct Push
Sampling Method:	24" Split Spoon Sampler				
Filter Pack: ____ Bags	N/A	Bentonite Seal: 1 Bags	Chips	Sanitary Seal: 6" Bags	Concrete
Casing Type:	N/A	Diameter:	N/A	Boring Dia.:	2"
Water Initial	33'				
Screen Type:	N/A	Slot Size:	N/A	Diameter:	N/A
Total Depth:	40'	Water Final	30.5'		

Depth (feet)	LITHOLOGIC DESCRIPTION UNIT: Color, moisture, rel. density, texture (USCS Symbol), details. Odor, variations.	Sample Depth /Blows	Sample Type	Sample Designation	Screen Type	Screen Vapor (ppm)	Time	Boring/Well Completion
0	4" Asphalt							
	ALLUVIUM: Moderate brown (5YR3/4), damp, fine to coarse sand (SW) with clay binders. No PHO.							
25			☒	B9-25'	B	0.0	14:38	
	ALLUVIUM: Olive gray (5YR3/2), damp, fine to coarse sand (SW) with trace clay binder. Slight PHO.							
	Slight PHO and moist soil at 31 ft.		☒	B9-31'	B	0.0	14:17	

LEGEND

Sample Type	Screen Type		
☒ Sleeve	A-Ambient	Concrete	Perforations
☒ Grab	B-Bag	Bentonite Seal	Well Casing
☒ Discard	C-Cuttings	Filter Pack	Locking Cap
■ No Recovery	H-Head Space	Contact - Dashed where inferred.	Water Table

Traffic Rated Well Cover

Drawn By:	Date:	Approved By:	Date:	RG Number:	Fig. No.:
MJL	December 2002	MJG	December 2002	4821	A9

LOCATION MAP
(Not to scale)

See Figure 2 & 3

EnecoTech®
STRATEGIES FOR ENVIRONMENTAL RESPONSIBILITIES

6160 Fairmount Ave.
Suite "A"
San Diego, California 92120

BORING/WELL LOG I.D.: B9

Date(s):	12/4/02			Project Name:	Wigington Petroleum
Start Time:	14:00	Finish Time:	15:30	Project Number:	02-01686-001
Logged By:	EK	Drilling Company:	HP Labs	Page	2 of 2
Elevation: (ft. amsl)	N/A	Vapor Detector:	OVM580	Drilling Method:	Direct Push
Sampling Method:	24" Split Spoon Sampler				

Filter Pack: ____ Bags	N/A	Bentonite Seal: 1 Bags	Chips	Sanitary Seal: 6" Bags	Concrete
Casing Type:	N/A	Diameter:	N/A	Boring Dia.:	2"
Screen Type:	N/A	Slot Size: N/A	Diameter: N/A	Total Depth:	40'
Water Initial	33'	Water Final	30.5'		

Depth (feet)	LITHOLOGIC DESCRIPTION UNIT: Color, moisture, rel. density, texture (USCS Symbol), details. Odor, variations.	Sample Depth /Blows	Sample Type	Sample Designation	Screen Type	Screen Vapor (ppm)	Time	Boring/Well Completion
30								
	Saturated soil and strong PHO at 33 ft.		☒	B9-33'	B	609	14:55	
35	Slight weathered fuel odor at 35 ft.		☒	B9-35'	B	26	15:06	
40			☒	B9-40'	B	0.0	15:18	
	Total Depth=40 ft.							
45								
50								
55								
60								

LEGEND

Sample Type	Screen Type	
☒ Sleeve	A-Ambient	Concrete
☒ Grab	B-Bag	Bentonite Seal
☒ Discard	C-Cuttings	Filter Pack
■ No Recovery	H-Head Space	Contact - Dashed where inferred.

Perforations
Well Casing
Locking Cap
Water Table

Traffic Rated Well Cover

Drawn By:	Date:	Approved By:	Date:	RG Number:	Fig. No.:
MJL	December 2002	MJG	December 2002	4821	A9

LOCATION MAP
(Not to scale)

See Figure 2 & 3

EnecoTech®
STRATEGIES FOR ENVIRONMENTAL RESPONSIBILITIES

6160 Fairmount Ave.
Suite "A"
San Diego, California 92120

BORING/WELL LOG I.D.: B10

Date(s):	12/5/02			Project Name:	Wigington Petroleum
Start Time:	09:00	Finish Time:	10:30	Project Number:	02-01686-001
Logged By:	EK	Drilling Company:	HP Labs	Page	1 of 2
Elevation: (ft. amsl)	N/A	Vapor Detector:	OVM580		
Drilling Method:	Direct Push			Sampling Method:	24" Split Spoon Sampler
Filter Pack: ____ Bags	N/A	Bentonite Seal: 1 Bags	Chips	Sanitary Seal: ____ Bags	
Casing Type:	N/A	Diameter:	N/A	Boring Dia.:	2"
Screen Type:	N/A	Slot Size: N/A	Diameter: N/A	Total Depth:	40'
				Water Initial	32'
				Water Final	31.5'

Depth (feet)	LITHOLOGIC DESCRIPTION UNIT: Color, moisture, rel. density, texture (USCS Symbol), details. Odor, variations.	Sample Depth /Blows	Sample Type	Sample Designation	Screen Type	Screen Vapor (ppm)	Time	Boring/Well Completion
0	ALLUVIUM: Moderate brown (5YR3/4), damp, fine to coarse sand (SW) with clay binder. No PHO.							
5				B10-7'	B	0.0	09:00	
10				B10-10'	B	0.0	09:06	
15				B10-15'	B	0.0	09:12	
	ALLUVIUM: Dark yellowish brown (10YR4/2), damp, fine to coarse sand (SW). No PHO.							
20				B10-20'	B	0.0	09:19	
25				B10-27'	B	0.0	09:30	
				B10-29'	B	0.0	09:38	
30				B10-30'	B	0.0	09:47	

LEGEND

Sample Type: Sleeve; Grab; Discard; No Recovery

Screen Type: A-Ambient; B-Bag; C-Cuttings; H-Head Space

Concrete; Bentonite Seal; Filter Pack; Contact - Dashed where inferred.

Perforations; Well Casing; Locking Cap; Water Table

Traffic Rated Well Cover

Drawn By:	MJL	Date:	December 2002	Approved By:	MJG	Date:	December 2002	RG Number:	4821	Fig. No.:	A10

LOCATION MAP
(Not to scale)

See Figure 2 & 3

EnecoTech®
STRATEGIES FOR ENVIRONMENTAL RESPONSIBILITIES

6160 Fairmount Ave.
Suite "A"
San Diego, California 92120

BORING/WELL LOG I.D.: B10

Date(s):	12/5/02			Project Name:	Wigington Petroleum
Start Time:	09:00	Finish Time:	10:30	Project Number:	02-01686-001
Logged By:	EK	Drilling Company:	HP Labs	Page	2 of 2
Elevation: (ft. amsl)	N/A	Vapor Detector:	OVM580	Drilling Method:	Direct Push
Sampling Method:	24" Split Spoon Sampler				
Filter Pack: ____ Bags	N/A	Bentonite Seal: 1 Bags	Chips	Sanitary Seal: ____ Bags	
Casing Type:	N/A	Diameter:	N/A	Boring Dia.:	2"
Water Initial	32'				
Screen Type:	N/A	Slot Size:	N/A	Diameter:	N/A
Total Depth:	40'	Water Final	31.5'		

Depth (feet)	LITHOLOGIC DESCRIPTION UNIT: Color, moisture, rel. density, texture (USCS Symbol), details. Odor, variations.	Sample Depth /Blows	Sample Type	Sample Designation	Screen Type	Screen Vapor (ppm)	Time	Boring/Well Completion
30	Saturated at 32 ft.		☒	B10-32'	B	0.0	09:58	
35			☒	B10-34'	B	0.0	10:00	
40	Total Depth=40 ft.		☒	B10-40'	B	0.0	10:20	
45								
50								
55								
60								

LEGEND

Sample Type	Screen Type		
☒ Sleeve	A-Ambient	Concrete	Perforations
⁄ Grab	B-Bag	Bentonite Seal	Well Casing
⁄ Discard	C-Cuttings	Filter Pack	Locking Cap
■ No Recovery	H-Head Space	Contact - Dashed where inferred.	Water Table

Traffic Rated Well Cover

Drawn By:	Date:	Approved By:	Date:	RG Number:	Fig. No.:
MJL	December 2002	MJG	December 2002	4821	A10

LOCATION MAP
(Not to scale)

See Figure 2 & 3

EnecoTech®
STRATEGIES FOR ENVIRONMENTAL RESPONSIBILITIES

6160 Fairmount Ave.
Suite "A"
San Diego, California 92120

BORING/WELL LOG I.D.: B11

Date(s):	12/5/02			Project Name:	Wigington Petroleum
Start Time:	10:45	Finish Time:	12:25	Project Number:	02-01686-001
Logged By:	EK	Drilling Company:	HP Labs	Page	1 of 2
Elevation: (ft. amsl)	N/A	Vapor Detector:	OVM580	Drilling Method:	Direct Push
Sampling Method:	24" Split Spoon Sampler				
Filter Pack: ____ Bags	N/A	Bentonite Seal: 1 Bags	Chips	Sanitary Seal: ____ Bags	
Casing Type:	N/A	Diameter:	N/A	Boring Dia.:	2"
Water Initial	32'				
Screen Type:	N/A	Slot Size:	N/A	Diameter:	N/A
Total Depth:	45'	Water Final	31.4'		

Depth (feet)	LITHOLOGIC DESCRIPTION UNIT: Color, moisture, rel. density, texture (USCS Symbol), details. Odor, variations.	Sample Depth /Blows	Sample Type	Sample Designation	Screen Type	Screen Vapor (ppm)	Time	Boring/Well Completion
0	ALLUVIUM: Moderate brown (5YR3/4), damp, fine to coarse sand (SW) with clay binder. No PHO.							
5								
10								
15								
20								
25				B11-27'	B	0.0	11:00	
	ALLUVIUM: Dark yellowish brown (10YR4/2), damp, fine to medium sand (SW) trace clay. No PHO.							
30				B11-31'	B	0.0	11:17	

LEGEND

Sample Type	Screen Type		
Sleeve	A-Ambient	Concrete	Perforations
Grab	B-Bag	Bentonite Seal	Well Casing
Discard	C-Cuttings	Filter Pack	Locking Cap
No Recovery	H-Head Space	Contact - Dashed where inferred.	Water Table

Traffic Rated Well Cover

Drawn By:	Date:	Approved By:	Date:	RG Number:	Fig. No.:
MJL	December 2002	MJG	December 2002	4821	A11

LOCATION MAP
(Not to scale)

See Figure 2 & 3

EnecoTech®
STRATEGIES FOR ENVIRONMENTAL RESPONSIBILITIES

6160 Fairmount Ave.
Suite "A"
San Diego, California 92120

BORING/WELL LOG I.D.: B11

Date(s):	12/5/02			Project Name:	Wigington Petroleum
Start Time:	10:45	Finish Time:	12:25	Project Number:	02-01686-001
Logged By:	EK	Drilling Company:	HP Labs	Page	2 of 2
Elevation: (ft. amsl)	N/A	Vapor Detector:	OVM580	Drilling Method:	Direct Push
Sampling Method:	24" Split Spoon Sampler				
Filter Pack: ____ Bags	N/A	Bentonite Seal: 1 Bags	Chips	Sanitary Seal: ____ Bags	
Casing Type:	N/A	Diameter:	N/A	Boring Dia.:	2"
Water Initial	32'				
Screen Type:	N/A	Slot Size:	N/A	Diameter:	N/A
Total Depth:	45'	Water Final	31.4'		

Depth (feet)	LITHOLOGIC DESCRIPTION UNIT: Color, moisture, rel. density, texture (USCS Symbol), details. Odor, variations.	Sample Depth /Blows	Sample Type	Sample Designation	Screen Type	Vapor (ppm)	Time	Boring/Well Completion
30								
35			⊠	B11-36'	B	7.0	11:30	
	Saturated at 36 ft.							
40	ALLUVIUM: Olive gray (5YR3/2), saturated, fine to coarse sand (SW) with clay. Slight weathered fuel.		⊠	B11-40'	B	23.0	11:43	
	No fuel odor at 45 ft.							
45			⊠	B11-45'	B	0.0	12:02	
	Total Depth=45 ft.							
50								
55								
60								

LEGEND

Sample Type	Screen Type		
⊠ Sleeve	A-Ambient	Concrete	Perforations
⊠ Grab	B-Bag	Bentonite Seal	Well Casing
⊠ Discard	C-Cuttings	Filter Pack	Locking Cap
■ No Recovery	H-Head Space	Contact - Dashed where inferred.	Water Table

Traffic Rated Well Cover

Drawn By:	Date:	Approved By:	Date:	RG Number:	Fig. No.:
MJL	December 2002	MJG	December 2002	4821	A11

LOCATION MAP
(Not to scale)

N

See Figure 2 & 3

EnecoTech®
STRATEGIES FOR ENVIRONMENTAL RESPONSIBILITIES

6160 Fairmount Ave.
Suite "A"
San Diego, California 92120

BORING/WELL LOG I.D.: B12

Date(s): 12/5/02		Project Name: Wigington Petroleum	
Start Time: 13:00	Finish Time: 15:15	Project Number: 02-01686-001	
Logged By: EK	Drilling Company: HP Labs	Page 1 of 2	
Elevation: (ft. amsl) N/A	Vapor Detector: OVM580	Drilling Method: Direct Push	Sampling Method: 24" Split Spoon Sampler
Filter Pack: ____ Bags N/A	Bentonite Seal: 1 Bags Chips	Sanitary Seal: ____ Bags	
Casing Type: N/A	Diameter: N/A	Boring Dia.: 2"	Water Initial 32'
Screen Type: N/A	Slot Size: N/A Diameter: N/A	Total Depth: 44'	Water Final 31.58'

Depth (feet)	LITHOLOGIC DESCRIPTION UNIT: Color, moisture, rel. density, texture (USCS Symbol), details. Odor, variations.	Sample Depth /Blows	Sample Type	Sample Designation	Screen Type	Screen Vapor (ppm)	Time	Boring/Well Completion
0	ALLUVIUM: Dark yellowish brown (10YR4/2), damp, fine to coarse sand (SW) with clay binder. No PHO.							
5								
10								
15								
20								
25			☒	B12-27'	B	0.0	13:13	
30								

LEGEND

Sample Type	Screen Type	
☒ Sleeve	A-Ambient	Concrete
☒ Grab	B-Bag	Bentonite Seal
☒ Discard	C-Cuttings	Filter Pack
■ No Recovery	H-Head Space	Contact - Dashed where inferred.

Perforations
Well Casing
Locking Cap
Water Table

Traffic Rated Well Cover

Drawn By: MJL	Date: December 2002	Approved By: MJG	Date: December 2002	RG Number: 4821	Fig. No.: A12

LOCATION MAP
(Not to scale)

See Figure 2 & 3

EnecoTech®
STRATEGIES FOR ENVIRONMENTAL RESPONSIBILITIES

6160 Fairmount Ave.
Suite "A"
San Diego, California 92120

BORING/WELL LOG I.D.: B12

Date(s):	12/5/02			Project Name:	Wigington Petroleum
Start Time:	13:00	Finish Time:	15:15	Project Number:	02-01686-001
Logged By:	EK	Drilling Company:	HP Labs	Page	2 of 2
Elevation: (ft. amsl)	N/A	Vapor Detector:	OVM580	Drilling Method:	Direct Push
Sampling Method:	24" Split Spoon Sampler				
Filter Pack:	____ Bags N/A	Bentonite Seal:	1 Bags Chips	Sanitary Seal:	____ Bags
Casing Type:	N/A	Diameter:	N/A	Boring Dia.:	2"
Water Initial	32'				
Screen Type:	N/A	Slot Size:	N/A	Diameter:	N/A
Total Depth:	44'	Water Final	31.58'		

Depth (feet)	LITHOLOGIC DESCRIPTION UNIT: Color, moisture, rel. density, texture (USCS Symbol), details. Odor, variations.	Sample Depth /Blows	Sample Type	Sample Designation	Screen Type	Screen Vapor (ppm)	Time	Boring/Well Completion
30				B12-32'	B	0.0	13:22	
				B12-34'	B	0.0	13:33	
35	ALLUVIUM: Olive gray (5YR3/2), saturated, coarse sand (SP). Slight PHO.			B12-36'	B	628	13:48	
	Strong PHO at 36 ft.			B12-38'	B	7.0	14:00	
40	Slight odor at 36 ft.			B12-40'	B	24.0	14:13	
				B12-42'	B	2.4	14:30	
				B12-44'	B	0.0	14:50	
45	Total Depth=44 ft.							
50								
55								
60								

LEGEND

Sample Type	Screen Type		
Sleeve	A-Ambient	Concrete	Perforations
Grab	B-Bag	Bentonite Seal	Well Casing
Discard	C-Cuttings	Filter Pack	Locking Cap
No Recovery	H-Head Space	Contact-Dashed where inferred.	Water Table

Traffic Rated Well Cover

Drawn By:	Date:	Approved By:	Date:	RG Number:	Fig. No.:
MJL	December 2002	MJG	December 2002	4821	A12

LOCATION MAP
(Not to scale)

See Figure 2 & 3

EnecoTech®
STRATEGIES FOR ENVIRONMENTAL RESPONSIBILITIES

6160 Fairmount Ave.
Suite "A"
San Diego, California 92120

BORING/WELL LOG I.D.: B13

Date(s):	12/5/02			Project Name:	Wigington Petroleum
Start Time:	15:45	Finish Time:	17:00	Project Number:	02-01686-001
Logged By:	EK	Drilling Company:	HP Labs	Page	1 of 2
Elevation: (ft. amsl)	N/A	Vapor Detector:	OVM580	Drilling Method:	Direct Push
Sampling Method:	24" Split Spoon Sampler				
Filter Pack: ____ Bags	N/A	Bentonite Seal: 1 Bags	Chips	Sanitary Seal: ____ Bags	
Casing Type:	N/A	Diameter:	N/A	Boring Dia.:	2"
Water Initial	32'				
Screen Type:	N/A	Slot Size:	N/A	Diameter:	N/A
Total Depth:	45'	Water Final	30.10'		

Depth (feet)	LITHOLOGIC DESCRIPTION UNIT: Color, moisture, rel. density, texture (USCS Symbol), details. Odor, variations.	Sample Depth /Blows	Sample Type	Sample Designation	Screen Type	Screen Vapor (ppm)	Time	Boring/Well Completion
0	ALLUVIUM: Moderate brown (5YR3/4), damp, fine to coarse sand (SW) with clay binder. No PHO.							
25			⊠	B13-25'	B	0.0	15:51	
30	ALLUVIUM: Olive gray (5YR3/2), damp, fine to coarse sand (SW). Strong PHO at 30 ft..		⊠	B13-30'	B	0.0	16:00	

LEGEND

Sample Type	Screen Type		
⊠ Sleeve	A-Ambient	Concrete	Perforations
⊘ Grab	B-Bag	Bentonite Seal	Well Casing
⊠ Discard	C-Cuttings	Filter Pack	Locking Cap
■ No Recovery	H-Head Space	Contact - Dashed where inferred.	Water Table

Traffic Rated Well Cover

Drawn By:	Date:	Approved By:	Date:	RG Number:	Fig. No.:
MJL	December 2002	MJG	December 2002	4821	A13

LOCATION MAP
(Not to scale)

See Figure 2 & 3

EnecoTech®
STRATEGIES FOR ENVIRONMENTAL RESPONSIBILITIES

6160 Fairmount Ave.
Suite "A"
San Diego, California 92120

BORING/WELL LOG I.D.: B13

Date(s):	12/5/02			Project Name:	Wigington Petroleum
Start Time:	15:45	Finish Time:	17:00	Project Number:	02-01686-001
Logged By:	EK	Drilling Company:	HP Labs	Page	2 of 2
Elevation: (ft. amsl)	N/A	Vapor Detector:	OVM580	Drilling Method:	Direct Push
Sampling Method:	24" Split Spoon Sampler				
Filter Pack: ____ Bags	N/A	Bentonite Seal: 1 Bags	Chips	Sanitary Seal: ____ Bags	
Casing Type:	N/A	Diameter:	N/A	Boring Dia.:	2"
Water Initial	32'				
Screen Type:	N/A	Slot Size:	N/A	Diameter:	N/A
Total Depth:	45'	Water Final	30.10'		

Depth (feet)	LITHOLOGIC DESCRIPTION UNIT: Color, moisture, rel. density, texture (USCS Symbol), details. Odor, variations.	Sample Depth /Blows	Sample Type	Sample Designation	Screen Type	Screen Vapor (ppm)	Time	Boring/Well Completion
30								
35	Saturated at 35 ft. Strong PHO.		⊠	B13-35'	B	43	16:09	
40	Slight odor at 40 ft.		⊠	B13-40'	B	0.0	16:21	
45	No odor at 45 ft.		⊠	B13-45'	B	0.0	16:40	
	Total depth=45 ft.							
50								
55								
60								

LEGEND

Sample Type	Screen Type		
⊠ Sleeve	A-Ambient	Concrete	Perforations
⊠ Grab	B-Bag	Bentonite Seal	Well Casing
⊠ Discard	C-Cuttings	Filter Pack	Locking Cap
■ No Recovery	H-Head Space	Contact - Dashed where inferred.	Water Table

Traffic Rated Well Cover

Drawn By:	Date:	Approved By:	Date:	RG Number:	Fig. No.:
MJL	December 2002	MJG	December 2002	4821	A13

LOCATION MAP
(Not to scale)

N

See Figure 2 & 3

EnecoTech®
STRATEGIES FOR ENVIRONMENTAL RESPONSIBILITIES

6160 Fairmount Ave.
Suite "A"
San Diego, California 92120

BORING/WELL LOG I.D.: B14

Date(s): 12/6/02		Project Name:	Wigington Petroleum
Start Time: 07:15	Finish Time: 08:30	Project Number:	02-01686-001
Logged By: EK	Drilling Company: HP Labs	Page	1 of 2
Elevation: (ft. amsl) N/A	Vapor Detector: OVM580	Drilling Method:	Direct Push
Sampling Method:	24" Split Spoon Sampler		
Filter Pack: ____ Bags	N/A	Bentonite Seal: 1 Bags	Chips
Sanitary Seal: 6" Bags	Concrete		
Casing Type: N/A	Diameter: N/A	Boring Dia.: 2"	Water Initial 30'
Screen Type: N/A	Slot Size: N/A	Diameter: N/A	Total Depth: 37'
Water Final 32.5'			

Depth (feet)	LITHOLOGIC DESCRIPTION UNIT: Color, moisture, rel. density, texture (USCS Symbol), details. Odor, variations.	Sample Depth /Blows	Sample Type	Sample Designation	Screen Type	Screen Vapor (ppm)	Time	Boring/Well Completion
0	Concrete 6" thick							
	ALLUVIUM: Moderate brown (5YR4/8), damp, fine to coarse sand (SW) with clay binder. No PHO.							
5			☒	B14-7'	B	0.0	07:23	
10			☒	B14-10'	B	0.0	07:26	
	ALLUVIUM: Dark yellowish brown (10YR4/2), damp, medium to coarse sand (SW). No PHO.							
15								
20			☒	B14-20'	B	0.0	07:34	
	ALLUVIUM: Moderate brown (5YR4/3), damp, fine to coarse sand (SW) with clay binder. Slight weathered PHO.							
25			☒	B14-25'	B	223	07:41	
	Moist to saturated at 30 ft..							
30			☒	B14-30'	B	29.0	07:50	

LEGEND

Sample Type	Screen Type		
☒ Sleeve	A-Ambient	Concrete	Perforations
☒ Grab	B-Bag	Bentonite Seal	Well Casing
☒ Discard	C-Cuttings	Filter Pack	Locking Cap
■ No Recovery	H-Head Space	Contact - Dashed where inferred.	Water Table

Traffic Rated Well Cover

Drawn By:	Date:	Approved By:	Date:	RG Number:	Fig. No.:
MJL	December 2002	MJG	December 2002	4821	A14

LOCATION MAP
(Not to scale)

See Figure 2 & 3

EnecoTech®
STRATEGIES FOR ENVIRONMENTAL RESPONSIBILITIES

6160 Fairmount Ave.
Suite "A"
San Diego, California 92120

BORING/WELL LOG I.D.: B14

Date(s):	12/6/02			Project Name:	Wigington Petroleum
Start Time:	07:15	Finish Time:	08:30	Project Number:	02-01686-001
Logged By:	EK	Drilling Company:	HP Labs	Page	2 of 2
Elevation: (ft. amsl)	N/A	Vapor Detector:	OVM580	Drilling Method:	Direct Push
Sampling Method:	24" Split Spoon Sampler				
Filter Pack: ____ Bags	N/A	Bentonite Seal: 1 Bags	Chips	Sanitary Seal: ____ Bags	
Casing Type:	N/A	Diameter:	N/A	Boring Dia.:	2"
Water Initial	30'				
Screen Type:	N/A	Slot Size:	N/A	Diameter:	N/A
Total Depth:	37'	Water Final	32.5'		

Depth (feet)	LITHOLOGIC DESCRIPTION UNIT: Color, moisture, rel. density, texture (USCS Symbol), details. Odor, variations.	Sample Depth /Blows	Sample Type	Sample Designation	Screen Type	Screen Vapor (ppm)	Time	Boring/Well Completion
30								
35			☒	B14-35'	B	0.0	08:03	
			☒	B14-37'	B	0.0	08:14	
	Total Depth=37 ft.							
40								
45								
50								
55								
60								

LEGEND

Sample Type
- ☒ Sleeve
- ☒ Grab
- ☒ Discard
- ■ No Recovery

Screen Type
- A-Ambient
- B-Bag
- C-Cuttings
- H-Head Space

- Concrete
- Bentonite Seal
- Filter Pack
- Contact - Dashed where inferred.
- Perforations
- Well Casing
- Locking Cap
- Water Table

Traffic Rated Well Cover

Drawn By:	MJL	Date:	December 2002	Approved By:	MJG	Date:	December 2002	RG Number:	4821	Fig. No.:	A14

LOCATION MAP
(Not to scale)

N

See Figure 2 & 3

EnecoTech®
STRATEGIES FOR ENVIRONMENTAL RESPONSIBILITIES

6160 Fairmount Ave.
Suite "A"
San Diego, California 92120

BORING/WELL LOG I.D.: B15

Date(s): 12/6/02		Project Name: Wigington Petroleum	
Start Time: 08:50	Finish Time: 10:30	Project Number: 02-01686-001	
Logged By: EK	Drilling Company: HP Labs	Page 1 of 2	
Elevation: (ft. amsl) N/A	Vapor Detector: OVM580	Drilling Method: Direct Push	Sampling Method: 24" Split Spoon Sampler
Filter Pack: ____ Bags N/A	Bentonite Seal: 1 Bags Chips	Sanitary Seal: ____ Bags	
Casing Type: N/A	Diameter: N/A	Boring Dia.: 2"	Water Initial 33'
Screen Type: N/A	Slot Size: N/A Diameter: N/A	Total Depth: 38'	Water Final 31.00'

Depth (feet)	LITHOLOGIC DESCRIPTION UNIT: Color, moisture, rel. density, texture (USCS Symbol), details. Odor, variations.	Sample Depth /Blows	Sample Type	Sample Designation	Screen Type	Screen Vapor (ppm)	Time	Boring/Well Completion
0	ALLUVIUM: Moderate brown (5YR3/4), damp, medium to coarse sand (SW) with clay binder. No PHO.							
5								
10								
15								
20								
25								
30								

LEGEND

Sample Type
- Sleeve
- Grab
- Discard
- No Recovery

Screen Type
- A - Ambient
- B - Bag
- C - Cuttings
- H - Head Space

- Concrete
- Bentonite Seal
- Filter Pack
- Contact - Dashed where inferred.
- Perforations
- Well Casing
- Locking Cap
- Water Table

Traffic Rated Well Cover

Drawn By: MJL	Date: December 2002	Approved By: MJG	Date: December 2002	RG Number: 4821	Fig. No.: A15

LOCATION MAP
(Not to scale)

N

See Figure 2 & 3

EnecoTech®
STRATEGIES FOR ENVIRONMENTAL RESPONSIBILITIES

6160 Fairmount Ave.
Suite "A"
San Diego, California 92120

BORING/WELL LOG I.D.: B15

Date(s): 12/6/02		Project Name:	Wigington Petroleum
Start Time: 08:50	Finish Time: 10:30	Project Number:	02-01686-001
Logged By: EK	Drilling Company: HP Labs		Page 2 of 2
Elevation: (ft. amsl) N/A	Vapor Detector: OVM580	Drilling Method:	Direct Push
		Sampling Method:	24" Split Spoon Sampler

Filter Pack: ____ Bags	N/A	Bentonite Seal: 1 Bags	Chips	Sanitary Seal: ____ Bags	
Casing Type: N/A		Diameter: N/A		Boring Dia.: 2"	Water Initial 33'
Screen Type: N/A	Slot Size: N/A	Diameter: N/A		Total Depth: 38'	Water Final 31.00'

Depth (feet)	LITHOLOGIC DESCRIPTION UNIT: Color, moisture, rel. density, texture (USCS Symbol), details. Odor, variations.	Sample Depth /Blows	Sample Type	Sample Designation	Screen Type	Screen Vapor (ppm)	Time	Boring/Well Completion
30	Saturated.			B15-32'	B	0.0	09:33	
				B15-33'	B	0.0	09:41	
				B15-34'				
35				B15-35'	B	0.0	09:56	
				B15-36'				
	Soil at 38 ft. Slightly discolored. No PHO.			B15-38'	B	0.0	10:05	
	Total Depth=38 ft.							
40								
45								
50								
55								
60								

LEGEND

Sample Type	Screen Type		
Sleeve	A-Ambient	Concrete	Perforations
Grab	B-Bag	Bentonite Seal	Well Casing
Discard	C-Cuttings	Filter Pack	Locking Cap
No Recovery	H-Head Space	Contact - Dashed where inferred.	Water Table

Traffic Rated Well Cover

Drawn By:	Date:	Approved By:	Date:	RG Number:	Fig. No.:
MJL	December 2002	MJG	December 2002	4821	A15

LOCATION MAP
(Not to scale)

N

See Figure 2 & 3

EnecoTech®
STRATEGIES FOR ENVIRONMENTAL RESPONSIBILITIES

6160 Fairmount Ave.
Suite "A"
San Diego, California 92120

BORING/WELL LOG I.D.: B16

Date(s): 12/6/02		Project Name: Wigington Petroleum	
Start Time: 11:00	Finish Time: 12:30	Project Number: 02-01686-001	
Logged By: EK	Drilling Company: HP Labs	Page 1 of 2	
Elevation: (ft. amsl) N/A	Vapor Detector: OVM580	Drilling Method: Direct Push	Sampling Method: 24" Split Spoon Sampler
Filter Pack: ____ Bags N/A	Bentonite Seal: 1 Bags Chips	Sanitary Seal: ____ Bags	
Casing Type: N/A	Diameter: N/A	Boring Dia.: 2"	Water Initial 31'
Screen Type: N/A	Slot Size: N/A Diameter: N/A	Total Depth: 45'	Water Final 30.79'

Depth (feet)	LITHOLOGIC DESCRIPTION UNIT: Color, moisture, rel. density, texture (USCS Symbol), details. Odor, variations.	Sample Depth /Blows	Sample Type	Sample Designation	Screen Type	Screen Vapor (ppm)	Time	Boring/Well Completion
0	ALLUVIUM: Moderate brown (5YR3/4), damp, medium to coarse sand (SW) with clay binder. No PHO.							
5								
10								
15								
20								
25								
30	ALLUVIUM: Dark yellowish brown (10YR4/2), medium sand No PHO.		☒	B16-29'	B	0.0	11:24	

LEGEND

Sample Type	Screen Type	
☒ Sleeve	A-Ambient	Concrete
☒ Grab	B-Bag	Bentonite Seal
☒ Discard	C-Cuttings	Filter Pack
■ No Recovery	H-Head Space	Contact - Dashed where inferred.

Perforations
Well Casing
Locking Cap
Water Table

Traffic Rated Well Cover

Drawn By: MJL	Date: December 2002	Approved By: MJG	Date: December 2002	RG Number: 4821	Fig. No.: A16

LOCATION MAP
(Not to scale)

See Figure 2 & 3

EnecoTech®
STRATEGIES FOR ENVIRONMENTAL RESPONSIBILITIES

6160 Fairmount Ave.
Suite "A"
San Diego, California 92120

BORING/WELL LOG I.D.: B16

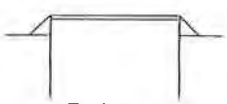
Date(s):	12/6/02			Project Name:	Wigington Petroleum
Start Time:	11:00	Finish Time:	12:30	Project Number:	02-01686-001
Logged By:	EK	Drilling Company:	HP Labs	Page	2 of 2
Elevation: (ft. amsl)	N/A	Vapor Detector:	OVM580	Drilling Method:	Direct Push
Sampling Method:	24" Split Spoon Sampler				

Filter Pack: ____ Bags	N/A	Bentonite Seal: 1 Bags	Chips	Sanitary Seal: ____ Bags	
Casing Type:	N/A	Diameter:	N/A	Boring Dia.:	2"
Screen Type:	N/A	Slot Size: N/A	Diameter: N/A	Total Depth:	45'
Water Initial	31'	Water Final	30.79'		

Depth (feet)	LITHOLOGIC DESCRIPTION UNIT: Color, moisture, rel. density, texture (USCS Symbol), details. Odor, variations.	Sample Depth /Blows	Sample Type	Sample Designation	Screen Type	Screen Vapor (ppm)	Time	Boring/Well Completion
30								
	Saturated at 32 ft.			B16-31'	B	0.0	11:35	
				B16-32'	B	0.0	11:46	
				B16-33'				
35				B16-35'	B	0.0	11:57	
40	Limited sample at 40 ft.			B16-40'	B	0.0	12:10	
				B16-44'	B	0.0	12:25	
45				B16-45'				
	Total Depth=45 ft.							
50								
55								
60								

LEGEND

Sample Type	Screen Type		
Sleeve	A-Ambient	Concrete	Perforations
Grab	B-Bag	Bentonite Seal	Well Casing
Discard	C-Cuttings	Filter Pack	Locking Cap
No Recovery	H-Head Space	Contact - Dashed where inferred.	Water Table



Traffic Rated Well Cover

Drawn By:	Date:	Approved By:	Date:	RG Number:	Fig. No.:
MJL	December 2002	MJG	December 2002	4821	A16

LOCATION MAP
(Not to scale)

See Figure 2 & 3

EnecoTech®
STRATEGIES FOR ENVIRONMENTAL RESPONSIBILITIES

6160 Fairmount Ave.
Suite "A"
San Diego, California 92120

BORING/WELL LOG I.D.: B17

Date(s): 12/6/02		Project Name: Wigington Petroleum	
Start Time: 13:30	Finish Time: 15:00	Project Number: 02-01686-001	
Logged By: EK	Drilling Company: HP Labs	Page 1 of 2	
Elevation: (ft. a msl) N/A	Vapor Detector: OVM580	Drilling Method: Direct Push	Sampling Method: 24" Split Spoon Sampler
Filter Pack: ____ Bags N/A	Bentonite Seal: 1 Bags Chips	Sanitary Seal: ____ Bags	
Casing Type: N/A	Diameter: N/A	Boring Dia.: 2"	Water Initial 32'
Screen Type: N/A	Slot Size: N/A Diameter: N/A	Total Depth: 40'	Water Final 30.62'

Depth (feet)	LITHOLOGIC DESCRIPTION UNIT: Color, moisture, rel. density, texture (USCS Symbol), details. Odor, variations.	Sample Depth /Blows	Sample Type	Sample Designation	Screen Type	Screen Vapor (ppm)	Time	Boring/Well Completion
0	6" concrete							
	ALLUVIUM: Black (N1), saturated (with oily fluid).							
	ALLUVIUM: Moderate brown (5 YR3/4), damp, medium sand (SP) with clay binder. Slight PHO.							
5			☒	B17-7	B	66.0	13:35	
	ALLUVIUM: Light olive gray (5 YR3/4), damp, medium to coarse sand (SW). Slight PHO.							
10			☒	B17-10'	B	9.7	13:37	
15			☒	B17-15'	B	0.0	13:43	
20	Slight PHO at 20 ft.		☒	B17-20'	B	7.0	13:49	
25	Slight PHO at 25 ft.		☒	B17-25'	B	0.0	13:56	
30	Strong PHO at 30 ft.		☒	B17-30'	B	590	14:05	

LEGEND

Sample Type	Screen Type		
☒ Sleeve	A - Ambient	Concrete	Perforations
☒ Grab	B - Bag	Bentonite Seal	Well Casing
☒ Discard	C - Cuttings	Filter Pack	Locking Cap
■ No Recovery	H - Head Space	Contact - Dashed where inferred.	Water Table

Traffic Rated Well Cover

Drawn By: MJL	Date: December 2002	Approved By: MJG	Date: December 2002	RG Number: 4821	Fig. No.: A17

LOCATION MAP
(Not to scale)

N

See Figure 2 & 3

EnecoTech®
STRATEGIES FOR ENVIRONMENTAL RESPONSIBILITIES

6160 Fairmount Ave.
Suite "A"
San Diego, California 92120

BORING/WELL LOG I.D.: B17

Date(s): 12/6/02		Project Name: Wigington Petroleum	
Start Time: 13:30	Finish Time: 15:00	Project Number: 02-01686-001	
Logged By: EK	Drilling Company: HP Labs	Page 2 of 2	
Elevation: (ft. amsl) N/A	Vapor Detector: OVM580	Drilling Method: Direct Push	Sampling Method: 24" Split Spoon Sampler
Filter Pack: ____ Bags N/A	Bentonite Seal: 1 Bags Chips	Sanitary Seal: ____ Bags	
Casing Type: N/A	Diameter: N/A	Boring Dia.: 2"	Water Initial 32'
Screen Type: N/A	Slot Size: N/A Diameter: N/A	Total Depth: 40'	Water Final 30.62'

Depth (feet)	LITHOLOGIC DESCRIPTION UNIT: Color, moisture, rel. density, texture (USCS Symbol), details. Odor, variations.	Sample Depth /Blows	Sample Type	Sample Designation	Screen Type	Screen Vapor (ppm)	Time	Boring/Well Completion
30	Strong PHO at 32 and 34 ft.		☒	B17-32'	B	648	14:19	
			☒	B17-34'	B	754	14:23	
35			☒	B17-36'	B	0.0	14:37	
	ALLUVIUM: Moderate brown (5 YR3/4), saturated, coarse sand (SW). No PHO.		☒	B17-40'	B	0.0	14:50	
40	Total Depth=40 ft.							
45								
50								
55								
60								

LEGEND

Sample Type	Screen Type		
☒ Sleeve	A-Ambient	Concrete	Perforations
☒ Grab	B-Bag	Bentonite Seal	Well Casing
☒ Discard	C-Cuttings	Filter Pack	Locking Cap
■ No Recovery	H-Head Space	Contact - Dashed where inferred.	Water Table

Traffic Rated Well Cover

Drawn By:	Date:	Approved By:	Date:	RG Number:	Fig. No.:
MJL	December 2002	MJG	December 2002	4821	A17

LOCATION MAP
(Not to scale)

See Figure 2 & 3

EnecoTech®
STRATEGIES FOR ENVIRONMENTAL RESPONSIBILITIES

6160 Fairmount Ave.
Suite "A"
San Diego, California 92120

BORING/WELL LOG I.D.: B18

Date(s):	12/6/02			Project Name:	Wigington Petroleum
Start Time:	15:00	Finish Time:	16:30	Project Number:	02-01686-001
Logged By:	EK	Drilling Company:	HP Labs	Page	1 of 2
Elevation: (ft. amsl)	N/A	Vapor Detector:	OVM580	Drilling Method:	Direct Push
Sampling Method:	24" Split Spoon Sampler				
Filter Pack: ____ Bags	N/A	Bentonite Seal: 1 Bags	Chips	Sanitary Seal: ____ Bags	
Casing Type:	N/A	Diameter:	N/A	Boring Dia.:	2"
Water Initial					
Screen Type:	N/A	Slot Size:	N/A	Diameter:	N/A
Total Depth:	40'	Water Final	32.84'		

Depth (feet)	LITHOLOGIC DESCRIPTION UNIT: Color, moisture, rel. density, texture (USCS Symbol), details. Odor, variations.	Sample Depth /Blows	Sample Type	Sample Designation	Screen Type	Screen Vapor (ppm)	Time	Boring/Well Completion
0	ALLUVIUM: Moderate brown (5 YR3/4), damp, medium sand (SP) with clay binder. No PHO.							
5			⊠	B18-5'	B	0.0	15:26	
10			⊠	B18-10'	B	0.0	15:30	
15			⊠	B18-15'	B	0.0	15:34	
20			⊠	B18-20'	B	0.0	15:40	
25			⊠	B18-25'	B	0.0	15:48	
30								

LEGEND

Sample Type	Screen Type		
⊠ Sleeve	A - Ambient	Concrete	Perforations
⊠ Grab	B - Bag	Bentonite Seal	Well Casing
⊠ Discard	C - Cuttings	Filter Pack	Locking Cap
■ No Recovery	H - Head Space	Contact - Dashed where inferred.	Water Table

Traffic Rated Well Cover

Drawn By:	Date:	Approved By:	Date:	RG Number:	Fig. No.:
MJL	December 2002	MJG	December 2002	4821	A18

LOCATION MAP
(Not to scale)

See Figure 2 & 3

EnecoTech®
STRATEGIES FOR ENVIRONMENTAL RESPONSIBILITIES

6160 Fairmount Ave.
Suite "A"
San Diego, California 92120

BORING/WELL LOG I.D.: B18

Date(s):	12/6/02			Project Name:	Wigington Petroleum
Start Time:	15:00	Finish Time:	16:30	Project Number:	02-01686-001
Logged By:	EK	Drilling Company:	HP Labs	Page	2 of 2
Elevation: (ft. amsl)	N/A	Vapor Detector:	OVM580	Drilling Method:	Direct Push
Sampling Method:	24" Split Spoon Sampler				
Filter Pack: ____ Bags	N/A	Bentonite Seal: 1 Bags	Chips	Sanitary Seal: ____ Bags	
Casing Type:	N/A	Diameter:	N/A	Boring Dia.:	2"
Water Initial					
Screen Type:	N/A	Slot Size:	N/A	Diameter:	N/A
Total Depth:	40'	Water Final	32.84'		

Depth (feet)	LITHOLOGIC DESCRIPTION UNIT: Color, moisture, rel. density, texture (USCS Symbol), details. Odor, variations.	Sample Depth /Blows	Sample Type	Sample Designation	Screen Type	Screen Vapor (ppm)	Time	Boring/Well Completion
30								
				B18-32'	B	38.0	15:59	
				B18-34'	B	18.0	16:04	
35	Soil moist at 36 ft.			B18-36'	B	7.0	16:19	
	Sandy clay (CL) at 36-40 ft.			B18-40'	B	0.0	16:25	
40	Total Depth=40 ft.							
45								
50								
55								
60								

LEGEND

Sample Type: Sleeve; Grab; Discard; No Recovery

Screen Type: A-Ambient; B-Bag; C-Cuttings; H-Head Space

Concrete; Bentonite Seal; Filter Pack; Contact - Dashed where inferred.

Perforations; Well Casing; Locking Cap; Water Table

Traffic Rated Well Cover

Drawn By:	Date:	Approved By:	Date:	RG Number:	Fig. No.:
MJL	December 2002	MJG	December 2002	4821	A18

DEPTH, FT.	SAMPLES	OVA READINGS	LITHOLOGIC DESCRIPTION
			BH-01
0			0-4.5' SANDY SILT; brown, dry to moist, sand (very fine to fine) silt with a trace to some, fine to medium, subangular gravel and a trace clay
5	X	B.G.	4.5-16.5' SILTY SANDY CLAY; red brown, moist, silty, sandy clay - color change to a light red brown
10	X	B.G.	
15			16.5-30.0' WEATHERED BEDROCK - DECOMPOSED GRANITE; brown, slightly moist highly weathered granadiorite composition bedrock
20	X	B.G.	
25			
30			Total Depth = 30.0'

PROJECT NAME
Buy Wright Oil

PROJECT NUMBER
185-001

GROUND SURFACE ELEVATION

DATE STARTED
4/28/88

DATE COMPLETED
4/28/88

FIELD ENGINEER
Rick Graff

DRILLERS
Morrison - G. Maxwell

DRILLING METHOD
Solid Stem Auger

DRILL RIG
Ingersoll-Rand TH-10

EXPLORATORY HOLE LOCATION

CONFIDENTIAL

EnecoTech
San Diego, California

BUY WRIGHT OIL

PROJECT 11427 WOODSIDE
SAN TEE, CALIFORNIA

LITHOLOGIC LOG OF SOIL BORING

FILE NO. 185-001 DATE JUNE, 1988 FIGURE NO.

DEPTH, FT.	SAMPLES	OVA READINGS	LITHOLOGIC DESCRIPTION BH-02
0			[GP] SILTY CLAY; brown, moist silty clay with a trace fine to medium sand.
0	X	B.G.	
5			@ 6.0' Color change to red brown
10	X	B.G.	@ 10.5' Grades to a sandy clay
15	X	B.G.	
			@ 17.0' DECOMPOSED GRANITE - WEATHERED BEDROCK; brown, slightly moist, highly weathered granodionite composition bedrock
20			
25			
30			Total Depth = 30.0'

PROJECT NAME
Buy Wright Oil

PROJECT NUMBER
185-001

GROUND SURFACE ELEVATION

DATE STARTED
04/30/88

DATE COMPLETED
04/30/88

FIELD ENGINEER
Rick Graff

DRILLERS
Morrison - G. Maxwell

DRILLING METHOD
Solid Stem Auger

DRILL RIG
Ingersoll-Rand TH-10

EXPLORATORY HOLE LOCATION

CONFIDENTIAL

ENECOTECH
San Diego, California

BUY WRIGHT OIL

LITHOLOGIC LOG OF SOIL BORING

PROJECT 11427 WOODSIDE
SAN TEE, CALIFORNIA

FILE NO. 185-001 DATE JUNE, 1988 FIGURE NO.

DEPTH, FT.	SAMPLES	OVA READINGS	LITHOLOGIC DESCRIPTION BH-03
0			0-0.5' FILL; light brown, sandy fine gravel 0.5' SILTY SAND; brown, moist, silty very fine to fine sand with a trace clay
5			
10	X	B.G.	8.0' Grades to a fine sand with a trace medium to coarse sand 10.5; SILTY CLAY: brown, moist silty clay with a trace fine sand
15	X	B.G.	
20			19.0' Sand lense 21.0' SCATTERED GRAVLES TO 2" WITHIN SILTY SAND CLAY MATRIX; OVA = 70-90 ppm off cuttings
25			
30	X	45	Total Depth = 30.0'

PROJECT NAME
Buy Wright Oil

PROJECT NUMBER
185-001

GROUND SURFACE ELEVATION

DATE STARTED
04/29/88

DATE COMPLETED
04/29/88

FIELD ENGINEER
Rick Graff

DRILLERS
Morrison - G. Maxwell

DRILLING METHOD
Solid Stem Auger

DRILL RIG
Ingersoll-Rand TH-10

EXPLORATORY HOLE LOCATION

CONFIDENTIAL

EnecoTech
San Diego, California

BUY WRIGHT OIL

LITHOLOGIC LOG OF SOIL BORING

PROJECT 11427 WOODSIDE
SAN TEE, CALIFORNIA

FILE NO. 185-001 DATE JUNE, 1988 FIGURE NO.

DEPTH, FT.	SAMPLES	OVA READINGS	LITHOLOGIC DESCRIPTION — BH-04
0	X	10+	0-11.0' SANDY SILT; brown, moist, sandy (very fine to fine) silt with a trace clay
5			@7.0' Increase in clay content
10	X	B.G.	11.0-17.0' SANDY CLAY; brown, moist sandy clay with a trace silt
15			17.0-30.0' CLAY; red brown, moist to wet (at V), clay with a trace sand
20			
25			
30	X	B.G.	Total Depth = 30.0'

PROJECT NAME
Buy Wright Oil

PROJECT NUMBER
185-001

GROUND SURFACE ELEVATION

DATE STARTED
04/29/88

DATE COMPLETED
04/29/88

FIELD ENGINEER
Rick Graff

DRILLERS
Morrison - G. Maxwell

DRILLING METHOD
Solid Stem Auger

DRILL RIG
Ingersoll-Rand TH-10

EXPLORATORY HOLE LOCATION

CONFIDENTIAL

EnecoTech
San Diego, California

BUY WRIGHT OIL

PROJECT 11427 WOODSIDE
SAN TEE, CALIFORNIA

LITHOLOGIC LOG OF SOIL BORING

FILE NO. 185-001 DATE JUNE, 1988 FIGURE NO.

DEPTH, FT.	SAMPLES	OVA READINGS	LITHOLOGIC DESCRIPTION BH-05
0			0-2' SANDY CLAY; brown, dry to moist, silty sandy clay
			2-4' SAND CLAY; brown, moist sandy (very fine) sand
5	X	B.G.	4.0' SAND; light brown, moist, fine to medium, angular to subangular sand with a trace coarse sand
10	X	B.G.	10.0' Grades to a fine to coarse sand 11-12' Clay lense
15			
20			
			22-24' Clay lense
			24.0' Grades to a fine to very coarse sand with scatterings surround gravles up to 2" OVA
30	X	B.G.	Total Depth = 30'

PROJECT NAME
Buy Wright Oil

PROJECT NUMBER
185-001

GROUND SURFACE ELEVATION

DATE STARTED
04/29/88

DATE COMPLETED
04/29/88

FIELD ENGINEER
Rick Graff

DRILLERS
Morrison - G. Maxwell

DRILLING METHOD
Solid Stem Auger

DRILL RIG
Ingersoll-Rand TH-10

EXPLORATORY HOLE LOCATION

CONFIDENTIAL

EnecoTech
San Diego, California

BUY WRIGHT OIL

PROJECT 11427 WOODSIDE
SAN TEE, CALIFORNIA

LITHOLOGIC LOG OF SOIL BORING

FILE NO. 185-001 DATE JUNE, 1988 FIGURE NO.

DEPTH, FT.	SAMPLES	OVA READINGS	LITHOLOGIC DESCRIPTION
			BH-06
0			0-0.5' ASPHALT 0.5-2' SILTY SAND; brown, moist silty sand with a trace clay 2.0-16.0' SAND; light brown, moist, fine to medium sand with a trace coarse to very coarse sand
5	X	B.G.	
10	X	N/A	
15	X	N/A	@ 14' COLOR CHANGE TO LIGHT GREY, BROWN; vapor stain? Slight H C odor 16-30' SILTY CLAY; brown, moist, silty sandy clay
20			@ 22' Decrease in clastics (sand)
25	X	N/A	
30	X	N/A	Total Depth - 30'

PROJECT NAME
Buy Wright Oil

PROJECT NUMBER
185-001

GROUND SURFACE ELEVATION

DATE STARTED
04/30/88

DATE COMPLETED
04/30/88

FIELD ENGINEER
Rick Graff

DRILLERS
Morrison - G. Maxwell

DRILLING METHOD
Solid Stem Auger

DRILL RIG
Ingersoll-Rand TH-10

EXPLORATORY HOLE LOCATION

CONFIDENTIAL

EnecoTech
San Diego, California

BUY WRIGHT OIL

LITHOLOGIC LOG OF SOIL BORING

PROJECT 11427 WOODSIDE
SAN TEE, CALIFORNIA

FILE NO. 185-001 DATE JUNE, 1988 FIGURE NO.

LITHOLOGIC DESCRIPTION

BH-07

DEPTH, FT.	SAMPLES	OVA READINGS	
0	X	B.G.	0-4' SILTY SAND; brown, moist, silty, very fine sand with a trace clay
5	X	B.G.	.0' SAND; slight brown; moist, fine to medium, sub-angular sand with a trace to some coarse to very coarse sand
10	X	20	
			@ 13.5' COLOR CHANGE TO GREY BROWN (vapor stain?); slight H C odor
15	X	100 +	
			@ 17' 1000 PPM (OVA) on cuttings @ 18-18.5' CLAY LENSE
20	X	100 +	
			@ 22-23' CLAY LENSE @ 23' GRADES TO A SILTY, FINE TO MEDIUM SAND
25			
			▽ = 29.0'
30	X	10 +	Total Depth = 30'

PROJECT NAME
Buy Wright Oil

PROJECT NUMBER
185-001

GROUND SURFACE ELEVATION

DATE STARTED
04/30/88

DATE COMPLETED
04/30/88

FIELD ENGINEER
Rick Graff

DRILLERS
Morrison - G. Maxwell

DRILLING METHOD
Solid Stem Auger

DRILL RIG
Ingersoll-Rand TH-10

EXPLORATORY HOLE LOCATION

ENECOTECH
San Diego, California

BUY WRIGHT OIL

PROJECT 11427 WOODSIDE
SANTEE, CALIFORNIA

LITHOLOGIC LOG OF SOIL BORING

FILE NO. 185-001 DATE JUNE, 1988 FIGURE NO.

CONFIDENTIAL

DEPTH, FT.	SAMPLES	OVA READINGS	LITHOLOGIC DESCRIPTION BH-08	
			0-0.5'	CONCRETE
			0.5-3'	SILTY SAND; Brown, moist, silty, very fine sand with a trace sand.
5	X	B.G.	3-17'	SAND; Light brown, moist, very fine to fine sand with a trace silt
10	X	B.G.		
15			@17-22.0	SANDY CLAY; Brown, moist, dandy (very fine) clay with occassional scattered gravel to 1" diameter.
20	X	B.G.		
			22.0-30.0	SILTY SAND; Dark brown, moist to wet, very fine to fine silty sand.
			@23.0	HYDROCARBON ORDOR
25	X	650		
30	X	350		Total Depth = 30'
40				
45				

PROJECT NAME
Buy Wright Oil

PROJECT NUMBER
185-001

GROUND SURFACE ELEVATION

DATE STARTED
4-30-88

DATE COMPLETED
4-30-88

FIELD ENGINEER
Rick Graff

DRILLERS
Morrison - G. Maxwell

DRILLING METHOD
Solid Stem Auger

DRILL RIG
Ingersoll-Rand TH-10

EXPLORATORY HOLE LOCATION

GOLDENROD

ENECOTECH
San Diego, California

BUY WRIGHT OIL

LITHOLOGIC LOG OF MONITORING WELL BORING

PROJECT 11427 WOODSIDE
SAN TEE, CALIFORNIA

FILE NO. : 185-001 DATE JUNE 1988 FIGURE NO.

DEPTH, FT.	SAMPLES	OVA READINGS	LITHOLOGIC DESCRIPTION
			BH-09
0			0-7' SILTY SAND; brown, dry to moist, silty fine sand
5	X	B.G.	
			7-22' SAND; light brown, fine to medium, subangular sand with a trace coarse and very fine sand
10	X	B.G.	
15			17-18' Silty clay lense
20	X	B.G.	
			22'-30.0 SANDY SILT CLAY ; Brown, moist to wet, sandy, silty clay
25			
			@ 27' Increase in clay
30	X	B.G.	Total Depth = 30.0'

PROJECT NAME
Buy Wright Oil

PROJECT NUMBER
185-001

GROUND SURFACE ELEVATION

DATE STARTED
05/02/88

DATE COMPLETED
05/02/88

FIELD ENGINEER
Rick Graff

DRILLERS
Morrison - G. Maxwell

DRILLING METHOD
Solid Stem Auger

DRILL RIG
Ingersoll-Rand TH-10

EXPLORATORY HOLE LOCATION

GEOTECHNICAL

EnecoTech
San Diego, California

BUY WRIGHT OIL

PROJECT 11427 WOODSIDE
SAN TEE, CALIFORNIA

LITHOLOGIC LOG OF SOIL BORING

FILE NO. 185-001 DATE JUNE, 1988 FIGURE NO.

DEPTH, FT.	SAMPLES	OVA READINGS	LITHOLOGIC DESCRIPTION BH-10
0	X	B.G.	0-0.5' ASPHALT 0.5-18' SAND; light brown, moist very fine to fine sand with a trace silt
5	X	B.G.	
10			
15			
			18-30' SANDY CLAY; grey brown, moist to wet, silty sandy clay
20			
25			
30	X	B.G.	Total Depth = 30'

PROJECT NAME
Buy Wright Oil

PROJECT NUMBER
185-001

GROUND SURFACE ELEVATION

DATE STARTED
05/13/88

DATE COMPLETED
05/13/88

FIELD ENGINEER
Rick Graff

DRILLERS
Morrison - G. Maxwell

DRILLING METHOD
Solid Stem Auger

DRILL RIG
Ingersoll-Rand TH-10

EXPLORATORY HOLE LOCATION

CONFIDENTIAL

ENECOTECH
San Diego, California

BUY WRIGHT OIL

LITHOLOGIC LOG OF SOIL BORING

PROJECT 11427 WOODSIDE
SAN TEE, CALIFORNIA

FILE NO. 185-001 DATE JUNE, 1988 FIGURE NO.

DEPTH, FT.	SAMPLES	OVA READINGS	LITHOLOGIC DESCRIPTION
			BH-11
0			0-0.5' ASPHALT
	X	B.G.	0.5-3.5' SILTY SAND; brown, moist, silty, very fine sand with a trace clay
			3.5-30' SAND; light brown, very fine to fine sand
5	X	B.G.	
10			
15			@ 17' Grades to a fine to medium sand with a trace coarse sand
20			
25			
30	X	B.G.	Total Depth = 30'

PROJECT NAME
Buy Wright Oil

PROJECT NUMBER
185-001

GROUND SURFACE ELEVATION

DATE STARTED
05/13/88

DATE COMPLETED
05/13/88

FIELD ENGINEER
Rick Graff

DRILLERS
Morrison - G. Maxwell

DRILLING METHOD
Solid Stem Auger

DRILL RIG
Ingersoll-Rand TH-10

EXPLORATORY HOLE LOCATION

CONFIDENTIAL

EnecoTech
San Diego, California

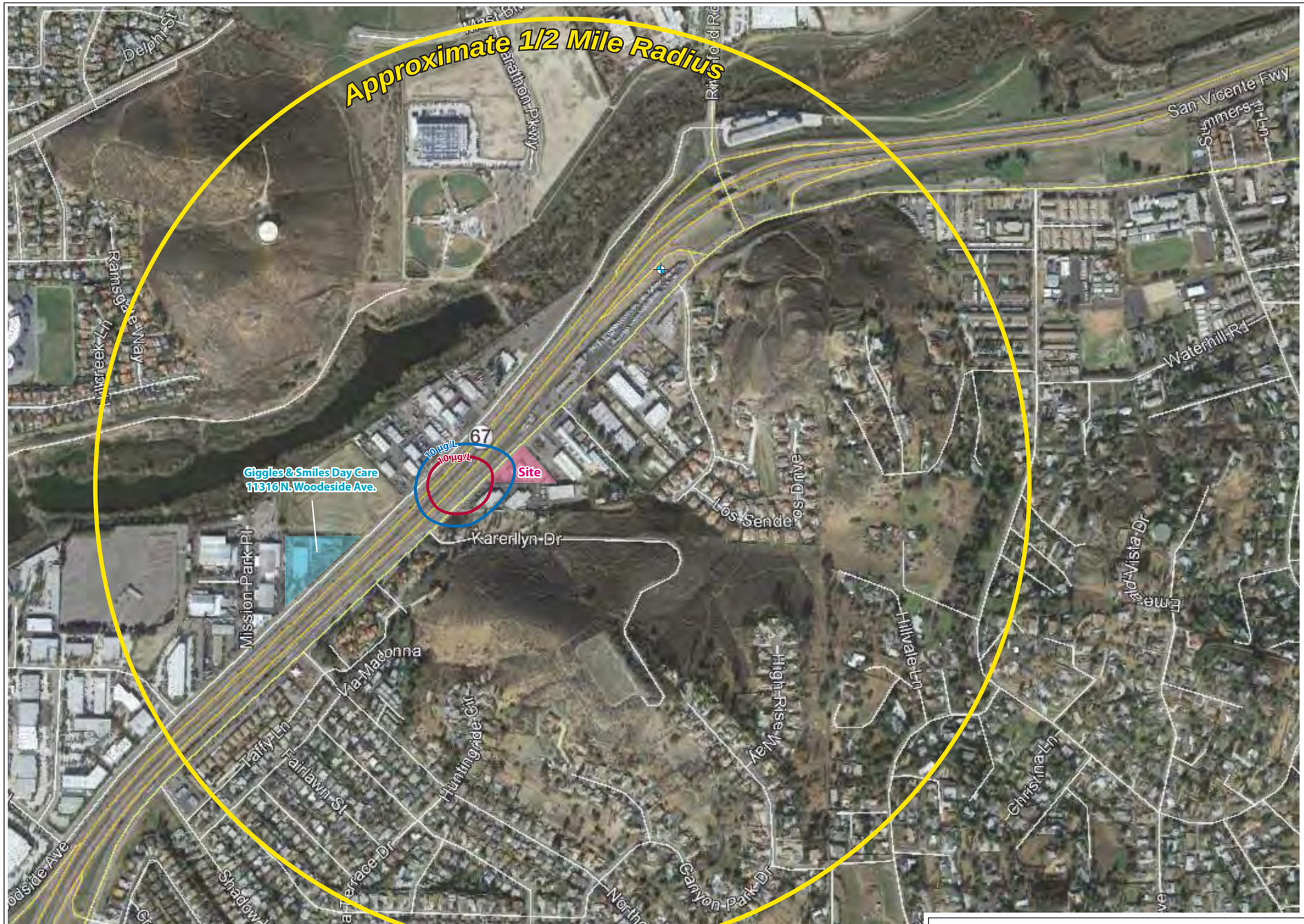
BUY WRIGHT OIL

LITHOLOGIC LOG OF SOIL BORING

PROJECT 11427 WOODSIDE
SAN TEE, CALIFORNIA

FILE NO. 185-001 DATE JUNE, 1988 FIGURE NO.

APPENDIX B
SENSITIVE RECEPTOR SURVEY MAP



Disclaimer: This figure is based on available data. Actual conditions may differ. All locations and dimensions are approximate.

- Sensitive receptor
- Groundwater supply well
- Benzene contour in micrograms per liter (µg/L)
- MTBE contour in micrograms per liter (µg/L)

North
Not to Scale

SCS ENGINEERS
Environmental Consultants
8799 Balboa Avenue, Suite 290
San Diego, California 92123

SENSITIVE RECEPTOR SURVEY MAP

Wigington Oil
11427 Woodside Avenue
Santee, California

Project No.: 01208473.00

Appendix B

Date Drafted: 2/4/15

APPENDIX C
SOIL VAPOR SURVEY AND HEALTH RISK ASSESSMENT REPORT

SCS ENGINEERS

Soil Vapor Survey and Health Risk Assessment

11427 Woodside Avenue

Santee, California

(DEH CASE #H19469-001)

Presented to:

Ms. Ellen Beacon
County of San Diego
Department of Environmental Health
P.O. Box 129261
San Diego, California 92112-9261

Presented by:

SCS ENGINEERS
8799 Balboa Avenue, Suite 290
San Diego, California 92123
(858) 571-5500

April 28, 2011
Project Number: 01208473.00

Offices Nationwide
www.scsengineers.com

April 28, 2011
Project No. 01208473.00

Ms. Ellen Beacon
County of San Diego
Department of Environmental Health
P.O. Box 129261
San Diego, California 92112-9261

Subject: Soil Vapor Survey and Health Risk Assessment

DEH File Number: H19469-001

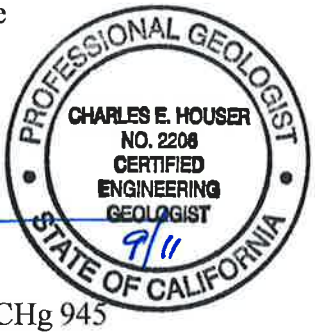
Site: 11427 Woodside Avenue
Santee, California

Dear Ms. Beacon:

SCS Engineers (SCS), is pleased to present this report (Report) of the March and April 2011 soil vapor survey and health risk assessment (HRA) of petroleum hydrocarbon-bearing vapors in the vicinity of the Site building at the above-referenced Site (Figures 1 and 2). During the current assessment, 10 soil vapor probes were installed, purged, and sampled pursuant to the requirements of the County of San Diego, Department of Environmental Health (DEH), Site Assessment and Mitigation Program (SAM). This work was conducted in accordance with Scope of Services Change Number 1 (SSC1) to Exhibit 00 to the Contract between SCS and Wigington Petroleum, Inc. (Client), dated March 30, 2009.

Should you have any questions regarding this Report, please do not hesitate to call the undersigned at (858) 571-5500.

Sincerely,



Chris Crosby
Staff Professional
SCS ENGINEERS

Charles E. Houser, CEG 2206, CHg 945
Senior Project Professional
SCS ENGINEERS

Chuck Pryatel, MBA, REHS
Vice President
SCS ENGINEERS

cc: Ms. Linda Wigington, c/o William Fischbeck, Esq.

State UST Cleanup Fund via electronic upload to State Geotracker website

Enclosures

F:\Projects\208\451-530\01208473.00 (Wigington Petroleum, Inc.)\701 (El Cap Oil)\Soil Vapor Survey\Soil Vapor Survey\01208473.00.SV.RPT (2011).doc

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Appendix C H&P Mobile Geochemistry SOP for Soil Vapor Sampling
Appendix D Analytical Data and Chain-of-Custody Documentation
Appendix E Vapor Risk Assessment Model Sheets

1 BACKGROUND

The Site is located at 11427 Woodside Avenue in the City of Santee, San Diego County, California (Figure 1). The Site is currently occupied by a commercial fuel and oil facility (Figure 2). Between 1987 and 1998, 13 underground storage tanks (USTs) were reportedly removed from the Site. Analysis of samples collected during the UST removals indicated that a release of petroleum hydrocarbons had occurred from the UST system. The County of San Diego, Hazardous Materials Management Division (HMMD) directed that corrective measures be taken regarding the release.

A summary of the previous environmental assessments conducted at the Site follows:

- EnecoTech Southwest, Inc. (EnecoTech) conducted assessment activities at the Site between 1988 and 2005. A total of 18 borings and 7 groundwater monitoring wells (MW-1 through MW-4 and MW-6 through MW-8) were drilled and sampled by EnecoTech. An existing 12-inch diameter concrete water production well inside the Site building was labeled MW-5 and was also sampled during the monitoring events in March 1998 and April 2002.

- In 1988, EnecoTech reported that four USTs were removed from the Site. A site assessment was performed immediately following the tank removal activities, during which 11 soil borings were drilled and sampled and four of the borings were completed as groundwater monitoring wells (MW-1 through MW-4).

- On August 19, 1993, the HMMD issued a Notice of Violation to El Capitan Oil Co. requiring corrective action relative to the release. The Site Assessment and Mitigation Program (SAM) reportedly assumed oversight responsibility of the UST assessment and mitigation in mid-1993.

- EnecoTech reported that single-walled product piping was removed from the Site in October 1997.

- In April 1998, nine USTs were reportedly removed from the Site where samples collected by EnecoTech indicated a release of petroleum hydrocarbons.

- On March 14, 2000, EnecoTech produced a workplan titled *Work Plan for Environmental Services*, which proposed the installation of two additional groundwater monitoring wells. SAMreportedly directed that four groundwater monitoring wells be installed in a letter dated, May 8, 2000. EnecoTech installed two groundwater monitoring wells (MW-6 and MW-7) on February 26, 2001, and one groundwater monitoring well (MW-8) on April 19, 2002.

- Based on the results of EnecoTech's Site assessment activities, groundwater beneath the Site was interpreted to have been impacted by petroleum hydrocarbons from on-Site releases.

- On March 25, 2005, EnecoTech submitted a workplan for additional Site assessment, which proposed the installation of nine additional groundwater monitoring wells both on and off Site.

- In 2006, Petra Geotechnical Inc. (Petra) was retained to conduct the Site assessment work. SAM approved EnecoTech's workplan in a letter, dated October 10, 2007. Petra proposed one well be installed in addition to the nine wells proposed by EnecoTech. SAM agreed that an additional well was needed and requested a revised workplan. Petra submitted an addendum to the revised workplan, dated December 21, 2007, to include a tenth groundwater monitoring well be installed. SAM approved the revised workplan in a letter, dated January 15, 2008.

- On October 25, 2007, Petra assessed that phase-separated hydrocarbons (PSH) were present in monitoring wells MW-2, MW-3, and MW-4. Petra submitted a workplan titled, *Workplan for High Vacuum Dual Phase Extraction Pilot Test and Interim Remediation*, to the SAM Program, dated December 24, 2007. SAM approved the workplan in a letter dated, January 16, 2008.

- Petra conducted a 33-day high-vacuum, dual-phase extraction (HVDPE) pilot test between January 22 and February 24, 2008. Approximately 3,256.17 pounds of petroleum hydrocarbons were removed and treated during the pilot test. During the pilot test, nine new monitoring wells (MW-9 through MW-17) were installed. The locations of these wells (MW9 through MW-17) and previous wells (MW-1 through MW-8) are depicted on Figure 2. In April 2008, monitoring wells MW-1 through MW-4 and MW-6 through MW-17 were sampled during the second quarter 2008 (2Q2008) groundwater monitoring event.

- On July 25, 2008, Petra submitted a *Workplan for Well Maintenance and Well Destruction* to SAM to destroy well MW-5 and reconstruct the well heads for several monitoring wells. SAM approved this workplan in a letter, dated September 4, 2008.

- On July 13, 2009, SAM issued a letter that called for the reduction of the frequency of groundwater monitoring from quarterly to semi-annually, occurring during the second and fourth quarters.

- In 2009, SCS Engineers was retained to conduct further groundwater monitoring and Site assessment beginning with the second quarter 2009 (2Q2009) groundwater monitoring event. SCS performed groundwater monitoring and sampling at the Site on June 2009 (2Q2009), November 2009 (4Q2009), April 2010 (2Q2010), December 2010 (4Q2010), and April 2011 (2Q2011).

- On April 26, 2010, SCS submitted a *Workplan for a Soil Vapor Survey and Health Risk Assessment* to SAM. SAM conditionally approved this workplan in a letter dated, May 18, 2010 (Appendix A). Additionally, on April 26, 2010, SCS submitted a *Site Assessment Workplan* to SAM to install two groundwater monitoring wells. SAM approved this workplan in a letter dated, May 19, 2010.

- On March 23, 2010, SCS installed two additional groundwater monitoring wells (MW-18 and MW-19) to the southwest of the Site. The Site Assessment Report including 2Q2011 groundwater monitoring results is in process and will be submitted in the near future.

The current Report describes the soil vapor sampling events conducted during March 2011 and April 2011.

2 SITE DESCRIPTION SUMMARY

Site Name:	Wigington Petroleum
Site Owner:	Wigington Petroleum, Inc.
Site Address:	11427 Woodside Avenue, Santee, California
DEH Case Number:	H19469-001
Cleanup Fund Claim Number:	912
Global ID:	T0607303173

3 OBJECTIVES

The objectives of the scope of services were to:

- Assess the extent and concentrations of petroleum hydrocarbons in subsurface soil vapor beneath the Site building.

- Assess the likelihood that significant[1] human health risk exists at the Site as a result of vapor-phase migration of petroleum hydrocarbons.

4 SCOPE OF SERVICES

PREPARATION FOR FIELD WORK

Site Health and Safety Plan

A Site health and safety plan (Plan) was required for the work conducted at the Site by workers within the "exclusion zone" pursuant to the requirements of 29 Code of Federal Regulations (CFR) Part 1910.120 and Title 8 California Code of Regulations (CCR) Section 5192. The existing Plan outlined the potential chemical and physical hazards that might be encountered during the drilling and sampling activities. The appropriate personal protective equipment and emergency response procedures for the Site-specific chemical and physical hazards were detailed in this Plan. All personnel involved with the field work were required to read and sign the document to encourage proper health and safety practices.

1 For the purposes of this assessment, significant is defined as greater than one in 1,000,000 excess lifetime cancer risk.

Utility Search and Markout

Prior to drilling, SCS contacted Underground Service Alert (USA) and contracted with a private underground utility search company (Subsurface Alert) to locate subsurface utilities and improvements at the Site to minimize the likelihood of drilling into an underground utility. No underground utilities were identified by USA or Subsurface Alert in the vicinity of the boring locations. USA issued ticket number A10750756 for the utility notification request.

Project Management, Subcontractor Management, and Scheduling

Prior to mobilizing for field work, SCS notified and scheduled the subcontractors including H&P Mobile Geochemistry, Inc. (H&P), Subsurface Alert, and Primetime Concrete Cutting.

FIELD ACTIVITIES

Soil Vapor Well Installation

On March 23, 2011, SCS supervised the drilling of 5 borings (SV1 through SV5) and installation of 10 soil vapor probes (Figure 3). All borings were drilled adjacent to the Site building using a truck-mounted, direct-push drill rig. A $1^{1}/_{2}$-inch diameter metal rod was driven to a depth of 10 feet below ground surface (bgs). Drilling equipment was cleaned or changed out between sampling locations to minimize the likelihood of cross-contamination of the soil vapor probe holes and to minimize the potential for a false positive in the soil vapor samples analyzed.

Dual-nested soil vapor probes were installed at each location at an approximate depth of 5 and 10 feet bgs. Each location was completed with a 5-inch traffic-rated well box in a 12-inch concrete pad (Appendix B).

Soil Vapor Survey

March 2011

On March 23, 2011, SCS supervised the collection of 13 soil vapor samples including 1 duplicate sample for quality assurance purposes. A purge test was conducted on the first sample location (SV3-10). One-, three-, and seven-purge volumes were removed prior to collecting samples SV3-10-1V, SV3-10-3V, and SV3-10-7V, respectively. Sample concentrations were not reported above the laboratory reporting limit from SV3-10; as a result, a default three-purge volume purge was used prior to collecting a sample from the remaining soil vapor probes. Soil vapor samples were collected after probes had the appropriate amount of time to equilibrate and three purge volumes were removed. H&P conducted a leak test for each sample collected. A copy of H&P standard operating procedures for soil vapor sampling is including in Appendix C.

The soil vapor samples were immediately transferred to a state-accredited, on-Site mobile laboratory provided by H&P for analysis for benzene, toluene, ethylbenzene, and total xylenes (BTEX), fuel oxygenates including methyl tertiary butyl ether (MTBE), di-iso propyl ether (DIPE), ethyl tertiary butyl ether (ETBE), tertiary amyl methyl ether (TAME), and tertiary butyl alcohol (TBA), and leak test compound (1,1-difluoroethane) in accordance with Environmental

Protection Agency (EPA) Method 8260B. Chain-of-custody procedures were implemented for sample tracking. A written analytical report was provided by the laboratory upon the completion of the sample testing. The laboratory reports and chain-of-custody documentation are presented in Appendix D.

April 2011

On April 5, 2011, SCS again supervised the collection of 11 soil vapor samples including 1 duplicate sample for quality assurance purposes. To remain consistent with the previous sampling event in March 2011, three purge volumes were removed prior to collecting each sample and a leak test was conducted for each sample collected.

The soil vapor samples were immediately transferred to a state-accredited, on-Site mobile laboratory provided by H&P for analysis for BTEX, fuel oxygenates, and 1,1-difluoroethane in accordance with EPA Method 8260B. Chain-of-custody procedures were implemented for sample tracking. A written analytical report was provided by the laboratory upon the completion of the sample testing. The laboratory reports and chain-of-custody documentation are presented in Appendix D.

Site Safety

The following procedures were used to conduct the drilling activity in a safe manner:

- The Site Health and Safety Plan was implemented.
- A limited access exclusion zone was established in the work area.
- Unauthorized personnel were not permitted to enter the exclusion zone.

CHANGES FROM WORKPLAN

Soil vapor probe SV3 was placed on the western end of the Site building per the direction of SAM in their May 18, 2010 conditional workplan approval letter. The location of soil vapor probe SV5 was move from the proposed location near the east corner of the building to the north side due to overhead obstructions and underground utilities.

5 FINDINGS

SOIL VAPOR ANALYTICAL RESULTS

Soil vapor samples were collected from 10 soil vapor probes in March 2011 and April 2011 to assess the possible presence of BTEX and fuel oxygenates in the shallow soil vapor beneath the Site. A summary of soil vapor analytical results from the sampling events are presented in Table 1 and Figure 3. A complete list of analytical results are included in the laboratory reports (Appendix D).

Benzene, Toluene, Ethylbenzene, and Total Xylenes

Benzene was reported at concentrations ranging from 0.21 micrograms per liter (µg/l) to 1.3 µg/l in soil vapor samples collected at 5 feet bgs from SV4 and SV5. Benzene was reported at concentrations from 0.39 µg/l to 5.9 µg/l in soil vapor samples collected at 10 feet bgs from SV4 and SV5. No concentrations of benzene were reported above the laboratory reporting limit in the remainder of the samples analyzed.

No concentrations of toluene were reported above the laboratory reporting limit in the soil vapor samples analyzed.

Ethylbenzene was reported at concentrations from 12 µg/l to 20 µg/l in soil vapor samples collected at 5 feet bgs from SV5. Ethylbenzene was reported at concentrations of 24 µg/l and 38 µg/l in soil vapor samples collected at 10 feet bgs from SV5. No concentrations of ethylbenzene were reported above the laboratory reporting limit in the remainder of the samples analyzed.

No concentrations of xylenes were reported above the laboratory reporting limit in the soil vapor samples analyzed.

Fuel Oxygenates

Ethyl tertiary butyl ether (ETBE) was reported at concentrations from 4.9 µg/l to 13 µg/l in soil vapor samples collected at 5 feet bgs from SV5. No concentrations of ETBE were reported above the laboratory reporting limit in the remainder of the samples analyzed.

No concentrations above the respective analyte laboratory reporting limit for methyl tertiary butyl ether (MTBE), di-isopropyl ether (DIPE), tertiary amyl methyl ether (TAME), and tertiary butyl alcohol (TBA) were reported in the soil vapor samples analyzed.

Leak Test Compound

No concentrations of 1,1-difluoroethane were reported above the laboratory reporting limit in the soil vapor samples analyzed.

6 DISCUSSION

HEALTH RISK ASSESSMENT (HRA)

As indicated above, concentrations of benzene, ethylbenzene, and ETBE were reported above their respective laboratory reporting limits in the soil vapor beneath the Site. Therefore, a health risk assessment was conducted.

The estimation of potential human health risks associated with the upward migration of vapors from petroleum hydrocarbon-bearing soil and groundwater has been extensively evaluated by the DEH. The spreadsheets used in this analysis are maintained by the DEH on their website at http://www.sdcounty.ca.gov/deh/water/sam_vapor_risk_assessment_2000.html (accessed March 29, 2011).

The evaluation of health risk is based upon indoor vapor concentrations, which are estimated from the rate of vapor-phase diffusion (or flux) of petroleum hydrocarbon constituents through the soil and a building foundation (i.e., the transport rate), the ventilation and use characteristics of a building (i.e., the dose), and the relative toxicity of the petroleum hydrocarbon constituents specific to vapor inhalation (i.e., the health risk associated with the estimated dose) for a given end-use scenario. The estimation of relative toxicity of vapors that could potentially accumulate in the building spaces is based upon carcinogenic and non-carcinogenic toxicity values published by California EPA (Cal-EPA).

Petroleum hydrocarbon constituents in soil vapor may originate from either impacted soil or groundwater; thus, soil vapor was measured directly. Concentrations of benzene, ethylbenzene, and ETBE were reported above the laboratory reporting limits in soil vapor; therefore, a limited human health risk assessment was conducted to assess the potential for significant human health risk posed to future users of the Site due to the upward migration of the detected vapor.

The human health risk assessment was conducted in accordance with the SAM Manual methodology and relied upon Site-specific data where available. It was assumed that the soil vapor is in chemical equilibrium with soil and pore water. The rate of the chemical diffusion from subsurface soil vapor into a building was estimated based upon properties of the petroleum hydrocarbon constituents. Finally, the potential human exposure to, and health risk from, the petroleum hydrocarbon constituents was estimated based on the duration of time that an individual is assumed to occupy the building and the relative petroleum hydrocarbon constituent concentrations that may occur within the building. The exposure concentration is based on the rate of diffusion into the building and the ventilation rate within the building. The human health risk is based on the exposure concentration, inhalation rate, and the relative toxicity of a given petroleum hydrocarbon constituent.

According to the methodology described in the SAM Manual, the potential indoor air concentration of a constituent of concern (COC) as a result of vapor-phase transport from soil beneath a building can be estimated based upon soil vapor data and an understanding of soil and building conditions. The only known complete exposure pathway is assumed to be the vadose zone vapor-phase migration to the surface.

The highest concentrations reported from 5 feet bgs and 10 feet bgs for the volatile organic compounds listed in the SAM Vapor Risk Assessment Model and reported above the laboratory reporting limits at the Site were used to estimate the range of total diffusion-driven vapor flux into the building. The Excel spreadsheets for the risk calculations associated with benzene and ethylbenzene (obtained from the DEH) are presented in Appendix E. ETBE is not listed in the SAM Vapor Risk Assessment Model and therefore is not included in the HRA.

The following assumptions were used to estimate human health risk:

- The highest reported concentration of each petroleum hydrocarbon constituent from 5 feet bgs and 10 feet bgs was conservatively estimated to be present at the entire Site.
- The Site building is assumed to be ventilated at the default exchange rate of 0.83 indoor building air exchanges per hour for commercial uses.
- A commercial adult exposure scenario is used in which an adult works at the Site for 12 hours a day, five days a week, 50 weeks per year for an average period of 25 years.
- The Site building was estimated to have an average interior height of 8 feet (2.44 meters).
- The Site was assumed to have an old slab-on-grade concrete foundation for which a slab attenuation factor default value of 0.1 was used.

The following table summarizes our estimates of carcinogenic and non-carcinogenic risk from soil vapor samples collected at 5 feet bgs:

Human Health Risk Calculations at 5 feet bgs			
CoC	**Highest Concentration with sample location (µg/L)**	**Noncarcinogenic (Hazard Index) Adult**	**Carcinogenic (Cancer Risk) Adult**
Benzene	1.3 (SV5-5)	7.96 E-04	2.44 E-07
Ethylbenzene	20 (SV5-5)	3.09 E-04	2.79 E-07
Total	**NA**	**1.11 E-03**	**5.23 E-07**

Notes:
CoC: Constituent of concern
µg/L: micrograms per liter vapor
NA: not applicable

The following table summarizes our estimates of carcinogenic and non-carcinogenic risk from soil vapor samples collected at 10 feet bgs:

Human Health Risk Calculations at 10 feet bgs			
CoC	**Highest Concentration with sample location (µg/L)**	**Noncarcinogenic (Hazard Index) Adult**	**Carcinogenic (Cancer Risk) Adult**
Benzene	5.9 (SV5-10)	1.80 E-03	5.53 E-07
Ethylbenzene	38 (SV5-10)	2.94 E-04	2.65 E-07
Total	**NA**	**2.09 E-03**	**8.18 E-07**

Notes:
CoC: Constituent of concern
µg/L: micrograms per liter vapor
NA: not applicable

The human health risk estimated herein is expressed for both carcinogenic and noncarcinogenic toxicity. Carcinogenic risk is expressed as a probability, where excess cancer risk (ECR) corresponds to the incremental probability that an individual will develop cancer in a lifetime. The SAM criterion for an acceptable ECR used in this analysis is one in one-million (1.00 E-06) or less. Noncarcinogenic toxicity is estimated by comparing the estimated dose to the dose required to trigger chronic toxicity (reference dose, RfD) (as a simple toxicant) and is expressed as a ratio of the dose to RfD. A value exceeding 1.0 is considered significant. The results of the human health risk assessment indicated the following:

- Based on the previously described assumptions and limitations of the scenario evaluated by the health risk calculation, the estimated cancer risk from the human health risk assessment for petroleum hydrocarbons at the Site is from 5.23 E-07 to 8.18 E-07 (less than 1.00 E-06). This result indicates that there is a low likelihood that a significant human health risk exists due to possible exposure to the petroleum hydrocarbon vapors detected beneath the Site.

- The calculated hazard index for petroleum hydrocarbons at the Site is from 1.11 E-03 to 2.09 E-03 (less than 1). This result indicates that there is a low likelihood of a non-carcinogenic risk due to possible exposure to the petroleum hydrocarbon vapors detected beneath the Site.

As noted above, the model makes a number of assumptions. In general, the assumptions are conservative, i.e., Site-specific data, if obtained and used in the model, would tend to give lower risk and toxicity results.

Please note that two of the assumptions used in the model are conservative. First, the use of 0.83 fresh air exchanges per hour is likely low. Second, the use of an indoor building height of eight

feet is a conservative assumption. The indoor ceiling height throughout most of the building is greater than eight feet.

7 CONCLUSIONS

Based on the data obtained and reviewed, laboratory results, current regulatory guidelines, and our experience and professional judgment, SCS concludes that petroleum hydrocarbon constituents were present in shallow soil vapor samples collected beneath the Site; however, with the assumptions used in the human health risk model (discussed in section 6), the calculated health risk at the Site does not exceed the criterion of one-in-one-million (1.00 E-06) excess cancer risk. In addition, a hazard index of 1.0 (significant non-carcinogenic risk criterion) was not exceeded. The calculated health risk and hazard index decreases as vapors migrate toward the surface. Therefore, there is a low likelihood that a significant human health risk exists in connection with the concentrations of petroleum hydrocarbon constituents in the soil vapor beneath the Site.

8 RECOMMENDATIONS

Based on the data obtained during this assessment and our conclusions, SCS recommends the DEH consider not requiring any further action to assess or mitigate potential vapor intrusion from the petroleum hydrocarbon-bearing soil and groundwater at the Site.

9 REPORT USAGE AND FUTURE SITE CONDITIONS

This Report is intended for the sole usage of the Client and the Client's authorized representatives. Use of this Report is subject to the provisions of the fully executed Contract between the Client and SCS. Any third party usage of this Report shall be subject to the provisions of the Contract, and any unauthorized misuse of or reliance upon the Report shall be without risk or liability to SCS.

The conclusions of this Report are judged to be relevant at the time the work described in this Report was conducted. Future conditions may differ and this Report should not be relied upon to represent future Site conditions unless a qualified consultant familiar with the practice of Phase II environmental assessments in San Diego County is consulted to assess the necessity of updating this Report.

Although this Assessment has attempted to assess the likelihood that the Site has been impacted by a hazardous material/waste release, potential sources of impact may have escaped detection for reasons, which include but are not limited to: 1) our reliance on inadequate or inaccurate information rightfully provided to SCS by third parties, such as public agencies and other outside sources; 2) the limited scope of this Assessment; and 3) the presence of undetected, unknown, or unreported environmental releases.

10 LIKELIHOOD STATEMENTS

Statements of "likelihood" have been made in this report. Likelihood statements are based on professional judgments of SCS. The term "likelihood," as used herein, pertains to the probability of a match between the prediction for an event and its actual occurrence. The likelihood statement assigns a measure for a "degree of belief" for the match between the prediction for the event and the actual occurrence of the event.

The likelihood statements in this Report are made qualitatively (expressed in words). The qualitative terms can be approximately related to quantitative percentages. The term "low likelihood" is used by SCS to approximate a range of 10 to 20 percent; the term "moderate likelihood" refers to an approximate range of 40 to 60 percent; and the term "high likelihood" refers to an approximate range of 80 to 90 percent.

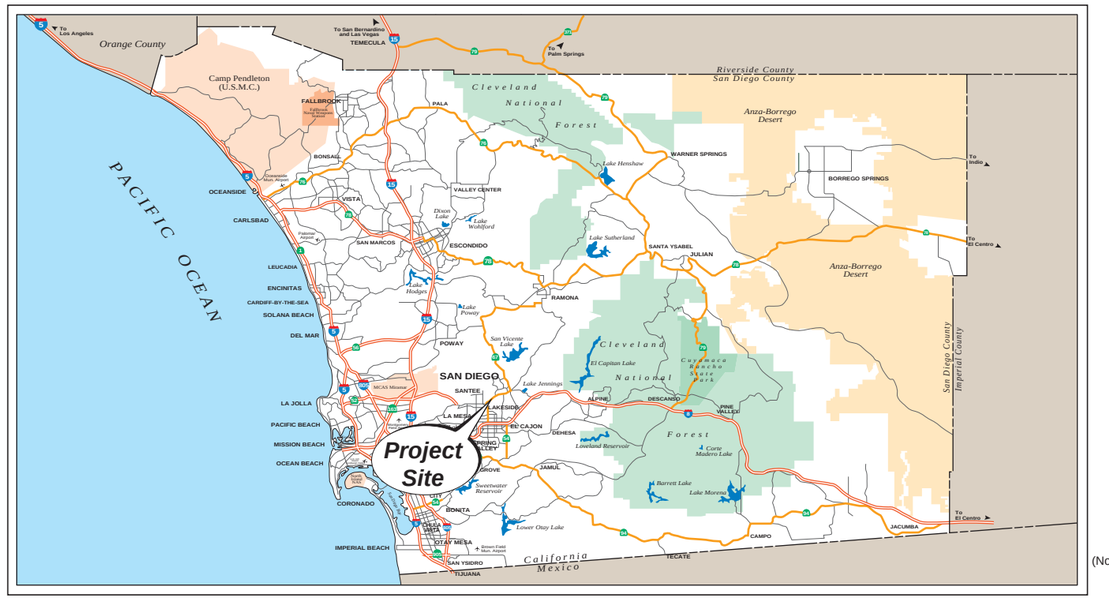
TABLES

Table 1
Soil Vapor Sample Analytical Results
11427 Woodside Avenue, Santee, California

Sample ID	Location	Depth (feet bgs)	Date Sampled	Purge Volume (cc)	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Total Xylenes (µg/L)	MTBE (µg/L)	DIPE (µg/L)	TAME (µg/L)	ETBE (µg/L)	TBA (µg/L)
SV1 - 5	SV1	5	3/23/2011	333	< 0.10	< 1.0	< 0.50	< 1.0	< 0.50	< 1.0	< 1.0	< 1.0	< 5.0
			4/5/2011	333	< 0.10	< 1.0	< 0.50	< 1.0	< 0.50	< 1.0	< 1.0	< 1.0	< 5.0
SV1 - 10		10	3/23/2011	348	< 0.10	< 1.0	< 0.50	< 1.0	< 0.50	< 1.0	< 1.0	< 1.0	< 5.0
			4/5/2011	348	< 0.10	< 1.0	< 0.50	< 1.0	< 0.50	< 1.0	< 1.0	< 1.0	< 5.0
SV2 - 5	SV2	5	3/23/2011	333	< 0.10	< 1.0	< 0.50	< 1.0	< 0.50	< 1.0	< 1.0	< 1.0	< 5.0
			4/5/2011	333	< 0.10	< 1.0	< 0.50	< 1.0	< 0.50	< 1.0	< 1.0	< 1.0	< 5.0
SV2 - 10		10	3/23/2011	348	< 0.10	< 1.0	< 0.50	< 1.0	< 0.50	< 1.0	< 1.0	< 1.0	< 5.0
			4/5/2011	348	< 0.10	< 1.0	< 0.50	< 1.0	< 0.50	< 1.0	< 1.0	< 1.0	< 5.0
SV3 - 5	SV3	5	3/23/2011	333	< 0.10	< 1.0	< 0.50	< 1.0	< 0.50	< 1.0	< 1.0	< 1.0	< 5.0
			4/5/2011	333	< 0.10	< 1.0	< 0.50	< 1.0	< 0.50	< 1.0	< 1.0	< 1.0	< 5.0
SV3 - 10		10	3/23/2011	116	< 0.10	< 1.0	< 0.50	< 1.0	< 0.50	< 1.0	< 1.0	< 1.0	< 5.0
			3/23/2011	348	< 0.10	< 1.0	< 0.50	< 1.0	< 0.50	< 1.0	< 1.0	< 1.0	< 5.0
			3/23/2011	812	< 0.10	< 1.0	< 0.50	< 1.0	< 0.50	< 1.0	< 1.0	< 1.0	< 5.0
			4/5/2011	348	< 0.10	< 1.0	< 0.50	< 1.0	< 0.50	< 1.0	< 1.0	< 1.0	< 5.0
SV4 - 5	SV4	5	3/23/2011	333	< 0.40	< 4.0	< 2.0	< 4.0	< 2.0	< 4.0	< 4.0	< 4.0	< 20
			4/5/2011	333	**0.21**	< 2.0	< 1.0	< 2.0	< 1.0	< 2.0	< 2.0	< 2.0	< 10
SV4 - 10		10	3/23/2011	348	< 1.0	< 10	< 5.0	< 10	< 5.0	< 10	< 10	< 10	< 50
			4/5/2011	348	**0.39**	< 2.0	< 1.0	< 2.0	< 1.0	< 2.0	< 2.0	< 2.0	< 10
SV5 - 5	SV5	5	3/23/2011	333	**1.3**	< 10	**14**	< 10	< 5.0	< 10	< 10	**13**	< 50
			4/5/2011	333	**1.1**	< 4.0	**18**	< 4.0	< 2.0	< 4.0	< 4.0	**4.9**	< 20
SV5 - 5 Dup			3/23/2011	383	**1.2**	< 10	**12**	< 10	< 5.0	< 10	< 10	**13**	< 50
			4/5/2011	383	**1.1**	< 4.0	**20**	< 4.0	< 2.0	< 4.0	< 4.0	**5.0**	< 20
SV5 - 10		10	3/23/2011	348	**5.9**	< 20	**38**	< 20	< 10	< 20	< 20	< 20	< 100
			4/5/2011	348	**3.2**	< 10	**24**	< 10	< 5.0	< 10	< 10	< 10	< 50

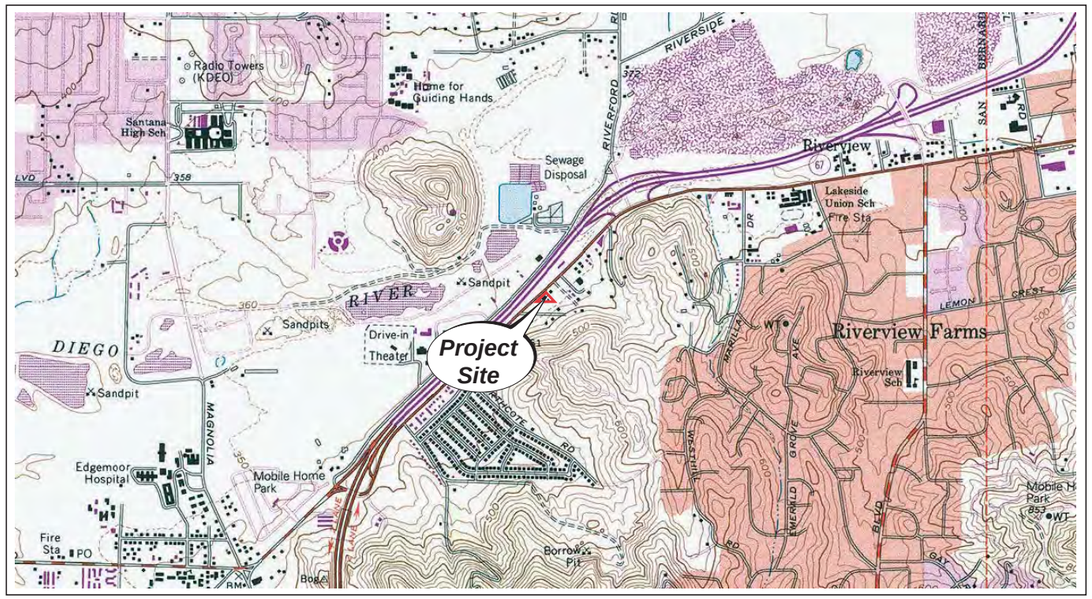
Notes:
Soil vapor samples collected by SCS Engineers.
Concentrations reported in micrograms per liter (µg/L).
Soil samples analyzed for benzene, toluene, ethylbenzene, and total xylenes (BTEX) and fuel oxygenates in accordance with EPA Method 8260B.
< indicates concentration not reported above indicated reporting limit for relevant analyte and analytical method.
Bold font indicates analytical results above the laboratory reporting limit
Please refer to the laboratory report in the Appendix for a complete list of analytes.
bgs = below ground surface.
MTBE = methyl tertiary butyl ether
DIPE = di-isopropyl ether
TAME = tertiary amyl methyl ether
ETBE = ethyl tertiary butyl ether
TBA = tertiary butyl alcohol
cc = cubic centimeters

FIGURES



North
(Not to scale)

REGIONAL SITE LOCATION



North
(Not to scale)

Reference:
U.S.G.S. 7.5 Minute Quadrangle map
El Cajon, California - 1977. Photo revised 1982.

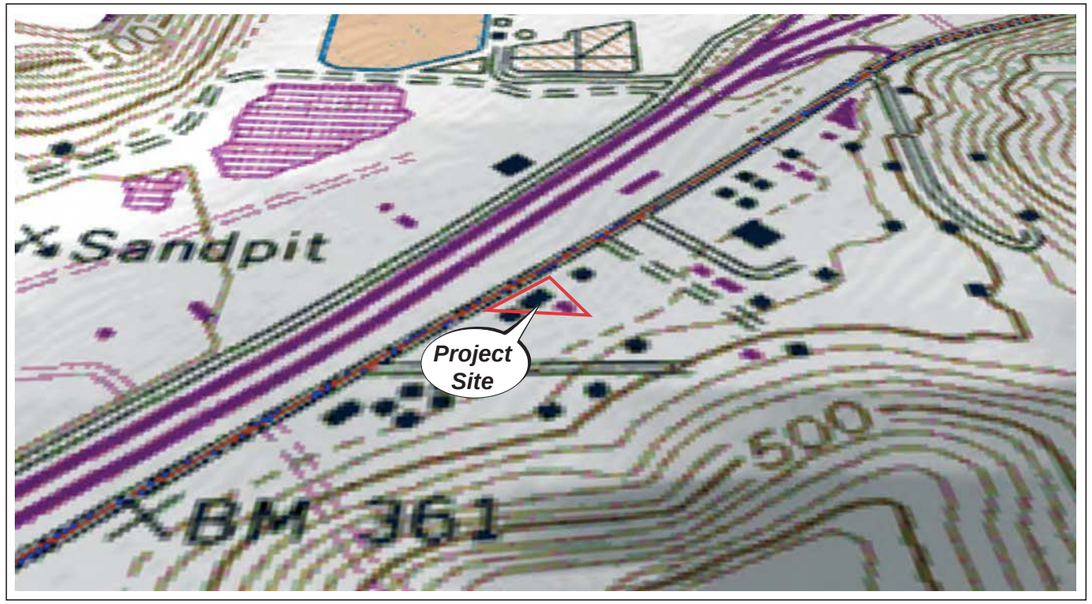
2-DIMENSIONAL SITE LOCATION

0 1,000 2,000 3,000
Approximate Graphic Scale in Feet

North
(Not to scale)

Reference:
Google Earth Aerial Photograph
Santee, California - February 2008

SITE AERIAL PHOTOGRAPH



North
(Not to scale)

Reference:
U.S.G.S. 7.5 Minute Quadrangle map
El Cajon, California - 1977. Photo revised 1982.

3-DIMENSIONAL SITE LOCATION

Disclaimer: This figure is based on available data. Actual conditions may differ. All locations and dimensions are approximate.

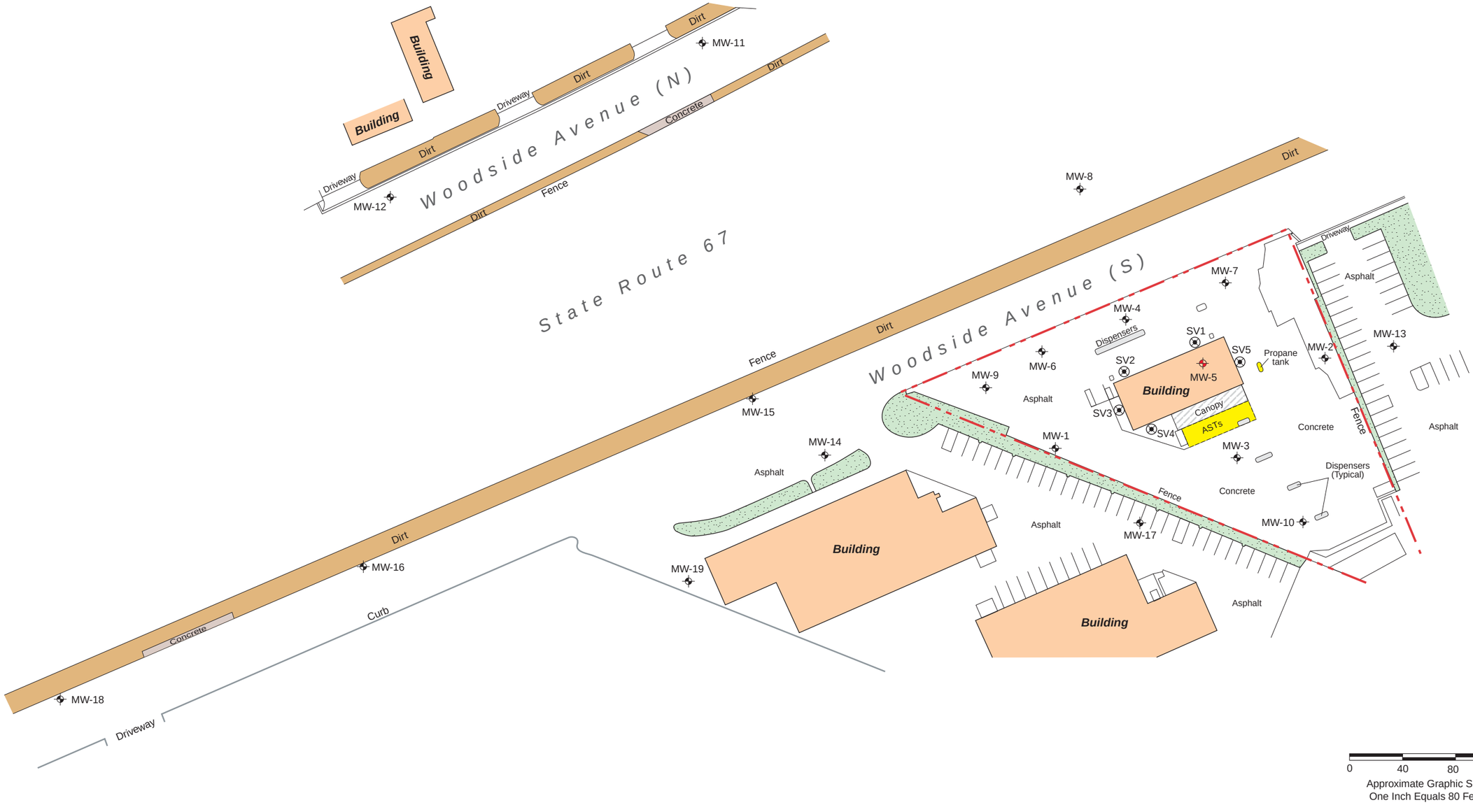
SCS ENGINEERS
Environmental Consultants
8799 Balboa Avenue, Suite 290
San Diego, California 92123

4-WAY SITE LOCATION MAP
Wigington Oil
11427 Woodside Avenue
Santee, California

Project No.: 01208473.00

Figure 1

Date Drafted: 4/22/10



EXPLANATION

MW-16 — Groundwater monitoring well location

MW-5 — Well destroyed

Approximate Site boundary

Soil vapor sampling location

AST = aboveground storage tank

Disclaimer: This figure is based on available data. Actual conditions may differ. All locations and dimensions are approximate.

SCS ENGINEERS
Environmental Consultants
8799 Balboa Avenue, Suite 290
San Diego, California 92123

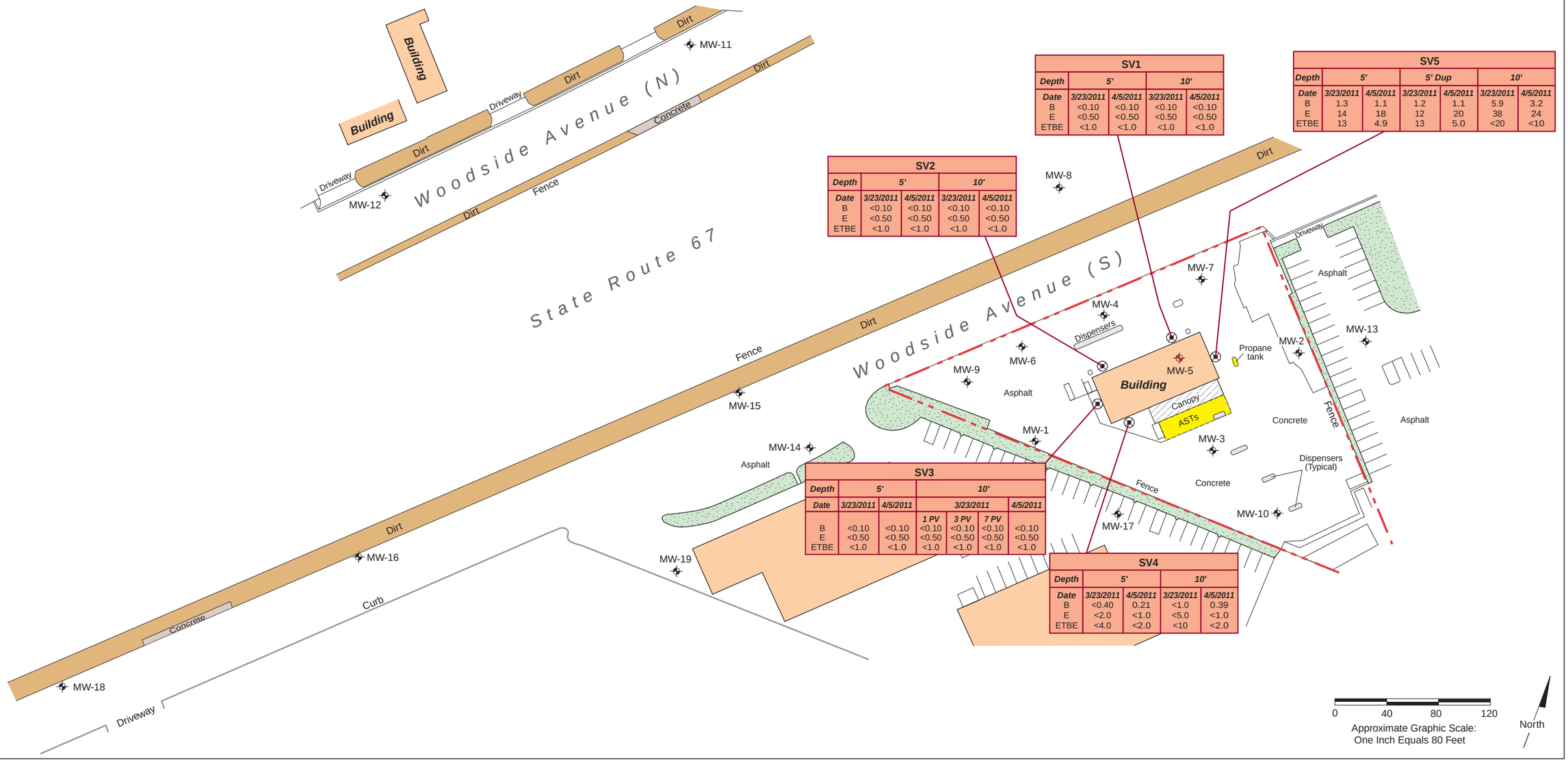
SITE MAP WITH SOIL VAPOR SAMPLING WELL LOCATIONS

Wigington Oil
11427 Woodside Avenue
Santee, California

Project No.: 01208473.00

Figure 2

Date Drafted: 4/21/11



SV1

Depth	5'		10'	
Date	3/23/2011	4/5/2011	3/23/2011	4/5/2011
B	<0.10	<0.10	<0.10	<0.10
E	<0.50	<0.50	<0.50	<0.50
ETBE	<1.0	<1.0	<1.0	<1.0

SV5

Depth	5'		5' Dup		10'	
Date	3/23/2011	4/5/2011	3/23/2011	4/5/2011	3/23/2011	4/5/2011
B	1.3	1.1	1.2	1.1	5.9	3.2
E	14	18	12	20	38	24
ETBE	13	4.9	13	5.0	<20	<10

SV2

Depth	5'		10'	
Date	3/23/2011	4/5/2011	3/23/2011	4/5/2011
B	<0.10	<0.10	<0.10	<0.10
E	<0.50	<0.50	<0.50	<0.50
ETBE	<1.0	<1.0	<1.0	<1.0

SV3

Depth	5'		10'			
Date	3/23/2011	4/5/2011	3/23/2011			4/5/2011
			1 PV	3 PV	7 PV	
B	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
E	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
ETBE	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0

SV4

Depth	5'		10'	
Date	3/23/2011	4/5/2011	3/23/2011	4/5/2011
B	<0.40	0.21	<1.0	0.39
E	<2.0	<1.0	<5.0	<1.0
ETBE	<4.0	<2.0	<10	<2.0

EXPLANATION

MW-16 — Groundwater monitoring well location

MW-5 — Well destroyed

Soil vapor sampling location

Approximate Site boundary

SV4

Depth	5'		10'	
Date	3/23/2011	4/5/2011	3/23/2011	4/5/2011
B	<0.40	0.21	<1.0	0.39
E	<2.0	<1.0	<5.0	<1.0
ETBE	<4.0	<2.0	<10	<2.0

Soil vapor samples collected by SCS Engineers. Soil vapor samples, with depth in feet below grade, analyzed for benzene, toluene, ethylbenzene, and xylenes (BTEX) and fuel oxygenates by EPA Method 8260B. Results reported in micrograms per liter (µg/L). < indicates concentration not reported above indicated reporting limit. Only analytes with concentrations reported above the laboratory reporting limit are listed here; refer to laboratory report for a complete list of analytes.

B = benzene
E = ethylbenzene
ETBE = ethyl tertiary butyl ether
QA/QC = quality assurance and quality control
PV = purge volume
Dup = duplicate sample

AST = aboveground storage tank

Disclaimer: This figure is based on available data. Actual conditions may differ. All locations and dimensions are approximate.

SCS ENGINEERS
Environmental Consultants
8799 Balboa Avenue, Suite 290
San Diego, California 92123

SOIL VAPOR ANALYTICAL RESULTS

Wigington Oil
11427 Woodside Avenue
Santee, California

Project No.: 01208473.00

Figure 3

Date Drafted: 4/28/11

APPENDICES

APPENDIX A

DEH WORKPLAN APPROVAL LETTER

County of San Diego

JACK MILLER
DIRECTOR

DEPARTMENT OF ENVIRONMENTAL HEALTH
LAND AND WATER QUALITY DIVISION
P.O. BOX 129261, SAN DIEGO, CA 92112-9261
619-338-2222/FAX 619-338-2315/1-800-253-9933
www.sdcdeh.org

ELIZABETH POZZEBON
ASSISTANT DIRECTOR

May 18, 2010

Mrs. Linda Wigington
c/o Mr. William Fischbeck
Fischbeck and Oberndorfer
5464 Grossmont Center Drive, 3rd Floor
La Mesa, CA 91942

Dear Mrs. Wigington:

UNAUTHORIZED RELEASE #H19469-001
WORK PLAN APPROVAL WITH CONDITIONS
WIGINGTON PETROLEUM
11427 WOODSIDE AVENUE, SANTEE, CA

This letter has been prepared in accordance with the requirements set forth in Title 23 (State Underground Storage Tank Regulations), Division 3, Chapter 16, Article 11, Section 2722. The purpose of this letter is to notify the Responsible Party of the status of the *Work Plan for a Soil Vapor Survey and Health Risk Assessment* received by the County of San Diego, Site Assessment and Mitigation Program (SAM), on April 28, 2010.

The Work Plan, dated April 26, 2010, and prepared by SCS Engineers, covers one of the following phases of corrective action:

Preliminary Site Assessment	( )
Soil and Water Investigation	(**X**)
Corrective Action Plan	( )
Verification Monitoring	( )
Interim Remedial Action	( )

The Work Plan has been:

( ) approved.
( ) disapproved-call the undersigned for further instructions.
(**X**) approved with the following changes or conditions:

- An additional soil vapor probe must be installed on the westward facing side of the building.
- Purge tests must be conducted prior to sample collection.
- A leak test using a leak detection compound must be conducted for each sample collected. The leak detection compound must be analyzed for in all samples.

This approval is valid for 180 days from the date of this letter. The work must be completed and a report submitted within 180 days. *Keep this letter for your records as it may be required for corrective action cost reimbursement under Senate Bill 2004 (California Health and Safety Code, Division 20, Chapter 6.75, Article 6).*

As a reminder, please continue submitting all of the soil and groundwater data electronically into GeoTracker based on our letter dated July 13, 2005.

Please call me at (619) 338-2243 if you have any questions.

Sincerely,

ELLEN BEACON, PG #7566
Project Manager
Site Assessment and Mitigation Program

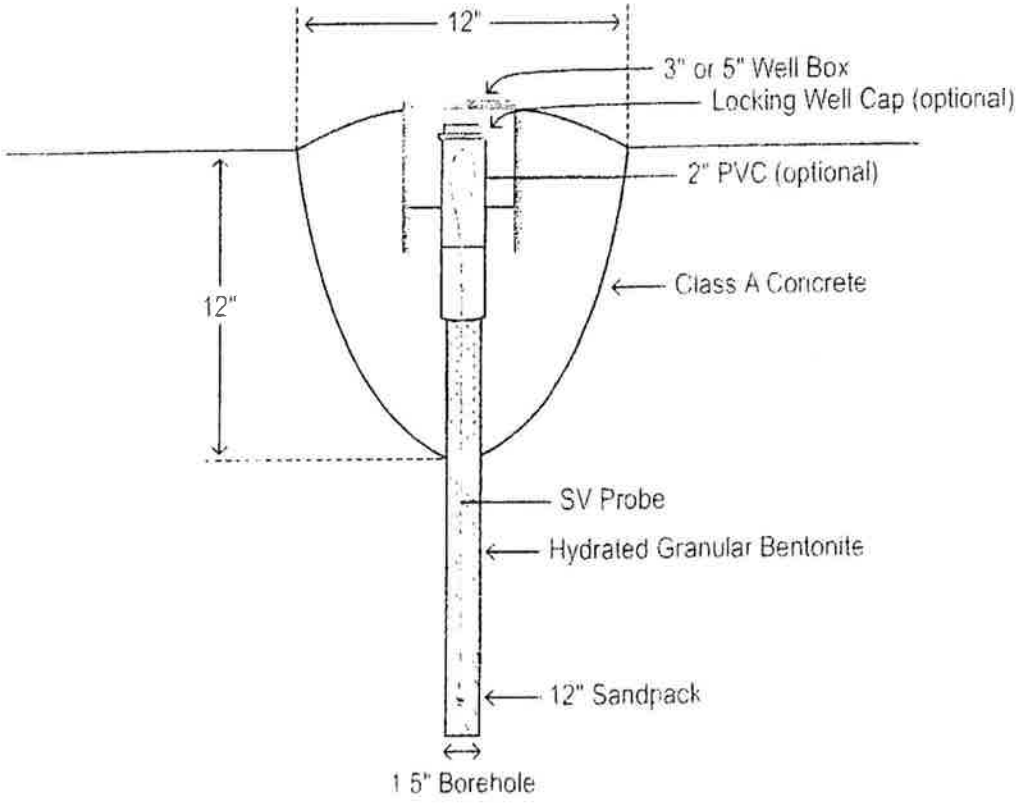
EB:kd

cc: Charles Houser, SCS Engineers

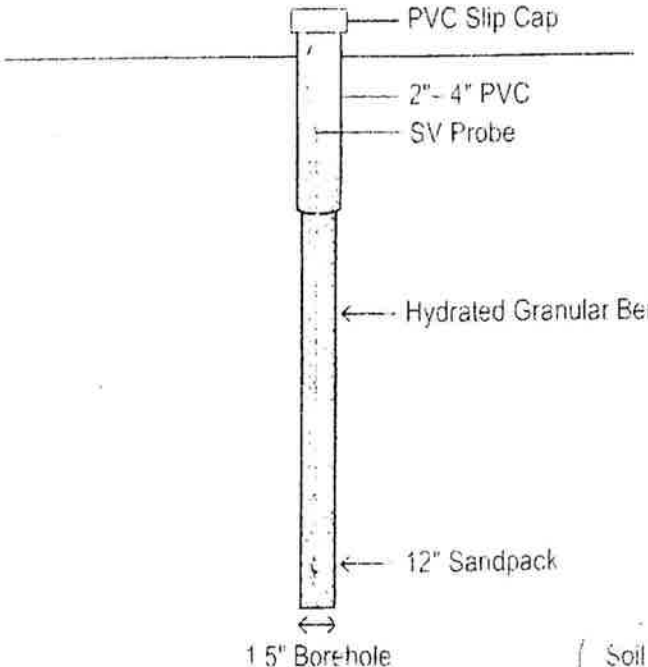
APPENDIX B

SOIL VAPOR WELL CONSTRUCTION DIAGRAM

Soil Vapor Monitoring Well Construction Diagram



Soil Vapor Semi-permanent Monitoring Well Construction Diagram



Soil Vapor Monitoring Well Construction Diagram

APPENDIX C

H&P MOBILE GEOCHEMISTRY SOP FOR SOIL VAPOR SAMPLING

H&P Standard Operating Procedures for Active Soil Gas Investigations

(Per CA DTSC Advisory dated January 28, 2003)

Mobile Lab 8260B Analysis

January 2011, REV 6

Prepared by:

H&P Mobile Geochemistry, Inc.

Carlsbad, California

Soil Gas Probe Installation and Sampling Procedures

Soil Gas Probe Construction

Soil Gas Probe Installation

At each vapor probe location, H&P's truck-mounted hydraulic direct push rig may be used to advance interconnected 4 ft. lengths of 1.5" stainless steel probe rod to the desired probe depth. The rod is then removed and 1/8" (or ¼" if requested) nylon tubing with a small airstone filter attached to the end is inserted into the open borehole. The probe is gently lifted up approximately 6" and sand is poured down the borehole to encase the filter with 1' of sandpack. Approximately 1' of dry granular bentonite is then poured down the borehole and then the probe can be completed to the surface with hydrated bentonite. For deep probe installation with multiple probe depths the borehole will be completed at each depth in the same manner. In unstable soil conditions, the implant and materials can be inserted into the probe rod as it is retracted.

Equilibration Time

For temporary probes, installed with the direct push method, sampling is conducted after a 30 minute equilibration period and to allow time for the bentonite to properly seal.

Post Run Tubing (PRT) Soil Vapor Sampling (optional method as requested)

Soil vapor samples are obtained by using a 1.5" O.D. PRT (post run tubing) point holder and a hardened stainless steel drop-off point. The point holder is threaded onto the leading end of a 1.5" O.D. probe rod and advanced to depth using H&P's direct push rig. Once the desired depth is reached, a 3/8" PRT fitting connected to 1/8" (or ¼" if requested) nylon tubing is inserted into the rod and lowered to the bottom fitting. The tubing is then threaded onto the drop-off point holder by applying downward pressure on the tubing while rotating. A small rubber o-ring on the PRT fitting ensures an airtight seal. The probe rod is then retracted slightly to disengage the expendable point, exposing the vapor sampling port. Hydrated bentonite is placed around the drive rod at the ground surface to prevent ambient air intrusion from occurring.

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Equilibration Time

For probes installed using the PRT system by direct push methods, sampling is conducted after a 20 minute equilibration period.

Manually-Driven Probes

H&P's manually driven soil vapor probes are constructed of 0.625" outside diameter steel and equipped with a hardened steel tip. The probes can reach a depth of 5' below ground surface. An inert 1/8" nylon tubing is threaded down the center of the probe and connected to a sampling port just above the tip. This internal sample tubing design eliminates any contact between the sample port and the gas sample.

The probe is driven into the ground by an electric rotary hammer. Once inserted to the desired depth, the probe is rotated approximately 3 turns to open the tip and exposes the vapor sampling ports. This design prevents clogging of the sampling ports and cross-contamination from soils during insertion. Hydrated bentonite is placed around the drive rod at the ground surface to prevent ambient air intrusion from occurring.

The probe is allowed to set for 20 minutes prior to sampling to allow the bentonite time to properly seal.

In stable soil conditions, the manually driven probe rods may also be used to set soil vapor implants. With a hardened 1" steel tip on the end of the rod, the probe is driven to depth (usually 5' or less). The rod is then removed and 1/8" (or ¼" if requested) nylon tubing with a small airstone filter attached to the end is inserted into the open borehole. The probe is gently lifted up approximately 6" and sand is poured down the borehole to encase the filter with 1' of sandpack. Approximately 1' of dry granular bentonite is poured down the borehole and then the well can be completed to the surface with hydrated bentonite.

The probe is allowed to set for 30 minutes prior to sampling to allow the bentonite time to properly seal.

Equilibration Time

For temporary probes, installed with the direct push method, sampling is conducted after a 30 minute equilibration period and to allow time for the bentonite to properly seal.

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Sub-Slab Probe Installation

For sub-slab applications, H&P uses a electrically powered rotary hammer with a 1” drill bit to drill through the concrete slab. After penetrating the bottom of the slab, the drill bit is advanced no more than 2-3” into the subsurface material.

For temporary probes (used for a single sample event), a length of 1/8” nylon tubing with a small airsone filter attached to the end is inserted into the borehole. A valve is attached to the end to allow a connection to be made for sampling. A carefully measured amount of sand is poured into the borehole so as to completely cover the filter and connection tubing. Dry granular bentonite is then slowly poured into the hole and carefully hydrated so as to properly seal the hole while not allowing water to penetrate into the sandpack. This is continued to the surface of the slab.

For permanent probes (used for multiple sample events), the same procedure is followed, however at the surface a small swagelok fitting is cemented flush into the slab. This fitting has a small plug that can be removed for multiple sample events. A small plastic cap can be placed over the fitting to protect it from foot traffic and debris.

Equilibration Time

For temporary sub-slab probes, sampling is conducted after a 30 minute equilibration period and to allow time for the bentonite to seal. For permanent sub-slab probes, sampling should be conducted after 1 hour to allow for the cement to properly set.

Soil Gas Sampling

For the initial sampling event for soil vapor wells, the internal volume of the tubing and the annular space of the sandpack surrounding the probe filter is calculated as 1 purge volume of the system. The number of purge volumes extracted from the probe prior to sampling can then be determined by conducting an on-site purge volume test (as described below), or using a standard default valueof 3 purge volumes.

For any additional sample events that occur to a soil vapor probe, it is assumed that any dead space air in the sand pack has been evacuated and the sandpack has equilibrated as a result of the prior sample event. Therefore the purge volume will be calculated as the internal volume of the tubing only, or as directed by client on a site specific basis.

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Purge Volume Test

As requested, a site specific purge volume test is conducted at the beginning of the soil gas survey to purge ambient air from the sampling system and to demonstrate that samples collected are representative of subsurface conditions. The purge volume of a probe system is determined by the internal volume of the tubing and the annular space of the sand pack surrounding the probe filter. Summa canisters, syringes or Tedlar bags are not included in this calculation. A 3 step purge volume test is performed by extracting a succession of purge volumes (typically 1, 3, 7 purge volumes) from the soil vapor probe and analyzing each sample immediately to determine which volume achieves the highest concentration of the target VOC's. Once the highest concentration is determined, that purge volume is used during the entire site investigation. If VOC's are not detected in the purge test, a default of three purge volumes is used for sampling.

Leak Test to Ensure Probe Seal Integrity

A leak test will be conducted to evaluate whether an adequate seal is established at the soil vapor probe interface with the ground surface. A leak test is conducted at every vapor probe, each time a sample is collected to ensure the sample is not being diluted by ambient air.

Using a liquid tracer compound

A liquid tracer compound, i.e. 1,1-Difluoroethane, or Isopropyl alcohol, is used to test for ambient air leaks at the soil vapor probe interface with the ground surface. This is done by saturating a towel or rag with the liquid compound and emplacing it at surface of the soil vapor probe prior to purging and sampling.

If a leak check compound is detected in the sample, the cause of the leak will be evaluated, corrected and retested. If a leak is confirmed and the cause cannot be corrected, the vapor well will be decommissioned.

Using a gaseous tracer compound

Placing a plastic shroud over a soil vapor sampling probe and introducing a gaseous compound, such as helium, into the shroud can be implemented to

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ensure the probe seal integrity. It may also be used to assess the potential for leaks in the sample train.

A plastic shroud is placed over the soil vapor probe location with the tubing of the probe exiting the shroud through a small hole. The valve on the probe termination is connected to the sampling apparatus that is to be used. Smaller purge volumes may only require a syringe to purge, while larger purge volumes may require a sample pump with flow meter and vacuum gauge.

Helium (or other compound) is released into the shroud and a hand held helium detector is used to monitor and maintain a reasonably steady concentration of approximately 50% helium in the shroud. Once the concentration is reached, the soil vapor probe is purged at the recommended flow rate and any probe vacuum is recorded. The soil vapor sample is then collected in the appropriate sample container (i.e. tedlar or summa canister). Once the sample is taken, a final reading of the shroud concentration is measured with the meter and recorded.

The sample can then be analyzed for the tracer gas (i.e. Helium) to determine if a leak was present during sample collection.

Shut-In Test

A shut-in test is conducted on the sampling train to check for leaks in the above-ground fittings. The shut-in test is conducted by assembling the above-ground apparatus (e.g., valves, lines, fittings downstream of the vapor probe) and evacuating the sampling train using an air-tight syringe. If the plunger on the air-tight syringe immediately returns to its original position, then sampling train is free from leaks. Alternatively, a shut-in test may be conducted by installing an in-line vacuum gauge and evacuating the sampling train to a measured vacuum of about 100 inches of water, then shutting the vacuum in with a closed valve. The vacuum gauge will be observed for one minute and all above ground connections will be considered “air-tight” if the pressure on the gauge does not noticeably dissipate.

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Sample Flow Rate and Vacuum

Sample collection is timed so that the flow rate does not exceed 200 ml/per minute. This is accomplished by withdrawing the plunger on the 60 cc syringe at a constant rate for 20 seconds. The collector notes the collection time on a logsheet. An inline gauge is used during sample collection to demonstrate that the probe vacuum does not exceed 100" of water.

A sample of in-situ soil vapor is then withdrawn and immediately transferred to the mobile lab for analysis within minutes of collection. The use of small calibrated syringes allow for careful monitoring of purge and sample volumes. This procedure ensures adequate sample flow is obtained without excessive pumping of air or introduction of surface air into the sample.

Summa Canister

Summa canisters are connected to the end of the nylaflow tubing to the same three way valve used with the syringe. A choke is placed on the canister to ensure that the flow rate is no more than 200 ml/ per minute into the summa canister.

Field Records

The field technician maintains a logsheet summarizing:

- Sample identification
- Probe location
- Date and time of sample collection
- Sampling depth
- Identity of samplers
- Sampling methods and devices
- Soil gas purge volumes
- Volume of soil gas extracted
- Observation of soil or subsurface characteristics (any condition that affects sample integrity)
- Apparent moisture content (dry, moist or saturated etc.) of the sampling zone
- Chain of custody protocols and records used to track samples from sampling point to analysis.

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Analytical Methodology

The following analytical protocols fulfills the both the CA-EPA advisory (2003) and LA-RWQCB soil gas analytical guidelines (1997).

Operating Conditions and Instrumentation

Volatile Organic Compounds (VOCs) by EPA 8260

Instrument: Hewlett-Packard 6890(6850)/5973 or 5890/5972 GCMS
Column: 25 meter HP-624, 0.20mm x 1.0u. capillary.
Carrier flow: Helium at 1.0 ml/min.
Detectors: Quadrupole MS, full scan mode
Concentrator: Tekmar 3000/Solatek 72

Fixed and Biogenic Gases (O2, CO2, & Methane)

Instrument: SRI 8610 or Carle AGC 311 Gas Chromatograph
Column: 6 foot CTR
Carrier flow: Helium at 15 ml/min.
Detectors: Thermoconductivity (TCD) for O2 & CO2.

Detectors: Flame ionization detector (FID) for methane.

Hydrogen Sulfide

Instrument: Jerome 631x
Detectors: Gold-film

Standard Preparation

Primary (stock) standards: Made from certified neat components or from traceable standards purchased from certified suppliers.

Secondary (working) Standards: Made by diluting primary standard. Typical concentrations are 1ug/ml, 10 ug/ml, and 50 ug/ml.

Laboratory Check Samples are prepared at the midpoint concentration from a standard purchased from a source different than the primary standards.

Lot numbers and preparations of all standards are recorded on a log sheet and kept in the mobile laboratory.

Gas Standards for TO-14A/15 analysis purchased from Spectra Gases, Branchburg, N.J. diluted from 1.0 ppmv to 10ppbv (for targets) and 1.0ppmv to 100ppbv (internal standards and surrogates

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Initial Multi-Point Calibration Curve

An initial calibration curve of a minimum of 3 points is performed either:

- At the start of the project.
- When the GC column or operating conditions have changed
- When the daily mid-point calibration check cannot meet the requirements as specified below.

Calibration curves for each target component are prepared by analyzing low, mid, and high calibration standards covering the expected concentration range. The lowest standard concentration will not exceed 5 times the reporting limit for each compound.

A linearity check of the calibration curve for each compound is performed by computing a correlation coefficient and an average response factor. If a correlation coefficient of 0.990 or a percent relative standard deviation (%RSD) of $\pm$ 20% is obtained, an average response factor is used over the entire calibration range. If the linearity criteria are not obtained, quantitation for that analyte is performed using a calibration curve.

After each initial multi-point calibration, the validity of the curve is further verified with a laboratory control standards (LCS) prepared at the mid-point of the calibration range. The LCS includes all target compounds and the response factor (RF) must fall within $\pm$ 15% of the factor from the initial calibration curve.

Continuing Calibration (Daily Mid-point Calibration Check)

Continuing calibration standards prepared from a traceable source are analyzed at the beginning of each day. Acceptable continuing calibration agreement is set at $\pm$ 15% to the average response factor from the calibration curve, except for freon, chloroethane, and vinyl chloride when a 25% agreement is required. When calibration checks fall outside this acceptable range for analytes detected on the site, corrective action, consisting of verification of the standard and/or a new calibration curve for the analytes out of specifications is performed by the on-site chemist.

The continuing calibration includes all compounds expected or detected at the site in addition to any specific compounds designated in the project workplan.

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Detection Limits

Reporting limits for this program are defined as 5 times lower than the lowest concentration standard of the calibration curve, as follows:

Compound	Detector	Report Limit
VOCs	Mass Spec	0.1 to 1 ug/l-vapor
Methane	FID	10 ppmv
Fixed Gases	TCD	0.2% by vol
H2S	Gold Film	0.10 ppmv

Injection of Soil Gas Samples

Vapor samples are withdrawn from the probe sampling syringe with a 5 cc syringe and injected with surrogates into a purge & trap instrument for VOC analysis. Separate aliquots are directly injected into gas chromatographs for fixed gases and methane analysis. The injection syringe is flushed 2 times with the sample prior to injection. Injection syringes are flushed several times with clean air or discarded between injections.

Laboratory Data Logs

The field chemist maintains injection and sample analysis records including date and time of analysis, sampler's name, chemist's name, sample ID number, concentrations of compounds detected, calibration data, and any unusual conditions.

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Quality Control Procedures

Compliance With Standards

Sampling and analytical procedures complied with the American Society for Testing and Materials' *Standard Guide for Soil Gas Monitoring in the Vadose Zone* (ASTM D5314-93), the LA-RWQCB Soil Gas Guidelines (Feb 1997 version), the San Diego County SAM Soil Gas Guidelines (October, 2001), and the Advisory – Active Soil Gas Investigations, DTSC/LARWQCB (Jan 28, 2003).

Sampling Quality Control

Method Blanks

Prior to sampling each day, all components of the sampling system are checked for contamination by drawing ambient air from above ground through the sampling equipment, and injecting a sample into a gas chromatograph.

Sample Quality Control

Each sample is given a unique identification number specifying location and depth. Purge and sample volumes are monitored closely using small calibrated syringes to assure a proper flow of soil gas. This ensures a representative sample is obtained from the sample zone.

Decontamination Procedures

To minimize the potential for cross-contamination between sample locations and other project sites, all external sampling assembly parts are wiped or washed cleaned of excess dirt and moisture. Glass syringed are baked at 240° between uses and decontaminated by baking and flushing with nitrogen or helium between uses.

Corrective Action

Corrective action is taken when unexpected target compounds are detected at concentrations above the laboratory report limit. First, field duplicate samples are collected to verify the initial detection of unexpected target compounds. If contamination is suspected, the soil vapor probe may be reinstalled at a nearby location, at the discretion of the client. Any contaminated sampling syringes are baked between uses and flushed with helium or nitrogen.

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Analytical Quality Control

Method Blanks

Method blanks are performed at the start of each day by drawing clean air through the sampling equipment and analyzing. These blanks verify all components of the sampling and analytical system are free of contamination. Additional blanks are performed more often as appropriate depending upon the measured concentrations, at a minimum 1 every 20 samples. The results of all blank analyses are recorded in the data tables. If a blank shows a measurable amount of any target compound, the on-site chemist will investigate and determine the source, and resolve the contamination problem prior to analyzing any samples.

Duplicate Samples

Duplicate (repetitive) analysis of a sample is performed when inconsistent data are observed, but at least one every 20 samples. Because soil vapor duplicates can vary widely, nominal relative percent difference (RPD) acceptance criteria is ± a factor of 2.

Continuing Calibration (Daily Mid-point Calibration Check)

As described on page 5 of this document, continuing calibration standards prepared from a traceable source are analyzed at the beginning of each day.

The continuing calibration includes all compounds expected or detected at the site and any specific compounds designated in the project workplan.

Laboratory Check Samples (LCS)

Laboratory check samples, prepared at the lowpoint concentration from a standard purchased from a source different than the calibration standards, are analyzed at the end of each day if all samples are below detection. Acceptance criteria is ± 30% from the true value. If the LCS falls outside this acceptance range for analytes detected on site, corrective action, consisting of verification of the standard and/or a new calibration curve for the analytes out of specifications, is performed.

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APPENDIX D

ANALYTICAL DATA AND CHAIN-OF-CUSTODY DOCUMENTATION

H&P Mobile Geochemistry Inc.

30 March 2011

Mr. Chuck Houser
SCS Engineers - San Diego
8799 Balboa Avenue, Suite 290
San Diego, CA 92123

H&P Project: SCS032311-SB2
Client Project: 01208473.00 / 11427 Woodside Ave.

Dear Mr. Chuck Houser:

Enclosed is the analytical report for the above referenced project. The data herein applies to samples as received by H&P Mobile Geochemistry, Inc. on 23-Mar-11 which were analyzed in accordance with the attached Chain of Custody record(s).

The results for all sample analyses and required QA/QC analyses are presented in the following sections and summarized in the documents:

- Sample Summary
- Case Narrative (if applicable)
- Sample Results
- Quality Control Summary
- Notes and Definitions / Appendix
- Chain of Custody

Unless otherwise noted, all analyses were performed and reviewed in compliance with our Quality Systems Manual and Standard Operating Procedures. This report shall not be reproduced, except in full, without the written approval of H&P Mobile Geochemistry, Inc.

We at H&P Mobile Geochemistry, Inc. sincerely appreciate the opportunity to provide analytical services to you on this project. If you have any questions or concerns regarding this analytical report, please contact me at your convenience at 760-804-9678.

Sincerely,

J. Villarreal

Janis Villarreal
Laboratory Director

H&P Mobile Geochemistry, Inc. operates under CA Environmental Lab Accreditation Program Numbers 2579, 2740, 2741, 2742, 2743, 2745 and 2754. National Environmental Laboratory Accreditation Conference (NELAC) Standards Lab #11845

2470 Impala Drive, Carlsbad, California 92010 ┌ 760.804.9678 — Fax 760.804.9159
1855 Coronado Avenue, Signal Hill, California 90755
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Mobile Geochemistry Inc.

2470 Impala Drive
Carlsbad, CA 92010
760-804-9678 Phone
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SCS Engineers - San Diego
8799 Balboa Avenue, Suite 290
San Diego, CA 92123

Project: SCS032311-SB2
Project Number: 01208473.00 / 11427 Woodside Ave.
Project Manager: Mr. Chuck Houser

Reported:
30-Mar-11 11:11

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
SV3-10', 1PV, P116cc	E103105-01	Vapor	23-Mar-11	23-Mar-11
SV3-10', 3PV, P348cc	E103105-02	Vapor	23-Mar-11	23-Mar-11
SV3-10', 7PV, P812cc	E103105-03	Vapor	23-Mar-11	23-Mar-11
SV3-5', P333cc	E103105-04	Vapor	23-Mar-11	23-Mar-11
SV1-5', P333cc	E103105-05	Vapor	23-Mar-11	23-Mar-11
SV1-10', P348cc	E103105-06	Vapor	23-Mar-11	23-Mar-11
SV2-5', P333cc	E103105-07	Vapor	23-Mar-11	23-Mar-11
SV2-10', P348cc	E103105-08	Vapor	23-Mar-11	23-Mar-11
SV4-5', P333cc	E103105-09	Vapor	23-Mar-11	23-Mar-11
SV4-10', P348cc	E103105-10	Vapor	23-Mar-11	23-Mar-11
SV5-5', P333cc	E103105-11	Vapor	23-Mar-11	23-Mar-11
SV5-5' Dup, P383cc	E103105-12	Vapor	23-Mar-11	23-Mar-11
SV5-10', P348cc	E103105-13	Vapor	23-Mar-11	23-Mar-11

Mobile Geochemistry Inc.

2470 Impala Drive
Carlsbad, CA 92010
760-804-9678 Phone
760-804-9159 Fax

SCS Engineers - San Diego	Project: SCS032311-SB2	
8799 Balboa Avenue, Suite 290	Project Number: 01208473.00 / 11427 Woodside Ave.	Reported:
San Diego, CA 92123	Project Manager: Mr. Chuck Houser	30-Mar-11 11:11

Volatile Organic Compounds by EPA Method 8260B Modified

H&P Mobile Geochemistry, Inc.

Analyte	Result	Reporting Limit	Units	Dilution Factor	Batch	Prepared	Analyzed	Method	Notes
SV3-10', 1PV, P116cc (E103105-01) Vapor Sampled: 23-Mar-11 Received: 23-Mar-11									
1,1-Difluoroethane (LCC)	ND	10	ug/l	0.05	EC12302	23-Mar-11	23-Mar-11	EPA 8260B	
Methyl tertiary-butyl ether (MTBE)	ND	0.50	"	"	"	"	"	"	
Diisopropyl ether (DIPE)	ND	1.0	"	"	"	"	"	"	
Ethyl tert-butyl ether (ETBE)	ND	1.0	"	"	"	"	"	"	
Tertiary-amyl methyl ether (TAME)	ND	1.0	"	"	"	"	"	"	
Benzene	ND	0.10	"	"	"	"	"	"	
Toluene	ND	1.0	"	"	"	"	"	"	
Ethylbenzene	ND	0.50	"	"	"	"	"	"	
m,p-Xylene	ND	0.50	"	"	"	"	"	"	
o-Xylene	ND	0.50	"	"	"	"	"	"	
Tertiary-butyl alcohol (TBA)	ND	5.0	"	"	"	"	"	"	
Surrogate: Dibromofluoromethane		*119 %*		*75-125*		"	"	"	
Surrogate: Toluene-d8		*87.3 %*		*75-125*		"	"	"	
Surrogate: 4-Bromofluorobenzene		*112 %*		*75-125*		"	"	"	
SV3-10', 3PV, P348cc (E103105-02) Vapor Sampled: 23-Mar-11 Received: 23-Mar-11									
1,1-Difluoroethane (LCC)	ND	10	ug/l	0.05	EC12302	23-Mar-11	23-Mar-11	EPA 8260B	
Methyl tertiary-butyl ether (MTBE)	ND	0.50	"	"	"	"	"	"	
Diisopropyl ether (DIPE)	ND	1.0	"	"	"	"	"	"	
Ethyl tert-butyl ether (ETBE)	ND	1.0	"	"	"	"	"	"	
Tertiary-amyl methyl ether (TAME)	ND	1.0	"	"	"	"	"	"	
Benzene	ND	0.10	"	"	"	"	"	"	
Toluene	ND	1.0	"	"	"	"	"	"	
Ethylbenzene	ND	0.50	"	"	"	"	"	"	
m,p-Xylene	ND	0.50	"	"	"	"	"	"	
o-Xylene	ND	0.50	"	"	"	"	"	"	
Tertiary-butyl alcohol (TBA)	ND	5.0	"	"	"	"	"	"	
Surrogate: Dibromofluoromethane		*124 %*		*75-125*		"	"	"	
Surrogate: Toluene-d8		*87.4 %*		*75-125*		"	"	"	
Surrogate: 4-Bromofluorobenzene		*112 %*		*75-125*		"	"	"	

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SCS Engineers - San Diego	Project: SCS032311-SB2	
8799 Balboa Avenue, Suite 290	Project Number: 01208473.00 / 11427 Woodside Ave.	Reported:
San Diego, CA 92123	Project Manager: Mr. Chuck Houser	30-Mar-11 11:11

Volatile Organic Compounds by EPA Method 8260B Modified

H&P Mobile Geochemistry, Inc.

Analyte	Result	Reporting Limit	Units	Dilution Factor	Batch	Prepared	Analyzed	Method	Notes
SV3-10', 7PV, P812cc (E103105-03) Vapor Sampled: 23-Mar-11 Received: 23-Mar-11									
1,1-Difluoroethane (LCC)	ND	10	ug/l	0.05	EC12302	23-Mar-11	23-Mar-11	EPA 8260B	
Methyl tertiary-butyl ether (MTBE)	ND	0.50	"	"	"	"	"	"	
Diisopropyl ether (DIPE)	ND	1.0	"	"	"	"	"	"	
Ethyl tert-butyl ether (ETBE)	ND	1.0	"	"	"	"	"	"	
Tertiary-amyl methyl ether (TAME)	ND	1.0	"	"	"	"	"	"	
Benzene	ND	0.10	"	"	"	"	"	"	
Toluene	ND	1.0	"	"	"	"	"	"	
Ethylbenzene	ND	0.50	"	"	"	"	"	"	
m,p-Xylene	ND	0.50	"	"	"	"	"	"	
o-Xylene	ND	0.50	"	"	"	"	"	"	
Tertiary-butyl alcohol (TBA)	ND	5.0	"	"	"	"	"	"	
Surrogate: Dibromofluoromethane		*118 %*		*75-125*	"	"	"	"	
Surrogate: Toluene-d8		*87.0 %*		*75-125*	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*120 %*		*75-125*	"	"	"	"	
SV3-5', P333cc (E103105-04) Vapor Sampled: 23-Mar-11 Received: 23-Mar-11									
1,1-Difluoroethane (LCC)	ND	10	ug/l	0.05	EC12302	23-Mar-11	23-Mar-11	EPA 8260B	
Methyl tertiary-butyl ether (MTBE)	ND	0.50	"	"	"	"	"	"	
Diisopropyl ether (DIPE)	ND	1.0	"	"	"	"	"	"	
Ethyl tert-butyl ether (ETBE)	ND	1.0	"	"	"	"	"	"	
Tertiary-amyl methyl ether (TAME)	ND	1.0	"	"	"	"	"	"	
Benzene	ND	0.10	"	"	"	"	"	"	
Toluene	ND	1.0	"	"	"	"	"	"	
Ethylbenzene	ND	0.50	"	"	"	"	"	"	
m,p-Xylene	ND	0.50	"	"	"	"	"	"	
o-Xylene	ND	0.50	"	"	"	"	"	"	
Tertiary-butyl alcohol (TBA)	ND	5.0	"	"	"	"	"	"	
Surrogate: Dibromofluoromethane		*121 %*		*75-125*	"	"	"	"	
Surrogate: Toluene-d8		*85.0 %*		*75-125*	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*118 %*		*75-125*	"	"	"	"	

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San Diego, CA 92123	Project Manager: Mr. Chuck Houser	30-Mar-11 11:11

Volatile Organic Compounds by EPA Method 8260B Modified

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Analyte	Result	Reporting Limit	Units	Dilution Factor	Batch	Prepared	Analyzed	Method	Notes
SV1-5', P333cc (E103105-05) Vapor Sampled: 23-Mar-11 Received: 23-Mar-11									
1,1-Difluoroethane (LCC)	ND	10	ug/l	0.05	EC12302	23-Mar-11	23-Mar-11	EPA 8260B	
Methyl tertiary-butyl ether (MTBE)	ND	0.50	"	"	"	"	"	"	
Diisopropyl ether (DIPE)	ND	1.0	"	"	"	"	"	"	
Ethyl tert-butyl ether (ETBE)	ND	1.0	"	"	"	"	"	"	
Tertiary-amyl methyl ether (TAME)	ND	1.0	"	"	"	"	"	"	
Benzene	ND	0.10	"	"	"	"	"	"	
Toluene	ND	1.0	"	"	"	"	"	"	
Ethylbenzene	ND	0.50	"	"	"	"	"	"	
m,p-Xylene	ND	0.50	"	"	"	"	"	"	
o-Xylene	ND	0.50	"	"	"	"	"	"	
Tertiary-butyl alcohol (TBA)	ND	5.0	"	"	"	"	"	"	
Surrogate: Dibromofluoromethane		*125 %*		*75-125*		"	"	"	
Surrogate: Toluene-d8		*90.4 %*		*75-125*		"	"	"	
Surrogate: 4-Bromofluorobenzene		*115 %*		*75-125*		"	"	"	
SV1-10', P348cc (E103105-06) Vapor Sampled: 23-Mar-11 Received: 23-Mar-11									
1,1-Difluoroethane (LCC)	ND	10	ug/l	0.05	EC12302	23-Mar-11	23-Mar-11	EPA 8260B	
Methyl tertiary-butyl ether (MTBE)	ND	0.50	"	"	"	"	"	"	
Diisopropyl ether (DIPE)	ND	1.0	"	"	"	"	"	"	
Ethyl tert-butyl ether (ETBE)	ND	1.0	"	"	"	"	"	"	
Tertiary-amyl methyl ether (TAME)	ND	1.0	"	"	"	"	"	"	
Benzene	ND	0.10	"	"	"	"	"	"	
Toluene	ND	1.0	"	"	"	"	"	"	
Ethylbenzene	ND	0.50	"	"	"	"	"	"	
m,p-Xylene	ND	0.50	"	"	"	"	"	"	
o-Xylene	ND	0.50	"	"	"	"	"	"	
Tertiary-butyl alcohol (TBA)	ND	5.0	"	"	"	"	"	"	
Surrogate: Dibromofluoromethane		*123 %*		*75-125*		"	"	"	
Surrogate: Toluene-d8		*89.5 %*		*75-125*		"	"	"	
Surrogate: 4-Bromofluorobenzene		*116 %*		*75-125*		"	"	"	

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SCS Engineers - San Diego	Project: SCS032311-SB2	
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San Diego, CA 92123	Project Manager: Mr. Chuck Houser	30-Mar-11 11:11

Volatile Organic Compounds by EPA Method 8260B Modified

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Analyte	Result	Reporting Limit	Units	Dilution Factor	Batch	Prepared	Analyzed	Method	Notes
SV2-5', P333cc (E103105-07) Vapor Sampled: 23-Mar-11 Received: 23-Mar-11									
1,1-Difluoroethane (LCC)	ND	10	ug/l	0.05	EC12302	23-Mar-11	23-Mar-11	EPA 8260B	
Methyl tertiary-butyl ether (MTBE)	ND	0.50	"	"	"	"	"	"	
Diisopropyl ether (DIPE)	ND	1.0	"	"	"	"	"	"	
Ethyl tert-butyl ether (ETBE)	ND	1.0	"	"	"	"	"	"	
Tertiary-amyl methyl ether (TAME)	ND	1.0	"	"	"	"	"	"	
Benzene	ND	0.10	"	"	"	"	"	"	
Toluene	ND	1.0	"	"	"	"	"	"	
Ethylbenzene	ND	0.50	"	"	"	"	"	"	
m,p-Xylene	ND	0.50	"	"	"	"	"	"	
o-Xylene	ND	0.50	"	"	"	"	"	"	
Tertiary-butyl alcohol (TBA)	ND	5.0	"	"	"	"	"	"	
Surrogate: Dibromofluoromethane		*121 %*		*75-125*	"	"	"	"	
Surrogate: Toluene-d8		*89.1 %*		*75-125*	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*116 %*		*75-125*	"	"	"	"	
SV2-10', P348cc (E103105-08) Vapor Sampled: 23-Mar-11 Received: 23-Mar-11									
1,1-Difluoroethane (LCC)	ND	10	ug/l	0.05	EC12302	23-Mar-11	23-Mar-11	EPA 8260B	
Methyl tertiary-butyl ether (MTBE)	ND	0.50	"	"	"	"	"	"	
Diisopropyl ether (DIPE)	ND	1.0	"	"	"	"	"	"	
Ethyl tert-butyl ether (ETBE)	ND	1.0	"	"	"	"	"	"	
Tertiary-amyl methyl ether (TAME)	ND	1.0	"	"	"	"	"	"	
Benzene	ND	0.10	"	"	"	"	"	"	
Toluene	ND	1.0	"	"	"	"	"	"	
Ethylbenzene	ND	0.50	"	"	"	"	"	"	
m,p-Xylene	ND	0.50	"	"	"	"	"	"	
o-Xylene	ND	0.50	"	"	"	"	"	"	
Tertiary-butyl alcohol (TBA)	ND	5.0	"	"	"	"	"	"	
Surrogate: Dibromofluoromethane		*121 %*		*75-125*	"	"	"	"	
Surrogate: Toluene-d8		*89.4 %*		*75-125*	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*117 %*		*75-125*	"	"	"	"	

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SCS Engineers - San Diego	Project: SCS032311-SB2	
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San Diego, CA 92123	Project Manager: Mr. Chuck Houser	30-Mar-11 11:11

Volatile Organic Compounds by EPA Method 8260B Modified

H&P Mobile Geochemistry, Inc.

Analyte	Result	Reporting Limit	Units	Dilution Factor	Batch	Prepared	Analyzed	Method	Notes
SV4-5', P333cc (E103105-09) Vapor Sampled: 23-Mar-11 Received: 23-Mar-11									**R-05**
1,1-Difluoroethane (LCC)	ND	10	ug/l	0.2	EC12302	23-Mar-11	23-Mar-11	EPA 8260B	
Methyl tertiary-butyl ether (MTBE)	ND	2.0	"	"	"	"	"	"	
Diisopropyl ether (DIPE)	ND	4.0	"	"	"	"	"	"	
Ethyl tert-butyl ether (ETBE)	ND	4.0	"	"	"	"	"	"	
Tertiary-amyl methyl ether (TAME)	ND	4.0	"	"	"	"	"	"	
Benzene	ND	0.40	"	"	"	"	"	"	
Toluene	ND	4.0	"	"	"	"	"	"	
Ethylbenzene	ND	2.0	"	"	"	"	"	"	
m,p-Xylene	ND	2.0	"	"	"	"	"	"	
o-Xylene	ND	2.0	"	"	"	"	"	"	
Tertiary-butyl alcohol (TBA)	ND	20	"	"	"	"	"	"	
Surrogate: Dibromofluoromethane		*83.8 %*		*75-125*		*"*	*"*	*"*	*"*
Surrogate: Toluene-d8		*106 %*		*75-125*		*"*	*"*	*"*	*"*
Surrogate: 4-Bromofluorobenzene		*123 %*		*75-125*		*"*	*"*	*"*	*"*
SV4-10', P348cc (E103105-10) Vapor Sampled: 23-Mar-11 Received: 23-Mar-11									**R-05**
1,1-Difluoroethane (LCC)	ND	10	ug/l	0.5	EC12302	23-Mar-11	23-Mar-11	EPA 8260B	
Methyl tertiary-butyl ether (MTBE)	ND	5.0	"	"	"	"	"	"	
Diisopropyl ether (DIPE)	ND	10	"	"	"	"	"	"	
Ethyl tert-butyl ether (ETBE)	ND	10	"	"	"	"	"	"	
Tertiary-amyl methyl ether (TAME)	ND	10	"	"	"	"	"	"	
Benzene	ND	1.0	"	"	"	"	"	"	
Toluene	ND	10	"	"	"	"	"	"	
Ethylbenzene	ND	5.0	"	"	"	"	"	"	
m,p-Xylene	ND	5.0	"	"	"	"	"	"	
o-Xylene	ND	5.0	"	"	"	"	"	"	
Tertiary-butyl alcohol (TBA)	ND	50	"	"	"	"	"	"	
Surrogate: Dibromofluoromethane		*81.0 %*		*75-125*		*"*	*"*	*"*	*"*
Surrogate: Toluene-d8		*104 %*		*75-125*		*"*	*"*	*"*	*"*
Surrogate: 4-Bromofluorobenzene		*122 %*		*75-125*		*"*	*"*	*"*	*"*

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SCS Engineers - San Diego	Project: SCS032311-SB2	
8799 Balboa Avenue, Suite 290	Project Number: 01208473.00 / 11427 Woodside Ave.	Reported:
San Diego, CA 92123	Project Manager: Mr. Chuck Houser	30-Mar-11 11:11

Volatile Organic Compounds by EPA Method 8260B Modified

H&P Mobile Geochemistry, Inc.

Analyte	Result	Reporting Limit	Units	Dilution Factor	Batch	Prepared	Analyzed	Method	Notes
SV5-5', P333cc (E103105-11) Vapor Sampled: 23-Mar-11 Received: 23-Mar-11									
1,1-Difluoroethane (LCC)	ND	10	ug/l	0.5	EC12302	23-Mar-11	23-Mar-11	EPA 8260B	
Methyl tertiary-butyl ether (MTBE)	ND	5.0	"	"	"	"	"	"	
Diisopropyl ether (DIPE)	ND	10	"	"	"	"	"	"	
Ethyl tert-butyl ether (ETBE)	**13**	10	"	"	"	"	"	"	
Tertiary-amyl methyl ether (TAME)	ND	10	"	"	"	"	"	"	
Benzene	**1.3**	1.0	"	"	"	"	"	"	
Toluene	ND	10	"	"	"	"	"	"	
Ethylbenzene	**14**	5.0	"	"	"	"	"	"	
m,p-Xylene	ND	5.0	"	"	"	"	"	"	
o-Xylene	ND	5.0	"	"	"	"	"	"	
Tertiary-butyl alcohol (TBA)	ND	50	"	"	"	"	"	"	
Surrogate: Dibromofluoromethane		*89.4 %*		*75-125*		"	"	"	
Surrogate: Toluene-d8		*115 %*		*75-125*		"	"	"	
Surrogate: 4-Bromofluorobenzene		*138 %*		*75-125*		"	"	"	*S-04*
SV5-5' Dup, P383cc (E103105-12) Vapor Sampled: 23-Mar-11 Received: 23-Mar-11									
1,1-Difluoroethane (LCC)	ND	10	ug/l	0.5	EC12302	23-Mar-11	23-Mar-11	EPA 8260B	
Methyl tertiary-butyl ether (MTBE)	ND	5.0	"	"	"	"	"	"	
Diisopropyl ether (DIPE)	ND	10	"	"	"	"	"	"	
Ethyl tert-butyl ether (ETBE)	**13**	10	"	"	"	"	"	"	
Tertiary-amyl methyl ether (TAME)	ND	10	"	"	"	"	"	"	
Benzene	**1.2**	1.0	"	"	"	"	"	"	
Toluene	ND	10	"	"	"	"	"	"	
Ethylbenzene	**12**	5.0	"	"	"	"	"	"	
m,p-Xylene	ND	5.0	"	"	"	"	"	"	
o-Xylene	ND	5.0	"	"	"	"	"	"	
Tertiary-butyl alcohol (TBA)	ND	50	"	"	"	"	"	"	
Surrogate: Dibromofluoromethane		*85.0 %*		*75-125*		"	"	"	
Surrogate: Toluene-d8		*98.3 %*		*75-125*		"	"	"	
Surrogate: 4-Bromofluorobenzene		*136 %*		*75-125*		"	"	"	*S-04*

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Volatile Organic Compounds by EPA Method 8260B Modified

H&P Mobile Geochemistry, Inc.

Analyte	Result	Reporting Limit	Units	Dilution Factor	Batch	Prepared	Analyzed	Method	Notes
SV5-10', P348cc (E103105-13) Vapor	**Sampled: 23-Mar-11**	**Received: 23-Mar-11**							
1,1-Difluoroethane (LCC)	ND	10	ug/l	1	EC12302	23-Mar-11	23-Mar-11	EPA 8260B	
Methyl tertiary-butyl ether (MTBE)	ND	10	"	"	"	"	"	"	
Diisopropyl ether (DIPE)	ND	20	"	"	"	"	"	"	
Ethyl tert-butyl ether (ETBE)	ND	20	"	"	"	"	"	"	
Tertiary-amyl methyl ether (TAME)	ND	20	"	"	"	"	"	"	
Benzene	**5.9**	2.0	"	"	"	"	"	"	
Toluene	ND	20	"	"	"	"	"	"	
Ethylbenzene	**38**	10	"	"	"	"	"	"	
m,p-Xylene	ND	10	"	"	"	"	"	"	
o-Xylene	ND	10	"	"	"	"	"	"	
Tertiary-butyl alcohol (TBA)	ND	100	"	"	"	"	"	"	
Surrogate: Dibromofluoromethane		*86.0 %*		*75-125*	"	"	"	"	
Surrogate: Toluene-d8		*113 %*		*75-125*	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*142 %*		*75-125*	"	"	"	"	*S-04*

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Volatile Organic Compounds by EPA Method 8260B Modified - Quality Control

H&P Mobile Geochemistry, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch EC12302 - EPA 5030										
Blank (EC12302-BLK1)				Prepared & Analyzed: 23-Mar-11						
1,1-Difluoroethane (LCC)	ND	10	ug/l							
Methyl tertiary-butyl ether (MTBE)	ND	0.50	"							
Diisopropyl ether (DIPE)	ND	1.0	"							
Ethyl tert-butyl ether (ETBE)	ND	1.0	"							
Tertiary-amyl methyl ether (TAME)	ND	1.0	"							
Benzene	ND	0.10	"							
Toluene	ND	1.0	"							
Ethylbenzene	ND	0.50	"							
m,p-Xylene	ND	0.50	"							
o-Xylene	ND	0.50	"							
Tertiary-butyl alcohol (TBA)	ND	5.0	"							
Surrogate: Dibromofluoromethane	*2.72*		*"*	*2.50*		*109*	*75-125*			
Surrogate: Toluene-d8	*2.05*		*"*	*2.50*		*81.8*	*75-125*			
Surrogate: 4-Bromofluorobenzene	*2.79*		*"*	*2.50*		*111*	*75-125*			

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San Diego, CA 92123	Project Manager: Mr. Chuck Houser	30-Mar-11 11:11

Notes and Definitions

S-04	The surrogate recovery for this sample is outside of established control limits due to a sample matrix effect.
R-05	The sample was diluted due to the presence of high levels of non-target analytes resulting in elevated reporting limits.
DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not Reported
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference

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Appendix

H&P Mobile Geochemistry, Inc. is approved as an Environmental Laboratory in conformance with the Environmental Laboratory Accreditation Program (CA) for the category of Volatile and Semi-Volatile Organic Chemistry of Hazardous Waste for the following methods:

Certificate# 2741, 2743, 2579, 2754 & 2740 approved for EPA 8260 and LUFT GC/MS
Certificate# 2742, 2745, & 2741 approved for LUFT
Certificate# 2745 & 2742 approved for EPA 418.1

H&P Mobile Geochemistry, Inc. is approved as an Environmental Laboratory in conformance with the National Environmental Accreditation Conference Standards for the category Environmental Analysis Air and Emissions for the following analytes and methods:

1,2,4-Trichlorobenzene by EPA TO-15 & TO-14A
Hexachlorobutadiene by EPA TO-15 & TO-14A
1,2,4-Trimethylbenzene by EPA TO -14A
1,2-Dichlorobenzene by EPA TO-15 & TO-14A
1,3,5-Trimethylbenzene by EPA TO -14A
1,4-Dichlorobenzene by EPA TO-15 & TO-14A
Benzene by EPA TO-15 & TO-14A
Chlorobenzene by EPA TO-15 & TO-14A
Ethyl benzene by EPA TO-15 & TO-14A
Styrene by EPA TO-15 & TO-14A
Toluene by EPA TO-15 & TO-14A
Total Xylenes by EPA TO-15 & TO-14A
1,1,1-Trichloroethane by EPA TO-15 & TO-14A
1,1,2,2-Tetrachloroethane by EPA TO-15 & TO-14A
1,1,2-Trichloroethane by EPA TO-15 & TO-14A
1,1-Dichloroethane by EPA TO-15 & TO-14A
1,1-Dichloroethene by EPA TO-15 & TO-14A
1,2-Dichloroethane by EPA TO-15 & TO-14A
1,2-Dichloropropane by EPA TO-15 & TO-14A
Bromoform by EPA TO-15
Bromomethane by EPA TO-15 & TO-14A
Carbon tetrachloride by EPA TO-15 & TO-14A
Chloroethane by EPA TO-15
Chloroform by EPA TO-15 & TO-14A
Chloromethane by EPA TO-15 & TO-14A
cis-1,2-Dichloroethene by EPA TO-15
cis-1,2-Dichloropropene by EPA TO-15 & TO-14A
Methylene chloride by EPA TO -15 & TO-14A
Tetrachloroethane by EPA TO-15 & TO-14A
trans-1,2-Dichloroethene by EPA TO-15
trans-1,2-Dichloropropene by EPA TO-15 & TO-14A
Trichloroethene by EPA TO-15 & TO-14A
Vinyl chloride by EPA TO -15 & TO-14A
2-Butanone by EPA TO-15
4-Methyl-2-Pentanone by EPA TO-15
Hexane by EPA TO-15
Methyl tert-butyl ether by EPA TO-15
Vinyl acetate by EPA TO-15

This certification applies to samples analyzed in summa canisters.

Chain of Custody Record

Mobile Geochemistry Inc.
☐ 2470 Impala Dr., Carlsbad, CA 92010 • ph 760.804.9678 • fax 760.804.9159
☒ 1855 Coronado Ave., Signal Hill, CA 90755 • ph 800.834.9888

Date: 3-23-11
H&P Project #: SCS032311-SB2
Outside Lab:

Client: SCS Engineers
Address: 8799 Balboa Avenue, Suite 290, San Diego, CA. 92123
Email: chouser@scsengineers.com, ccrosby@scsengineers.com
Collector: D. Pride
Client Project #: 01208473.00
Location: 11427 Woodside Ave., Santee SD
Phone: 858-571-5500 x 244
Fax:
Page: 1 of 2
Project Contact: Chuck Houser
Turn around time: ON-SITE

Geotracker EDF: Yes ☒ No ☐
Global ID:
Excel EDD: Yes ☐ No ☒

Sample Receipt
Intact: ☐ Yes ☒ No
Seal Intact: ☐ Yes ☐ No ☒ N/A
Cold: ☐ Yes ☐ No ☒ N/A
Temperature: N/A

Special Instructions:

Lab Work Order #: E103105 EC12302

Sample Name	Field Point Name	Purge Vol	Time	Date	Sample Type	Container Type	Total # of containers	8260B Full List	8260B ☐ BTEX/OXY ☐ TPH gas	8015M TPH ☐ g ☐ d ☐ ext	418.1 TRPH	VOC's: Full List ☐ 8260B ☐ TO-15	VOC's: Short List/DTSC ☐ 8260B ☐ TO-15	VOC's: SAM, 8260B ☐ SAM A ☐ SAM B	Naphthalene ☐ 8260B ☐ TO-15	Oxygenates ☒ 8260B ☐ TO-15	TPHv gas ☐ 8260B ☐ TO-15	Ketones ☐ 8260B ☐ TO-15	Other BTEX ☒ 8260B ☐ TO-15	Leak Check Compound ☒ 1,1 DFA ☐ OTHER	Methane	Fixed Gases ☐ N_2 ☐ O_2 ☐ CO_2
								SOIL/GW				SOIL VAPOR/AIR ANALYSIS										
SV3-10' 1PV	SV3	116cc	1051	3-23-11	Vapor	Glass Syringe	1									X			X	X		
SV3-10' 3PV	SV3	348cc	1053				1															
SV3-10' 7PV	SV3	812cc	1056				1															
SV3-5'	SV3	333cc	1204				1															
SV1-5'	SV1	333cc	1209				1															
SV1-10'	SV1	348cc	1217				1															
SV2-5'	SV2	333cc	1228				1															
SV2-10'	SV2	348cc	1235				1															
SV4-5'	SV4	333cc	1256				1															
SV4-10'	SV4	348cc	1306				1															

Relinquished by: (Signature)	(company) SCS	Received by: (Signature) D. Pride	(company) H&P	Date: 3/23/11 Time: 1530
Relinquished by: (Signature)	(company)	Received by: (Signature)	(company)	Date: Time:
Relinquished by: (Signature)	(company)	Received by: (Signature)	(company)	Date: Time:

*Signature constitutes authorization to proceed with analysis and acceptance of condition on back.

Sample disposal instruction: ☐ Disposal ☐ Return to client ☐ Pickup

Chain of Custody Record

Mobile Geochemistry Inc.
☐ 2470 Impala Dr., Carlsbad, CA 92010 • ph 760.804.9678 • fax 760.804.9159
☒ 1855 Coronado Ave., Signal Hill, CA 90755 • ph 800.834.9888

Date: 3-23-11
H&P Project # SCS032311-SB2
Outside Lab:

Client: SCS Engineers
Address: 8799 Balboa Avenue, Suite 290, San Diego, CA. 92123
Email: chouser@scsengineers.com, ccrosby@scsengineers.com
Collector: D. Pride
Client Project # 01208473.00
Location: 11427 Woodside Ave., Santee SD
Phone: 858-571-5500x244 Fax:
Page: 2 of 2
Project Contact: Chuck Houser
Turn around time: Field

Geotracker EDF: Yes ☒ No ☐
Global ID:
Excel EDD: Yes ☐ No ☒

Sample Receipt
Intact: ☐ Yes ☒ No
Seal Intact: ☐ Yes ☐ No ☒ N/A
Cold: ☐ Yes ☐ No ☒ N/A
Temperature: N/A

Special Instructions:

Lab Work Order # E103105

Sample Name	Field Point Name	Purge Vol	Time	Date	Sample Type	Container Type	Total # of containers	SOIL/GW: 8260B Full List	SOIL/GW: 8260B ☐ BTEX/OXY ☐ TPH gas	SOIL/GW: 8015M TPH ☐ g ☐ d ☐ ext	SOIL/GW: 418.1 TRPH	SOIL VAPOR/AIR ANALYSIS: VOC's: Full List ☐ 8260B ☐ TO-15	SOIL VAPOR/AIR ANALYSIS: VOC's: Short List/DTSC ☐ 8260B ☐ TO-15	SOIL VAPOR/AIR ANALYSIS: VOC's: SAM, 8260B ☐ SAM A ☐ SAM B	SOIL VAPOR/AIR ANALYSIS: Naphthalene ☐ 8260B ☐ TO-15	SOIL VAPOR/AIR ANALYSIS: Oxygenates ☒ 8260B ☐ TO-15	SOIL VAPOR/AIR ANALYSIS: TPHv gas ☐ 8260B ☐ TO-15	SOIL VAPOR/AIR ANALYSIS: Ketones ☐ 8260B ☐ TO-15	SOIL VAPOR/AIR ANALYSIS: Other BTEX ☒ 8260B ☐ TO-15	SOIL VAPOR/AIR ANALYSIS: Leak Check Compound ☒ 1,1 DFA ☐ OTHER	SOIL VAPOR/AIR ANALYSIS: Methane	SOIL VAPOR/AIR ANALYSIS: Fixed Gases ☐ CO_2 ☐ O_2 ☐ N_2
SV5-5'	SV5	333cc	1337	3-23-11	Vapor	Glass Syringe	1									X			X	X		
SV5-5' Dup	SV5	383cc	1338	↓	↓	↓	1									↓			↓	↓		
SV5-10'	SV5	348cc	1434	↓	↓	↓	1									↓			↓	↓		

Relinquished by: (Signature)	(company)	Received by: (Signature)	(company)	Date:	Time:
	SCS		H&P	3/23	1530
Relinquished by: (Signature)	(company)	Received by: (Signature)	(company)	Date:	Time:
Relinquished by: (Signature)	(company)	Received by: (Signature)	(company)	Date:	Time:

*Signature constitutes authorization to proceed with analysis and acceptance of condition on back.

Sample disposal instruction: ☐ Disposal ☐ Return to client ☐ Pickup

H&P Mobile Geochemistry Inc.

12 April 2011

Mr. Chuck Houser
SCS Engineers - San Diego
8799 Balboa Avenue, Suite 290
San Diego, CA 92123

H&P Project: SCS040511-SB2
Client Project: 01208473.00 / 11427 Woodside Ave.

Dear Mr. Chuck Houser:

Enclosed is the analytical report for the above referenced project. The data herein applies to samples as received by H&P Mobile Geochemistry, Inc. on 05-Apr-11 which were analyzed in accordance with the attached Chain of Custody record(s).

The results for all sample analyses and required QA/QC analyses are presented in the following sections and summarized in the documents:

- Sample Summary
- Case Narrative (if applicable)
- Sample Results
- Quality Control Summary
- Notes and Definitions / Appendix
- Chain of Custody

Unless otherwise noted, all analyses were performed and reviewed in compliance with our Quality Systems Manual and Standard Operating Procedures. This report shall not be reproduced, except in full, without the written approval of H&P Mobile Geochemistry, Inc.

We at H&P Mobile Geochemistry, Inc. sincerely appreciate the opportunity to provide analytical services to you on this project. If you have any questions or concerns regarding this analytical report, please contact me at your convenience at 760-804-9678.

Sincerely,

CS Parsons

for Janis Villarreal
Laboratory Director

H&P Mobile Geochemistry, Inc. operates under CA Environmental Lab Accreditation Program Numbers 2579, 2740, 2741, 2742, 2743, 2745 and 2754. National Environmental Laboratory Accreditation Conference (NELAC) Standards Lab #11845

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Mobile Geochemistry Inc.

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SCS Engineers - San Diego	Project: SCS040511-SB2	
8799 Balboa Avenue, Suite 290	Project Number: 01208473.00 / 11427 Woodside Ave.	Reported:
San Diego, CA 92123	Project Manager: Mr. Chuck Houser	12-Apr-11 11:09

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
SV1-5', P333cc	E104011-01	Vapor	05-Apr-11	05-Apr-11
SV1-10', P348cc	E104011-02	Vapor	05-Apr-11	05-Apr-11
SV2-5', P333cc	E104011-03	Vapor	05-Apr-11	05-Apr-11
SV2-10', P348cc	E104011-04	Vapor	05-Apr-11	05-Apr-11
SV3-5', P333cc	E104011-05	Vapor	05-Apr-11	05-Apr-11
SV3-10', P348cc	E104011-06	Vapor	05-Apr-11	05-Apr-11
SV4-5', P333cc	E104011-07	Vapor	05-Apr-11	05-Apr-11
SV4-10', P348cc	E104011-08	Vapor	05-Apr-11	05-Apr-11
SV5-5', P333cc	E104011-09	Vapor	05-Apr-11	05-Apr-11
SV5-5' Dup, P383cc	E104011-10	Vapor	05-Apr-11	05-Apr-11
SV5-10', P348cc	E104011-11	Vapor	05-Apr-11	05-Apr-11

H&P Mobile Geochemistry Inc.

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SCS Engineers - San Diego
8799 Balboa Avenue, Suite 290
San Diego, CA 92123

Project: SCS040511-SB2
Project Number: 01208473.00 / 11427 Woodside Ave.
Project Manager: Mr. Chuck Houser

Reported:
12-Apr-11 11:09

Volatile Organic Compounds by EPA Method 8260B Modified

H&P Mobile Geochemistry, Inc.

Analyte	Result	Reporting Limit	Units	Dilution Factor	Batch	Prepared	Analyzed	Method	Notes
SV1-5', P333cc (E104011-01) Vapor Sampled: 05-Apr-11 Received: 05-Apr-11									
1,1-Difluoroethane (LCC)	ND	10	ug/l	0.05	ED10504	05-Apr-11	05-Apr-11	EPA 8260B	
Methyl tertiary-butyl ether (MTBE)	ND	0.50	"	"	"	"	"	"	
Diisopropyl ether (DIPE)	ND	1.0	"	"	"	"	"	"	
Ethyl tert-butyl ether (ETBE)	ND	1.0	"	"	"	"	"	"	
Tertiary-amyl methyl ether (TAME)	ND	1.0	"	"	"	"	"	"	
Benzene	ND	0.10	"	"	"	"	"	"	
Toluene	ND	1.0	"	"	"	"	"	"	
Ethylbenzene	ND	0.50	"	"	"	"	"	"	
m,p-Xylene	ND	0.50	"	"	"	"	"	"	
o-Xylene	ND	0.50	"	"	"	"	"	"	
Tertiary-butyl alcohol (TBA)	ND	5.0	"	"	"	"	"	"	
Surrogate: Dibromofluoromethane		*122 %*		*75-125*		"	"	"	
Surrogate: Toluene-d8		*90.6 %*		*75-125*		"	"	"	
Surrogate: 4-Bromofluorobenzene		*114 %*		*75-125*		"	"	"	
SV1-10', P348cc (E104011-02) Vapor Sampled: 05-Apr-11 Received: 05-Apr-11									
1,1-Difluoroethane (LCC)	ND	10	ug/l	0.05	ED10504	05-Apr-11	05-Apr-11	EPA 8260B	
Methyl tertiary-butyl ether (MTBE)	ND	0.50	"	"	"	"	"	"	
Diisopropyl ether (DIPE)	ND	1.0	"	"	"	"	"	"	
Ethyl tert-butyl ether (ETBE)	ND	1.0	"	"	"	"	"	"	
Tertiary-amyl methyl ether (TAME)	ND	1.0	"	"	"	"	"	"	
Benzene	ND	0.10	"	"	"	"	"	"	
Toluene	ND	1.0	"	"	"	"	"	"	
Ethylbenzene	ND	0.50	"	"	"	"	"	"	
m,p-Xylene	ND	0.50	"	"	"	"	"	"	
o-Xylene	ND	0.50	"	"	"	"	"	"	
Tertiary-butyl alcohol (TBA)	ND	5.0	"	"	"	"	"	"	
Surrogate: Dibromofluoromethane		*119 %*		*75-125*		"	"	"	
Surrogate: Toluene-d8		*97.4 %*		*75-125*		"	"	"	
Surrogate: 4-Bromofluorobenzene		*116 %*		*75-125*		"	"	"	

H&P Mobile Geochemistry Inc.

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SCS Engineers - San Diego	Project: SCS040511-SB2	
8799 Balboa Avenue, Suite 290	Project Number: 01208473.00 / 11427 Woodside Ave.	Reported:
San Diego, CA 92123	Project Manager: Mr. Chuck Houser	12-Apr-11 11:09

Volatile Organic Compounds by EPA Method 8260B Modified

H&P Mobile Geochemistry, Inc.

Analyte	Result	Reporting Limit	Units	Dilution Factor	Batch	Prepared	Analyzed	Method	Notes
SV2-5', P333cc (E104011-03) Vapor Sampled: 05-Apr-11 Received: 05-Apr-11									
1,1-Difluoroethane (LCC)	ND	10	ug/l	0.05	ED10504	05-Apr-11	05-Apr-11	EPA 8260B	
Methyl tertiary-butyl ether (MTBE)	ND	0.50	"	"	"	"	"	"	
Diisopropyl ether (DIPE)	ND	1.0	"	"	"	"	"	"	
Ethyl tert-butyl ether (ETBE)	ND	1.0	"	"	"	"	"	"	
Tertiary-amyl methyl ether (TAME)	ND	1.0	"	"	"	"	"	"	
Benzene	ND	0.10	"	"	"	"	"	"	
Toluene	ND	1.0	"	"	"	"	"	"	
Ethylbenzene	ND	0.50	"	"	"	"	"	"	
m,p-Xylene	ND	0.50	"	"	"	"	"	"	
o-Xylene	ND	0.50	"	"	"	"	"	"	
Tertiary-butyl alcohol (TBA)	ND	5.0	"	"	"	"	"	"	
Surrogate: Dibromofluoromethane		*124 %*		*75-125*	"	"	"	"	
Surrogate: Toluene-d8		*93.6 %*		*75-125*	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*118 %*		*75-125*	"	"	"	"	
SV2-10', P348cc (E104011-04) Vapor Sampled: 05-Apr-11 Received: 05-Apr-11									
1,1-Difluoroethane (LCC)	ND	10	ug/l	0.05	ED10504	05-Apr-11	05-Apr-11	EPA 8260B	
Methyl tertiary-butyl ether (MTBE)	ND	0.50	"	"	"	"	"	"	
Diisopropyl ether (DIPE)	ND	1.0	"	"	"	"	"	"	
Ethyl tert-butyl ether (ETBE)	ND	1.0	"	"	"	"	"	"	
Tertiary-amyl methyl ether (TAME)	ND	1.0	"	"	"	"	"	"	
Benzene	ND	0.10	"	"	"	"	"	"	
Toluene	ND	1.0	"	"	"	"	"	"	
Ethylbenzene	ND	0.50	"	"	"	"	"	"	
m,p-Xylene	ND	0.50	"	"	"	"	"	"	
o-Xylene	ND	0.50	"	"	"	"	"	"	
Tertiary-butyl alcohol (TBA)	ND	5.0	"	"	"	"	"	"	
Surrogate: Dibromofluoromethane		*115 %*		*75-125*	"	"	"	"	
Surrogate: Toluene-d8		*95.8 %*		*75-125*	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*112 %*		*75-125*	"	"	"	"	

Mobile Geochemistry Inc.

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SCS Engineers - San Diego	Project: SCS040511-SB2	
8799 Balboa Avenue, Suite 290	Project Number: 01208473.00 / 11427 Woodside Ave.	Reported:
San Diego, CA 92123	Project Manager: Mr. Chuck Houser	12-Apr-11 11:09

Volatile Organic Compounds by EPA Method 8260B Modified

H&P Mobile Geochemistry, Inc.

Analyte	Result	Reporting Limit	Units	Dilution Factor	Batch	Prepared	Analyzed	Method	Notes
SV3-5', P333cc (E104011-05) Vapor Sampled: 05-Apr-11 Received: 05-Apr-11									
1,1-Difluoroethane (LCC)	ND	10	ug/l	0.05	ED10504	05-Apr-11	05-Apr-11	EPA 8260B	
Methyl tertiary-butyl ether (MTBE)	ND	0.50	"	"	"	"	"	"	
Diisopropyl ether (DIPE)	ND	1.0	"	"	"	"	"	"	
Ethyl tert-butyl ether (ETBE)	ND	1.0	"	"	"	"	"	"	
Tertiary-amyl methyl ether (TAME)	ND	1.0	"	"	"	"	"	"	
Benzene	ND	0.10	"	"	"	"	"	"	
Toluene	ND	1.0	"	"	"	"	"	"	
Ethylbenzene	ND	0.50	"	"	"	"	"	"	
m,p-Xylene	ND	0.50	"	"	"	"	"	"	
o-Xylene	ND	0.50	"	"	"	"	"	"	
Tertiary-butyl alcohol (TBA)	ND	5.0	"	"	"	"	"	"	
Surrogate: Dibromofluoromethane		*118 %*		*75-125*		"	"	"	
Surrogate: Toluene-d8		*92.7 %*		*75-125*		"	"	"	
Surrogate: 4-Bromofluorobenzene		*115 %*		*75-125*		"	"	"	
SV3-10', P348cc (E104011-06) Vapor Sampled: 05-Apr-11 Received: 05-Apr-11									
1,1-Difluoroethane (LCC)	ND	10	ug/l	0.05	ED10504	05-Apr-11	05-Apr-11	EPA 8260B	
Methyl tertiary-butyl ether (MTBE)	ND	0.50	"	"	"	"	"	"	
Diisopropyl ether (DIPE)	ND	1.0	"	"	"	"	"	"	
Ethyl tert-butyl ether (ETBE)	ND	1.0	"	"	"	"	"	"	
Tertiary-amyl methyl ether (TAME)	ND	1.0	"	"	"	"	"	"	
Benzene	ND	0.10	"	"	"	"	"	"	
Toluene	ND	1.0	"	"	"	"	"	"	
Ethylbenzene	ND	0.50	"	"	"	"	"	"	
m,p-Xylene	ND	0.50	"	"	"	"	"	"	
o-Xylene	ND	0.50	"	"	"	"	"	"	
Tertiary-butyl alcohol (TBA)	ND	5.0	"	"	"	"	"	"	
Surrogate: Dibromofluoromethane		*124 %*		*75-125*		"	"	"	
Surrogate: Toluene-d8		*97.1 %*		*75-125*		"	"	"	
Surrogate: 4-Bromofluorobenzene		*120 %*		*75-125*		"	"	"	

Mobile Geochemistry Inc.

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Carlsbad, CA 92010
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SCS Engineers - San Diego	Project: SCS040511-SB2	
8799 Balboa Avenue, Suite 290	Project Number: 01208473.00 / 11427 Woodside Ave.	Reported:
San Diego, CA 92123	Project Manager: Mr. Chuck Houser	12-Apr-11 11:09

Volatile Organic Compounds by EPA Method 8260B Modified

H&P Mobile Geochemistry, Inc.

Analyte	Result	Reporting Limit	Units	Dilution Factor	Batch	Prepared	Analyzed	Method	Notes
SV4-5', P333cc (E104011-07) Vapor Sampled: 05-Apr-11 Received: 05-Apr-11									
1,1-Difluoroethane (LCC)	ND	10	ug/l	0.1	ED10504	05-Apr-11	05-Apr-11	EPA 8260B	
Methyl tertiary-butyl ether (MTBE)	ND	1.0	"	"	"	"	"	"	
Diisopropyl ether (DIPE)	ND	2.0	"	"	"	"	"	"	
Ethyl tert-butyl ether (ETBE)	ND	2.0	"	"	"	"	"	"	
Tertiary-amyl methyl ether (TAME)	ND	2.0	"	"	"	"	"	"	
Benzene	**0.21**	0.20	"	"	"	"	"	"	
Toluene	ND	2.0	"	"	"	"	"	"	
Ethylbenzene	ND	1.0	"	"	"	"	"	"	
m,p-Xylene	ND	1.0	"	"	"	"	"	"	
o-Xylene	ND	1.0	"	"	"	"	"	"	
Tertiary-butyl alcohol (TBA)	ND	10	"	"	"	"	"	"	
Surrogate: Dibromofluoromethane		*76.6 %*		*75-125*		"	"	"	
Surrogate: Toluene-d8		*111 %*		*75-125*		"	"	"	
Surrogate: 4-Bromofluorobenzene		*109 %*		*75-125*		"	"	"	
SV4-10', P348cc (E104011-08) Vapor Sampled: 05-Apr-11 Received: 05-Apr-11									
1,1-Difluoroethane (LCC)	ND	10	ug/l	0.1	ED10504	05-Apr-11	05-Apr-11	EPA 8260B	
Methyl tertiary-butyl ether (MTBE)	ND	1.0	"	"	"	"	"	"	
Diisopropyl ether (DIPE)	ND	2.0	"	"	"	"	"	"	
Ethyl tert-butyl ether (ETBE)	ND	2.0	"	"	"	"	"	"	
Tertiary-amyl methyl ether (TAME)	ND	2.0	"	"	"	"	"	"	
Benzene	**0.39**	0.20	"	"	"	"	"	"	
Toluene	ND	2.0	"	"	"	"	"	"	
Ethylbenzene	ND	1.0	"	"	"	"	"	"	
m,p-Xylene	ND	1.0	"	"	"	"	"	"	
o-Xylene	ND	1.0	"	"	"	"	"	"	
Tertiary-butyl alcohol (TBA)	ND	10	"	"	"	"	"	"	
Surrogate: Dibromofluoromethane		*81.1 %*		*75-125*		"	"	"	
Surrogate: Toluene-d8		*117 %*		*75-125*		"	"	"	
Surrogate: 4-Bromofluorobenzene		*117 %*		*75-125*		"	"	"	

Mobile Geochemistry Inc.

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Carlsbad, CA 92010
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SCS Engineers - San Diego	Project: SCS040511-SB2	
8799 Balboa Avenue, Suite 290	Project Number: 01208473.00 / 11427 Woodside Ave.	Reported:
San Diego, CA 92123	Project Manager: Mr. Chuck Houser	12-Apr-11 11:09

Volatile Organic Compounds by EPA Method 8260B Modified

H&P Mobile Geochemistry, Inc.

Analyte	Result	Reporting Limit	Units	Dilution Factor	Batch	Prepared	Analyzed	Method	Notes
SV5-5', P333cc (E104011-09) Vapor Sampled: 05-Apr-11 Received: 05-Apr-11									
1,1-Difluoroethane (LCC)	ND	10	ug/l	0.2	ED10504	05-Apr-11	05-Apr-11	EPA 8260B	
Methyl tertiary-butyl ether (MTBE)	ND	2.0	"	"	"	"	"	"	
Diisopropyl ether (DIPE)	ND	4.0	"	"	"	"	"	"	
Ethyl tert-butyl ether (ETBE)	**4.9**	4.0	"	"	"	"	"	"	
Tertiary-amyl methyl ether (TAME)	ND	4.0	"	"	"	"	"	"	
Benzene	**1.1**	0.40	"	"	"	"	"	"	
Toluene	ND	4.0	"	"	"	"	"	"	
Ethylbenzene	**18**	2.0	"	"	"	"	"	"	
m,p-Xylene	ND	2.0	"	"	"	"	"	"	
o-Xylene	ND	2.0	"	"	"	"	"	"	
Tertiary-butyl alcohol (TBA)	ND	20	"	"	"	"	"	"	
Surrogate: Dibromofluoromethane		*79.9 %*		*75-125*		"	"	"	
Surrogate: Toluene-d8		*120 %*		*75-125*		"	"	"	
Surrogate: 4-Bromofluorobenzene		*125 %*		*75-125*		"	"	"	
SV5-5' Dup, P383cc (E104011-10) Vapor Sampled: 05-Apr-11 Received: 05-Apr-11									
1,1-Difluoroethane (LCC)	ND	10	ug/l	0.2	ED10504	05-Apr-11	05-Apr-11	EPA 8260B	
Methyl tertiary-butyl ether (MTBE)	ND	2.0	"	"	"	"	"	"	
Diisopropyl ether (DIPE)	ND	4.0	"	"	"	"	"	"	
Ethyl tert-butyl ether (ETBE)	**5.0**	4.0	"	"	"	"	"	"	
Tertiary-amyl methyl ether (TAME)	ND	4.0	"	"	"	"	"	"	
Benzene	**1.1**	0.40	"	"	"	"	"	"	
Toluene	ND	4.0	"	"	"	"	"	"	
Ethylbenzene	**20**	2.0	"	"	"	"	"	"	
m,p-Xylene	ND	2.0	"	"	"	"	"	"	
o-Xylene	ND	2.0	"	"	"	"	"	"	
Tertiary-butyl alcohol (TBA)	ND	20	"	"	"	"	"	"	
Surrogate: Dibromofluoromethane		*78.2 %*		*75-125*		"	"	"	
Surrogate: Toluene-d8		*124 %*		*75-125*		"	"	"	
Surrogate: 4-Bromofluorobenzene		*124 %*		*75-125*		"	"	"	

H&P Mobile Geochemistry Inc.

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Carlsbad, CA 92010
760-804-9678 Phone
760-804-9159 Fax

SCS Engineers - San Diego	Project: SCS040511-SB2	
8799 Balboa Avenue, Suite 290	Project Number: 01208473.00 / 11427 Woodside Ave.	Reported:
San Diego, CA 92123	Project Manager: Mr. Chuck Houser	12-Apr-11 11:09

Volatile Organic Compounds by EPA Method 8260B Modified

H&P Mobile Geochemistry, Inc.

Analyte	Result	Reporting Limit	Units	Dilution Factor	Batch	Prepared	Analyzed	Method	Notes
SV5-10', P348cc (E104011-11) Vapor Sampled: 05-Apr-11 Received: 05-Apr-11									
1,1-Difluoroethane (LCC)	ND	10	ug/l	0.5	ED10504	05-Apr-11	05-Apr-11	EPA 8260B	
Methyl tertiary-butyl ether (MTBE)	ND	5.0	"	"	"	"	"	"	
Diisopropyl ether (DIPE)	ND	10	"	"	"	"	"	"	
Ethyl tert-butyl ether (ETBE)	ND	10	"	"	"	"	"	"	
Tertiary-amyl methyl ether (TAME)	ND	10	"	"	"	"	"	"	
Benzene	**3.2**	1.0	"	"	"	"	"	"	
Toluene	ND	10	"	"	"	"	"	"	
Ethylbenzene	**24**	5.0	"	"	"	"	"	"	
m,p-Xylene	ND	5.0	"	"	"	"	"	"	
o-Xylene	ND	5.0	"	"	"	"	"	"	
Tertiary-butyl alcohol (TBA)	ND	50	"	"	"	"	"	"	
Surrogate: Dibromofluoromethane		*81.1 %*		*75-125*		*"*	*"*	*"*	
Surrogate: Toluene-d8		*112 %*		*75-125*		*"*	*"*	*"*	
Surrogate: 4-Bromofluorobenzene		*120 %*		*75-125*		*"*	*"*	*"*	

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SCS Engineers - San Diego	Project: SCS040511-SB2	
8799 Balboa Avenue, Suite 290	Project Number: 01208473.00 / 11427 Woodside Ave.	Reported:
San Diego, CA 92123	Project Manager: Mr. Chuck Houser	12-Apr-11 11:09

Volatile Organic Compounds by EPA Method 8260B Modified - Quality Control

H&P Mobile Geochemistry, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch ED10504 - EPA 5030										
Blank (ED10504-BLK1)				Prepared & Analyzed: 05-Apr-11						
1,1-Difluoroethane (LCC)	ND	10	ug/l							
Methyl tertiary-butyl ether (MTBE)	ND	0.50	"							
Diisopropyl ether (DIPE)	ND	1.0	"							
Ethyl tert-butyl ether (ETBE)	ND	1.0	"							
Tertiary-amyl methyl ether (TAME)	ND	1.0	"							
Benzene	ND	0.10	"							
Toluene	ND	1.0	"							
Ethylbenzene	ND	0.50	"							
m,p-Xylene	ND	0.50	"							
o-Xylene	ND	0.50	"							
Tertiary-butyl alcohol (TBA)	ND	5.0	"							
Surrogate: Dibromofluoromethane	*2.76*		*"*	*2.50*		*111*	*75-125*			
Surrogate: Toluene-d8	*2.08*		*"*	*2.50*		*83.1*	*75-125*			
Surrogate: 4-Bromofluorobenzene	*2.88*		*"*	*2.50*		*115*	*75-125*			

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SCS Engineers - San Diego	Project: SCS040511-SB2	
8799 Balboa Avenue, Suite 290	Project Number: 01208473.00 / 11427 Woodside Ave.	Reported:
San Diego, CA 92123	Project Manager: Mr. Chuck Houser	12-Apr-11 11:09

Notes and Definitions

DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not Reported
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference

Appendix

H&P Mobile Geochemistry, Inc. is approved as an Environmental Laboratory in conformance with the Environmental Laboratory Accreditation Program (CA) for the category of Volatile and Semi-Volatile Organic Chemistry of Hazardous Waste for the following methods:

Certificate# 2741, 2743, 2579, 2754 & 2740 approved for EPA 8260 and LUFT GC/MS
Certificate# 2742, 2745, & 2741 approved for LUFT
Certificate# 2745 & 2742 approved for EPA 418.1

H&P Mobile Geochemistry, Inc. is approved as an Environmental Laboratory in conformance with the National Environmental Accreditation Conference Standards for the category Environmental Analysis Air and Emissions for the following analytes and methods:

1,2,4-Trichlorobenzene by EPA TO-15 & TO-14A
Hexachlorobutadiene by EPA TO-15 & TO-14A
1,2,4-Trimethylbenzene by EPA TO -14A
1,2-Dichlorobenzene by EPA TO-15 & TO-14A
1,3,5-Trimethylbenzene by EPA TO -14A
1,4-Dichlorobenzene by EPA TO-15 & TO-14A
Benzene by EPA TO-15 & TO-14A
Chlorobenzene by EPA TO-15 & TO-14A
Ethyl benzene by EPA TO-15 & TO-14A
Styrene by EPA TO-15 & TO-14A
Toluene by EPA TO-15 & TO-14A
Total Xylenes by EPA TO-15 & TO-14A
1,1,1-Trichloroethane by EPA TO-15 & TO-14A
1,1,2,2-Tetrachloroethane by EPA TO-15 & TO-14A
1,1,2-Trichloroethane by EPA TO-15 & TO-14A
1,1-Dichloroethane by EPA TO-15 & TO-14A
1,1-Dichloroethene by EPA TO-15 & TO-14A
1,2-Dichloroethane by EPA TO-15 & TO-14A
1,2-Dichloropropane by EPA TO-15 & TO-14A
Bromoform by EPA TO-15
Bromomethane by EPA TO-15 & TO-14A
Carbon tetrachloride by EPA TO-15 & TO-14A
Chloroethane by EPA TO-15
Chloroform by EPA TO-15 & TO-14A
Chloromethane by EPA TO-15 & TO-14A
cis-1,2-Dichloroethene by EPA TO-15
cis-1,2-Dichloropropene by EPA TO-15 & TO-14A
Methylene chloride by EPA TO -15 & TO-14A
Tetrachloroethane by EPA TO-15 & TO-14A
trans-1,2-Dichloroethene by EPA TO-15
trans-1,2-Dichloropropene by EPA TO-15 & TO-14A
Trichloroethene by EPA TO-15 & TO-14A
Vinyl chloride by EPA TO -15 & TO-14A
2-Butanone by EPA TO-15
4-Methyl-2-Pentanone by EPA TO-15
Hexane by EPA TO-15
Methyl tert-butyl ether by EPA TO-15
Vinyl acetate by EPA TO-15

This certification applies to samples analyzed in summa canisters.

Chain of Custody Record

H&P Mobile Geochemistry Inc.

☒ 2470 Impala Dr., Carlsbad, CA 92010 • ph 760.804.9678 • fax 760.804.9159
☐ 1855 Coronado Ave., Signal Hill, CA 90755 • ph 800.834.9888

Date: 4/5/11
H&P Project # SCS040511-SB2
Outside Lab:

Client: SCS Engineers
Address: 8799 Balboa Avenue Suite 290
San Diego, CA 92123
Email: chouser@scsengineers.com; ccrosby@scsengineers.com
Collector: Dave Pride
Client Project # 01208473.00
Location: 11427 Woodside Ave. Santee, CA
Phone: 858-571-5500x24 Fax:
Page: 1 of 2
Project Contact: Chuck Houser
Turn around time: ON-SITE

Geotracker EDF: Yes ☒ No ☐
Global ID:
Excel EDD: Yes ☐ No ☐

Sample Receipt
Intact: ☒ Yes ☐ No
Seal Intact: ☐ Yes ☐ No ☒ N/A
Cold: ☐ Yes ☐ No ☒ N/A
Temperature: 20°C

Special Instructions: Use 3PV as determined from SCS032311-SB2

Lab Work Order # E104011 EDD504

Sample Name	Field Point Name	Purge Vol	Time	Date	Sample Type	Container Type	Total # of containers	8260B Full List	8260B ☐ BTEX/OXY ☐ TPH gas	8015M TPH ☐ g ☐ d ☐ ext	418.1 TRPH	VOC's: Full List ☐ 8260B ☐ TO-15	VOC's: Short List/DTSC ☐ 8260B ☐ TO-15	VOC's: SAM, 8260B ☐ SAM A ☐ SAM B	Naphthalene ☐ 8260B ☐ TO-15	Oxygenates ☒ 8260B ☐ TO-15	TPHv gas ☐ 8260B ☐ TO-15	Ketones ☐ 8260B ☐ TO-15	Other BTEX ☒ 8260B ☐ TO-15	Leak Check Compound ☒ 1,1 DFA ☐ OTHER	Methane	Fixed Gases ☐ CO_2 ☐ O_2 ☐ N_2
								SOIL/GW				SOIL VAPOR/AIR ANALYSIS										
SV1-5'	SV1	333cc	0949	4/5/11	Vapor	Glass Syringe	1									X			X	X		
SV1-10'	SV1	348cc	1011				1															
SV2-5'	SV2	333cc	1036				1															
SV2-10'	SV2	348cc	1045				1															
SV3-5'	SV3	333cc	1108				1															
SV3-10'	SV3	348cc	1122				1															
SV4-5'	SV4	333cc	1149				1															
SV4-10'	SV4	348cc	1213				1															
SV5-5'	SV5	333cc	1237				1															
SV5-5' Dup	SV5	383cc	1238				1															

Relinquished by: (Signature)	(company)	Received by: (Signature)	(company)	Date:	Time:
Chris Crosby	SCS	Dave Pride	H&P	4/5/11	1430
Relinquished by: (Signature)	(company)	Received by: (Signature)	(company)	Date:	Time:
Relinquished by: (Signature)	(company)	Received by: (Signature)	(company)	Date:	Time:

*Signature constitutes authorization to proceed with analysis and acceptance of condition on back.

Sample disposal instruction: ☐ Disposal ☐ Return to client ☐ Pickup

Chain of Custody Record

H&P Mobile Geochemistry Inc.
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☐ 1855 Coronado Ave., Signal Hill, CA 90755 • ph 800.834.9888

Date: 4/5/11
H&P Project # SCS040511-SB2
Outside Lab:

Client: SCS Engineers
Address: 8799 Balboa Avenue, Suite 290, San Diego, CA
Email: chouser@scsengineers.com; cgrosby@scsengineers.com
Collector: Dave Pride
Client Project # 01208473.00
Location: 11427 Woodside Ave. Santee, CA
Phone: 858-571-5500 x244
Fax:
Page: 2 of 2
Project Contact: Chuck Houser
Turn around time: ON SITE

Geotracker EDF: Yes ☒ No ☐
Global ID:
Excel EDD: Yes ☐ No ☐

Sample Receipt
Intact: ☒ Yes ☐ No
Seal Intact: ☐ Yes ☐ No ☒ N/A
Cold: ☐ Yes ☐ No ☒ N/A
Temperature: 30°C

Special Instructions:

Lab Work Order # E104011

Sample Name	Field Point Name	Purge Vol	Time	Date	Sample Type	Container Type	Total # of containers	SOIL/GW: 8260B Full List	SOIL/GW: 8260B ☐ BTEX/OXY ☐ TPH gas	SOIL/GW: 8015M TPH ☐ g ☐ d ☐ ext	SOIL/GW: 418.1 TRPH	SOIL VAPOR/AIR ANALYSIS: VOC's: Full List ☐ 8260B ☐ TO-15	SOIL VAPOR/AIR ANALYSIS: VOC's: Short List/DTSC ☐ 8260B ☐ TO-15	SOIL VAPOR/AIR ANALYSIS: VOC's: SAM, 8260B ☐ SAM A ☐ SAM B	SOIL VAPOR/AIR ANALYSIS: Naphthalene ☐ 8260B ☐ TO-15	SOIL VAPOR/AIR ANALYSIS: Oxygenates ☒ 8260B ☐ TO-15	SOIL VAPOR/AIR ANALYSIS: TPHv gas ☐ 8260B ☐ TO-15	SOIL VAPOR/AIR ANALYSIS: Ketones ☐ 8260B ☐ TO-15	SOIL VAPOR/AIR ANALYSIS: Other BTEX ☒ 8260B ☐ TO-15	SOIL VAPOR/AIR ANALYSIS: Leak Check Compound ☒ 1,1 DFA ☐ OTHER	SOIL VAPOR/AIR ANALYSIS: Methane	SOIL VAPOR/AIR ANALYSIS: Fixed Gases ☐ CO_2 ☐ O_2 ☐ N_2
SVS-10'	SVS	348cc	1312	4/5/11	Vapor	Glass Syringe	1									X			X	X		

Relinquished by: (Signature)	(company)	Received by: (Signature)	(company)	Date:	Time:
Chris Crosby	SCS	David Pride	H&P	4/5/11	1430
Relinquished by: (Signature)	(company)	Received by: (Signature)	(company)	Date:	Time:
Relinquished by: (Signature)	(company)	Received by: (Signature)	(company)	Date:	Time:

*Signature constitutes authorization to proceed with analysis and acceptance of condition on back.

Sample disposal instruction: ☐ Disposal ☐ Return to client ☐ Pickup

APPENDIX E

VAPOR RISK ASSESSMENT MODEL SHEETS

Input Data

Version: November 1999

Revised 07/29/2010

Case Name:

Benzene (SV5-5)

CHEMICAL OF CONCERN:

Enter Chemical Name = benzene

C11	benzene	**E11**	dichloromethane (methylene chloride)
C12	benzo(a)pyrene	**E12**	ethylbenzene
C13	carbon tetrachloride	**E13**	naphthalene
C14	chlorobenzene	**E14**	methyl tertiary butyl ether (MTBE)
C15	chloroethane (ethyl chloride)	**E15**	tetrachloroethene (PCE)
C16	chloromethane (methyl chloride)	**E16**	toluene
C17	1,2-dichlorobenzene	**E17**	1,1,1-trichloroethane
C18	1,3-dichlorobenzene	**E18**	1,1,2-trichloroethane
C19	1,4-dichlorobenzene	**E19**	trichloroethene (TCE)
C20	1,1-dichloroethene (1,1-DCE)	**E20**	trichloromethane (chloroform)
C21	trans-1,2-dichloroethene	**E21**	vinyl chloride
C22	1,1-dichloroethane (1,1-DCA)	**E22**	xylene
C23	1,2-dichloroethane (1,2-DCA)		

Chemical Mixture (if app.) =

C27	Gasoline	**E27**	Fuel Oil
C28	Kerosene	**E28**	Waste Oil
C29	Diesel		

If compound is not listed then data must be entered into the site-specific field.

SITE SPECIFIC INFORMATION			Site-Specific	Value Used
Mole fraction	dimensionless	MF		0.0000
Temperature	K	T		293
Water concentration (chemical)	ug/l	C_w		0
Soil concentration (chemical)	mg/kg	C_t		0
Soil concentration (TPH/TRPH)	mg/kg	C_t		0
Soil gas concentration (measured	mg/m3 (ug/l)	C_{sg}(m)	1.3	1.3
Depth of contamination or Soil G	m	X	1.52	1.52

Data Input

Version: November 1999

Revised 07/29/2010

CHEMICAL PROPERTIES			Site Specific	Value Used
Henry's Law Constant	dimensionless	H		0.23
Vapor pressure	atm	VP		0.13
Molecular weight (chemical)	mg/mole	MW		78,110
Molecular weight (mixture)	mg/mole	MW(m)		#N/A
Universal gas constant	atm-m3/mole-K	R	XXXXXXXXX	8.20E-05
Diffusion coefficient in air	cm2/sec	D_a		0.088
Organic carbon partitioning coef.	cm3/gm	K_{oc}		62
SOIL PROPERTIES				
Total porosity	dimensionless	θ		0.3
Air-filled porosity	dimensionless	θ_a		0.2
Water-filled porosity	dimensionless	θ_w	XXXXXXXXX	0.1
Bulk density (dry)	gm/cc	r_b		1.8
Weight fraction of organic carbon	dimensionless	foc		0.01
BUILDING SPECIFICATIONS				
Floor area of building	m2	A		1
% of floor area that flux occurs	dimensionless			100%
Interior Height of building	m	R_h		2.44
Exchange rate of air	exchanges/hr	E		0.83
Slab Attenuation factor	dimensionless	S_b		0.1
OUTDOOR AIR COMPONENT				
Downwind contamination length	m	L		0
Wind speed	m/hr	u		16000
Height of building openings	m	h		2
EXPOSURE SCENARIO Default values are for Industrial Uses				
Body weight	kg	BW		70
Inhalation rate	m3/day	IR		20
Exposure duration	yrs	ED		25
Hours per day	hr/day			12
Days per week	days/week			5
Weeks per year	weeks/yr			50
HEALTH RISK FACTORS				
Reference dose	mg/kg-day	RfD		0.0086
Slope factor (potency)	1/(mg/kg-day)	SF		0.1

Case Name: Benzene (SV5-5)

Chemical: benzene

Variable Descriptions				Units
CALCULATION OF SOIL GAS CONCENTRATION				
A. SOURCE - Free Product/Soil>100mg/kg.				
Mole fraction	MF	=	0.00E+00	dimensionless
Molecular weight	MW	=	7.81E+04	mg/mole
Vapor pressure	VP	=	1.30E-01	atm
Universal gas constant	R	=	8.20E-05	atm-m3/mole-K
Temperature	T	=	2.93E+02	K
Calculated soil gas concentration	**C_{sg}(fp)**	=	**0.00E+00**	**mg/m3**
B. SOURCE - Groundwater				
Water contamination level	C_w	=	0.00E+00	ug/l
Henry's Law Constant	H	=	2.30E-01	dimensionless
Calculated soil gas concentration	**C_{sg}(gw)**	=	**0.00E+00**	**mg/m3**
C. SOURCE - Soil < 100 mg/kg				
Soil contamination level	C_t	=	0.00E+00	mg/kg
Henry's Law Constant	H	=	2.30E-01	dimensionless
Bulk density (dry)	ρ_b	=	1.80E+00	gm/cc
Air-filled porosity	θ_a	=	2.00E-01	dimensionless
Water-filled porosity	θ_w	=	1.00E-01	dimensionless
Soil/water distribution coef.	K_d	=	6.20E-01	cm3/gm
Calculated soil gas concentration	**C_{sg}(s)**	=	**0.00E+00**	**mg/m3**
D. SOURCE - Measured Soil Gas				
Measured soil gas concentration	**C_{sg}(m)**	=	**1.30E+00**	**mg/m3 (ug/l)**

E. SOIL GAS CONCENTRATION USED IN RISK CALCULATIONS >>>> 1.30E+00 mg/m3

DIFFUSIVE TRANSPORT UPWARD IN UNSATURATED ZONE				
Total porosity	θ	=	3.00E-01	dimensionless
Air-filled porosity	θ_a	=	2.00E-01	dimensionless
Diffusion coefficient in air	D_a	=	8.80E-02	cm2/sec
Effective diffusion coefficient	**D_e**	=	**4.60E-03**	cm2/sec
Depth of contamination or Csg	X	=	1.52E+00	m
Calculated Flux	**F_x**	=	**1.42E-03**	**mg/m2-hour**

Case Name: Benzene (SV5-5)

CALCULATING VAPOR CONCENTRATION IN BUILDING

A. INDOOR AIR COMPONENT

Floor area of building	A	=	1.00E+00	m2
% of floor area that flux occurs			1.00E+00	dimensionless
Slab Attenuation factor	S_b	=	1.00E-01	dimensionless
Flux area within building	Af	=	**1.00E-01**	m2
Interior Height of building	R_h	=	2.44E+00	m
Volume of building	V	=	**2.44E+00**	m3
Exchange rate of air	E	=	8.30E-01	exchanges/hr
Ventilation rate	Q	=	**2.03E+00**	m3/hr
Indoor air component	**C_i**	=	**6.99E-05**	**mg/m3**

B. OUTDOOR AIR COMPONENT

Downwind contamination length	L	=	0.00E+00	m
Wind speed	u	=	1.60E+04	m/hr
Height of building openings (or height of breathing zone)	h	=	2.00E+00	m
Outdoor air component	**C_o**	=	**0.00E+00**	**mg/m3**

C. TOTAL INDOOR AIR CONCENTRATION

C_t = **6.99E-05** **mg/m3**

EXPOSURE SCENARIO

Body weight	BW	=	7.00E+01	kg
Inhalation rate	IR	=	2.00E+01	m3/day
Exposure duration	ED	=	2.50E+01	yrs
Hours per day	conversion		1.20E+01	hr/day
Exposure time	ET	=	**5.00E-01**	hr/24 hours
Days per week	conversion		5.00E+00	days/week
Weeks per year	conversion		5.00E+01	weeks/yr
Exposure frequency	EF	=	**2.50E+02**	days/yr
Averaging Time (carc. risk)	AT	=	2.56E+04	days
Averaging Time (non-carc. risk)	AT	=	**9.13E+03**	days
Chemical Intake (carc. risk)	**IT_c**	=	**2.44E-06**	**mg/kg-day**
Chemical Intake (non-carc. risk)	**IT_{nc}**	=	**6.84E-06**	**mg/kg-day**

NON-CARCINOGENIC RISK (Chronic Risk)

Chemical Intake (non-carc. risk)	**IT_{nc}**	=	6.84E-06	mg/kg-day
Reference dose	RfD	=	8.60E-03	mg/kg-day
Hazard Index	**HI**	=	**7.96E-04**	

CARCINOGENIC RISK

Chemical Intake (carc. risk)	IT_c	=	2.44E-06	mg/kg-day
Slope factor (potency)	SF	=	1.00E-01	1/(mg/kg-day)
Cancer Risk	**Risk**	=	**2.44E-07**	

Case Name:

Ethylbenzene (SV5-5)

CHEMICAL OF CONCERN:

Enter Chemical Name = ethylbenzene

C11 benzene
C12 benzo(a)pyrene
C13 carbon tetrachloride
C14 chlorobenzene
C15 chloroethane (ethyl chloride)
C16 chloromethane (methyl chloride)
C17 1,2-dichlorobenzene
C18 1,3-dichlorobenzene
C19 1,4-dichlorobenzene
C20 1,1-dichloroethene (1,1-DCE)
C21 trans-1,2-dichloroethene
C22 1,1-dichloroethane (1,1-DCA)
C23 1,2-dichloroethane (1,2-DCA)

E11 dichloromethane (methylene chloride)
E12 ethylbenzene
E13 naphthalene
E14 methyl tertiary butyl ether (MTBE)
E15 tetrachloroethene (PCE)
E16 toluene
E17 1,1,1-trichloroethane
E18 1,1,2-trichloroethane
E19 trichloroethene (TCE)
E20 trichloromethane (chloroform)
E21 vinyl chloride
E22 xylene

Chemical Mixture (if app.) =

C27 Gasoline
C28 Kerosene
C29 Diesel

E27 Fuel Oil
E28 Waste Oil

If compound is not listed then data must be entered into the site-specific field.

SITE SPECIFIC INFORMATION			Site-Specific	Value Used
Mole fraction	dimensionless	MF		0.0000
Temperature	K	T		293
Water concentration (chemical)	ug/l	C_w		0
Soil concentration (chemical)	mg/kg	C_t		0
Soil concentration (TPH/TRPH)	mg/kg	C_t		0
Soil gas concentration (measured	mg/m3 (ug/l)	C_{sg}(m)	20	20
Depth of contamination or Soil G	m	X	1.52	1.52

CHEMICAL PROPERTIES			Site Specific	Value Used
Henry's Law Constant	dimensionless	H		0.32
Vapor pressure	atm	VP		0.015
Molecular weight (chemical)	mg/mole	MW		106,000
Molecular weight (mixture)	mg/mole	MW(m)		#N/A
Universal gas constant	atm-m3/mole-K	R	XXXXXXXXX	8.20E-05
Diffusion coefficient in air	cm2/sec	D_a		0.075
Organic carbon partitioning coef.	cm3/gm	K_{oc}		200
SOIL PROPERTIES				
Total porosity	dimensionless	θ		0.3
Air-filled porosity	dimensionless	θ_a		0.2
Water-filled porosity	dimensionless	θ_w	XXXXXXXXX	0.1
Bulk density (dry)	gm/cc	r_b		1.8
Weight fraction of organic carbon	dimensionless	foc		0.01
BUILDING SPECIFICATIONS				
Floor area of building	m2	A		1
% of floor area that flux occurs	dimensionless			100%
Interior Height of building	m	R_h		2.44
Exchange rate of air	exchanges/hr	E		0.83
Slab Attenuation factor	dimensionless	S_b		0.1
OUTDOOR AIR COMPONENT				
Downwind contamination length	m	L		0
Wind speed	m/hr	u		16000
Height of building openings	m	h		2
EXPOSURE SCENARIO Default values are for Industrial Uses				
Body weight	kg	BW		70
Inhalation rate	m3/day	IR		20
Exposure duration	yrs	ED		25
Hours per day	hr/day			12
Days per week	days/week			5
Weeks per year	weeks/yr			50
HEALTH RISK FACTORS				
Reference dose	mg/kg-day	RfD		0.29
Slope factor (potency)	1/(mg/kg-day)	SF		0.0087

Case Name: Ethylbenzene (SV5-5)

Chemical: ethylbenzene

Variable Descriptions				**Units**
CALCULATION OF SOIL GAS CONCENTRATION				
A. SOURCE - Free Product/Soil>100mg/kg.				
Mole fraction	MF	=	0.00E+00	dimensionless
Molecular weight	MW	=	1.06E+05	mg/mole
Vapor pressure	VP	=	1.50E-02	atm
Universal gas constant	R	=	8.20E-05	atm-m3/mole-K
Temperature	T	=	2.93E+02	K
Calculated soil gas concentration	**C_{sg}(fp)**	=	**0.00E+00**	**mg/m3**
B. SOURCE - Groundwater				
Water contamination level	C_w	=	0.00E+00	ug/l
Henry's Law Constant	H	=	3.20E-01	dimensionless
Calculated soil gas concentration	**C_{sg}(gw)**	=	**0.00E+00**	**mg/m3**
C. SOURCE - Soil < 100 mg/kg				
Soil contamination level	C_t	=	0.00E+00	mg/kg
Henry's Law Constant	H	=	3.20E-01	dimensionless
Bulk density (dry)	ρ_b	=	1.80E+00	gm/cc
Air-filled porosity	θ_a	=	2.00E-01	dimensionless
Water-filled porosity	θ_w	=	1.00E-01	dimensionless
Soil/water distribution coef.	K_d	=	2.00E+00	cm3/gm
Calculated soil gas concentration	**C_{sg}(s)**	=	**0.00E+00**	**mg/m3**
D. SOURCE - Measured Soil Gas				
Measured soil gas concentration	**C_{sg}(m)**	=	**2.00E+01**	**mg/m3 (ug/l)**

E. SOIL GAS CONCENTRATION USED IN RISK CALCULATIONS >>>> 2.00E+01 mg/m3

DIFFUSIVE TRANSPORT UPWARD IN UNSATURATED ZONE				
Total porosity	θ	=	3.00E-01	dimensionless
Air-filled porosity	θ_a	=	2.00E-01	dimensionless
Diffusion coefficient in air	D_a	=	7.50E-02	cm2/sec
Effective diffusion coefficient	**D_e**	=	**3.92E-03**	cm2/sec
Depth of contamination or Csg	X	=	1.52E+00	m
Calculated Flux	**F_x**	=	**1.86E-02**	**mg/m2-hour**

Case Name: Ethylbenzene (SV5-5)

CALCULATING VAPOR CONCENTRATION IN BUILDING

A. INDOOR AIR COMPONENT

Floor area of building	A	=	1.00E+00	m2
% of floor area that flux occurs			1.00E+00	dimensionless
Slab Attenuation factor	S_b	=	1.00E-01	dimensionless
Flux area within building	Af	=	**1.00E-01**	m2
Interior Height of building	R_h	=	2.44E+00	m
Volume of building	V	=	**2.44E+00**	m3
Exchange rate of air	E	=	8.30E-01	exchanges/hr
Ventilation rate	Q	=	**2.03E+00**	m3/hr
Indoor air component	**C_i**	=	**9.17E-04**	**mg/m3**

B. OUTDOOR AIR COMPONENT

Downwind contamination length	L	=	0.00E+00	m
Wind speed	u	=	1.60E+04	m/hr
Height of building openings (or height of breathing zone)	h	=	2.00E+00	m
Outdoor air component	**C_o**	=	**0.00E+00**	**mg/m3**

C. TOTAL INDOOR AIR CONCENTRATION

C_t = **9.17E-04** **mg/m3**

EXPOSURE SCENARIO

Body weight	BW	=	7.00E+01	kg
Inhalation rate	IR	=	2.00E+01	m3/day
Exposure duration	ED	=	2.50E+01	yrs
Hours per day	conversion		1.20E+01	hr/day
Exposure time	ET	=	**5.00E-01**	hr/24 hours
Days per week	conversion		5.00E+00	days/week
Weeks per year	conversion		5.00E+01	weeks/yr
Exposure frequency	EF	=	**2.50E+02**	days/yr
Averaging Time (carc. risk)	AT	=	2.56E+04	days
Averaging Time (non-carc. risk)	AT	=	**9.13E+03**	days
Chemical Intake (carc. risk)	**IT_c**	=	**3.20E-05**	**mg/kg-day**
Chemical Intake (non-carc. risk)	**IT_{nc}**	=	**8.97E-05**	**mg/kg-day**

NON-CARCINOGENIC RISK (Chronic Risk)

Chemical Intake (non-carc. risk)	IT_{nc}	=	8.97E-05	mg/kg-day
Reference dose	RfD	=	2.90E-01	mg/kg-day
Hazard Index	**HI**	=	**3.09E-04**	

CARCINOGENIC RISK

Chemical Intake (carc. risk)	IT_c	=	3.20E-05	mg/kg-day
Slope factor (potency)	SF	=	8.70E-03	1/(mg/kg-day)
Cancer Risk	**Risk**	=	**2.79E-07**	

Case Name:
Benzene (SV5-10)

CHEMICAL OF CONCERN:

Enter Chemical Name = benzene

C11 benzene
C12 benzo(a)pyrene
C13 carbon tetrachloride
C14 chlorobenzene
C15 chloroethane (ethyl chloride)
C16 chloromethane (methyl chloride)
C17 1,2-dichlorobenzene
C18 1,3-dichlorobenzene
C19 1,4-dichlorobenzene
C20 1,1-dichloroethene (1,1-DCE)
C21 trans-1,2-dichloroethene
C22 1,1-dichloroethane (1,1-DCA)
C23 1,2-dichloroethane (1,2-DCA)

E11 dichloromethane (methylene chloride)
E12 ethylbenzene
E13 naphthalene
E14 methyl tertiary butyl ether (MTBE)
E15 tetrachloroethene (PCE)
E16 toluene
E17 1,1,1-trichloroethane
E18 1,1,2-trichloroethane
E19 trichloroethene (TCE)
E20 trichloromethane (chloroform)
E21 vinyl chloride
E22 xylene

Chemical Mixture (if app.) =

C27 Gasoline
C28 Kerosene
C29 Diesel

E27 Fuel Oil
E28 Waste Oil

If compound is not listed then data must be entered into the site-specific field.

SITE SPECIFIC INFORMATION			Site-Specific	Value Used
Mole fraction	dimensionless	MF		0.0000
Temperature	K	T		293
Water concentration (chemical)	ug/l	C_w		0
Soil concentration (chemical)	mg/kg	C_t		0
Soil concentration (TPH/TRPH)	mg/kg	C_t		0
Soil gas concentration (measured	mg/m3 (ug/l)	$C_{sg}(m)$	5.9	5.9
Depth of contamination or Soil G	m	X	3.05	3.05

CHEMICAL PROPERTIES			Site Specific	Value Used
Henry's Law Constant	dimensionless	H		0.23
Vapor pressure	atm	VP		0.13
Molecular weight (chemical)	mg/mole	MW		78,110
Molecular weight (mixture)	mg/mole	MW(m)		#N/A
Universal gas constant	atm-m3/mole-K	R	XXXXXXXXX	8.20E-05
Diffusion coefficient in air	cm2/sec	D_a		0.088
Organic carbon partitioning coef.	cm3/gm	K_{oc}		62
SOIL PROPERTIES				
Total porosity	dimensionless	θ		0.3
Air-filled porosity	dimensionless	θ_a		0.2
Water-filled porosity	dimensionless	θ_w	XXXXXXXXX	0.1
Bulk density (dry)	gm/cc	r_b		1.8
Weight fraction of organic carbon	dimensionless	foc		0.01
BUILDING SPECIFICATIONS				
Floor area of building	m2	A		1
% of floor area that flux occurs	dimensionless			100%
Interior Height of building	m	R_h		2.44
Exchange rate of air	exchanges/hr	E		0.83
Slab Attenuation factor	dimensionless	S_b		0.1
OUTDOOR AIR COMPONENT				
Downwind contamination length	m	L		0
Wind speed	m/hr	u		16000
Height of building openings	m	h		2
EXPOSURE SCENARIO Default values are for Industrial Uses				
Body weight	kg	BW		70
Inhalation rate	m3/day	IR		20
Exposure duration	yrs	ED		25
Hours per day	hr/day			12
Days per week	days/week			5
Weeks per year	weeks/yr			50
HEALTH RISK FACTORS				
Reference dose	mg/kg-day	RfD		0.0086
Slope factor (potency)	1/(mg/kg-day)	SF		0.1

Case Name: Benzene (SV5-10)

Chemical: benzene

Variable Descriptions				Units
CALCULATION OF SOIL GAS CONCENTRATION				
A. SOURCE - Free Product/Soil>100mg/kg.				
Mole fraction	MF	=	0.00E+00	dimensionless
Molecular weight	MW	=	7.81E+04	mg/mole
Vapor pressure	VP	=	1.30E-01	atm
Universal gas constant	R	=	8.20E-05	atm-m3/mole-K
Temperature	T	=	2.93E+02	K
Calculated soil gas concentration	**C_{sg}(fp)**	=	**0.00E+00**	**mg/m3**
B. SOURCE - Groundwater				
Water contamination level	C_w	=	0.00E+00	ug/l
Henry's Law Constant	H	=	2.30E-01	dimensionless
Calculated soil gas concentration	**C_{sg}(gw)**	=	**0.00E+00**	**mg/m3**
C. SOURCE - Soil < 100 mg/kg				
Soil contamination level	C_t	=	0.00E+00	mg/kg
Henry's Law Constant	H	=	2.30E-01	dimensionless
Bulk density (dry)	ρ_b	=	1.80E+00	gm/cc
Air-filled porosity	θ_a	=	2.00E-01	dimensionless
Water-filled porosity	θ_w	=	1.00E-01	dimensionless
Soil/water distribution coef.	K_d	=	6.20E-01	cm3/gm
Calculated soil gas concentration	**C_{sg}(s)**	=	**0.00E+00**	**mg/m3**
D. SOURCE - Measured Soil Gas				
Measured soil gas concentration	**C_{sg}(m)**	=	**5.90E+00**	**mg/m3 (ug/l)**

E. SOIL GAS CONCENTRATION USED IN RISK CALCULATIONS >>>> 5.90E+00 mg/m3

DIFFUSIVE TRANSPORT UPWARD IN UNSATURATED ZONE				
Total porosity	θ	=	3.00E-01	dimensionless
Air-filled porosity	θ_a	=	2.00E-01	dimensionless
Diffusion coefficient in air	D_a	=	8.80E-02	cm2/sec
Effective diffusion coefficient	**D_e**	=	**4.60E-03**	cm2/sec
Depth of contamination or Csg	X	=	3.05E+00	m
Calculated Flux	**F_x**	=	**3.20E-03**	**mg/m2-hour**

Case Name: Benzene (SV5-10)

CALCULATING VAPOR CONCENTRATION IN BUILDING

A. INDOOR AIR COMPONENT

Floor area of building	A	=	1.00E+00	m2
% of floor area that flux occurs			1.00E+00	dimensionless
Slab Attenuation factor	S_b	=	1.00E-01	dimensionless
Flux area within building	Af	=	**1.00E-01**	m2
Interior Height of building	R_h	=	2.44E+00	m
Volume of building	V	=	**2.44E+00**	m3
Exchange rate of air	E	=	8.30E-01	exchanges/hr
Ventilation rate	Q	=	**2.03E+00**	m3/hr
Indoor air component	**C_i**	=	**1.58E-04**	**mg/m3**

B. OUTDOOR AIR COMPONENT

Downwind contamination length	L	=	0.00E+00	m
Wind speed	u	=	1.60E+04	m/hr
Height of building openings (or height of breathing zone)	h	=	2.00E+00	m
Outdoor air component	**C_o**	=	**0.00E+00**	**mg/m3**

C. TOTAL INDOOR AIR CONCENTRATION

C_t = **1.58E-04** **mg/m3**

EXPOSURE SCENARIO

Body weight	BW	=	7.00E+01	kg
Inhalation rate	IR	=	2.00E+01	m3/day
Exposure duration	ED	=	2.50E+01	yrs
Hours per day	conversion		1.20E+01	hr/day
Exposure time	ET	=	**5.00E-01**	hr/24 hours
Days per week	conversion		5.00E+00	days/week
Weeks per year	conversion		5.00E+01	weeks/yr
Exposure frequency	EF	=	**2.50E+02**	days/yr
Averaging Time (carc. risk)	AT	=	2.56E+04	days
Averaging Time (non-carc. risk)	AT	=	**9.13E+03**	days
Chemical Intake (carc. risk)	**IT_c**	=	**5.53E-06**	**mg/kg-day**
Chemical Intake (non-carc. risk)	**IT_{nc}**	=	**1.55E-05**	**mg/kg-day**

NON-CARCINOGENIC RISK (Chronic Risk)

Chemical Intake (non-carc. risk)	IT_{nc}	=	1.55E-05	mg/kg-day
Reference dose	RfD	=	8.60E-03	mg/kg-day
Hazard Index	**HI**	=	**1.80E-03**	

CARCINOGENIC RISK

Chemical Intake (carc. risk)	IT_c	=	5.53E-06	mg/kg-day
Slope factor (potency)	SF	=	1.00E-01	1/(mg/kg-day)
Cancer Risk	**Risk**	=	**5.53E-07**	

Input Data

Version: November 1999

Revised 07/29/2010

Case Name:

Ethylbenzene (SV5-10)

CHEMICAL OF CONCERN:

Enter Chemical Name = ethylbenzene

C11	benzene	**E11**	dichloromethane (methylene chloride)
C12	benzo(a)pyrene	**E12**	ethylbenzene
C13	carbon tetrachloride	**E13**	naphthalene
C14	chlorobenzene	**E14**	methyl tertiary butyl ether (MTBE)
C15	chloroethane (ethyl chloride)	**E15**	tetrachloroethene (PCE)
C16	chloromethane (methyl chloride)	**E16**	toluene
C17	1,2-dichlorobenzene	**E17**	1,1,1-trichloroethane
C18	1,3-dichlorobenzene	**E18**	1,1,2-trichloroethane
C19	1,4-dichlorobenzene	**E19**	trichloroethene (TCE)
C20	1,1-dichloroethene (1,1-DCE)	**E20**	trichloromethane (chloroform)
C21	trans-1,2-dichloroethene	**E21**	vinyl chloride
C22	1,1-dichloroethane (1,1-DCA)	**E22**	xylene
C23	1,2-dichloroethane (1,2-DCA)		

Chemical Mixture (if app.) =

C27	Gasoline	**E27**	Fuel Oil
C28	Kerosene	**E28**	Waste Oil
C29	Diesel		

If compound is not listed then data must be entered into the site-specific field.

SITE SPECIFIC INFORMATION			Site-Specific	Value Used
Mole fraction	dimensionless	MF		0.0000
Temperature	K	T		293
Water concentration (chemical)	ug/l	C_w		0
Soil concentration (chemical)	mg/kg	C_t		0
Soil concentration (TPH/TRPH)	mg/kg	C_t		0
Soil gas concentration (measured	mg/m3 (ug/l)	C_{sg}(m)	38	38
Depth of contamination or Soil G	m	X	3.04	3.04

CHEMICAL PROPERTIES			Site Specific	Value Used
Henry's Law Constant	dimensionless	H		0.32
Vapor pressure	atm	VP		0.015
Molecular weight (chemical)	mg/mole	MW		106,000
Molecular weight (mixture)	mg/mole	MW(m)		#N/A
Universal gas constant	atm-m3/mole-K	R	XXXXXXXXX	8.20E-05
Diffusion coefficient in air	cm2/sec	D_a		0.075
Organic carbon partitioning coef.	cm3/gm	K_{oc}		200
SOIL PROPERTIES				
Total porosity	dimensionless	θ		0.3
Air-filled porosity	dimensionless	θ_a		0.2
Water-filled porosity	dimensionless	θ_w	XXXXXXXXX	0.1
Bulk density (dry)	gm/cc	r_b		1.8
Weight fraction of organic carbon	dimensionless	foc		0.01
BUILDING SPECIFICATIONS				
Floor area of building	m2	A		1
% of floor area that flux occurs	dimensionless			100%
Interior Height of building	m	R_h		2.44
Exchange rate of air	exchanges/hr	E		0.83
Slab Attenuation factor	dimensionless	S_b		0.1
OUTDOOR AIR COMPONENT				
Downwind contamination length	m	L		0
Wind speed	m/hr	u		16000
Height of building openings	m	h		2
EXPOSURE SCENARIO Default values are for Industrial Uses				
Body weight	kg	BW		70
Inhalation rate	m3/day	IR		20
Exposure duration	yrs	ED		25
Hours per day	hr/day			12
Days per week	days/week			5
Weeks per year	weeks/yr			50
HEALTH RISK FACTORS				
Reference dose	mg/kg-day	RfD		0.29
Slope factor (potency)	1/(mg/kg-day)	SF		0.0087

Case Name: Ethylbenzene (SV5-10)

Chemical: ethylbenzene

Variable Descriptions				Units
CALCULATION OF SOIL GAS CONCENTRATION				
A. SOURCE - Free Product/Soil>100mg/kg.				
Mole fraction	MF	=	0.00E+00	dimensionless
Molecular weight	MW	=	1.06E+05	mg/mole
Vapor pressure	VP	=	1.50E-02	atm
Universal gas constant	R	=	8.20E-05	atm-m3/mole-K
Temperature	T	=	2.93E+02	K
Calculated soil gas concentration	**C_{sg}(fp)**	=	**0.00E+00**	**mg/m3**
B. SOURCE - Groundwater				
Water contamination level	C_w	=	0.00E+00	ug/l
Henry's Law Constant	H	=	3.20E-01	dimensionless
Calculated soil gas concentration	**C_{sg}(gw)**	=	**0.00E+00**	**mg/m3**
C. SOURCE - Soil < 100 mg/kg				
Soil contamination level	C_t	=	0.00E+00	mg/kg
Henry's Law Constant	H	=	3.20E-01	dimensionless
Bulk density (dry)	ρ_b	=	1.80E+00	gm/cc
Air-filled porosity	θ_a	=	2.00E-01	dimensionless
Water-filled porosity	θ_w	=	1.00E-01	dimensionless
Soil/water distribution coef.	K_d	=	2.00E+00	cm3/gm
Calculated soil gas concentration	**C_{sg}(s)**	=	**0.00E+00**	**mg/m3**
D. SOURCE - Measured Soil Gas				
Measured soil gas concentration	**C_{sg}(m)**	=	**3.80E+01**	**mg/m3 (ug/l)**

E. SOIL GAS CONCENTRATION USED IN RISK CALCULATIONS >>>> 3.80E+01 mg/m3

DIFFUSIVE TRANSPORT UPWARD IN UNSATURATED ZONE				
Total porosity	θ	=	3.00E-01	dimensionless
Air-filled porosity	θ_a	=	2.00E-01	dimensionless
Diffusion coefficient in air	D_a	=	7.50E-02	cm2/sec
Effective diffusion coefficient	**D_e**	=	**3.92E-03**	cm2/sec
Depth of contamination or Csg	X	=	3.04E+00	m
Calculated Flux	**F_x**	=	**1.76E-02**	**mg/m2-hour**

Case Name: Ethylbenzene (SV5-10)

CALCULATING VAPOR CONCENTRATION IN BUILDING

A. INDOOR AIR COMPONENT

Floor area of building	A	=	1.00E+00	m2
% of floor area that flux occurs			1.00E+00	dimensionless
Slab Attenuation factor	S_b	=	1.00E-01	dimensionless
Flux area within building	Af	=	**1.00E-01**	m2
Interior Height of building	R_h	=	2.44E+00	m
Volume of building	V	=	**2.44E+00**	m3
Exchange rate of air	E	=	8.30E-01	exchanges/hr
Ventilation rate	Q	=	**2.03E+00**	m3/hr
Indoor air component	**C_i**	=	**8.71E-04**	**mg/m3**

B. OUTDOOR AIR COMPONENT

Downwind contamination length	L	=	0.00E+00	m
Wind speed	u	=	1.60E+04	m/hr
Height of building openings (or height of breathing zone)	h	=	2.00E+00	m
Outdoor air component	**C_o**	=	**0.00E+00**	**mg/m3**

C. TOTAL INDOOR AIR CONCENTRATION

C_t = **8.71E-04** **mg/m3**

EXPOSURE SCENARIO

Body weight	BW	=	7.00E+01	kg
Inhalation rate	IR	=	2.00E+01	m3/day
Exposure duration	ED	=	2.50E+01	yrs
Hours per day	conversion		1.20E+01	hr/day
Exposure time	ET	=	**5.00E-01**	hr/24 hours
Days per week	conversion		5.00E+00	days/week
Weeks per year	conversion		5.00E+01	weeks/yr
Exposure frequency	EF	=	**2.50E+02**	days/yr
Averaging Time (carc. risk)	AT	=	2.56E+04	days
Averaging Time (non-carc. risk)	AT	=	**9.13E+03**	days
Chemical Intake (carc. risk)	**IT_c**	=	**3.04E-05**	**mg/kg-day**
Chemical Intake (non-carc. risk)	**IT_{nc}**	=	**8.52E-05**	**mg/kg-day**

NON-CARCINOGENIC RISK (Chronic Risk)

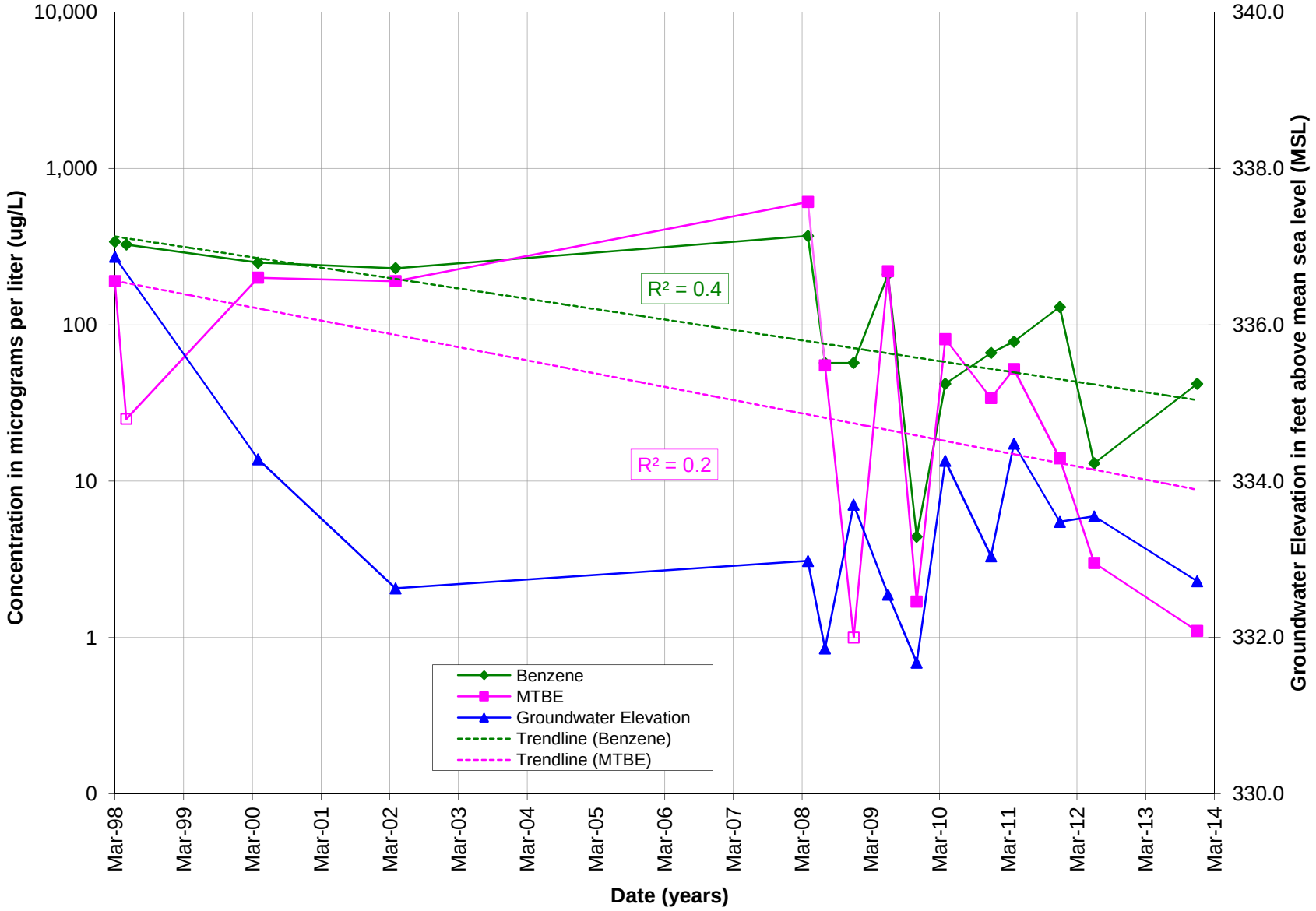
Chemical Intake (non-carc. risk)	IT_{nc}	=	8.52E-05	mg/kg-day
Reference dose	RfD	=	2.90E-01	mg/kg-day
Hazard Index	**HI**	=	**2.94E-04**	

CARCINOGENIC RISK

Chemical Intake (carc. risk)	IT_c	=	3.04E-05	mg/kg-day
Slope factor (potency)	SF	=	8.70E-03	1/(mg/kg-day)
Cancer Risk	**Risk**	=	**2.65E-07**	

APPENDIX D
HYDROGRAPHS

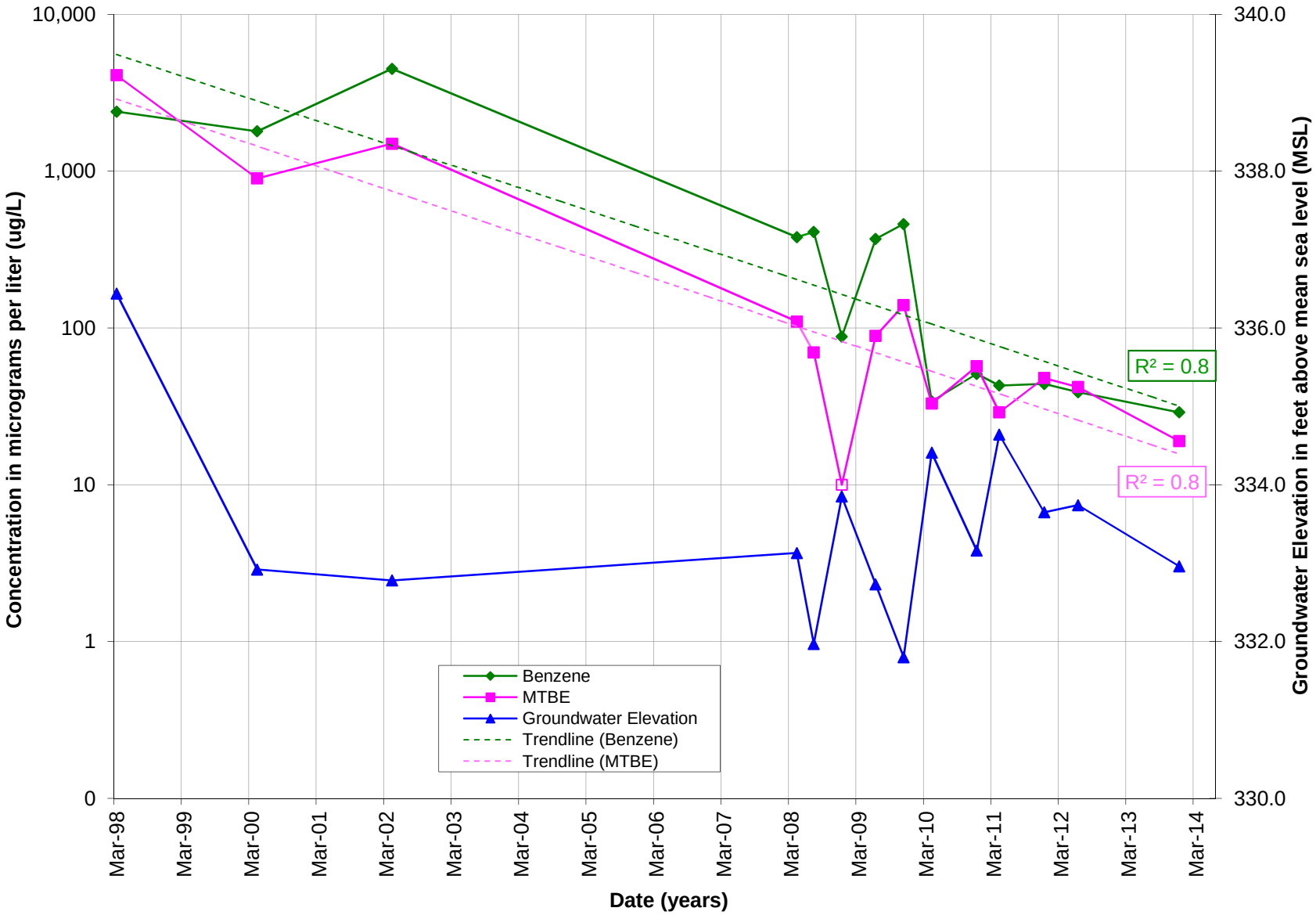
MW-1
Benzene and MTBE Concentrations and Groundwater Elevation versus Time
Wigington Petroleum
11427 Woodside Avenue, Santee, California



SCS ENGINEERS

Hollow points represent half of the detection limit

MW-4
Benzene and MTBE Concentrations and Groundwater Elevation versus Time
Wigington Petroleum
11427 Woodside Avenue, Santee, California



SCS ENGINEERS

Hollow points represent half of the detection limit

MW-6
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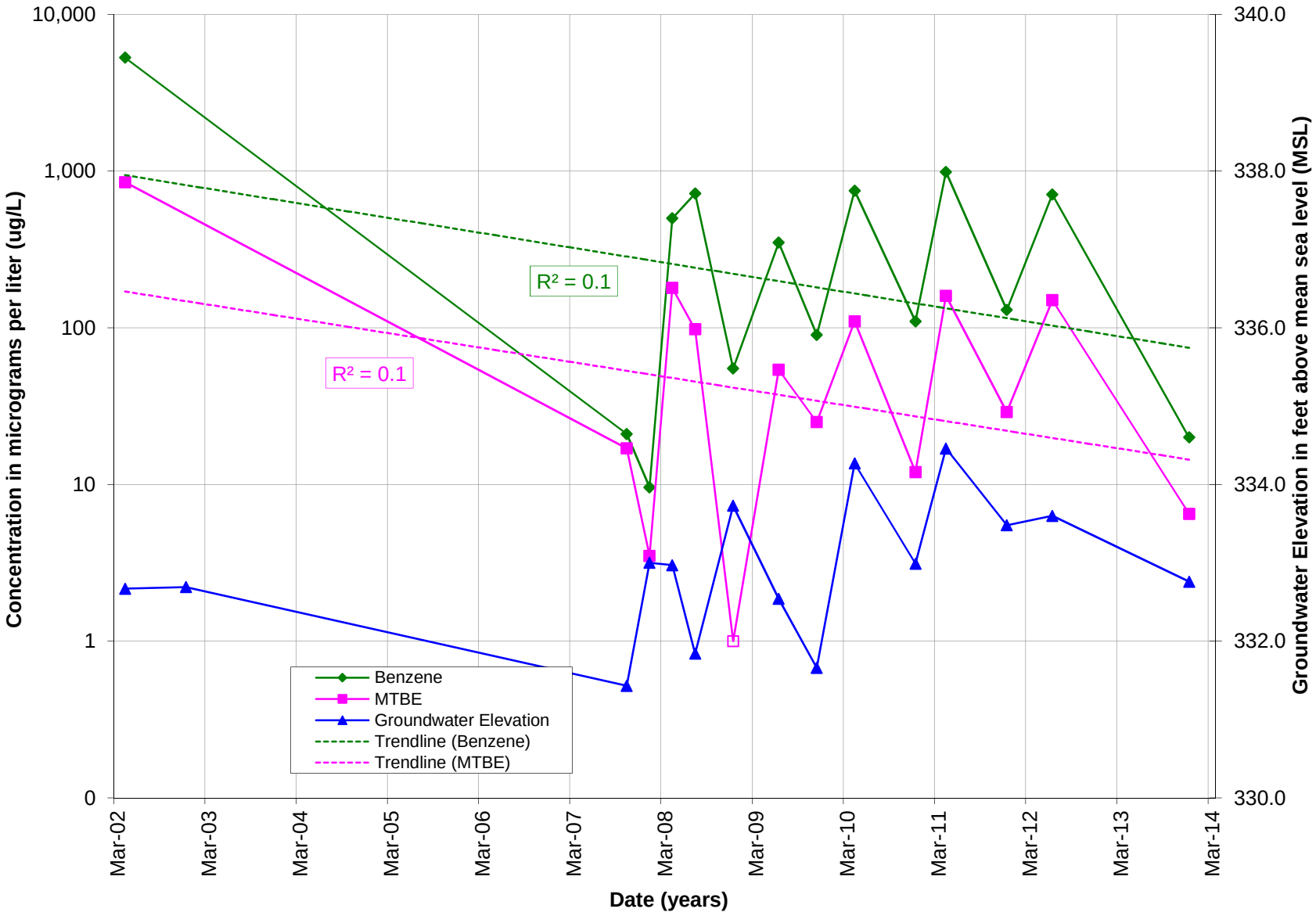
11427 Woodside Avenue, Santee, California



SCS ENGINEERS

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MW-7
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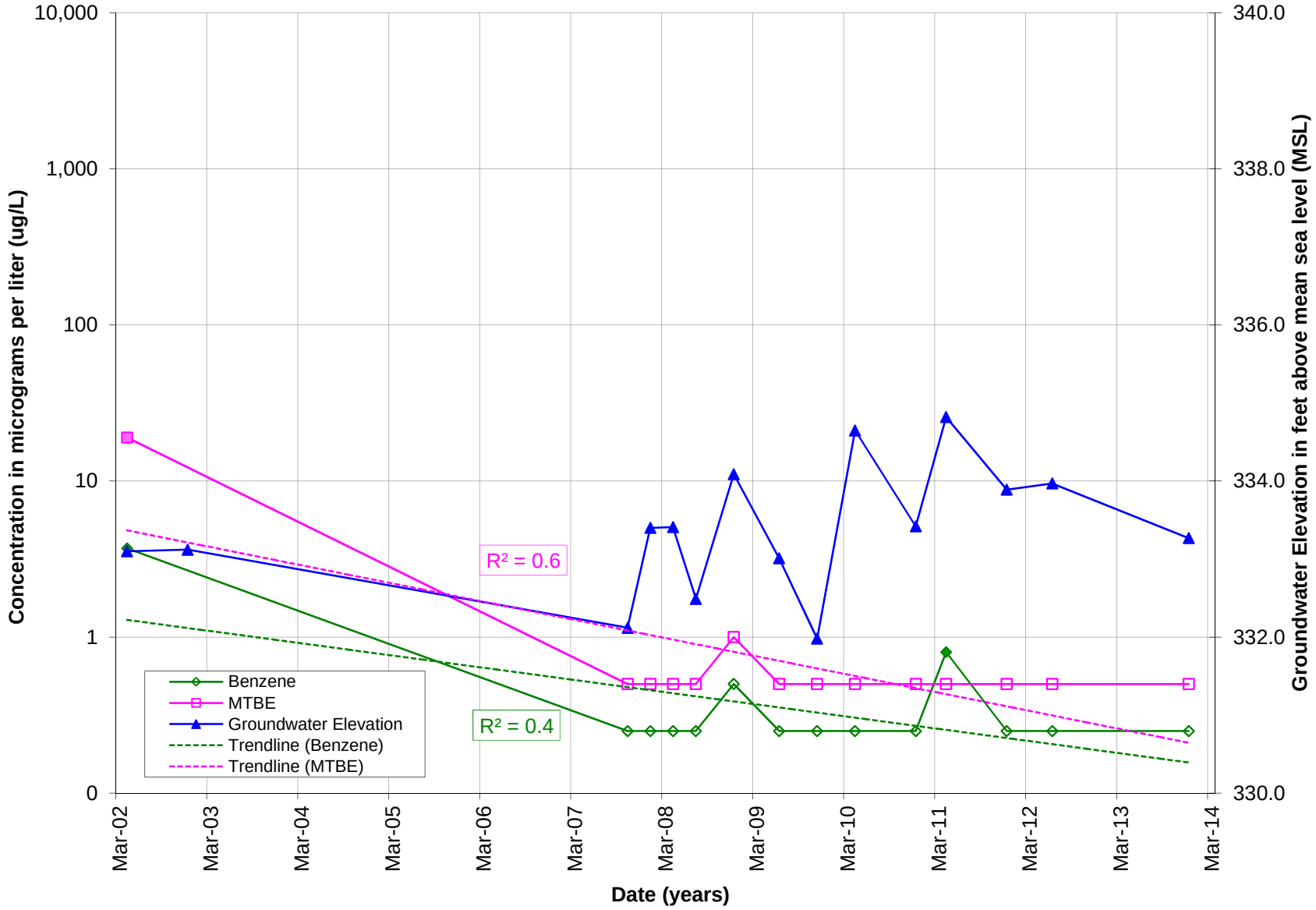
Wigington Petroleum
11427 Woodside Avenue, Santee, California



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MW-8
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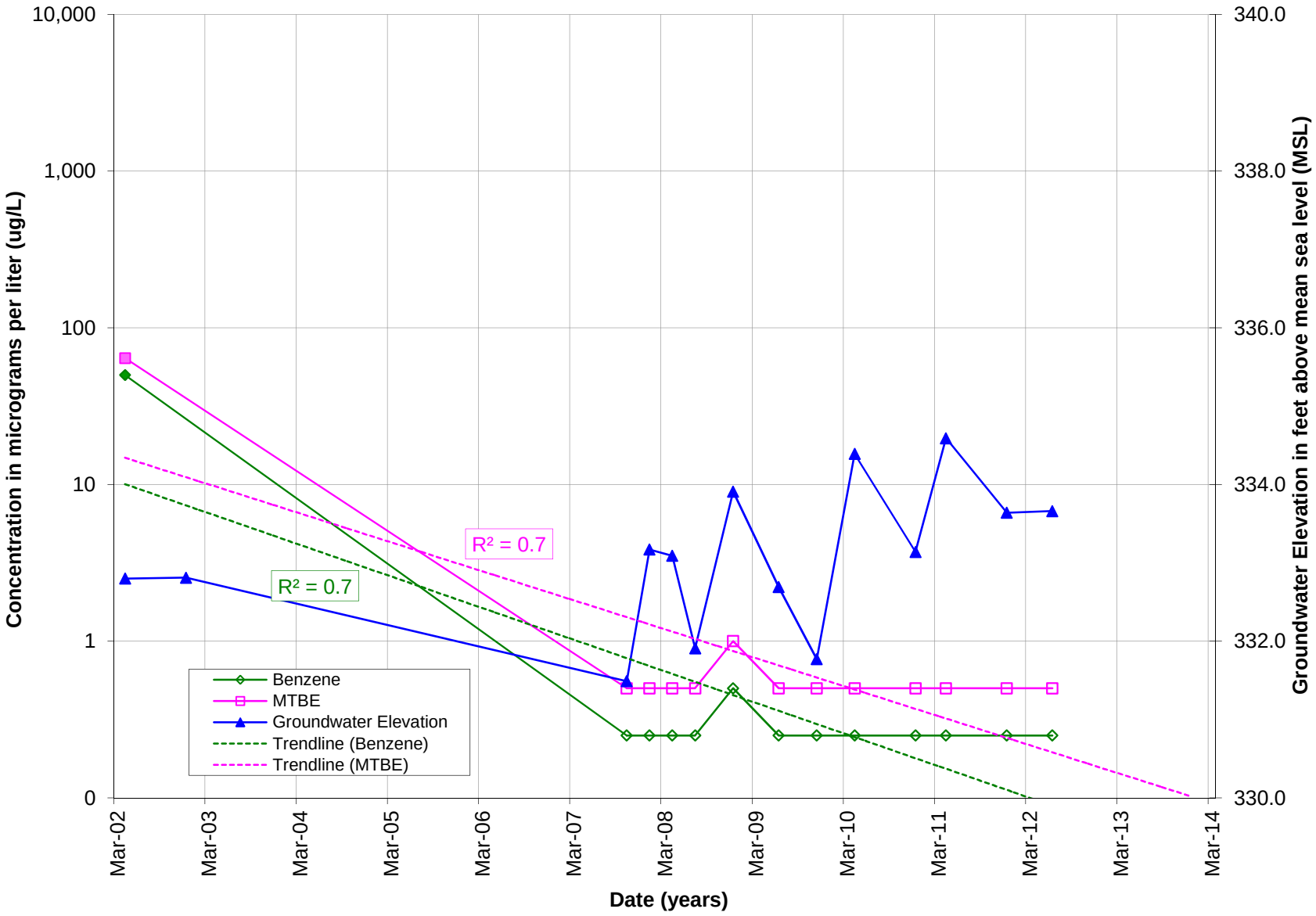
Wigington Petroleum
11427 Woodside Avenue, Santee, California



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MW-9
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Wigington Petroleum
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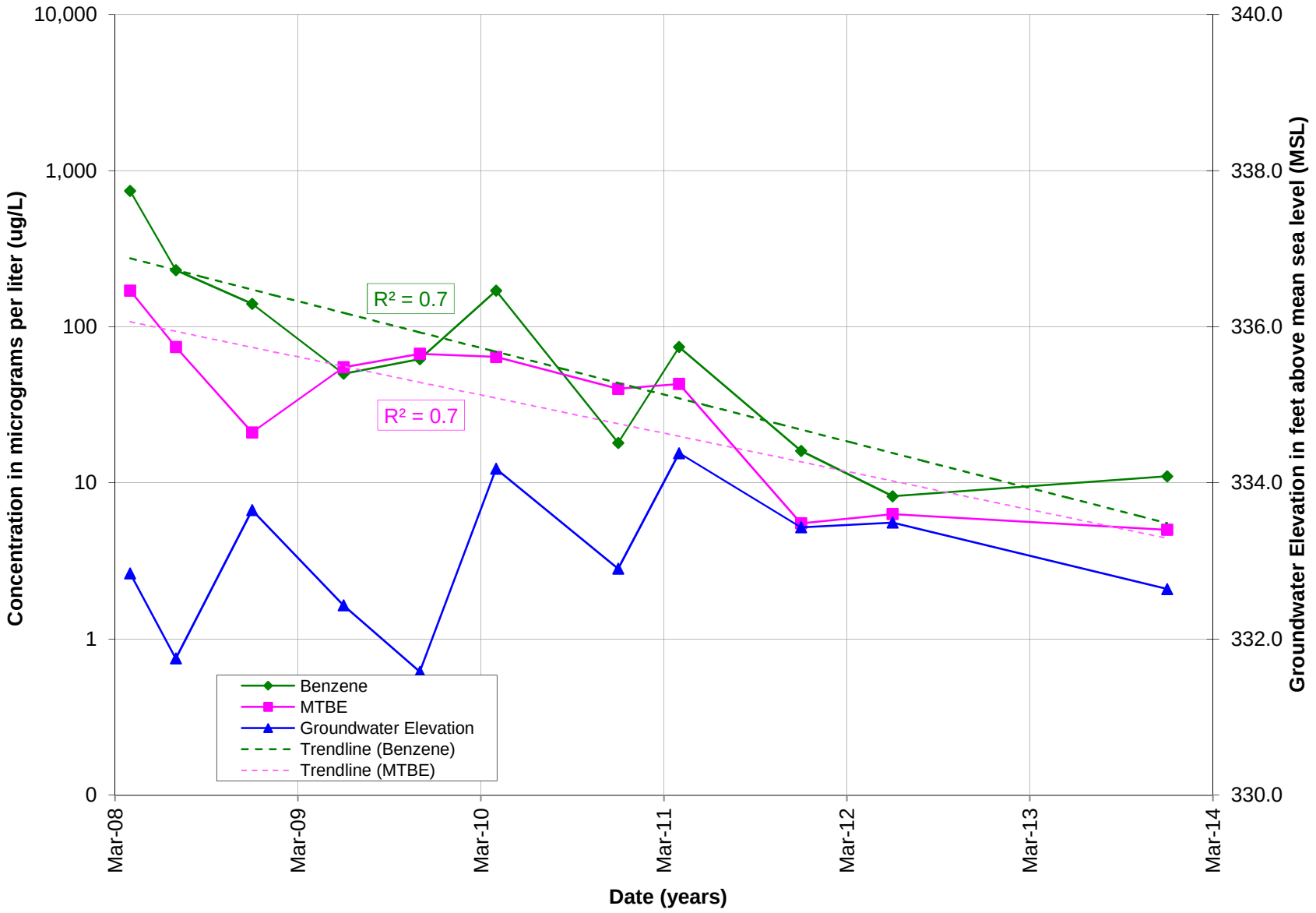

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Hollow points represent half of the detection limit

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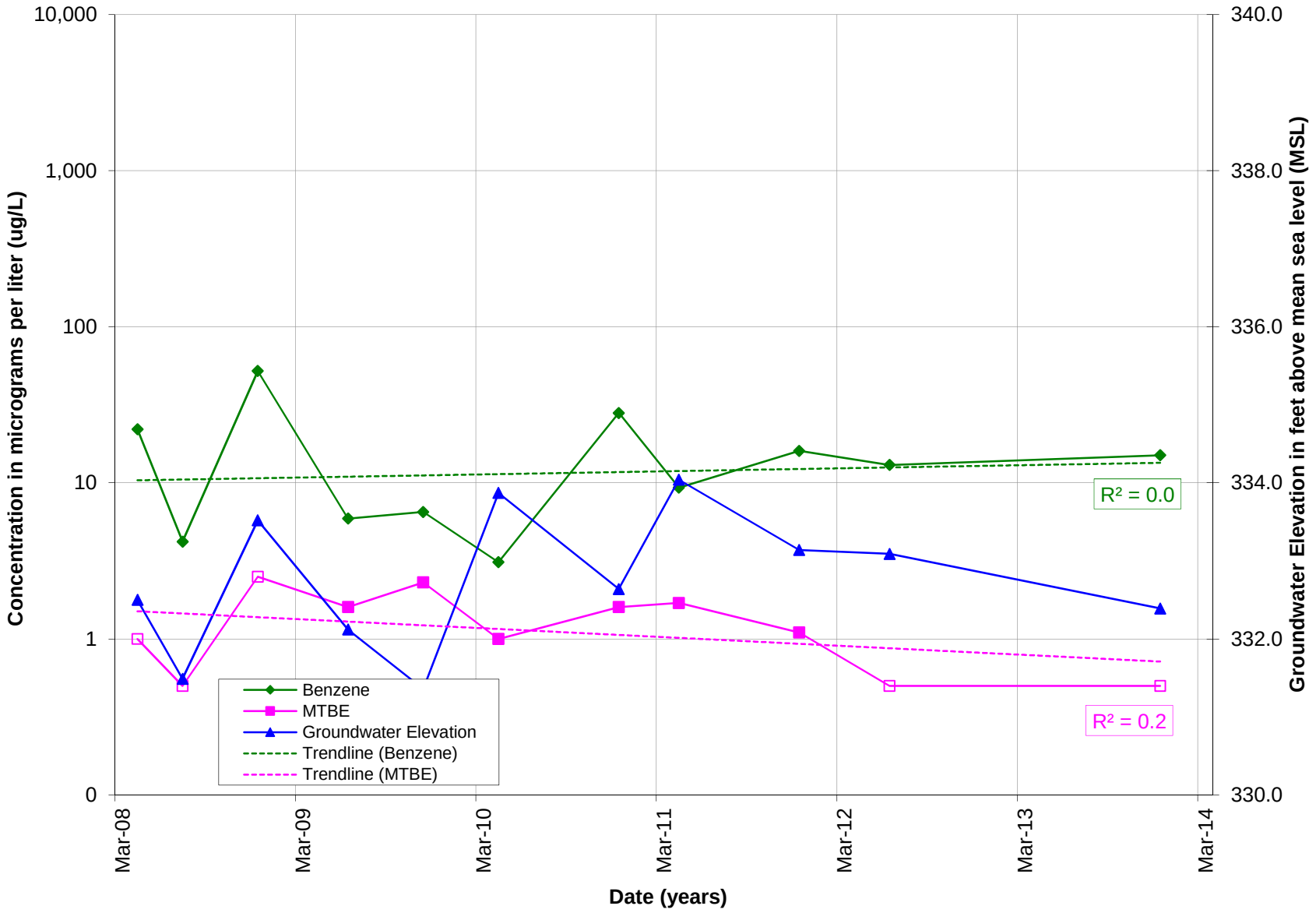
Wigington Petroleum
11427 Woodside Avenue, Santee, California



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Hollow points represent half of the detection limit

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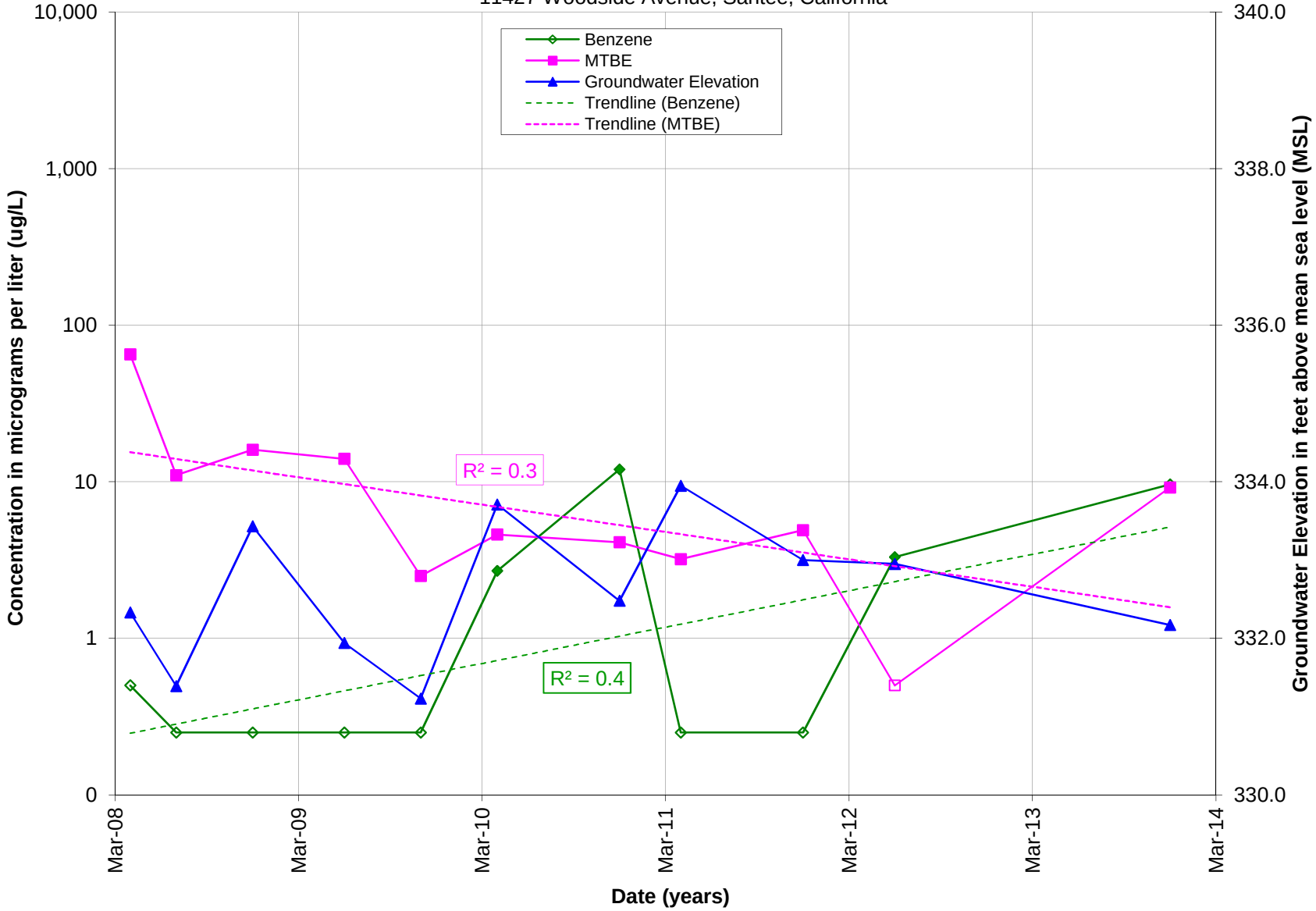
Wigington Petroleum
11427 Woodside Avenue, Santee, California



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Hollow points represent half of the detection limit

MW-14
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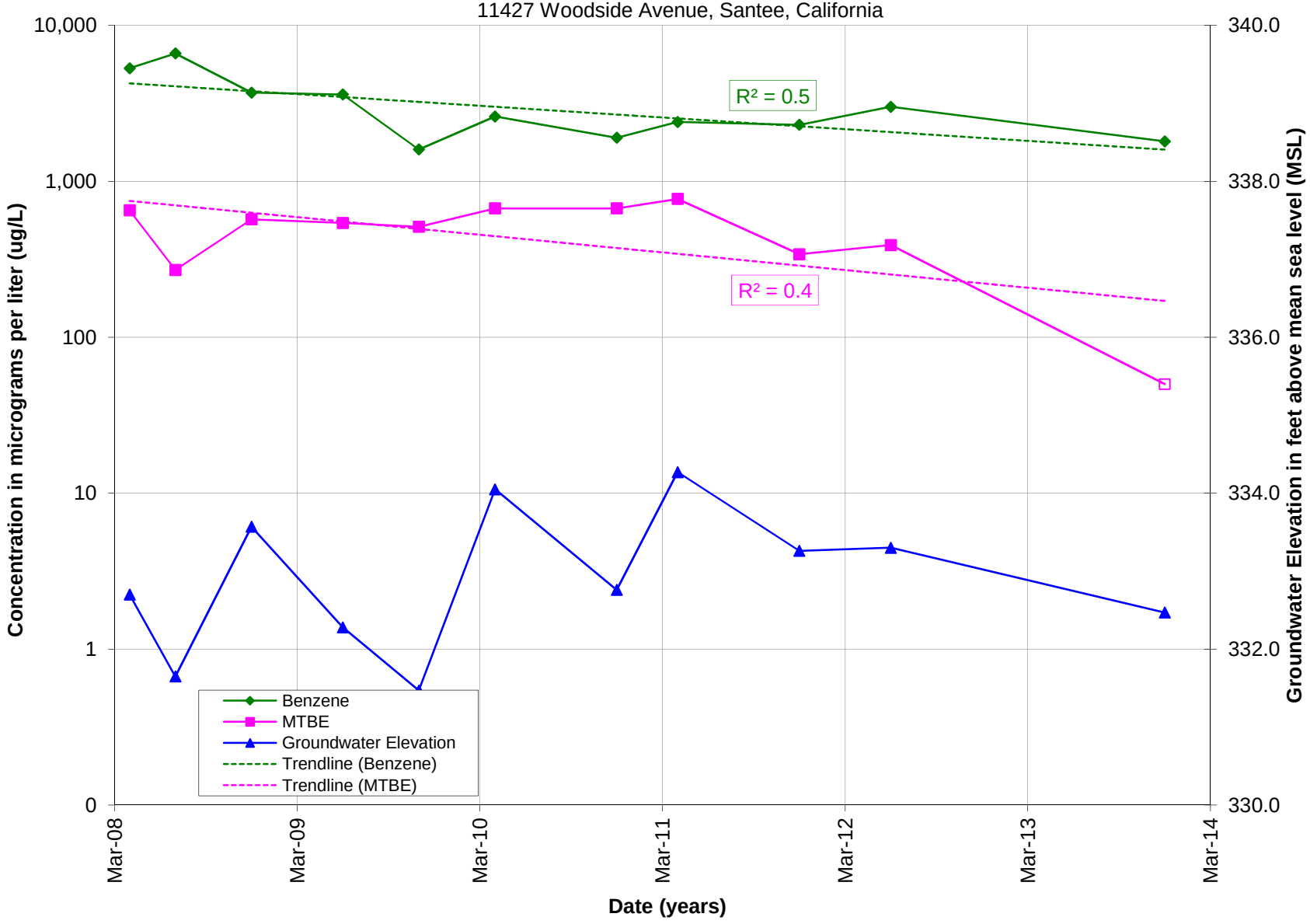
Wigington Petroleum
11427 Woodside Avenue, Santee, California



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MW-15
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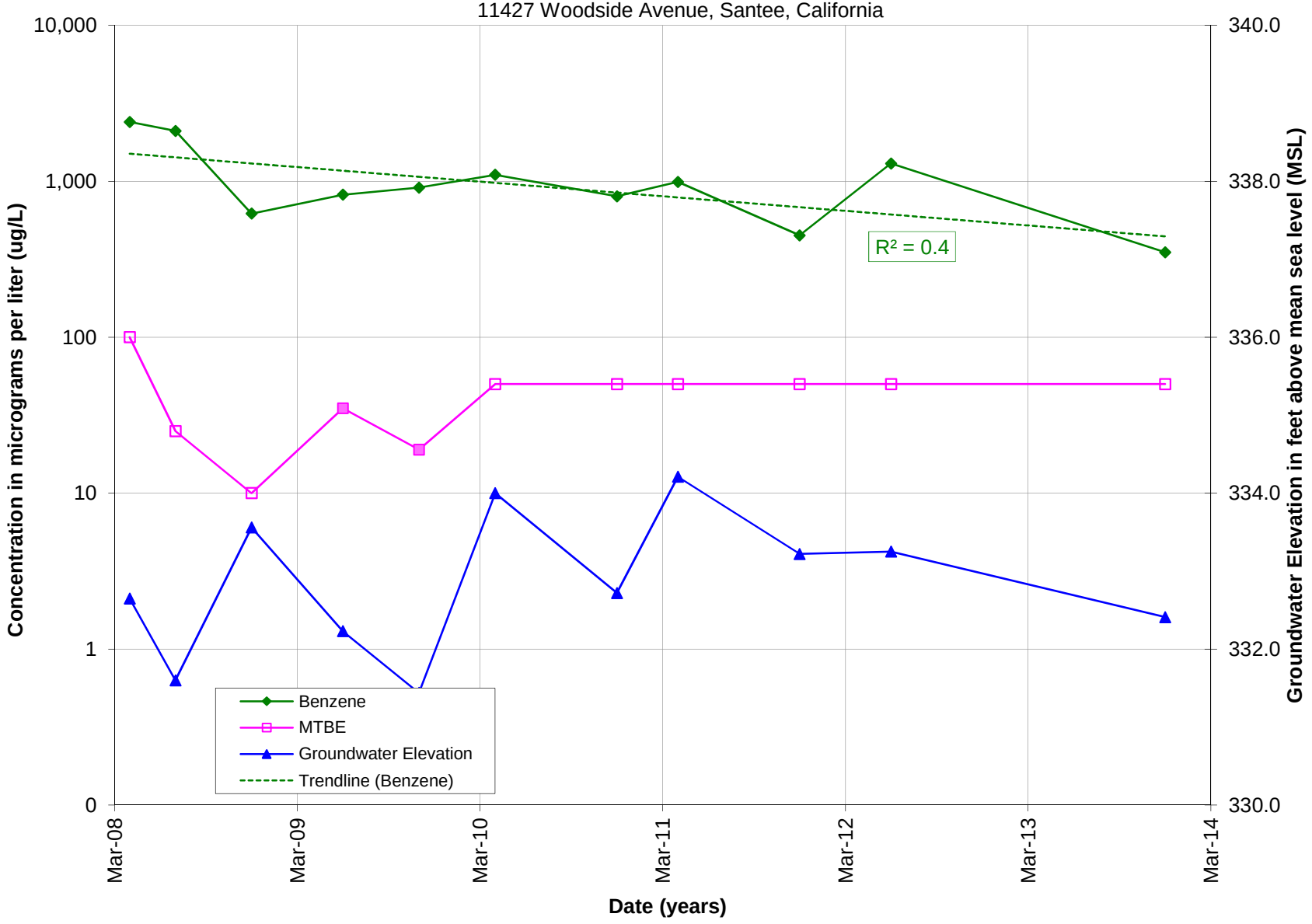
Wigington Petroleum
11427 Woodside Avenue, Santee, California



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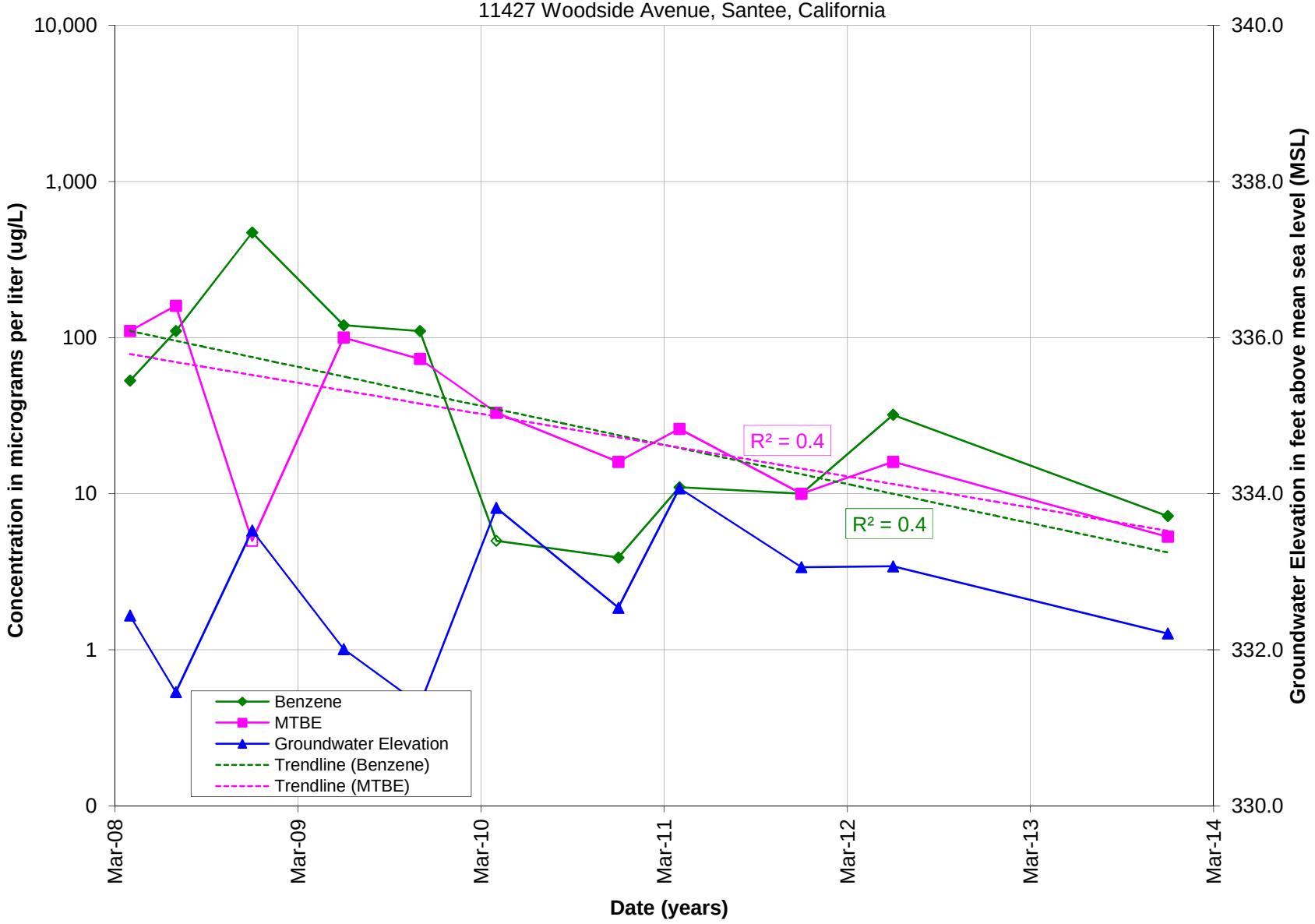
Wigington Petroleum
11427 Woodside Avenue, Santee, California



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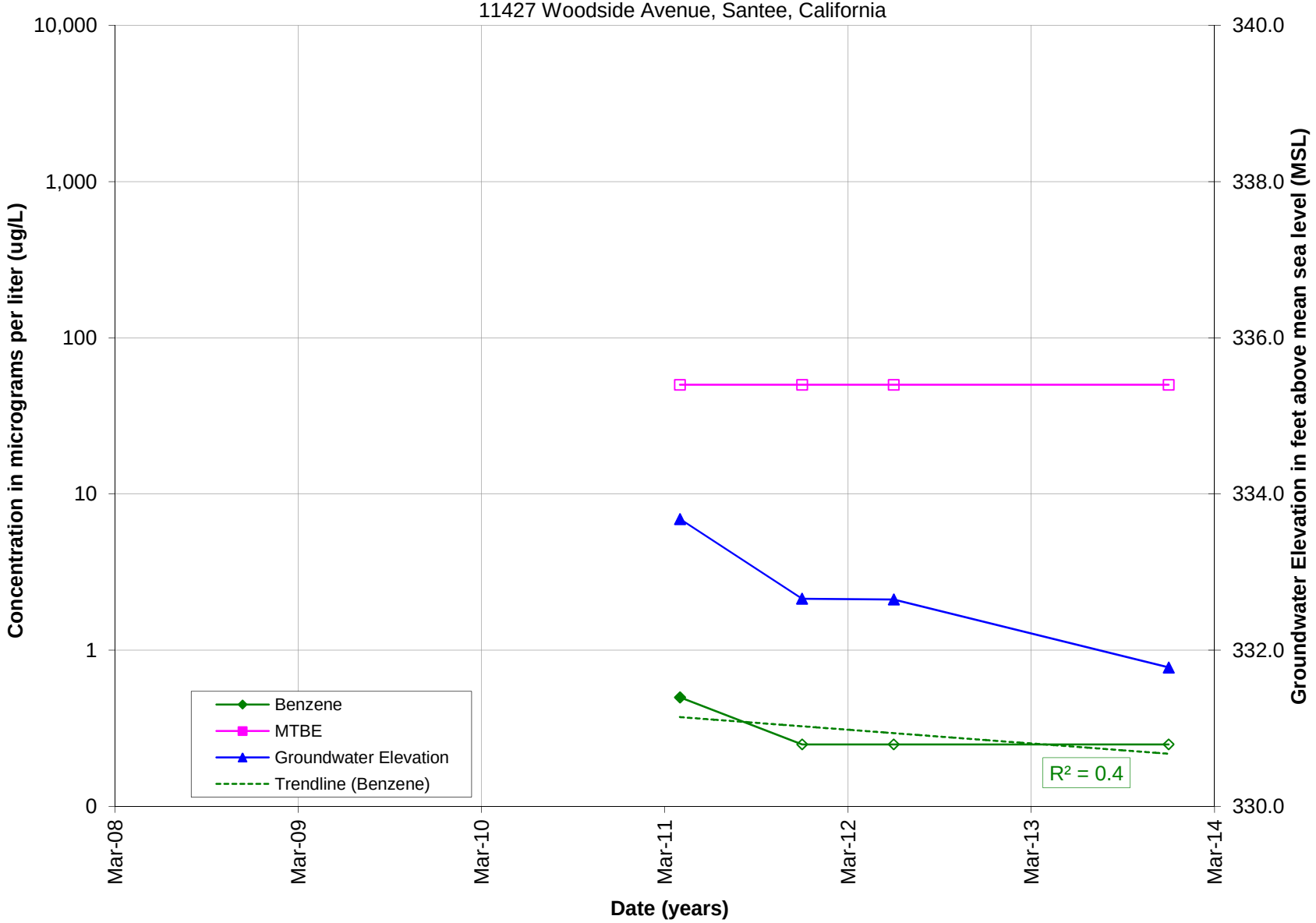
Wigington Petroleum
11427 Woodside Avenue, Santee, California



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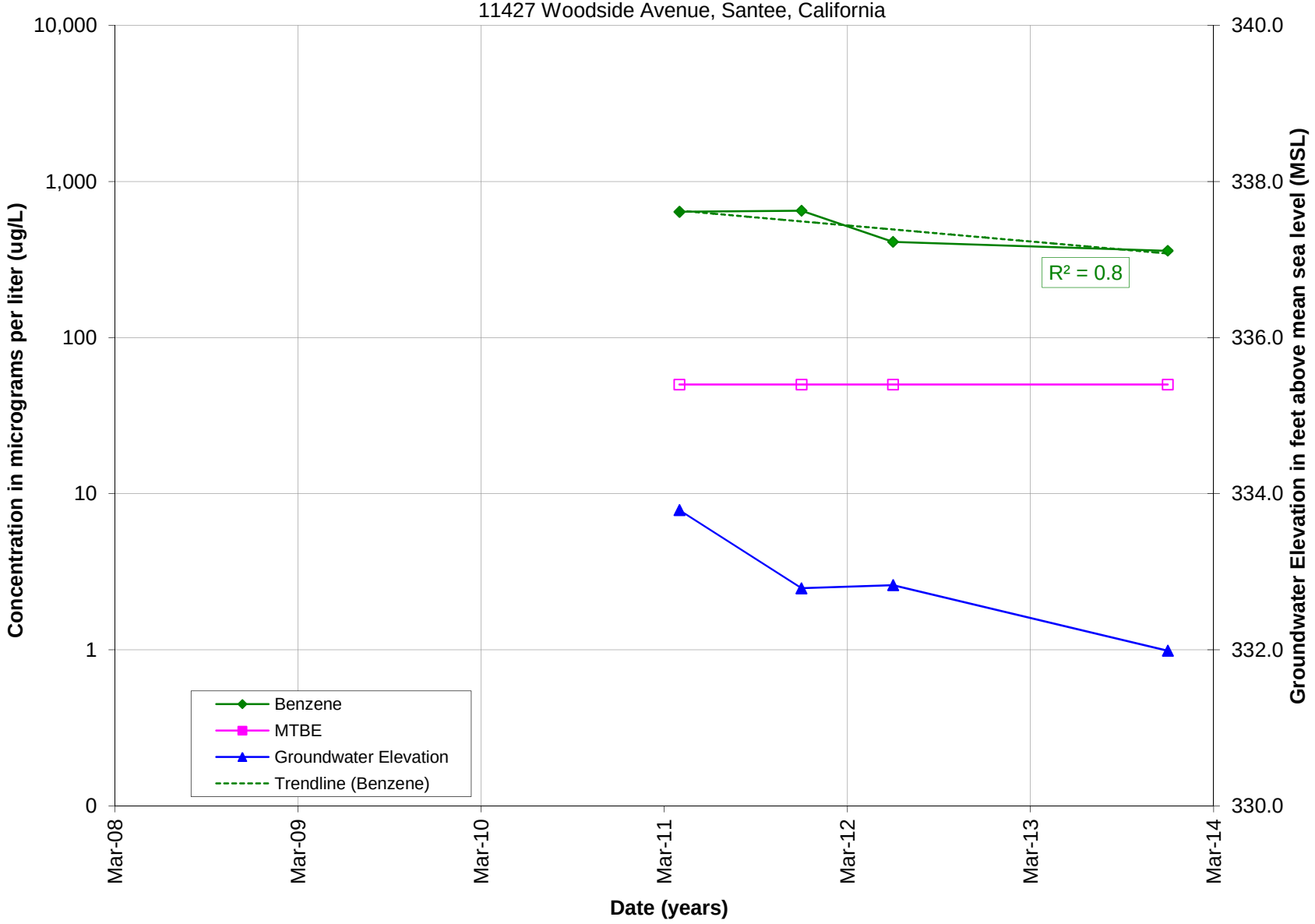
Benzene and MTBE Concentrations and Groundwater Elevation versus Time
Wigington Petroleum
11427 Woodside Avenue, Santee, California



SCS ENGINEERS

Hollow points represent half of the detection limit

SCS ENGINEERS

Groundwater Monitoring Report Third and Fourth Quarter 2015 and Request for Closure

11427 Woodside Avenue

Santee, California

(DEH CASE #H19469-001)

Presented to:

Mr. James Clay
County of San Diego
Department of Environmental Health
P.O. Box 129261
San Diego, California 92112-9261

Presented by:

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(858) 571-5500

March 17, 2016
Project Number: 01208473.00

Offices Nationwide
www.scsengineers.com

March 17, 2016
Project No. 01208473.00

Mr. James Clay
County of San Diego
Department of Environmental Health
P.O. Box 129261
San Diego, California 92112-9261

Subject: **Groundwater Monitoring and Sampling Report, Third and Fourth Quarter 2015, and Request for Closure**
DEH File Number: H19469-001

Site: **11427 Woodside Avenue**
Santee, California

Dear Mr. Clay:

SCS Engineers (SCS) is pleased to present this report (Report) of the groundwater monitoring and sampling activities (Assessment) at the above-referenced Site (Figures 1 and 2). This Assessment was conducted in accordance with the guidelines set forth by the County of San Diego Department of Environmental Health (DEH), Site Assessment and Mitigation Program (SAM), Scope of Service Change 6 (SSC6) to Exhibit 00, and the Contract between SCS and Wigington Oil, Inc. (Client), fully executed on March 30, 2009.

Should you have any questions regarding this Report, please do not hesitate to call the undersigned at (858) 571-5500.

Sincerely,

Alissa Barrow, EIT
Staff Professional
SCS ENGINEERS

Charles E. Houser, CHg 945
Project Manager
SCS ENGINEERS

Anthony J. Maggio, PG, CHg
San Diego Office Manager
SCS ENGINEERS

cc: Ms. Linda Wigington, c/o William Fischbeck, Esq.
State UST Cleanup Fund via upload to State Geotracker website

AB

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1 BACKGROUND

The Site is located at 11427 Woodside Avenue in the City of Santee, San Diego County, California (Site; Figure 1). The Site is currently occupied by a commercial fuel and oil facility (Figure 2). Between 1987 and 1998, 13 underground storage tanks (USTs) were reportedly removed from the Site. Analysis of soil samples collected during the UST removals indicated that a release of petroleum hydrocarbons had occurred from the UST system. The County of San Diego, Department of Environmental Health (DEH), Hazardous Materials Management Division (HMMD) directed that corrective measures be taken regarding the release.

A summary of the previous environmental assessments conducted at the Site follows:

- EnecoTech Southwest, Inc. (EnecoTech) conducted assessment activities at the Site between 1988 and 2005. A total of 18 borings and 7 groundwater monitoring wells (MW-1 through MW-4 and MW-6 through MW-8) were drilled and sampled by EnecoTech. An existing 12-inch diameter concrete water production well inside the Site building was labeled MW-5 and was also sampled during the monitoring events in March 1998 and April 2002.

- In 1988, EnecoTech reported that four USTs were removed from the Site. A Site assessment was performed immediately following the tank removal activities, during which 11 soil borings were drilled and sampled and 4 of the borings were completed as groundwater monitoring wells (MW-1 through MW-4).

- On August 19, 1993, the HMMD issued a Notice of Violation to El Capitan Oil Co. requiring corrective action relative to the release. The DEH Site Assessment and Mitigation Program (SAM) reportedly assumed oversight responsibility of the UST assessment and mitigation in mid-1993.

- EnecoTech reported that single-walled product piping was removed from the Site in October 1997.

- In April 1998, samples collected by EnecoTech from the areas where nine USTs were reportedly removed from the Site indicated a release of petroleum hydrocarbons.

- On March 14, 2000, EnecoTech produced a workplan titled *Work Plan for Environmental Services*, which proposed the installation of two additional groundwater monitoring wells. SAM reportedly directed that four groundwater monitoring wells be installed in a letter dated May 8, 2000. EnecoTech installed two groundwater monitoring wells (MW-6 and MW-7) on February 26, 2001, and one groundwater monitoring well (MW-8) on April 19, 2002.

- Based on the results of EnecoTech's Site assessment activities, groundwater beneath the Site was interpreted to have been impacted by petroleum hydrocarbons from on-Site releases.

- On March 25, 2005, EnecoTech submitted a workplan for additional Site assessment, which proposed the installation of nine additional groundwater monitoring wells both on and off Site.

- In 2006, Petra Geotechnical Inc. (Petra) was retained to conduct the Site assessment work. The SAM Program approved EnecoTech's workplan in a letter, dated October 10, 2007. Petra proposed one well to be installed in addition to the nine wells proposed by EnecoTech. The SAM Program agreed that an additional well was needed and requested a revised workplan. Petra submitted an addendum to the revised workplan, dated December 21, 2007, to include the installation of a 10th groundwater monitoring well. SAM approved the revised workplan in a letter, dated January 15, 2008.

- On October 25, 2007, Petra assessed that phase-separated hydrocarbons (PSH) were present in monitoring wells MW-2, MW-3, and MW-4. Petra submitted a workplan to SAM titled *Workplan for High Vacuum Dual Phase Extraction Pilot Test and Interim Remediation*, dated December 24, 2007. The SAM Program approved the workplan in a letter dated, January 16, 2008.

- Petra conducted a 33-day high-vacuum, dual-phase extraction (HVDPE) pilot test between January 22 and February 24, 2008. Approximately 3,256.17 pounds of petroleum hydrocarbons were removed and treated during the pilot test. During the pilot test, nine new monitoring wells (MW-9 through MW-17) were installed. The locations of these wells (MW-9 through MW-17) and previously existing wells (MW-1 through MW-8) are depicted on Figure 2. In April 2008, monitoring wells MW-1 through MW-4 and MW-6 through MW-17 were sampled.

- On July 25, 2008, Petra submitted a *Workplan for Well Maintenance and Well Destruction* to SAM to destroy well MW-5 and reconstruct the well heads for several monitoring wells. SAM approved this workplan in a letter, dated September 4, 2008. It is SCS Engineers' (SCS) understanding that Petra subsequently destroyed MW-5.

- On July 13, 2009, SAM issued a letter that called for the reduction of the frequency of groundwater monitoring from quarterly to semi-annually, occurring during the second and fourth quarters.

- In 2009, SCS was retained to conduct further groundwater monitoring and Site assessment beginning with the second quarter 2009 (2Q2009) groundwater monitoring event. SCS performed groundwater monitoring and sampling at the Site on June 2009 (2Q2009), November 2009 (4Q2009), April 2010 (2Q2010), and December 2010 (4Q2010).

- On February 19, 2010, SCS submitted a focused HVDPE pilot test workplan. SAM responded in a letter, dated March 16, 2010, stating that, prior to conducting remedial testing, an on-Site health risk assessment and delineation of the groundwater contamination should be completed.

- On April 26, 2010, SCS submitted a *Workplan for a Soil Vapor Survey and Health Risk Assessment* to SAM. SAM approved this workplan in a letter dated May 18, 2010. Additionally, on April 26, 2010, SCS submitted a *Site Assessment Workplan* to SAM to install two additional groundwater monitoring wells (MW-18 and MW-19) in order to delineate the downgradient (westerly) and southernly extent of dissolved petroleum hydrocarbons in groundwater from the release at the Site. SAM approved this workplan in a letter dated May 19, 2010.

- On April 28, 2011, SCS submitted a report titled *Soil Vapor Survey and Health Risk Assessment* to SAM describing the installation and sampling activities of five nested soil vapor probes (SV1 through SV5) near the Site building conducted in March and April 2011. SAM concurred with SCS's conclusions in a letter, dated May 9, 2011, that there is a low likelihood that a significant health risk exists in connection with the concentrations of petroleum hydrocarbons in soil vapor beneath the on-Site building.

- On August 18, 2011, SCS submitted a report to SAM titled *Additional Site Assessment and Semi-Annual Groundwater Monitoring Report 2Q2011* describing the installation of two groundwater monitoring wells (MW-18 and MW-19) installed in March 2011 and the semi-annual sampling event conducted in April 2011. That report indicated that additional assessment was needed to the south of well MW-19.

- On May 18, 2012, SCS submitted a workplan for additional assessment south of well MW-19 at the Site. SAM issued a letter on May 29, 2012, granting approval of the workplan.

- SCS conducted groundwater monitoring and sampling during the fourth quarter of 2011 and, on February 13, 2012, submitted a report titled *Semi-Annual Groundwater Monitoring, Fourth Quarter 2011, 11427 Woodside Avenue, Santee, California*.

- During the second quarter 2012 groundwater monitoring event, PSH with the appearance of red-dyed diesel fuel was measured in well MW-10. Similar PSH has subsequently been monitored in wells MW-2, MW-3, MW-13, and MW-17. A separate DEH Voluntary Assistance Program (VAP) case (Case No. H19469-005) was opened on September 12, 2012 to address the release of red-dyed diesel from the on-Site aboveground storage tank (AST) system.

- On December 11, 2013, the DEH issued a letter stating, "Based on current contaminant trends in groundwater, DEH staff is eliminating the requirement for the cross-gradient well/boring proposed in the May 18, 2012 *Workplan for Additional Site Assessment*." The letter goes on to state that an additional round of groundwater sampling should be conducted and to prepare a Corrective Action Plan (CAP).

- SCS conducted groundwater monitoring and sampling during the fourth quarter of 2013 and, on April 4, 2014, submitted a report titled *Semi-Annual Groundwater Monitoring, Fourth Quarter 2013, 11427 Woodside Avenue, Santee, California*.

- SCS submitted a CAP for the Site on March 30, 2015, in which SCS recommended monitored natural attenuation as the most cost-effective and technically feasible strategy for the Site.

- On April 24, 2015, the DEH issued a letter in response to the CAP, requesting the collection of groundwater samples from source area wells MW-1, MW-3, MW-5, MW-6, and MW-14, upgradient well MW-7, and downgradient well MW-18, for analysis for total petroleum hydrocarbons (TPH), benzene, toluene, ethylbenzene, and xylenes (BTEX); methyl tertiary butyl ether (MTBE), ethyl tert-butyl ether (ETBE), tertiary amyl methyl ether (TAME), di-isopropyl ether (DIPE), and tertiary butyl alcohol (TBA), (collectively, fuel oxygenates), and natural attenuation parameters (Appendix A).

- On April 24, 2015, SCS responded to the DEH via email, stating that MW-5 had previously been destroyed and recommending the collection of samples from source area wells MW-1, MW-6, and MW-19, upgradient well MW-7, and downgradient well MW-18 for analysis for TPH, BTEX, fuel oxygenates, and remediation by natural attenuation (RNA) parameters, and dissuading the collection of a sample from MW-3 due to the presence of PSH.

- On April 29, 2015, Mr. James Clay of the DEH responded via email, requesting two rounds of quarterly sampling for source area wells MW-1, MW-3 (by dropping a bailer through the PSH), and MW-6, upgradient well MW-7, and downgradient well MW-18 for analysis for TPH, BTEX, fuel oxygenates, and RNA parameters (Appendix A).

- This Report describes the results of the two rounds of quarterly monitoring and sampling conducted in the third and fourth quarters of 2015, and provides the basis for closure of case H19469-001.

2 SITE DESCRIPTION SUMMARY

Site Name:	Wigington Oil
Site Owner:	Wigington Oil, Inc.
Site Address:	11427 Woodside Avenue, Santee, California
DEH Case Number:	H19469-001
Cleanup Fund Claim Number:	912
Global ID:	T0607303173

3 OBJECTIVES

The objectives of the scope of services described in this Report were to:

- Assess the presence and extent of petroleum hydrocarbons and associated volatile organic compounds (VOCs) dissolved in groundwater at the Site.
- Assess the possible presence of PSH in groundwater at the Site.
- Assess the groundwater elevation and the hydraulic gradient at the Site.
- Assess whether RNA might be occurring at the Site, using procedures outlined in Section 7 of the SAM Manual.

4 SCOPE OF SERVICES

FIELD ACTIVITIES—GROUNDWATER SAMPLING AND ANALYSIS

Groundwater Monitoring and Sampling – 3 and 4Q2015

The third and fourth quarter 2015 monitoring and sampling activities were conducted on September 3 and December 10, 2015, respectively. For each event, fifteen of the eighteen Site groundwater monitoring wells were monitored for depth to groundwater and for the presence of PSH. Wells MW-2 and MW-3 had measurable PSH during the 3Q2015 event, and wells MW-2, MW-3, MW-10, MW-13, and MW-17 had measurable PSH during the 4Q2015 event. Depth-to-groundwater measurements were taken using an interface probe with a manufacturer's reported accuracy of 0.01 foot and are presented in Table 1. The following describes the sampling activities conducted for both the third and fourth quarter events.

Well MW-3 was sampled with a bomb sampler. The bomb sampler was lowered through the PSH, triggered to collect a sample from beneath the PSH, lifted out of the well, and carefully drained into laboratory-supplied containers. This process was repeated several times to obtain an adequate volume of sample for the desired analysis.

Groundwater monitoring wells MW-1, MW-6, MW-7, and MW-18 were purged and sampled in accordance with SAM guidelines. All sampled wells were fast-recovering wells (i.e., those recovering at least 80 percent within two hours). During purging, temperature, conductivity, and pH measurements (collectively referred to as purging parameters) were measured after the removal of the first borehole volume and each one-half borehole volume thereafter. Purging continued until at least one and one-half borehole volumes had been removed and purging parameters had stabilized to within 10 percent of the previous reading. Purge water was placed in appropriate 55-gallon drums, labeled, and stored on Site pending disposal.

After purging was completed, the wells were allowed to recover at least 80 percent before sampling. Groundwater samples were collected from each well with a single-use, disposable bailer and decanted into laboratory-supplied containers. The groundwater sample containers were labeled and placed in an ice-filled cooler pending delivery to the laboratory. Chain-of-custody procedures were implemented for sample tracking. Copies of groundwater monitoring/sampling data sheets are included in Appendix B.

Groundwater Sample Analysis

Groundwater samples were analyzed by Eurofins Calscience, Inc. (Eurofins), a state-accredited environmental testing laboratory, in Garden Grove, California, for the following:

- Total petroleum hydrocarbons as gasoline (TPHg) and diesel (TPHd) in general accordance with U.S. Environmental Protection Agency (EPA) Method 8015B.
- Benzene, toluene, ethylbenzene, and xylenes (BTEX) and fuel oxygenates in general accordance with EPA Method 8260B.
- Natural attenuation parameters, including iron and manganese by EPA Method 6010B; ferrous iron by Standard Method 3500; nitrate and sulfate by EPA Method 300.0; ammonia, phosphate, pH, dissolved oxygen, and carbon dioxide by EPA Method SM4500; redox potential by American Society for Testing and Materials (ASTM) D-1498; and methane by EPA Method RSK175.

Disposal of Drummed Purged Groundwater and Rinsate Water

Purged groundwater is currently being stored in California Department of Transportation (DOT)-rated 55-gallon drums on Site pending disposal. Copies of the Non-Hazardous Waste Manifest documenting the disposal will be provided following disposal.

5 FINDINGS

GEOLOGY

Regional Geology

The Site is located in the Peninsular Ranges Geomorphic Province of Southern California. This province is typified by northwest- to southeast-trending mountain ranges approximately parallel to the San Andreas Fault and related regional fault systems. The Peninsular Ranges are generally characterized by granitic rocks of the Southern California batholith and associated metamorphic rocks. Sedimentary rocks ranging in age from Cretaceous to Pleistocene form the San Diego embayment and coastal terraces west of the batholith.

Site Geology

Based on SCS's review of previous Site assessments, materials encountered at the Site generally included fill soil, alluvium, residual soil, and weathered granitic rock. Following is a brief description of these units.

Fill Soil

This unit was encountered in wells MW-13, MW-15, and MW-16 and was interpreted by Petra to be derived from the local alluvial soils. This unit generally consisted of loose, brown to olive-brown to dark yellowish-brown, dry to moist, fine- to very coarse-grained sand with some gravel and asphalt fragments.

Alluvium

This unit generally consisted of brown to olive-brown, moist to wet, interbedded silty to clayey, fine- to very coarse-grained sand, with some gravel. This unit was interpreted to extend from the surface to depths ranging from approximately 10 feet (well MW-10) to 41.5 feet below ground surface (bgs) (wells MW-14, MW-15, and MW-16).

Residual Soil

This unit generally consisted of earth material derived from in-situ weathering of granitic bedrock, and consisted of dark brown to dark reddish-brown, moist, fine- to medium-grained clayey sand with some coarse-grained sand and gravel. This unit was encountered in MW-10, MW-17, and MW-13 at depths of approximately 10, 20, and 30 feet bgs, respectively.

Weathered Granitic Rock

This unit generally consisted of dark yellowish-brown to dark olive-brown, hard to very hard, weathered crystalline granitic rock. This unit was encountered in MW-10 and MW-17 at approximately 30 feet bgs and 45 feet bgs, respectively.

HYDROGEOLOGY

Based on review of a document titled *Water Quality Control Plan, San Diego Basin - Region 9*, prepared by the San Diego Regional Water Quality Control Board (RWQCB), dated September 1994, the Site is interpreted to be located within the Santee Hydrologic Sub Area (7.12) of the Lower San Diego Hydrologic Area (7.10) of the San Diego Hydrologic Unit (7.00). According to the RWQCB, the groundwater in this hydrologic unit has been classified as having existing beneficial uses for municipal and domestic supply, agricultural supply, industrial service supply, and industrial process supply purposes.

It is noted that the City of San Diego owns paramount Pueblo water rights to surface and groundwater resources of the San Diego River. The bank of the San Diego River is approximately 800 feet northwest of Site, and groundwater beneath the Site is in alluvial deposits interpreted to be associated with the San Diego River.

Groundwater Conditions – 3Q2015

Groundwater elevations were calculated based on the surveyed top-of-well casing elevations and the measured depth to groundwater obtained from 13 Site wells (Table 1). Groundwater was encountered at depths ranging from approximately 29.80 (MW-7) to 35.47 (MW-17) feet below top-of-well casings. The groundwater elevations ranged from 331.48 feet above mean sea level (msl) in well MW-18 to 334.36 feet above msl in well MW-10. The groundwater flow direction was interpreted to be generally toward west to west-southwest, with a gradient ranging from approximately 0.006 to 0.025. The interpreted groundwater elevation contours and flow directions for the third quarter 2015 are depicted on Figure 3.

PSH, consisting of red-dye diesel associated with another open release case at the Site, was measured in wells MW-2 and MW-3 at thicknesses of 2.44 and 4.89 feet, respectively (Table 2). Although PSH was detected in fewer wells than in the previous gauging event in December 2013, the measured thickness in MW-2 and MW-3 was greater than in the previous gauging event.

Groundwater Conditions – 4Q2015

Groundwater elevations were calculated based on the surveyed top-of-well casing elevations and the measured depth to groundwater obtained from 15 Site wells (Table 1). Groundwater was encountered at depths ranging from approximately 29.66 (MW-7) to 33.28 (MW-19 feet below top-of-well casings. The groundwater elevations ranged from 331.60 feet above msl in well MW-18 to 332.91 feet above msl in well MW-7. The groundwater flow direction was interpreted to be generally toward the west to southwest, with a gradient ranging from approximately 0.001 to 0.003 for the majority of the Site. The interpreted groundwater elevation contours and flow directions for the fourth quarter 2015 are depicted on Figure 4.

PSH, consisting of red-dye diesel associated with another open release case at the Site, was observed in wells MW-2, MW-3, MW-10, MW-13, and MW-17 at thicknesses ranging from 0.70 (MW-17) to 5.10 (MW-2) feet (Table 2).

LABORATORY ANALYTICAL RESULTS

Groundwater Samples – 3Q2015

Groundwater analytical results for TPH and VOCs from the 3Q2015 semi-annual sampling event are summarized in Table 3 and depicted on Figure 5, and a copy of the laboratory analytical report is provided (Appendix C). Based on laboratory analytical results from the groundwater sampling event, wells MW-1, MW-3, MW-6, and MW-7 had detectable concentrations[1] of dissolved petroleum hydrocarbons. Concentrations of TPH and VOCs were reported as follows.

TPH

TPHg was reported in wells MW-1, MW-3, MW-6, and MW-7, at concentrations ranging from 120 micrograms per liter (µg/L) in MW-7 to 200,000 µg/L in MW-3. No detectable concentrations of TPHg were reported in MW-18.

TPHd was reported in wells MW-1, MW-3, MW-6, and MW-7, at concentrations ranging from 440 µg/L in MW-6 to 7,200,000 µg/L in MW-3. No detectable concentrations of TPHd were reported in MW-18.

[1] For the purposes of this Report, "detectable concentrations" means concentrations above the laboratory reporting limits for the analytical method used.

BTEX

Benzene was reported in wells MW-1, MW-3, and MW-6, at concentrations ranging from 48 µg/L in MW-6 to 170 µg/L in MW-3. No detectable concentrations of benzene were reported in the remainder of the groundwater samples analyzed.

Toluene was not reported at detectable concentrations in any of the five wells sampled.

Ethylbenzene was reported in wells MW-1, MW-3, and MW-6, at concentrations ranging from 1.1 µg/L in MW-1 to 48 µg/L in MW-3. No detectable concentrations of ethylbenzene were reported in MW-7 or MW-18.

Xylenes were reported in well MW-6 at a concentration of 2.8 µg/L. No detectable concentrations of xylenes were reported in the remainder of the groundwater samples collected.

Fuel Oxygenates

Methyl tertiary butyl ether (MTBE) was reported in wells MW-1, MW-3, and MW-6, at concentrations ranging from 4.7 µg/L in MW-1 to 42 µg/L in MW-3. No detectable concentrations of MTBE were reported in wells MW-7 or MW-18.

Tertiary butyl alcohol (TBA) was reported in wells MW-1 and MW-3 at concentrations of 94 and 430 µg/L, respectively. No detectable concentrations of TBA were reported in wells MW-6, MW-7, or MW-18.

Detectable concentrations of ethyl tert-butyl ether (ETBE), tertiary amyl methyl ether (TAME), and di-isopropyl ether (DIPE) were not reported in any of the five wells sampled.

RNA Parameters

Groundwater samples collected from monitoring wells MW-1, MW-3, MW-6, MW-7, and MW-18 were also analyzed for RNA parameters. Results are presented in Table 4 and Figure 6, and are discussed in Section 6 below.

Groundwater Samples – 4Q2015

Groundwater analytical results for TPH and VOCs from the 4Q2015 semi-annual sampling event are summarized in Table 3 and on Figure 5. Based on laboratory analytical results from the groundwater sampling event, wells MW-1, MW-3, MW-6, MW-7, and MW-18 had detectable concentrations[2] of dissolved petroleum hydrocarbons. Concentrations of TPH and VOCs were reported as follows.

[2] For the purposes of this Report, "detectable concentrations" means concentrations above the laboratory reporting limits for the analytical method used.

TPH

TPHg was reported in wells MW-3 and MW-6 at concentrations of 29,000 and 270 µg/L, respectively. No detectable concentrations of TPHg were reported in MW-1, MW-7, or MW-18.

TPHd was reported in wells MW-3, MW-6, and MW-7, at concentrations ranging from 280 µg/L in MW-6 to 86,000 µg/L in MW-3. No detectable concentrations of TPHd were reported in MW-1 or MW-18.

BTEX

Benzene was reported in wells MW-1, MW-3, and MW-6, at concentrations ranging from 19 µg/L in MW-6 to 97 µg/L in MW-3. No detectable concentrations of benzene were reported in MW-7 or MW-18.

Toluene was not reported at detectable concentrations in any of the five wells sampled.

Ethylbenzene was reported in wells MW-1, MW-3, and MW-6, at concentrations ranging from 2.3 µg/L in MW-1 to 17 µg/L in MW-6. No detectable concentrations of ethylbenzene were reported in MW-7 or MW-18.

Xylenes were reported in well MW-6 at a concentration of 1.1 µg/L. No detectable concentrations of xylenes were reported in the remainder of the groundwater samples collected.

Fuel Oxygenates

Methyl tertiary butyl ether (MTBE) was reported in wells MW-1, MW-3, and MW-6, at concentrations ranging from 2.2 µg/L in MW-1 to 28 µg/L in MW-3. No detectable concentrations of MTBE were reported in wells MW-7 or MW-18.

Tertiary butyl alcohol (TBA) was reported in wells MW-1 and MW-3 at concentrations of 44 and 190 µg/L, respectively. No detectable concentrations of TBA were reported in wells MW-6, MW-7, or MW-18.

Detectable concentrations of ethyl tert-butyl ether (ETBE), tertiary amyl methyl ether (TAME), and di-isopropyl ether (DIPE) were not reported in any of the five wells sampled.

RNA Parameters

Groundwater samples collected from monitoring wells MW-1, MW-3, MW-6, MW-7, and MW-18 were also analyzed for RNA parameters. Results are presented in Table 4 and Figure 6, and are discussed in Section 6 below.

6 DISCUSSION

RNA PARAMETER ANALYSIS

Samples collected from wells MW-1, MW-3, and MW-6 are interpreted to represent source area conditions, MW-7 is interpreted to represent upgradient conditions, and MW-18 is interpreted to represent downgradient conditions. The results of the RNA parameter analysis are summarized in the following tables.

Third Quarter 2015 RNA Analysis:

Third Quarter 2015 RNA Parameter Results							
RNA Parameter	Concentration near Source Area			Concentration for Upgradient Conditions	Concentration for Downgradient Conditions	Criteria for Source Area	Supports RNA
	MW-1	MW-3	MW-6	MW-7	MW-18		
Carbon dioxide (mg/L)	46	200	55	81	69	Higher	Yes
Methane (µg/L)	87.6	5,260	515	< 1	< 1	Higher	Yes
Total manganese (mg/L)	0.332	4.40	0.579	0.769	0.282	Higher	Yes
Iron (mg/L)	2.21	68.6	4.66	7.60	20.6	Higher	Yes
Ferric Iron (mg/L)	< 0.10	1.30	< 0.10	< 0.10	< 0.10	Higher	Yes
Iron II (mg/L)	< 0.10	1.30	< 0.10	< 0.10	< 0.10	Higher	Yes
Redox potential (mV)	230	220	210	200	200	Lower	No
Nitrate (mg/L)	13	< 0.10	9.6	13	13	Lower	Yes
Sulfate (mg/L)	170	2.2	230	230	280	Lower	Yes
pH	7.11	6.68	7.19	6.99	6.84	Lower	Yes
Total phosphate (mg/L)	0.49	< 0.31	< 0.31	0.38	0.34	Lower	Yes
Ammonia (mg/L)	< 0.10	0.45	< 0.10	0.17	< 0.10	Lower	No
Dissolved oxygen (mg/L)	3.38	1.68	2.85	3.15	4.55	Lower	Yes

Notes
µg/L: micrograms per liter
mg/L: milligrams per liter
mV: millivolts

Analytical results for RNA parameters from the third quarter 2015 generally indicate RNA is occurring based on the following:

- Based on results from MW-3, carbon dioxide is higher in the source area.
- Dissolved oxygen is lower in the source area.
- Methane is higher in the source area.
- Based on results from MW-3, manganese is higher in the source area.
- Based on results from MW-3, iron, iron II, and ferric iron are higher in the source area.
- Nitrate is lower in the source area.
- Sulfate is lower in the source area.
- Phosphate is lower in the source area.
- Based on results from MW-3, pH is lower in the source area.

Fourth Quarter 2015 RNA Analysis:

Fourth Quarter 2015 RNA Parameter Results							
RNA Parameter	Concentration near Source Area			Concentration for Upgradient Conditions	Concentration for Downgradient Conditions	Criteria for Source Area	Supports RNA
	MW-1	MW-3	MW-6	MW-7	MW-18		
Carbon dioxide (mg/L)	88	1,600	520	400	140	Higher	Yes
Methane (µg/L)	15.0	6,510	185	< 1	< 1	Higher	Yes
Total manganese (mg/L)	0.565	5.27	0.534	0.794	0.799	Higher	Yes
Iron (mg/L)	1.46	289	6.07	3.73	47.4	Higher	Yes
Ferric Iron (mg/L)	1.46	288	6.07	3.73	47.4	Higher	Yes
Iron II (mg/L)	< 0.10	1.11	< 0.10	< 0.10	< 0.10	Higher	Yes
Redox potential (mV)	-170	-74	10	110	120	Lower	Yes
Nitrate (mg/L)	15	< 0.10	10	14	14	Lower	Yes
Sulfate (mg/L)	170	2.9	250	220	270	Lower	Yes
pH	7.22	6.81	6.95	6.91	6.75	Lower	No
Total phosphate (mg/L)	0.87	1.9	0.46	0.62	1.4	Lower	No
Ammonia (mg/L)	< 0.10	0.67	< 0.10	0.11	< 0.10	Lower	No

Fourth Quarter 2015 RNA Parameter Results							
RNA Parameter	Concentration near Source Area			Concentration for Upgradient Conditions	Concentration for Downgradient Conditions	Criteria for Source Area	Supports RNA
	MW-1	MW-3	MW-6	MW-7	MW-18		
Dissolved oxygen (mg/L)	2.32	1.82	2.79	3.21	4.32	Lower	Yes

Notes
µg/L: micrograms per liter
mg/L: milligrams per liter
mV: millivolts

Analytical results for RNA parameters from the fourth quarter 2015 generally indicate RNA is occurring based on the following:

- Based on results from MW-3 and MW-6, carbon dioxide is higher in the source area.
- Dissolved oxygen is lower in the source area.
- Methane is higher in the source area.
- Based on results from MW-3, manganese is higher in the source area.
- Based on results from MW-3, iron, iron II, and ferric iron are higher in the source area.
- Redox potential is lower in the source area.
- Based on results from MW-3 and MW-6, nitrate is lower in the source area.
- Sulfate is lower in the source area.

HYDROGRAPHS

Hydrographs depicting groundwater elevations and concentrations of dissolved-phase benzene and MTBE in groundwater versus time for wells MW-1, MW-3, MW-6, MW-7, and MW-18 are included in Appendix D and discussed in the table below. Linear regression trendlines of the benzene and MTBE concentrations are depicted on each hydrograph, as appropriate, with the calculated R-squared (R^2) value.

The R^2 value indicates the *goodness-of-fit* of the trendline to the data set. In general, an R^2 value between 0.7 and 1.0 would be a *good* fit, between 0.4 and 0.7 a *moderate* fit, and below 0.4 would be a *poor* fit. Over time, significant data gaps are present, limiting the ability to calculate representative data trends from several wells. For illustration purposes, samples with no detectable concentration of benzene or MTBE were plotted at one-half of the laboratory reporting limit. Please note that the laboratory reporting limits have changed for benzene and MTBE over time; therefore, some wells may show detectable concentrations that are below previous laboratory reporting limits.

Well	Benzene Trendline	MTBE Trendline	Correlation with Groundwater Elevation	Benzene/MTBE Above MCL	Comment
MW-1	Decreasing R^2=0.3	Decreasing R^2=0.3	No	Benzene – Yes MTBE – No	Benzene and MTBE within historical range.
MW-3	Decreasing R^2=0.1	Decreasing R^2=0.8	No	Yes	MTBE at historic low. Benzene near historic high. PSH detected since October 2012.
MW-6	Decreasing R^2=0.2	Decreasing R^2=0.2	Yes, weak	Benzene – Yes MTBE – No	Benzene and MTBE within historical range.
MW-7	Decreasing R^2=0.4	Decreasing R^2=0.4	No	No	Benzene and MTBE below laboratory reporting limit.
MW-18	Decreasing R^2=0.3	NA	No	No	Benzene below laboratory reporting limits since Dec. 2011. MTBE below laboratory reporting limits since installation.

Notes:

MCLs = Maximum contaminant levels, California Code of Regulations, Section 64444.5, dated February 12, 2014. MCL for benzene = 1 µg/L; MCL for MTBE = 13 µg/L.

NA = Not applicable due to values below laboratory reporting limits

ND = Not detected above laboratory reporting limit

MTBE = Methyl tertiary butyl ether

µg/L = Micrograms per liter

* = MTBE trendline not calculated for MW-15 due to increased laboratory reporting limit

TIME TO MCLS

SCS used the existing groundwater data for MW-14 to estimate the time, in years, for groundwater concentrations to reach maximum contaminant levels (MCLs) for benzene and MTBE.

Method

SCS used the EPA's model for Calculating First-Order Rate Constants for Monitored Natural Attenuation[3] (Model) to perform the calculation for dissolved-phase constituents still present in groundwater at the Site. The concentration versus time attenuation rate constant is derived as the slope of the natural log of the concentration versus time curve and can be used to estimate the attenuation time of constituents of concern (CoC) concentrations at a single point. Concentration versus time rate constants for wells encompassing the entire plume can be used to identify

3 Newell et al; 2002. *Calculation and Use of First-Order Rate Constants for Monitored Natural Attenuation Studies,* EPA /540/S-02/500, November 2002, and included in Appendix C.

overall trends and predict the duration of the plume, and thus, how quickly remediation goals will be met at the Site.

MW-14 was used for this analysis because it contained the highest concentrations of benzene and MTBE at the Site. The time to MCL calculations include benzene and MTBE data from well MW-14 from April 2008 (post-remediation) to the most recent sampling event for this well in December 2013.

The time to reach the MCL was calculated using the following decay model equation:

$$C_{goal} = C_{start}(e^{K_{Point}})t$$

Solving for *t* results in the following equation:

$$t = \frac{-LN\left[\frac{C_{goal}}{C_{start}}\right]}{K_{point}}$$

The following table summarizes the definitions of the symbols used in the above equation.

Symbol	Definition
C_{goal}	MCL concentration
C_{start}	The maximum CoC concentration in a particular well and utilized as the CoC attenuation starting point
K_{Point}	The slope of the best fit line of the log of concentration versus time
t	The timespan between C_{start} and C_{goal}
e	An irrational number that equals approximately 2.71828
LN	Natural log

These calculations were performed using Excel®. The spreadsheets depicting the plot of the log of concentration versus time, the equation of the best fit line, and the result of the calculation for the attenuation time to MCL are included in Appendix B.

Estimated Time to Attenuate to MCL

Benzene

The estimated time for benzene concentrations to reach the MCL of 1 µg/L was estimated from reported benzene concentrations in groundwater in well MW-14 between April 2008 and December 2013. The estimated benzene concentration, based on this evaluation, will attenuate to the respective MCL of 1.0 µg/L in July 2056 in well MW-14. Please refer to Appendix E for the spreadsheets used to calculate the time to MCLs.

MTBE

The estimated time for MTBE concentrations to reach the MCL of 13 µg/L was estimated from reported MTBE concentrations in groundwater in well MW-14 between April 2008 and December 2013. The estimated MTBE concentration, based on this evaluation, will attenuate to the respective MCL of 13 µg/L in April 2033 in well MW-14. Please refer to Appendix E for the spreadsheets used to calculate the time to MCLs.

BASIS FOR SITE CLOSURE

As stated above, results from the third and fourth quarter 2015 indicate that RNA is occurring at the Site, thus the objective presented in the previously submitted and approved CAP has been met. In addition, given the reasonably short timeframe to reach MCLs at the Site (i.e., approximately 50 years or less), along with the limited extent of the CoC plume, the relatively low residual concentrations of benzene and MTBE in groundwater, and the apparent lack of impact to groundwater resources and sensitive receptors within the Site vicinity, it is SCS's professional judgment that natural attenuation will be effective in achieving remediation goals within a reasonable period of time.

7 CONCLUSIONS

Based on the data collected during this Assessment, including but not limited to laboratory results, field observations and data evaluation by a professional geologist, and current regulatory guidelines, the following conclusions are made:

- Phase-separated hydrocarbons (PSH) measured in wells MW-2, MW-3, MW-10, MW-13, and MW-17 at thicknesses ranging from 0.70 (MW-17) to 5.10 (MW-2) feet are from another open case at the Site: a release of red-dyed diesel fuel from the on-Site above-ground storage tank (AST) system. PSH were not observed in the remaining Site wells during the third and fourth quarter 2015 sampling events.

- On September 3, 2015, groundwater was encountered at depths ranging from approximately 29.80 (MW-7) to 35.47 (MW-17) feet below top-of-well casings. The groundwater elevations ranged from 331.48 feet above mean sea level (msl) in well MW-18 to 334.36 feet above msl in well MW-10. The groundwater flow direction was interpreted to be generally toward the west to west-southwest, with a gradient ranging from approximately 0.006 to 0.025 for the majority of the Site.

- On December 10, 2015, groundwater was encountered at depths ranging from approximately 29.66 (MW-7) to 33.28 (MW-19) feet below top-of-well casings. The groundwater elevations ranged from 331.60 feet above msl in well MW-18 to 332.91 feet above msl in well MW-7. The groundwater flow direction was interpreted to be generally toward the west to southwest, with a gradient ranging from approximately 0.001 to 0.003 for the majority of the Site.

- Based on the results from the third and fourth quarter 2015 sampling events, remediation by natural attenuation (RNA) is occurring at the Site.

- SCS has prepared estimates for dissolved phase benzene and methyl tertiary butyl ether (MTBE) to attenuate to their respective maximum contaminant levels (MCLs) for the Site.
    - The estimated benzene concentration, based on this evaluation, will attenuate to its MCL of 1.0 microgram per liter (µg/L) in July 2056 in well MW-14.
    - The estimated MTBE concentration, based on this evaluation, will attenuate to its MCL of 13 µg/L in April 2033 in well MW-14.

8 RECOMMENDATION

Based on the data obtained during this assessment, the results of previous assessments, and our conclusions regarding the release from the former USTs at the Site, SCS recommends that no further action be required regarding the under-ground storage tank (UST) unauthorized release, that the Department of Environmental Health (DEH) case number H19469-001 be closed, and the Site monitoring wells be properly abandoned in accordance with Site Assessment and Mitigation Program (SAM) guidelines. Please note that we anticipate that some wells at the Site will be turned over to the responsible party for the red-dyed diesel release at the Site (Dion and Sons) rather than being destroyed.

9 REPORT USAGE AND FUTURE SITE CONDITIONS

This Report is intended for the sole usage of the Client and the parties designated by SCS. Use of this Report is subject to the provisions of the fully executed Contract between the Client and SCS. Any third party usage of this Report shall be subject to the provisions of the Contract, and any unauthorized misuse of or reliance upon the Report shall be without risk or liability to SCS.

The conclusions of this Report are judged to be relevant at the time the work described in this Report was conducted. Future conditions may differ and this Report should not be relied upon to represent future Site conditions unless a qualified consultant familiar with the practice of Phase II environmental assessments in San Diego County is consulted to assess the necessity of updating this Report.

Although this Assessment has attempted to assess the likelihood that the Site has been impacted by a hazardous material/waste release, potential sources of impact may have escaped detection for reasons that include, but are not limited to: 1) inadequate or inaccurate information rightfully provided to SCS by third parties, such as public agencies and other outside sources; 2) the limited scope of this Assessment; and 3) the presence of undetected, unknown, or unreported environmental releases.

10 LIKELIHOOD STATEMENTS

Statements of "likelihood" have been made in this report. Likelihood statements are based on professional judgments of SCS. The term "likelihood," as used herein, pertains to the probability of a match between the prediction for an event and its actual occurrence. The likelihood statement assigns a measure for a "degree of belief" for the match between the prediction for the event and the actual occurrence of the event.

The likelihood statements in this Report are made qualitatively (expressed in words). The qualitative terms can be approximately related to quantitative percentages. The term "low likelihood" is used by SCS to approximate a range of 10 to 20 percent; the term "moderate likelihood" refers to an approximate range of 40 to 60 percent; and the term "high likelihood" refers to an approximate range of 80 to 90 percent.

TABLES

Table 1
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Groundwater Elevation Data
11427 Woodside Avenue, Santee, California

Groundwater Monitoring Well	Wellhead Elevation (feet above msl) and Depth of Screen (feet below grade)	Date Measured	Depth to Groundwater (feet below TOC)	Groundwater Elevation (feet above msl)
MW-1	363.90 (22-42)	05/25/88	28.73	335.17
		03/10/98	27.03	336.87
		04/05/00	29.62	334.28
	362.84 (22-42)	04/26/02	30.21	332.63
		12/03/02	30.19	332.65
		10/26/07	NM	NM
		01/17/08	PSH	PSH
		04/18/08	29.86	332.98
		07/28/08	30.98	331.86
		12/29/08	29.14	333.70
		06/18/09	30.29	332.55
		11/17/09	31.15	331.69
		04/20/10	28.58	334.26
		12/20/10	29.80	333.04
		04/04/11	28.36	334.48
		12/21/11	29.36	333.48
		06/04/12	29.29	333.55
		12/30/13	30.12	332.72
		09/03/15	30.47	332.37
		12/10/15	30.38	332.46
MW-2	365.40 (24-44)	05/25/88	30.03	335.37
		03/10/98	28.75	336.65
		04/05/00	32.23	333.17
	365.08 (24-44)	04/26/02	31.72	333.36
		12/03/02	31.84	333.24
		10/26/07	PSH	PSH
		01/17/08	PSH	PSH
		04/18/08	31.06	334.02
		07/28/08	PSH	PSH
		12/29/08	31.50	333.58
		06/18/09	31.56	333.52
		11/17/09	32.86	332.22
		04/20/10	29.08	336.00
		12/20/10	PSH	PSH
		04/04/11	29.41	335.67
		12/21/11	30.93	334.15
		06/04/12	30.27	334.81
		12/30/13	PSH	PSH
		09/03/15	PSH	PSH
		12/10/15	PSH	PSH
MW-3	366.07 (24.5-44.5)	05/25/88	30.83	335.24
		03/10/98	28.25	337.82
		04/05/00	36.65	329.42
	364.16 (24.5-44.5)	04/26/02	31.37	332.79
		12/03/02	31.32	332.84
		10/26/07	PSH	PSH
		01/17/08	PSH	PSH
		04/18/08	30.91	333.25
		07/28/08	PSH	PSH
		12/29/08	30.54	333.62
		06/18/09	31.33	332.83
		11/17/09	PSH	PSH
		04/20/10	29.54	334.62
		12/20/10	PSH	PSH
		04/04/11	29.32	334.84
		12/21/11	30.41	333.75
		06/04/12	30.26	333.90
		12/30/13	PSH	PSH
		09/03/15	PSH	PSH
		12/10/15	PSH	PSH

Table 1
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Groundwater Elevation Data
11427 Woodside Avenue, Santee, California

Groundwater Monitoring Well	Wellhead Elevation (feet above msl) and Depth of Screen (feet below grade)	Date Measured	Depth to Groundwater (feet below TOC)	Groundwater Elevation (feet above msl)
MW-4	362.90 (22-42)	05/25/88	27.68	335.22
		03/10/98	26.46	336.44
		04/05/00	29.98	332.92
	362.38 (22-42)	04/26/02	29.60	332.78
		12/03/02	29.43	332.95
		10/26/07	PSH	PSH
		01/17/08	PSH	PSH
		04/18/08	29.25	333.13
		07/28/08	30.41	331.97
		12/29/08	28.53	333.85
		06/18/09	29.65	332.73
		11/17/09	30.58	331.80
		04/20/10	27.97	334.41
		12/20/10	29.22	333.16
		04/04/11	27.74	334.64
		12/21/11	28.73	333.65
		06/04/12	28.64	333.74
		12/30/13	29.42	332.96
		09/03/15	29.83	332.55
		12/10/15	29.70	332.68
MW-5	NM	03/10/98	27.50	NM
	363.42 (unknown)	04/26/02	30.39	333.03
		12/03/02	30.50	332.92
		10/26/07	31.72	331.70
		01/17/08	NM	NM
		04/18/08	31.07	332.35
		07/28/08	NM	NM
		12/29/08	NM	NM
		Well Destroyed		
MW-6	362.44 (17-42)	04/26/02	29.77	332.67
		12/03/02	29.75	332.69
		10/26/07	31.01	331.43
		01/17/08	29.44	333.00
		04/18/08	29.47	332.97
		07/28/08	30.60	331.84
		12/29/08	28.71	333.73
		06/18/09	29.90	332.54
		11/17/09	30.78	331.66
		04/20/10	28.17	334.27
		12/20/10	29.45	332.99
		04/04/11	27.98	334.46
		12/21/11	28.96	333.48
		06/04/12	28.84	333.60
		12/30/13	29.68	332.76
		09/03/15	30.02	332.42
		12/10/15	29.96	332.48

Table 1
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Groundwater Elevation Data
11427 Woodside Avenue, Santee, California

Groundwater Monitoring Well	Wellhead Elevation (feet above msl) and Depth of Screen (feet below grade)	Date Measured	Depth to Groundwater (feet below TOC)	Groundwater Elevation (feet above msl)
MW-7	362.57 (17-42)	04/26/02	29.47	333.10
		12/03/02	29.45	333.12
		10/26/07	30.45	332.12
		01/17/08	29.17	333.40
		04/18/08	29.16	333.41
		07/28/08	30.08	332.49
		12/29/08	28.48	334.09
		06/18/09	29.56	333.01
		11/17/09	30.59	331.98
		04/20/10	27.92	334.65
		12/20/10	29.15	333.42
		04/04/11	27.75	334.82
		12/21/11	28.68	333.89
		06/04/12	28.60	333.97
		12/30/13	29.30	333.27
		09/03/15	29.80	332.77
		12/10/15	29.66	332.91
MW-8	364.51 (20.5-40.5)	04/26/02	31.71	332.80
		12/03/02	31.70	332.81
		10/26/07	33.02	331.49
		01/17/08	31.34	333.17
		04/18/08	31.42	333.09
		07/28/08	32.60	331.91
		12/29/08	30.60	333.91
		06/18/09	31.82	332.69
		11/17/09	32.74	331.77
		04/20/10	30.12	334.39
		12/20/10	31.37	333.14
		04/04/11	29.92	334.59
		12/21/11	30.87	333.64
		06/04/12	30.85	333.66
MW-9	362.33 (34-39)	04/18/08	29.49	332.84
		07/28/08	30.58	331.75
		12/29/08	28.68	333.65
		06/18/09	29.90	332.43
		11/17/09	30.75	331.58
		04/20/10	28.15	334.18
		12/20/10	29.43	332.90
		04/04/11	27.95	334.38
		12/21/11	28.90	333.43
		06/04/12	28.84	333.49
		12/30/13	29.69	332.64
		09/03/15	30.01	332.32
		12/10/15	29.92	332.41
MW-10	367.28 (25-40)	04/18/08	32.52	334.76
		07/29/08	33.65	333.63
		12/29/08	32.62	334.66
		06/18/09	32.75	334.53
		11/17/09	33.97	333.31
		04/20/10	30.83	336.45
		12/20/10	32.10	335.18
		04/04/11	30.26	337.02
		12/21/11	31.64	335.64
		06/04/12	PSH	PSH
		12/30/13	PSH	PSH
		09/03/15	32.92	334.36
		12/10/15	PSH	PSH

Table 1
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Groundwater Elevation Data
11427 Woodside Avenue, Santee, California

Groundwater Monitoring Well	Wellhead Elevation (feet above msl) and Depth of Screen (feet below grade)	Date Measured	Depth to Groundwater (feet below TOC)	Groundwater Elevation (feet above msl)
MW-11	362.48 (23-38)	04/18/08	29.98	332.50
		07/29/08	30.99	331.49
		12/29/08	28.96	333.52
		06/18/09	30.36	332.12
		11/17/09	31.12	331.36
		04/20/10	28.61	333.87
		12/20/10	29.84	332.64
		04/04/11	28.44	334.04
		12/21/11	29.34	333.14
		06/04/12	29.39	333.09
		12/30/13	30.09	332.39
MW-12	361.88 (24-39)	04/18/08	29.55	332.33
		07/29/08	30.49	331.39
		12/29/08	28.45	333.43
		06/18/09	29.94	331.94
		11/17/09	30.65	331.23
		04/20/10	28.17	333.71
		12/20/10	29.40	332.48
		04/04/11	27.93	333.95
		12/21/11	28.88	333.00
		06/04/12	28.93	332.95
		12/30/13	29.71	332.17
MW-13	366.91 (25-45)	04/21/08	32.77	334.14
		07/30/08	34.08	332.83
		12/29/08	32.54	334.37
		06/18/09	33.17	333.74
		11/17/09	34.33	332.58
		04/20/10	31.35	335.56
		12/20/10	32.71	334.20
		04/04/11	31.24	335.67
		12/21/11	31.36	335.55
		06/04/12	32.13	334.78
		12/30/13	PSH	PSH
		09/03/15	33.43	333.48
		12/10/15	PSH	PSH
MW-14	362.79 (23-38)	04/21/08	30.09	332.70
		07/30/08	31.14	331.65
		12/29/08	29.22	333.57
		06/18/09	30.51	332.28
		11/17/09	31.32	331.47
		04/20/10	28.74	334.05
		12/20/10	30.03	332.76
		04/04/11	28.52	334.27
		12/21/11	29.53	333.26
		06/04/12	29.49	333.30
		12/30/13	30.32	332.47
		09/03/15	30.63	332.16
		12/10/15	30.52	332.27
MW-15	362.36 (23.5-38.5)	04/21/08	29.91	332.65
		07/30/08	30.96	331.60
		12/29/08	28.80	333.56
		06/18/09	30.13	332.23
		11/17/09	30.92	331.44
		04/20/10	28.36	334.00
		12/20/10	29.64	332.72
		04/04/11	28.15	334.21
		12/21/11	29.14	333.22
		06/04/12	29.11	333.25
		12/30/13	29.95	332.41
		09/03/15	30.23	332.13
		12/10/15	30.32	332.04

Table 1
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Groundwater Elevation Data
11427 Woodside Avenue, Santee, California

Groundwater Monitoring Well	Wellhead Elevation (feet above msl) and Depth of Screen (feet below grade)	Date Measured	Depth to Groundwater (feet below TOC)	Groundwater Elevation (feet above msl)
MW-16	362.48 (24-39)	04/21/08	30.04	332.44
		07/30/08	31.02	331.46
		12/29/08	28.95	333.53
		06/18/09	30.47	332.01
		11/17/09	31.18	331.30
		04/20/10	28.66	333.82
		12/20/10	29.94	332.54
		04/04/11	28.41	334.07
		12/21/11	29.42	333.06
		06/04/12	29.41	333.07
		12/30/13	30.27	332.21
		09/03/15	30.55	331.93
		12/10/15	30.40	332.08
MW-17	367.97 (24.5-44.5)	04/21/08	34.97	333.00
		07/30/08	36.08	331.89
		12/29/08	34.34	333.63
		06/18/09	35.38	332.59
		11/17/09	36.23	331.74
		04/20/10	33.63	334.34
		12/20/10	34.93	333.04
		04/04/11	33.40	334.57
		12/21/11	34.45	333.52
		06/04/12	34.35	333.62
		12/30/13	PSH	PSH
		09/03/15	35.47	332.50
		12/10/15	PSH	PSH
MW-18	362.28 (24-39)	04/04/11	28.60	333.68
		12/21/11	29.62	332.66
		06/04/12	29.63	332.65
		12/30/13	30.50	331.78
		09/03/15	30.80	331.48
		12/10/15	30.68	331.60
MW-19	365.07 (26-41)	04/04/11	31.28	333.79
		12/21/11	32.28	332.79
		06/04/12	32.24	332.83
		12/30/13	33.08	331.99
		09/03/15	33.39	331.68
		12/10/15	33.28	331.79

Notes:
MSL = mean sea level
TOC = top of well casing
PSH = phase-separated hydrocarbons present in well, therefore groundwater elevation was not calculated
NM = well not measured
Wells were surveyed by Southern California Survey initially on April 26, 2002 and updated on March 28, 2008.

Table 2
Phase-Separated Hydrocarbon Monitoring Data
11427 Woodside Avenue, Santee, CA

Date	MW-2			MW-3			MW-10			MW-13			MW-17		
	DTP	DTW	PT	DTP	DTW	PT	DTP	DTW	PT	DTP	DTW	PT	DTP	DTW	PT
6/18/2009	NP	31.56	NP	NP	31.33	NP	NP	32.75	NP	NP	33.17	NP	NP	35.38	NP
9/4/2009	32.62	32.65	0.03	32.15	32.18	0.03	NM	NM	NM	NM	NM	NM	NM	NM	NM
9/18/2009	32.72	32.73	0.01	32.21	32.26	0.05	NM	NM	NM	NM	NM	NM	NM	NM	NM
10/2/2009	NP	32.79	NP	32.26	32.36	0.10	NM	NM	NM	NM	NM	NM	NM	NM	NM
10/16/2009	32.82	32.83	0.01	32.29	32.45	0.16	NM	NM	NM	NM	NM	NM	NM	NM	NM
10/29/2009	NP	32.90	NP	32.29	32.52	0.23	NM	NM	NM	NM	NM	NM	NM	NM	NM
11/17/2009	NP	32.86	NP	32.20	32.48	0.28	NP	33.97	NP	NP	34.33	NP	NP	36.23	NP
11/30/2009	NP	32.82	NP	32.10	32.41	0.31	NM	NM	NM	NM	NM	NM	NM	NM	NM
12/11/2009	NP	32.41	NP	31.64	31.80	0.16	NM	NM	NM	NM	NM	NM	NM	NM	NM
12/24/2009	NP	31.62	NP	NP	30.72	NP	NM	NM	NM	NM	NM	NM	NM	NM	NM
1/7/2010	NP	29.03	NP	31.78	31.79	0.01	NM	NM	NM	NM	NM	NM	NM	NM	NM
1/26/2010	NP	31.04	NP	NP	30.11	NP	NM	NM	NM	NM	NM	NM	NM	NM	NM
2/8/2010	NP	30.08	NP	NP	29.56*	NP	NM	NM	NM	NM	NM	NM	NM	NM	NM
2/19/2010	NP	29.32	NP	29.26	29.27	0.01	NM	NM	NM	NM	NM	NM	NM	NM	NM
3/5/2010	NP	28.94	NP	NP	29.07*	NP	NM	NM	NM	NM	NM	NM	NM	NM	NM
3/19/2010	NP	28.31	NP	NP	29.22	NP	NM	NM	NM	NM	NM	NM	NM	NM	NM
4/2/2010	NP	28.61	NP	NP	29.57	NP	NM	NM	NM	NM	NM	NM	NM	NM	NM
4/20/2010	NP	29.08	NP	NP	29.54	NP	NP	30.83	NP	NP	31.35	NP	NP	33.63	NP
12/20/2010	31.25	31.27	0.02	30.83	30.84	0.01	NP	32.10	NP	NP	32.71	NP	NP	34.93	NP
4/4/2011	NP	29.41	NP	NP	29.32	NP	NP	30.26	NP	NP	31.24	NP	NP	33.40	NP
12/21/2011	NP	30.93	NP	NP	30.41	NP	NP	31.64	NP	NP	31.36	NP	NP	34.45	NP
6/4/2012	NP	30.27	NP	NP	30.26	NP	31.07	33.41	2.34	NP	32.13	NP	NP	34.35	NP
12/3/2013	31.41	32.74	1.33	30.81	34.14	3.33	32.42	34.07	1.65	32.95	33.65	0.70	35.18	35.63	0.45
9/3/2015	31.55	33.99	2.44	30.93	35.82	4.89	NP	32.92	NP	NP	33.43	NP	NP	35.47	NP
12/10/2015	31.10	36.20	5.10	30.87	35.45	4.58	32.81	35.58	2.77	33.23	35.18	1.95	35.40	36.10	0.70

Notes:
DTP = depth to product
DTW = depth to groundwater
PT = product thickness
NP incidactes no measurable free product was observed.
NM indicates well was not monitored

Table 3
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Groundwater Analytical Data for TPH and VOCs
11427 Woodside Avenue, Santee, California

Well Number	Sample Date	TPH	TPHg (µg/L)	TPHd (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Xylenes (µg/L)	MTBE (µg/L)	ETBE (µg/L)	TAME (µg/L)	TBA (µg/L)	DIPE (µg/L)
MW-1 (installed 5/11/88)	05/25/88	**0.6**	NA	NA	**0.7**	< 0.5	NA	< 0.5	NA	NA	NA	NA	NA
	03/10/98	NA	**2,500**	**910**	**340**	**200**	**18**	**240**	**190**	NA	NA	NA	NA
	05/18/98	NA	**704**	< 500	**326**	**89.5**	< 50.0	< 100	< 50.0	NA	NA	NA	NA
	04/05/00	NA	**1,800**	NA	**250**	**14**	**34**	**380**	**200**	NA	NA	NA	NA
	04/26/02	NA	**1,100**	**1,100**	**230**	**14**	**36**	**220**	**190**	< 40	< 40	**500**	< 40
	12/03/02	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	10/25/07	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	01/17/08	PSH	PSH	PSH	PSH	PSH	PSH	PSH	PSH	PSH	PSH	PSH	PSH
	04/18/08	NA	**2,800**	**980**	**370**	**6.6**	**170**	**227.8**	**610**	NA	NA	NA	NA
	07/28/08	NA	**420**	< 500	**57**	< 0.5	**19.0**	**15**	**55**	NA	NA	NA	NA
	12/29/08	NA	**440**	**720**	**57**	< 1.0	**30**	**26**	< 2.0	< 2.0	< 2.0	**27**	< 2.0
	06/18/09	NA	< 500	< 500	**210**	**1.0**	**38**	**17.7**	**220**	< 1.0	< 1.0	**140**	< 1.0
	11/17/09	NA	< 500	< 500	**4.4**	**0.6**	**2.5**	**1.1**	**1.7**	< 1.0	< 1.0	< 5.0	< 1.0
	04/20/10	NA	< 500	< 500	**42**	<0.5	**3.7**	**1.1**	**81**	< 1.0	< 1.0	**49**	< 1.0
	12/20/10	NA	< 500	< 500	**66**	<0.5	**35**	**4.6**	**34**	< 1.0	< 1.0	**15**	< 1.0
	04/04/11	NA	< 500	< 500	**78**	**1.3**	**9.8**	**10.4**	**52**	< 1.0	< 1.0	**40**	< 1.0
	12/21/11	NA	< 500	< 500	**130**	< 0.5	**19**	**1.0**	**14**	< 1.0	< 1.0	**59**	< 1.0
	06/05/12	NA	< 500	< 500	**13**	< 0.5	**0.8**	< 1.5	**3.0**	< 1.0	< 1.0	**10**	< 1.0
	12/30/13	NA	< 500	< 500	**42**	< 0.5	**0.8**	< 1.5	**1.1**	< 1.0	< 1.0	< 0.5	< 1.0
	09/03/15	NA	**240**	**930**	**120**	< 1.0	**1.1**	< 2.0	**4.7**	< 2.0	< 2.0	**94**	< 2.0
	12/10/15	NA	< 100	< 94	**58**	< 1.0	**2.3**	< 2.0	**2.2**	< 2.0	< 2.0	**44**	< 2.0
MW-2 (installed 5/12/88)	05/25/88	< 0.5	NA	NA	< 0.5	< 0.5	NA	< 0.5	NA	NA	NA	NA	NA
	03/10/98	NA	**330**	< 500	**20**	**3.3**	**25**	**47**	**53**	NA	NA	NA	NA
	04/04/00	NA	**7,600**	NA	**7.6**	**3.3**	**30**	**59**	**3,500**	NA	NA	NA	NA
	04/26/02	NA	**6,000**	**160,000**	**9.2**	**3.9**	**16**	**17**	**3,100**	< 40	< 40	**500**	< 40
	12/03/02	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	10/25/07	PSH	PSH	PSH	PSH	PSH	PSH	PSH	PSH	PSH	PSH	PSH	PSH
	01/17/08	PSH	PSH	PSH	PSH	PSH	PSH	PSH	PSH	PSH	PSH	PSH	PSH
	04/18/08	NA	**510**	**6,400**	< 10	< 10	< 10	< 30	**1,300**	NA	NA	NA	NA
	07/28/08	PSH	PSH	PSH	PSH	PSH	PSH	PSH	PSH	PSH	PSH	PSH	PSH
	12/30/08	NA	**440**	**22,000**	< 2.5	< 2.5	**4.0**	< 10	< 5.0	< 5.0	< 5.0	**2,100**	< 5.0
	06/19/09	NA	< 500	< 500	< 0.5	< 0.5	**4.9**	< 1.5	**8.3**	< 1.0	< 1.0	**2,000**	< 1.0
	11/18/09	NA	**2,300**	< 500	**1.0**	**0.7**	**3.4**	< 1.5	**1.9**	< 1.0	< 1.0	**1,100**	< 1.0
	04/21/10	NA	< 500	**7,400**	< 0.5	< 0.5	**3.7**	< 1.5	**20**	< 1.0	< 1.0	**170**	< 1.0
	12/20/10	PSH	PSH	PSH	PSH	PSH	PSH	PSH	PSH	PSH	PSH	PSH	PSH
	04/06/11	NA	< 500	**2,600**	< 0.5	< 0.5	< 0.5	< 1.5	**13**	< 1.0	< 1.0	**490**	< 1.0
	12/22/11	NA	< 500	**3,600**	< 0.5	< 0.5	< 0.5	< 1.5	**3.5**	< 1.0	< 1.0	**1,200**	< 1.0
	06/05/12	NA	< 500	**5,100**	**0.6**	**1.3**	**2.3**	**11.6**	**8.0**	< 1.0	< 1.0	**720**	< 1.0
	12/30/13	PSH	PSH	PSH	PSH	PSH	PSH	PSH	PSH	PSH	PSH	PSH	PSH

Table 3
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Groundwater Analytical Data for TPH and VOCs
11427 Woodside Avenue, Santee, California

Well Number	Sample Date	TPH	TPHg (µg/L)	TPHd (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Xylenes (µg/L)	MTBE (µg/L)	ETBE (µg/L)	TAME (µg/L)	TBA (µg/L)	DIPE (µg/L)
MW-3 (installed 5/13/88)	05/25/88	**140**	NA	NA	**19**	**3.4**	NA	**1.3**	NA	NA	NA	NA	NA
	03/10/98	NA	**2,300**	**5,100**	**3.6**	**0.7**	**0.7**	**4.1**	**2,000**	NA	NA	NA	NA
	05/18/98	NA	**115**	< 500	**98.5**	< 12.5	< 12.5	< 25.0	**226**	NA	NA	NA	NA
	04/05/00	NA	**420**	NA	**18**	**1.7**	**3.9**	**12**	**230**	NA	NA	NA	NA
	04/26/02	NA	**9,700**	**190,000**	**92**	< 3.0	**56**	**62**	**590**	< 100	< 100	< 1,200	< 100
	12/03/02	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	10/25/07	PSH	PSH	PSH	PSH	PSH	PSH	PSH	PSH	PSH	PSH	PSH	PSH
	01/17/08	PSH	PSH	PSH	PSH	PSH	PSH	PSH	PSH	PSH	PSH	PSH	PSH
	04/18/08	NA	< 500	**1,800**	**2.8**	< 1.0	< 1.0	< 3.0	**99**	NA	NA	NA	NA
	07/28/08	PSH	PSH	PSH	PSH	PSH	PSH	PSH	PSH	PSH	PSH	PSH	PSH
	12/30/08	NA	**230**	**3,200**	**1.7**	< 0.5	**0.61**	< 2.0	**110**	< 1.0	< 1.0	**59**	< 1.0
	06/19/09	NA	< 500	< 500	**0.5**	< 0.5	< 0.5	< 1.5	**77**	< 1.0	< 1.0	**400**	< 1.0
	11/17/09	PSH	PSH	PSH	PSH	PSH	PSH	PSH	PSH	PSH	PSH	PSH	PSH
	04/21/10	NA	< 500	**5,900**	**1.3**	< 0.5	**1.2**	< 1.5	**90**	< 1.0	< 1.0	**43**	< 1.0
	12/20/10	PSH	PSH	PSH	PSH	PSH	PSH	PSH	PSH	PSH	PSH	PSH	PSH
	04/06/11	NA	< 500	< 500	< 0.5	< 0.5	< 0.5	< 1.5	**96**	< 1.0	< 1.0	**9.5**	< 1.0
	12/22/11	NA	< 500	< 500	< 0.5	< 0.5	< 0.5	< 1.5	**64**	< 1.0	< 1.0	**7.0**	< 1.0
	06/06/12	NA	< 500	< 500	< 0.5	< 0.5	< 0.5	< 1.5	**78**	< 1.0	< 1.0	**15**	< 1.0
	12/30/13	PSH	PSH	PSH	PSH	PSH	PSH	PSH	PSH	PSH	PSH	PSH	PSH
	09/03/15	NA	**200,000**	**7,200,000**	**170**	< 1.0	**48**	< 2.0	**42**	< 2.0	< 2.0	**430**	< 2.0
	12/10/15	NA	**290,000**	**86,000**	**97**	< 1.0	**14**	< 2.0	**28**	< 2.0	< 2.0	**190**	< 2.0
MW-4 (installed 5/13/88)	05/25/88	**6.3**	NA	NA	< 0.5	< 0.5	NA	< 0.5	NA	NA	NA	NA	NA
	03/10/98	NA	**9,600**	**3,700**	**2,400**	250	**50**	430	**4,100**	NA	NA	NA	NA
	04/04/00	NA	**8,700**	NA	**1,800**	< 12	**110**	**790**	**900**	NA	NA	NA	NA
	04/26/02	NA	**15,000**	**95,000**	**4,500**	**150**	**450**	**1,900**	**1,500**	< 100	< 100	< 1,200	< 100
	12/03/02	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	10/25/07	PSH	PSH	PSH	PSH	PSH	PSH	PSH	PSH	PSH	PSH	PSH	PSH
	01/17/08	PSH	PSH	PSH	PSH	PSH	PSH	PSH	PSH	PSH	PSH	PSH	PSH
	04/18/08	NA	**2,000**	**4,500**	**380**	**2.9**	**95**	**41.0**	**110.0**	NA	NA	NA	NA
	07/28/08	NA	**2,100**	**1,300**	**410**	< 2.5	**72.0**	< 10	**70**	NA	NA	NA	NA
	12/30/08	NA	**4,900**	**3,400**	**88**	< 10	**20**	**53**	< 20	< 20	< 20	< 200	< 20
	06/18/09	NA	< 500	< 500	**370**	**2.0**	**58**	**11.6**	**89**	< 1.0	< 1.0	**24**	< 1.0
	11/18/09	NA	**3,300**	**2,600**	**460**	**11**	**130**	**70.4**	**140**	< 1.0	< 1.0	< 5.0	< 1.0
	04/21/10	NA	< 500	< 500	**34**	**0.5**	**4.7**	**1.0**	**33**	< 1.0	< 1.0	< 5.0	< 1.0
	12/23/10	NA	< 500	< 500	**51**	**1.2**	**20**	**4.7**	**57**	< 1.0	< 1.0	< 5.0	< 1.0
	04/05/11	NA	< 500	**860**	**43**	**2.7**	**11**	**8.3**	**29**	< 1.0	< 1.0	< 5.0	< 1.0
	12/22/11	NA	< 500	**820**	**44**	**1.9**	**15**	**6.0**	**48**	< 1.0	< 1.0	< 5.0	< 1.0
	06/04/12	NA	< 500	< 500	**39**	**1.2**	**21**	**1.3**	**42**	< 1.0	< 1.0	< 5.0	< 1.0
	12/30/13	NA	< 500	< 500	**29**	**0.9**	**53**	**1.3**	**19**	< 1.0	< 1.0	< 5.0	< 1.0

Table 3
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Groundwater Analytical Data for TPH and VOCs
11427 Woodside Avenue, Santee, California

Well Number	Sample Date	TPH	TPHg (µg/L)	TPHd (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Xylenes (µg/L)	MTBE (µg/L)	ETBE (µg/L)	TAME (µg/L)	TBA (µg/L)	DIPE (µg/L)
MW-5 (instalation unknown)	03/10/98	NA	**730**	**1,700**	**20**	**0.6**	< 0.30	**39**	**92**	NA	NA	NA	NA
	04/26/02	NA	**500**	**2,000**	**7.3**	**1.7**	**2.8**	**6.8**	**230**	NA	NA	NA	NA
	12/03/02	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	10/25/07	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	01/17/08	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	04/18/08	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	07/28/08	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	12/30/08	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	Well Destroyed												
MW-6 (installed 2/26/01)	04/26/02	NA	**25,000**	**9,100**	**5,300**	**1,400**	**1,200**	**5,900**	**850**	NA	NA	NA	NA
	12/03/02	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	10/25/07	NA	**570**	< 500	**21**	**0.7**	**48**	**14**	**17**	NA	NA	NA	NA
	01/17/08	NA	**1,400**	< 500	**9.6**	**0.6**	**4.8**	**8.5**	**3.5**	NA	NA	NA	NA
	04/18/08	NA	**2,000**	**750**	**500**	< 20	**210**	**150**	**180**	NA	NA	NA	NA
	07/28/08	NA	**6,900**	**980**	**720**	**7.6**	**410**	**540**	**98**	NA	NA	NA	NA
	12/30/08	NA	**950**	**650**	**55**	< 1.0	**34**	**30**	< 2.0	< 2.0	< 2.0	< 20	< 2.0
	06/19/09	NA	< 500	< 500	**350**	**3.1**	**250**	**182.3**	**54**	< 1.0	< 1.0	**22**	< 1.0
	11/18/09	NA	< 500	< 500	**90**	**2.0**	**75**	**73.0**	**25**	< 1.0	< 1.0	< 5.0	< 1.0
	04/21/10	NA	**1,300**	**1,500**	**750**	**4.1**	**320**	**29.7**	**110**	< 1.0	< 1.0	< 5.0	< 1.0
	12/20/10	NA	< 500	< 500	**110**	< 1.0	**16**	**5.0**	**12**	< 1.0	< 1.0	< 5.0	< 1.0
	04/05/11	NA	**1,200**	**6,800**	**990**	**5.7**	**550**	**28.8**	**160**	< 1.0	< 1.0	< 5.0	< 1.0
	12/22/11	NA	< 500	< 500	**130**	< 5.0	< 5.0	< 15	**29**	< 10	< 10	< 50	< 10
	06/05/12	NA	**4,300**	**4,000**	**710**	**7.6**	**660**	**91**	**150**	< 10	< 10	< 50	< 10
	12/30/13	NA	< 500	< 500	**20**	<0.5	**27**	**2.4**	**6.5**	< 1.0	< 1.0	< 5.0	< 1.0
	09/03/15	NA	**1,500**	**440**	**48**	< 1.0	**41**	**2.8**	**8.5**	< 2.0	< 2.0	< 10	< 2.0
	12/10/15	NA	**270**	**280**	**19**	< 1.0	**17**	**1.1**	**5.4**	< 2.0	< 2.0	< 10	< 2.0
MW-7 (installed 2/26/01)	04/26/02	NA	**1,900**	**13,000**	**3.7**	**1.1**	**4**	**7.9**	**19**	NA	NA	NA	NA
	12/03/02	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	10/25/07	NA	< 500	< 500	< 0.5	< 0.5	< 0.5	< 1.5	< 1.0	NA	NA	NA	NA
	01/17/08	NA	< 500	< 500	< 0.5	< 0.5	< 0.5	< 1.5	< 1.0	NA	NA	NA	NA
	04/21/08	NA	< 500	< 500	< 0.5	< 0.5	< 0.5	< 1.5	< 1.0	NA	NA	NA	NA
	07/29/08	NA	< 50	< 500	< 0.5	< 0.5	< 0.5	< 1.5	< 1.0	NA	NA	NA	NA
	12/30/08	NA	< 50	< 500	< 1.0	< 1.0	< 1.0	< 3.0	< 2.0	< 2.0	< 2.0	< 20	< 2.0
	06/18/09	NA	< 500	< 500	< 0.5	< 0.5	< 0.5	< 1.5	< 1.0	< 1.0	< 1.0	**15**	< 1.0
	11/17/09	NA	< 500	< 500	< 0.5	< 0.5	< 0.5	< 1.5	< 1.0	< 1.0	< 1.0	**8.7**	< 1.0
	04/20/10	NA	< 500	< 500	< 0.5	< 0.5	< 0.5	< 1.5	< 1.0	< 1.0	< 1.0	< 5.0	< 1.0
	12/21/10	NA	< 500	< 500	< 0.5	< 0.5	< 0.5	< 1.5	< 1.0	< 1.0	< 1.0	< 5.0	< 1.0
	04/05/11	NA	< 500	< 500	**0.8**	< 0.5	**0.6**	**2.8**	< 1.0	< 1.0	< 1.0	< 5.0	< 1.0
	12/22/11	NA	< 500	< 500	< 0.5	< 0.5	< 0.5	< 1.5	< 1.0	< 1.0	< 1.0	< 5.0	< 1.0
	06/04/12	NA	< 500	< 500	< 0.5	< 0.5	< 0.5	< 1.5	< 1.0	< 1.0	< 1.0	< 5.0	< 1.0
	12/30/13	NA	< 500	< 500	< 0.5	< 0.5	< 0.5	< 1.5	< 1.0	< 1.0	< 1.0	< 5.0	< 1.0
	09/03/15	NA	**120**	**610**	< 0.5	< 1.0	< 1.0	<2.0	< 1.0	< 2.0	< 2.0	< 10	< 2.0
	12/10/15	NA	< 100	**510**	< 0.5	< 1.0	< 1.0	<2.0	< 1.0	< 2.0	< 2.0	< 10	< 2.0

Table 3
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Groundwater Analytical Data for TPH and VOCs
11427 Woodside Avenue, Santee, California

Well Number	Sample Date	TPH	TPHg (µg/L)	TPHd (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Xylenes (µg/L)	MTBE (µg/L)	ETBE (µg/L)	TAME (µg/L)	TBA (µg/L)	DIPE (µg/L)
MW-8 (installed 4/19/02)	04/26/02	NA	**4,800**	**6,500**	**50**	**9.2**	**170**	**210**	**64**	NA	NA	NA	NA
	12/03/02	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	10/26/07	NA	**1,100**	**790**	< 0.5	< 0.5	**23**	< 0.5	< 1.0	NA	NA	NA	NA
	01/17/08	NA	**1,100**	**570**	< 0.5	< 0.5	**27**	< 1.5	< 1.0	NA	NA	NA	NA
	04/21/08	NA	**980**	**1,200**	< 0.5	< 0.5	**23**	< 1.5	< 1.0	NA	NA	NA	NA
	07/29/08	NA	**660**	**2,100**	< 0.5	< 0.5	**15**	< 2.0	< 1.0	NA	NA	NA	NA
	12/30/08	NA	**890**	**3,000**	< 1.0	< 1.0	**16**	< 4.0	< 2.0	< 2.0	< 2.0	< 20	< 2.0
	06/18/09	NA	< 500	< 500	< 0.5	< 0.5	**13**	< 1.5	< 1.0	< 1.0	< 1.0	**13**	< 1.0
	11/17/09	NA	< 500	< 500	< 0.5	**0.7**	**10**	< 1.5	< 1.0	< 1.0	< 1.0	< 5.0	< 1.0
	04/20/10	NA	< 500	< 500	< 0.5	< 0.5	**6.1**	< 1.5	< 1.0	< 1.0	< 1.0	< 5.0	< 1.0
	12/23/10	NA	< 500	< 500	< 0.5	< 0.5	**1.9**	< 1.5	< 1.0	< 1.0	< 1.0	< 5.0	< 1.0
	04/05/11	NA	< 500	< 500	< 0.5	< 0.5	**5.1**	< 1.5	< 1.0	< 1.0	< 1.0	< 5.0	< 1.0
	12/21/11	NA	< 500	< 500	< 0.5	< 0.5	**4.3**	< 1.5	< 1.0	< 1.0	< 1.0	< 5.0	< 1.0
	06/05/12	NA	< 500	< 500	< 0.5	< 0.5	**4.6**	< 1.5	< 1.0	< 1.0	< 1.0	< 5.0	< 1.0
	12/30/13	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW-9 (installed 2/4/08)	04/18/08	NA	**1,700**	**560**	**740**	**250**	**270**	**1,010**	**170**	NA	NA	NA	NA
	07/28/08	NA	**1,100**	**570**	**230**	**27**	**27**	**65**	**74**	NA	NA	NA	NA
	12/30/08	NA	**1,300**	< 500	**140**	**10**	**71**	**200**	**21**	< 5.0	< 5.0	< 50	< 5.0
	06/19/09	NA	< 500	< 500	**50**	**6.1**	**34**	**49.3**	**55**	< 1.0	< 1.0	**34**	< 1.0
	11/18/09	NA	< 500	< 500	**62**	**8.9**	**51**	**89**	**67**	< 1.0	< 1.0	< 5.0	< 1.0
	04/21/10	NA	< 500	< 500	**170**	**28**	**86**	**164**	**64**	< 1.0	< 1.0	< 5.0	< 1.0
	12/20/10	NA	< 500	< 500	**18**	**2.9**	**22**	**31.3**	**40**	< 1.0	< 1.0	< 5.0	< 1.0
	04/04/11	NA	**1,300**	**500**	**74**	**31**	**84**	**146**	**43**	< 1.0	< 1.0	< 5.0	< 1.0
	12/21/11	NA	**3,800**	< 500	**16**	**3.6**	**22**	**25.3**	**5.5**	< 1.0	< 1.0	< 5.0	< 1.0
	06/05/12	NA	< 500	< 500	**8.2**	**4.5**	**10**	**13.8**	**6.3**	< 1.0	< 1.0	< 5.0	< 1.0
	12/30/13	NA	< 500	< 500	**11**	**0.8**	**25**	**13**	**5**	< 1.0	< 1.0	< 5.0	< 1.0
MW-10 (installed 2/5/08)	04/18/08	NA	< 500	< 500	< 0.5	< 0.5	< 0.5	< 1.5	**4.2**	NA	NA	NA	NA
	07/29/08	NA	< 50	< 500	< 0.5	< 0.5	< 0.5	< 2.0	**1.0**	NA	NA	NA	NA
	12/30/08	NA	< 50	< 500	< 0.5	< 0.5	< 0.5	< 2.0	< 1.0	< 1.0	< 1.0	< 10	< 1.0
	06/18/09	NA	< 500	< 500	< 0.5	< 0.5	< 0.5	< 1.5	**1.8**	< 1.0	< 1.0	**20**	< 1.0
	11/17/09	NA	< 500	< 500	< 0.5	**0.5**	< 0.5	< 1.5	**6.3**	< 1.0	< 1.0	**6.3**	< 1.0
	04/20/10	NA	< 500	< 500	< 0.5	< 0.5	< 0.5	< 1.5	**2.0**	< 1.0	< 1.0	< 5.0	< 1.0
	12/20/10	NA	< 500	< 500	< 0.5	< 0.5	< 0.5	< 1.5	**1.4**	< 1.0	< 1.0	< 5.0	< 1.0
	04/05/11	NA	< 500	< 500	< 0.5	< 0.5	< 0.5	< 1.5	< 1.0	< 1.0	< 1.0	< 5.0	< 1.0
	12/22/11	NA	< 500	< 500	< 0.5	< 0.5	< 0.5	< 1.5	< 1.0	< 1.0	< 1.0	< 5.0	< 1.0
	06/04/12	PSH	PSH	PSH	PSH	PSH	PSH	PSH	PSH	PSH	PSH	PSH	PSH
	12/30/13	PSH	PSH	PSH	PSH	PSH	PSH	PSH	PSH	PSH	PSH	PSH	PSH

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Groundwater Analytical Data for TPH and VOCs
11427 Woodside Avenue, Santee, California

Well Number	Sample Date	TPH	TPHg (µg/L)	TPHd (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Xylenes (µg/L)	MTBE (µg/L)	ETBE (µg/L)	TAME (µg/L)	TBA (µg/L)	DIPE (µg/L)
MW-11 (installed 2/8/08)	04/18/08	NA	**1,800**	< 500	**22**	< 1.0	**170**	< 3.0	< 2.0	NA	NA	NA	NA
	07/29/08	NA	**690**	**720**	**4.2**	**0.81**	**39**	< 2.0	< 1.0	NA	NA	NA	NA
	12/31/08	NA	**2,000**	**1,600**	**52**	**6.8**	**230**	**11**	< 5.0	< 5.0	< 5.0	< 50	< 5.0
	06/18/09	NA	< 500	< 500	**5.9**	**0.6**	**19**	< 1.5	**1.6**	< 1.0	< 1.0	**12**	< 1.0
	11/17/09	NA	**900**	< 500	**6.5**	**1.5**	**5.5**	**1.2**	**2.3**	< 1.0	< 1.0	< 5.0	< 1.0
	04/20/10	NA	< 500	< 500	**3.1**	< 0.5	**0.7**	< 1.5	**1.0**	< 1.0	< 1.0	< 5.0	< 1.0
	12/21/10	NA	< 500	< 500	**28**	**4.1**	**22**	**9.6**	**1.6**	< 1.0	< 1.0	< 5.0	< 1.0
	04/04/11	NA	< 500	**600**	**9.3**	**0.7**	**5.7**	< 1.5	**1.7**	< 1.0	< 1.0	< 5.0	< 1.0
	12/21/11	NA	**910**	**1,400**	**16**	**1.2**	**27**	**2.8**	**1.1**	< 1.0	< 1.0	< 5.0	< 1.0
	06/04/12	NA	**1,700**	**1,600**	**13**	**2.5**	**16**	**13.4**	< 1.0	< 1.0	< 1.0	< 5.0	< 1.0
	12/30/13	NA	**2,000**	**730**	**15**	**1.4**	**39**	**5.6**	< 1.0	< 1.0	< 1.0	< 5.0	< 1.0
MW-12 (installed 2/8/08)	04/18/08	NA	< 500	< 500	< 1.0	< 1.0	**2.0**	< 3.0	**65**	NA	NA	NA	NA
	07/29/08	NA	< 50	< 500	< 0.5	< 0.5	< 0.5	< 2.0	**11**	NA	NA	NA	NA
	12/31/08	NA	< 50	< 500	< 0.5	< 0.5	< 0.5	< 2.0	**16**	< 1.0	< 1.0	< 10	< 1.0
	06/18/09	NA	< 500	< 500	< 0.5	< 0.5	< 0.5	< 1.5	**14**	< 1.0	< 1.0	**32**	< 1.0
	11/17/09	NA	< 500	< 500	< 0.5	< 0.5	< 0.5	< 1.5	**2.5**	< 1.0	< 1.0	< 5.0	< 1.0
	04/20/10	NA	< 500	< 500	**2.7**	< 0.5	< 0.5	< 1.5	**4.6**	< 1.0	< 1.0	< 5.0	< 1.0
	12/23/10	NA	< 500	< 500	**12**	**0.6**	**0.7**	**3.6**	**4.1**	< 1.0	< 1.0	< 5.0	< 1.0
	04/04/11	NA	< 500	< 500	< 0.5	< 0.5	< 0.5	< 1.5	**3.2**	< 1.0	< 1.0	< 5.0	< 1.0
	12/21/11	NA	< 500	< 500	< 0.5	< 0.5	< 0.5	< 1.5	**4.9**	< 1.0	< 1.0	< 5.0	< 1.0
	06/04/12	NA	< 500	< 500	**3.3**	**0.7**	< 0.5	< 1.5	< 1.0	< 1.0	< 1.0	< 5.0	< 1.0
	12/30/13	NA	< 500	< 500	**9.6**	**0.5**	**0.8**	< 1.5	**9.2**	< 1.0	< 1.0	< 5.0	< 1.0
MW-13 (installed 2/18/08)	04/21/08	NA	< 500	< 500	< 0.5	< 0.5	< 0.5	< 2.0	< 1.0	NA	NA	NA	NA
	07/30/08	NA	< 50	< 500	< 0.5	< 0.5	< 0.5	< 2.0	< 1.0	NA	NA	NA	NA
	12/30/08	NA	< 50	< 500	< 0.5	< 0.5	< 0.5	< 2.0	< 1.0	< 1.0	< 1.0	< 10	< 1.0
	06/18/09	NA	< 500	< 500	< 0.5	< 0.5	< 0.5	< 1.5	< 1.0	< 1.0	< 1.0	**11**	< 1.0
	11/17/09	NA	< 500	< 500	< 0.5	**0.6**	< 0.5	< 1.5	< 1.0	< 1.0	< 1.0	< 5.0	< 1.0
	04/20/10	NA	< 500	< 500	< 0.5	< 0.5	< 0.5	< 1.5	< 1.0	< 1.0	< 1.0	< 5.0	< 1.0
	12/23/10	NA	< 500	< 500	< 0.5	< 0.5	< 0.5	< 1.5	< 1.0	< 1.0	< 1.0	< 5.0	< 1.0
	04/05/11	NA	< 500	< 500	< 0.5	< 0.5	**1.0**	< 1.5	< 1.0	< 1.0	< 1.0	< 5.0	< 1.0
	12/21/11	NA	< 500	< 500	< 0.5	< 0.5	< 0.5	< 1.5	< 1.0	< 1.0	< 1.0	< 5.0	< 1.0
	06/04/12	NA	< 500	< 500	< 0.5	< 0.5	< 0.5	< 1.5	< 1.0	< 1.0	< 1.0	< 5.0	< 1.0
	12/30/13	PSH	PSH	PSH	PSH	PSH	PSH	PSH	PSH	PSH	PSH	PSH	PSH
MW-14 (installed 2/18/08)	04/21/08	NA	**27,000**	**3,800**	**5,300**	**290**	**2,400**	**6,460**	**650**	NA	NA	NA	NA
	07/30/08	NA	**25,000**	**12,000**	**6,600**	**170**	**2,400**	**3,700**	**270**	NA	NA	NA	NA
	12/31/08	NA	**18,000**	**1,000**	**3,700**	< 50	**1,500**	**2,000**	**570**	< 100	< 100	< 1,000	< 100
	06/19/09	NA	< 500	< 500	**3,600**	**160**	**1,900**	**2,990**	**540**	< 20	< 20	**110**	< 20
	11/18/09	NA	**6,900**	< 500	**1,600**	**54**	**1,000**	**944**	**510**	< 1.0	< 1.0	< 5.0	< 1.0
	04/20/10	NA	**3,700**	< 500	**2,600**	**210**	**1,700**	**3,650**	**670**	< 20	< 20	< 100	< 20
	12/20/10	NA	**5,500**	**2,300**	**1,900**	**98**	**1,400**	**2,180**	**670**	< 40	< 40	< 200	< 40
	04/05/11	NA	**14,000**	**2,900**	**2,400**	**110**	**1,500**	**2,759**	**770**	< 40	< 40	< 200	< 40
	12/22/11	NA	**17,000**	**6,000**	**2,300**	< 50	**1,800**	**2,600**	**340**	< 100	< 100	< 500	< 100
	06/05/12	NA	**6,000**	**2,600**	**3,000**	**120**	**2,500**	**3,751**	**390**	< 100	< 100	< 500	< 100
	12/30/13	NA	**25,000**	**2,200**	**1,800**	**59**	**1,700**	**1,900**	< 100	< 100	< 100	< 500	< 100

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Groundwater Analytical Data for TPH and VOCs
11427 Woodside Avenue, Santee, California

Well Number	Sample Date	TPH	TPHg (µg/L)	TPHd (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Xylenes (µg/L)	MTBE (µg/L)	ETBE (µg/L)	TAME (µg/L)	TBA (µg/L)	DIPE (µg/L)
MW-15 (installed 2/19/08)	04/21/08	NA	**32,000**	**3,500**	**2,400**	**510**	**4,100**	**13,380**	< 200	NA	NA	NA	NA
	07/30/08	NA	**46,000**	**17,000**	**2,100**	**250**	**3,700**	**10,000**	< 50	NA	NA	NA	NA
	12/31/08	NA	**8,400**	**2,100**	**620**	**12**	**1,500**	**160**	< 20	< 20	< 20	< 200	< 20
	06/19/09	NA	< 500	< 500	**820**	**250**	**2,800**	**6,930**	**35**	< 20	< 20	< 100	< 20
	11/18/09	NA	**19,000**	< 500	**910**	**77**	**3,700**	**4,308.9**	**19**	< 10	< 10	< 50	< 10
	04/20/10	NA	**1,800**	**1,500**	**1,100**	**130**	**3,700**	**10,090**	< 100	< 100	< 100	< 500	< 100
	12/21/10	NA	**7,100**	**4,800**	**800**	**63**	**2,600**	**2,800**	< 100	< 100	< 100	< 500	< 100
	04/05/11	NA	**21,000**	**8,400**	**990**	**120**	**3,000**	**7,180**	< 100	< 100	< 100	< 500	< 100
	12/22/11	NA	**1,200**	**720**	**450**	< 50	**580**	**810**	< 100	< 100	< 100	< 500	< 100
	06/06/12	NA	**44,000**	**8,200**	**1,300**	**72**	**3,800**	**6,790**	< 100	< 100	< 100	< 500	< 100
	12/30/13	NA	**26,000**	**3,500**	**350**	< 50	**2,800**	**3,400**	< 100	< 100	< 100	< 500	< 100
MW-16 (installed 2/16/08)	04/21/08	NA	< 500	< 500	**53**	< 2.5	**77**	< 7.5	**110**	NA	NA	NA	NA
	07/30/08	NA	**1,300**	**780**	**110**	**1.7**	**210**	< 4.0	**160**	NA	NA	NA	NA
	12/31/08	NA	**2,500**	**790**	**470**	**6**	**390**	< 20	< 10	< 10	< 10	< 100	< 10
	06/19/09	NA	< 500	< 500	**120**	**16**	**220**	**33**	**100**	< 20	< 20	**170**	< 20
	11/18/09	NA	**570**	< 500	**110**	**2.5**	**65**	**10.5**	**73**	< 1.0	< 1.0	< 5.0	< 1.0
	04/20/10	NA	< 500	< 500	< 10	< 10	< 10	< 30	**33**	< 20	< 20	< 100	< 20
	12/21/10	NA	< 500	< 500	**3.9**	< 1.0	< 1.0	< 1.5	**16**	< 1.0	< 1.0	< 5.0	< 1.0
	04/04/11	NA	< 500	**570**	**11**	**0.7**	**60**	< 1.5	**26**	< 1.0	< 1.0	< 5.0	< 1.0
	12/21/11	NA	< 500	**770**	**10**	< 0.5	**53**	**2.8**	**10**	< 1.0	< 1.0	< 5.0	< 1.0
	06/04/12	NA	< 500	**640**	**32**	**0.9**	**24**	**3.5**	**16**	< 1.0	< 1.0	< 5.0	< 1.0
	12/30/13	NA	< 500	< 500	**7.2**	**0.5**	<0.5	**3.4**	**5.3**	<1.0	<1.0	**37**	<1.0
MW-17 (installed 2/19/08)	04/21/08	NA	**990**	**3,100**	< 0.5	< 0.5	< 0.5	< 1.5	< 1.0	NA	NA	NA	NA
	07/30/08	NA	**780**	**11,000**	< 5.0	< 5.0	< 5.0	< 1.5	< 1.0	NA	NA	NA	NA
	12/30/08	NA	**520**	**55,000**	< 5.0	< 5.0	< 5.0	< 20	< 10	< 10	< 10	< 100	< 10
	06/19/09	NA	**1,600**	**730**	< 0.5	**0.7**	< 0.5	< 1.5	**2.4**	< 1.0	< 1.0	**15**	< 1.0
	11/17/09	NA	**550**	< 500	**0.5**	< 0.5	**1.9**	**2.4**	< 1.0	< 1.0	< 1.0	< 5.0	< 1.0
	04/20/10	NA	< 500	< 500	**0.6**	< 0.5	< 0.5	< 1.5	**29**	< 1.0	< 1.0	**35**	< 1.0
	12/20/10	NA	< 500	< 500	< 0.5	< 0.5	< 0.5	< 1.5	**2.9**	< 1.0	< 1.0	< 5.0	< 1.0
	04/05/11	NA	< 500	< 500	< 0.5	< 0.5	< 0.5	< 1.5	**1.9**	< 1.0	< 1.0	< 5.0	< 1.0
	12/22/11	NA	< 500	< 500	< 0.5	< 0.5	< 0.5	< 1.5	**1.0**	< 1.0	< 1.0	< 5.0	< 1.0
	06/05/12	NA	< 500	< 500	< 0.5	< 0.5	< 0.5	< 1.5	**1.3**	< 1.0	< 1.0	< 5.0	< 1.0
	12/30/13	PSH	PSH	PSH	PSH	PSH	PSH	PSH	PSH	PSH	PSH	PSH	PSH
MW-18 (installed 3/23/11)	04/04/11	NA	**530**	< 500	**0.5**	< 0.5	**0.5**	< 1.5	< 1.0	< 1.0	< 1.0	< 5.0	< 1.0
	12/21/11	NA	< 500	< 500	< 0.5	< 0.5	< 0.5	< 1.5	< 1.0	< 1.0	< 1.0	< 5.0	< 1.0
	06/04/12	NA	< 500	< 500	< 0.5	< 0.5	< 0.5	< 1.5	< 1.0	< 1.0	< 1.0	< 5.0	< 1.0
	12/30/13	NA	< 500	< 500	< 0.5	< 0.5	< 0.5	< 1.5	< 1.0	< 1.0	< 1.0	< 5.0	< 1.0
	09/03/15	NA	< 100	< 94	< 0.5	< 1.0	< 1.0	<2.0	< 1.0	< 2.0	< 2.0	< 10	< 2.0
	12/10/15	NA	< 100	< 94	< 0.5	< 1.0	< 1.0	< 2.0	< 1.0	< 2.0	< 2.0	< 10	< 2.0

Table 3
(Page 7 of 7)
Groundwater Analytical Data for TPH and VOCs
11427 Woodside Avenue, Santee, California

Well Number	Sample Date	TPH	TPHg (µg/L)	TPHd (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Xylenes (µg/L)	MTBE (µg/L)	ETBE (µg/L)	TAME (µg/L)	TBA (µg/L)	DIPE (µg/L)
MW-19 (installed 3/23/11)	04/04/11	NA	**55,000**	**6,100**	**640**	**2,600**	**4,100**	**17,200**	< 100	< 100	< 100	< 500	< 100
	12/22/11	NA	**35,000**	**15,000**	**650**	**1,500**	**3,300**	**6,700**	< 100	< 100	< 100	< 500	< 100
	06/05/12	NA	**22,000**	**6,000**	**410**	**870**	**2,400**	**4,800**	< 100	< 100	< 100	< 500	< 100
	12/30/13	NA	**43,000**	**2,300**	**360**	**370**	**2,900**	**5,400**	< 100	< 100	< 100	< 500	< 100

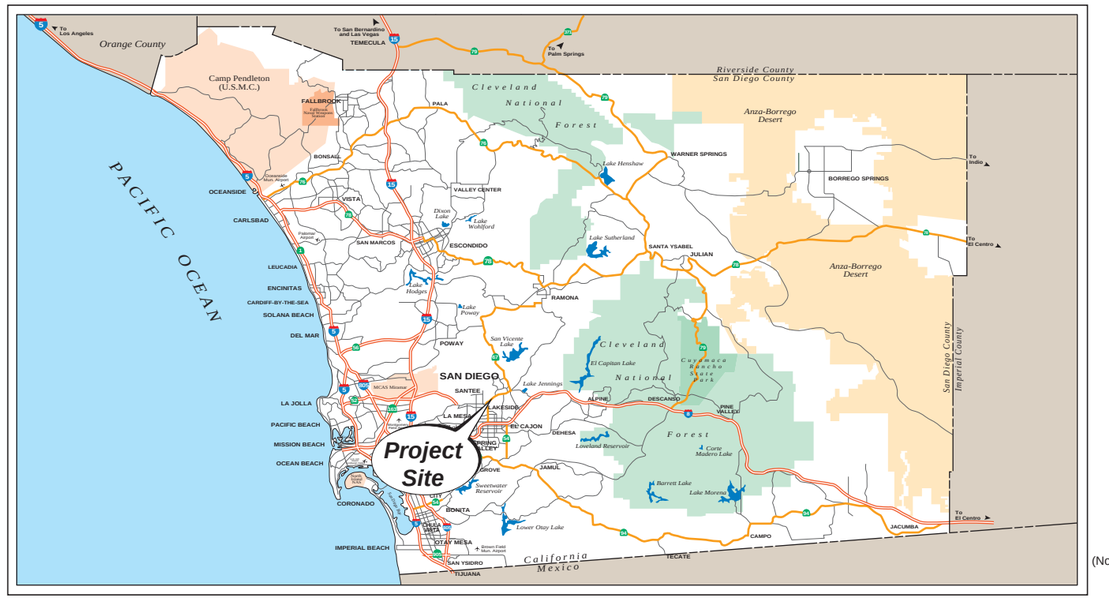
Notes:
Groundwater samples collected by SCS Engineers from June 2009 to present.
Groundwater samples collected by Petra Geotechnical, Inc. from October 25, 2007 to December 31, 2008.
Groundwater samples collected by EnecoTech Southwest, Inc. from May 25, 1988 to December 3, 2002.
Results presented in micrograms per liter (µg/L).
Samples were analyzed for gasoline-range (TPHg) and diesel-range (TPHd) total petroleum hydrocarbons in general accordance with CA DHS LUFT Method; and benzene, toluene, ethylbenzene, and xylenes (BTEX), methyl tertiary butyl ether (MTBE), di-isopropyl ether (DIPE), ethyl-t-butyl ether (ETBE), tert-amyl methyl ether (TAME), and t-butanol (TBA) in general accordance with EPA Method 8260B.
< indicates not reported at a concentration above laboratory detection limit, and bold font indicates concentrations above the laboratory reporting limit.
NS indicates well not sampled.
NA indicates not analyzed for particular constituent of concern.
* indicates samples were analyzed by EPA Method 418.1 for total extractable hydrocarbons.
PSH = phase-separated hydrocarbons

Table 4
RNA Analytical Results
11427 Woodside Avenue, Santee, California

Sample Number	Date Sampled	Conductivity (µS/cm3)	pH	Dissolved Oxygen (mg/L)	Redox Potential (mV)	Total Iron (mg/L)	Ferric Iron (mg/L)	Iron (II) (mg/L)	Nitrate as N (mg/L)	Sulfate (mg/L)	Total Manganese (mg/L)	Ammonia (mg/L)	Phosphate (mg/L)	Carbon Dioxide (mg/L)	Methane (µg/L)
MW-1	9/3/2015	**1.41***	**7.11**	**3.38**	**230**	**2.21**	< 0.10	< 0.10	**13**	**170**	**0.332**	< 0.10	**0.49**	**46**	**87.6**
	12/10/2015	**1.44***	**7.22**	**2.32**	**-170**	**1.46**	**1.46**	< 0.100	**15**	**170**	**0.565**	< 0.10	**0.87**	**88**	**15.0**
MW-3	9/3/2015	--	**6.68**	**1.68**	**220**	**68.6**	**1.30**	**1.30**	< 0.10	**2.2**	**4.40**	**0.45**	< 0.31	**200**	**5,260**
	12/10/2015	--	**6.81**	**1.82**	**-74**	**289**	**288**	**1.11**	< 0.10	**2.9**	**5.27**	**0.67**	**1.9**	**1,600**	**6,510**
MW-6	12/30/2013	**1.89***	**7.16**	**2.91**	**110**	**2.67**	**2.67**	< 0.10	**8.3**	**270**	**0.569**	**0.17**	< 0.10	**67**	**102**
	9/3/2015	**1.79***	**7.19**	**2.85**	**210**	**4.66**	< 0.10	< 0.10	**9.6**	**230**	**0.579**	< 0.10	< 0.31	**55**	**515**
	12/10/2015	**1.78***	**6.95**	**2.79**	**10**	**6.07**	**6.07**	< 0.10	**10**	**250**	**0.534**	< 0.10	**0.46**	**520**	**185**
MW-7	12/30/2013	**1.78***	**6.89**	**2.98**	**120**	**1.62**	**1.62**	< 0.10	**15**	**230**	**0.893**	**0.17**	**0.13**	**100**	< 1
	9/3/2015	**1.70***	**6.99**	**3.15**	**200**	**7.60**	< 0.10	< 0.10	**13**	**230**	**0.769**	**0.17**	**0.38**	**81**	< 1
	12/10/2015	**1.62***	**6.91**	**3.21**	**110**	**3.73**	**3.73**	< 0.10	**14**	**220**	**0.794**	**0.11**	**0.62**	**400**	< 1
MW-14	12/30/2013	**1.51***	**6.67**	**1.72**	**-160**	**20.0**	**9.6**	**10.4**	< 0.10	**22**	**1.64**	**0.22**	< 0.10	**240**	**20.0**
MW-18	12/30/2013	**1.39***	**6.81**	**6.36**	**85**	**36.8**	**36.8**	< 0.10	**12**	**290**	**0.522**	**0.11**	< 0.10	**93**	**1.37**
	9/3/2015	**1.45***	**6.84**	**4.55**	**200**	**20.6**	< 0.10	< 0.10	**13**	**280**	**0.282**	< 0.10	**0.34**	**69**	< 1
	12/10/2015	**1.45***	**6.75**	**4.32**	**120**	**47.4**	**47.4**	< 0.10	**14**	**270**	**0.799**	< 0.10	**1.4**	**140**	< 1

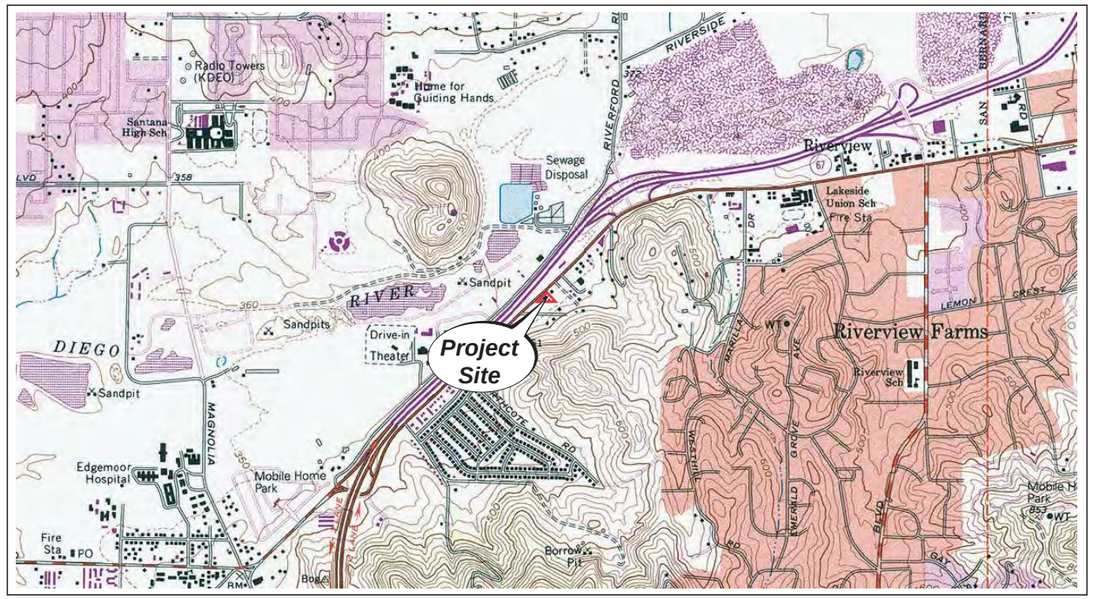
Notes:
µS/cm3 = microsiemens per centimeter
µg/L = micrograms per liter
mg/L = milligrams per liter
mV = millivolts
Groundwater samples analyzed for geochemical parameters in accordance with Method SM3500-FE-D for ferrous iron, Method 300 for nitrate and sulfate, Method 6010B for manganese and iron, Method SM4500 for ammonia, phosphate, pH, dissolved oxygen, and carbon dioxide, Method RSK175 for methane, and ASTM D-1498 for redox potential.
Bold font indicates concentrations above laboratory reporting limits for the analyte.
* indicates data collected from a field instrument
-- indicates no data available, as field parameters were not collected
< indicates result not reported at concentrations greater than the indicated analytical method reporting limit.

FIGURES



North
(Not to scale)

REGIONAL SITE LOCATION



North

Reference:
U.S.G.S. 7.5 Minute Quadrangle map
El Cajon, California - 1977. Photo revised 1982.

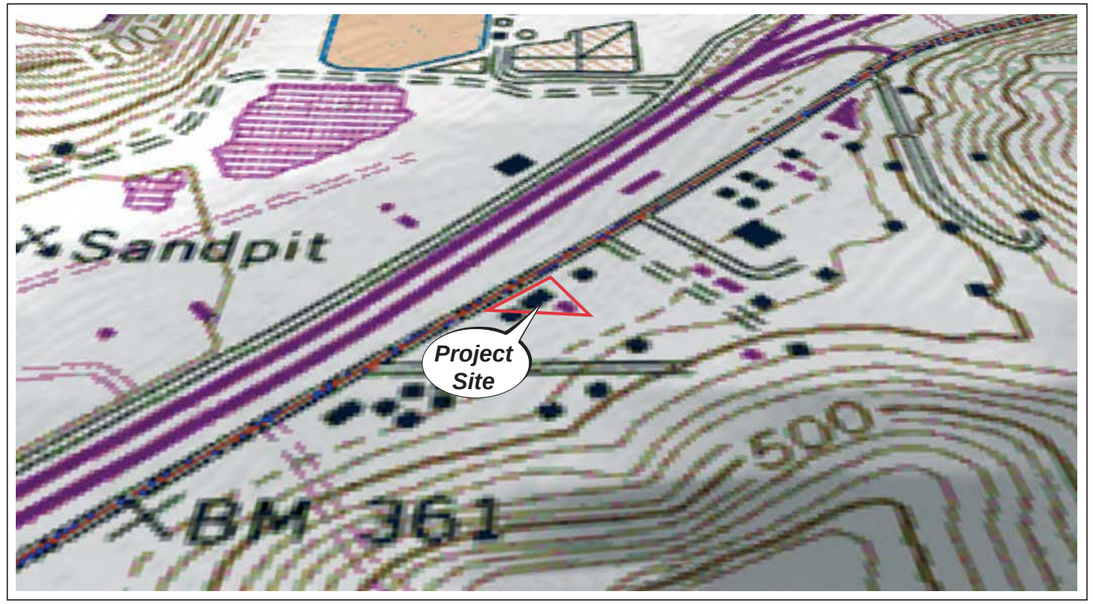
2-DIMENSIONAL SITE LOCATION

0 1,000 2,000 3,000
Approximate Graphic Scale in Feet

North
(Not to scale)

Reference:
Google Earth Aerial Photograph
Santee, California - February 2008

SITE AERIAL PHOTOGRAPH



North
(Not to scale)

Reference:
U.S.G.S. 7.5 Minute Quadrangle map
El Cajon, California - 1977. Photo revised 1982.

3-DIMENSIONAL SITE LOCATION

Disclaimer: This figure is based on available data. Actual conditions may differ. All locations and dimensions are approximate.

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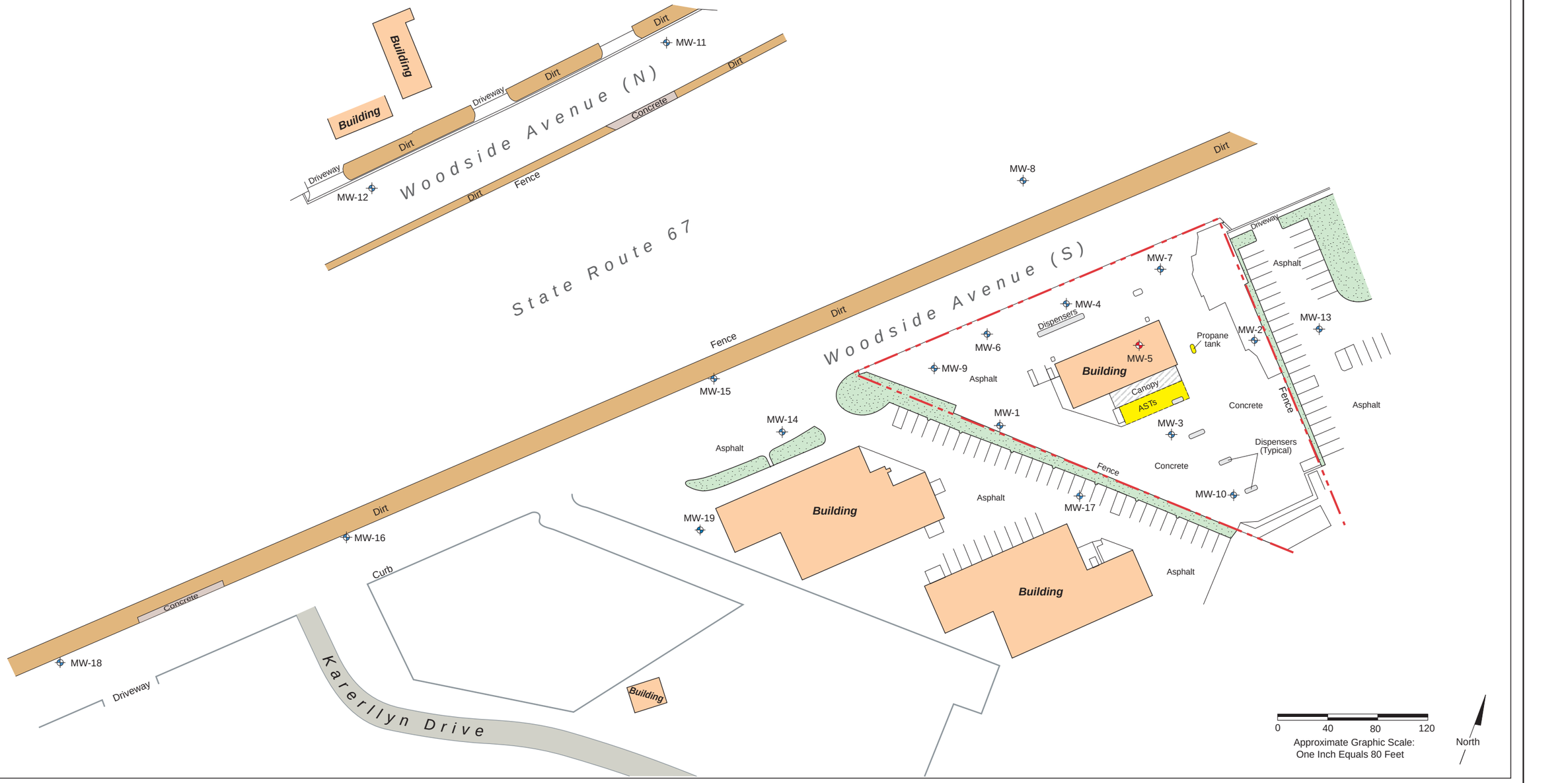
4-WAY SITE LOCATION MAP

Wigington Oil
11427 Woodside Avenue
Santee, California

Project No.: 01208473.00

Figure 1

Date Drafted: 11/4/09



EXPLANATION

MW-16 — Groundwater monitoring well location

MW-5 — Well destroyed

Approximate Site boundary

AST = aboveground storage tank

Disclaimer: This figure is based on available data. Actual conditions may differ. All locations and dimensions are approximate.

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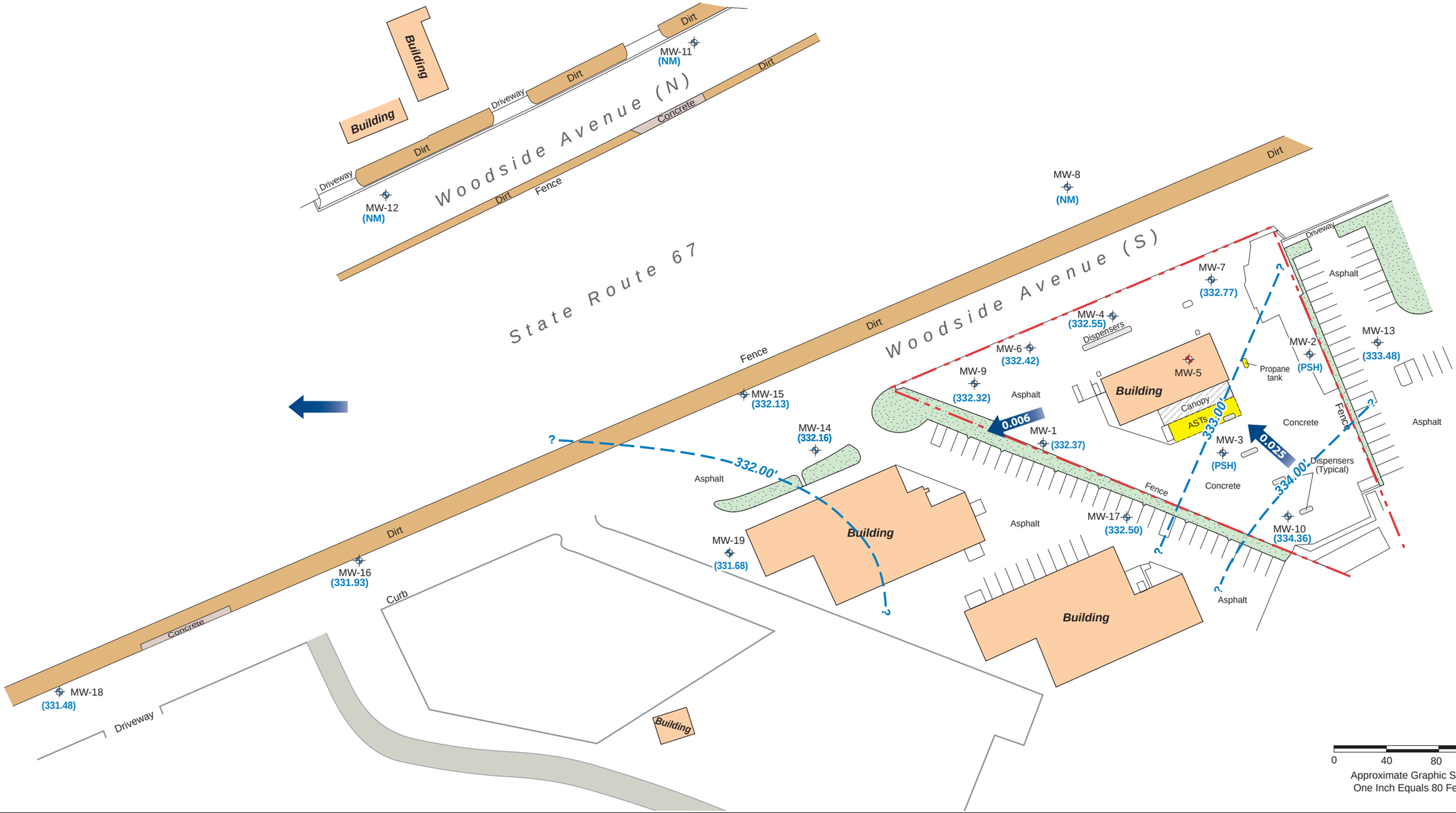
SITE MAP
Wigington Oil
11427 Woodside Avenue
Santee, California

Project No.: 01208473.00

Figure 2

Date Drafted: 3/3/16



EXPLANATION

MW-16 (331.93) — Groundwater monitoring well location with groundwater elevation in feet above mean sea level.

MW-5 — Well destroyed

334.00' — Estimated groundwater contour in feet above mean sea level.

0.006 — Interpreted direction of groundwater flow and estimated groundwater gradient.

PSH: data not used for contouring due to the presence of phase-separated hydrocarbons in well

AST = aboveground storage tank
PSH = phase-separated hydrocarbons
NM = not measured

Disclaimer: This figure is based on available data. Actual conditions may differ. All locations and dimensions are approximate.

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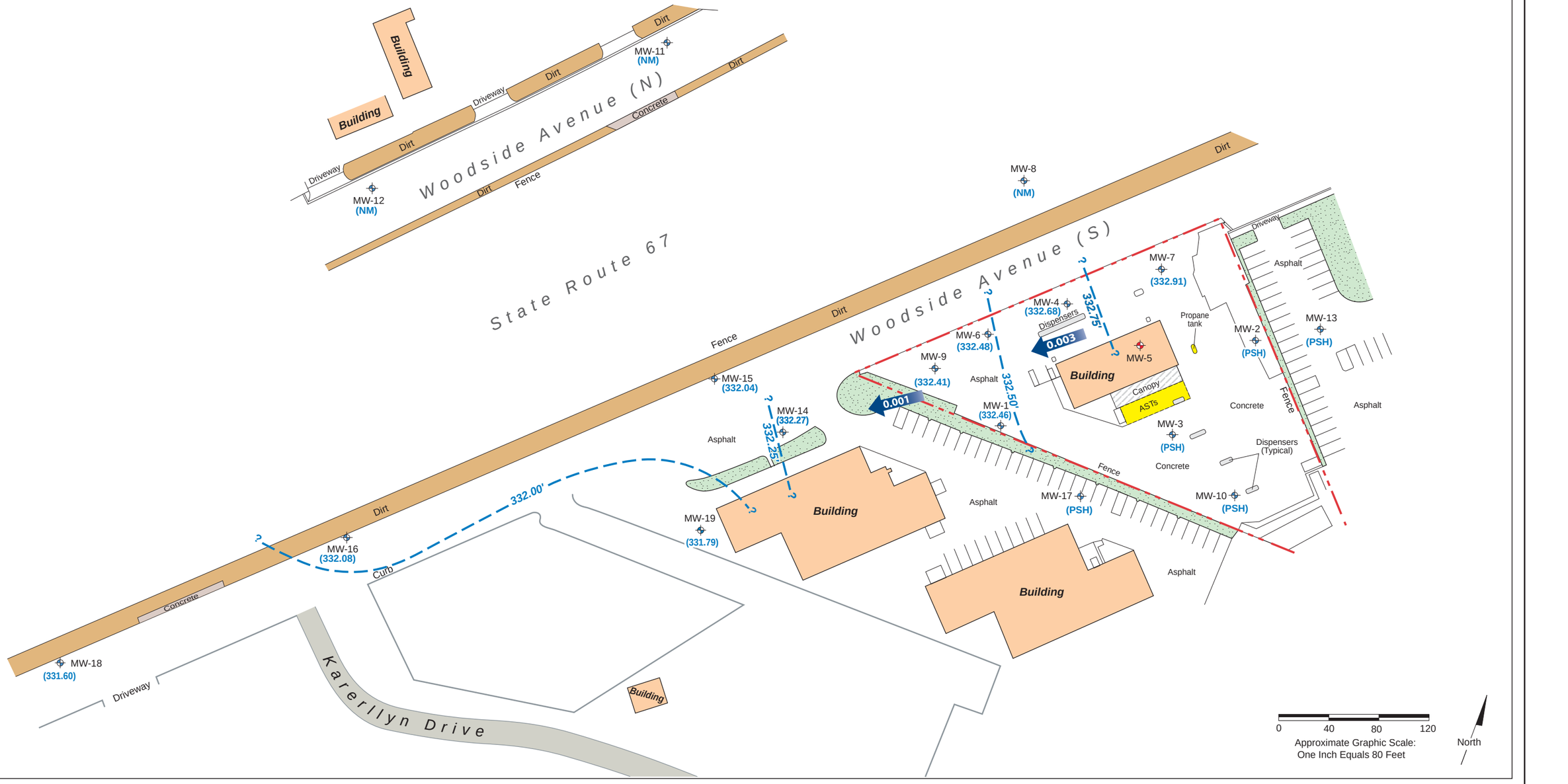
GROUNDWATER ELEVATION MAP SEPTEMBER 2015

Wigington Oil
11427 Woodside Avenue
Santee, California

Project No.: 01208473.00

Figure 3

Date Drafted: 1/25/16



EXPLANATION

MW-16 (332.08) — Groundwater monitoring well location with groundwater elevation in feet above mean sea level.

MW-5 — Well destroyed

332.00 — Estimated groundwater contour in feet above mean sea level.

0.001 — Interpreted direction of groundwater flow and estimated groundwater gradient.

PSH: data not used for contouring due to the presence of phase-separated hydrocarbons in well

AST = aboveground storage tank
PSH = phase-separated hydrocarbons
NM = not measured

Disclaimer: This figure is based on available data. Actual conditions may differ. All locations and dimensions are approximate.

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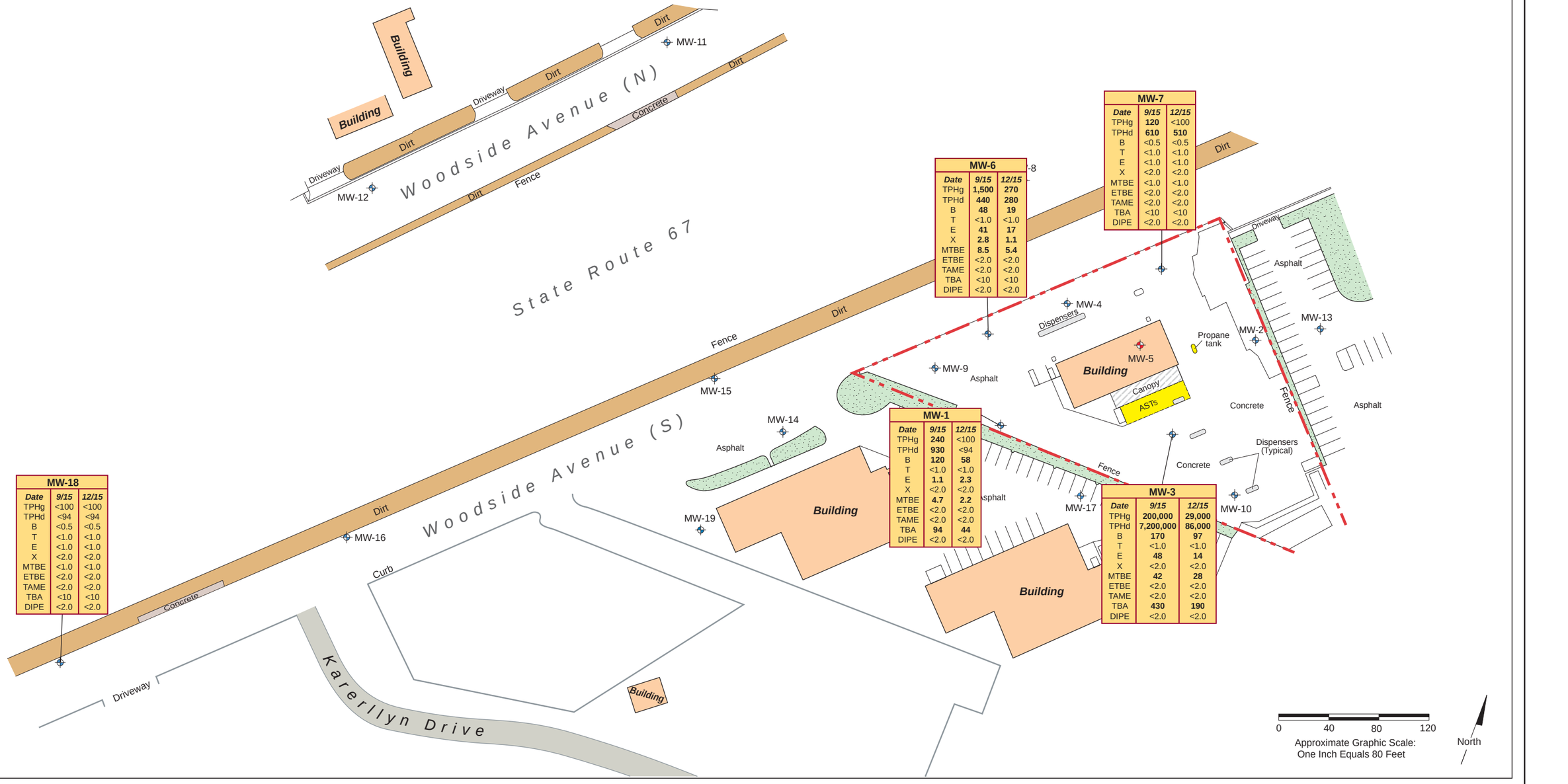
GROUNDWATER ELEVATION MAP DECEMBER 2015

Wigington Oil
11427 Woodside Avenue
Santee, California

Project No.: 01208473.00

Figure 4

Date Drafted: 3/3/16



EXPLANATION

MW-16 — Groundwater monitoring well location

MW-5 — Well destroyed

AST = aboveground storage tank

Approximate Site boundary

Disclaimer: This figure is based on available data. Actual conditions may differ. All locations and dimensions are approximate.

MW-1

Date	9/15	12/15
TPHg	**240**	<100
TPHd	**930**	<94
B	**120**	**58**
T	<1.0	<1.0
E	**1.1**	**2.3**
X	<2.0	<2.0
MTBE	**4.7**	**2.2**
ETBE	<2.0	<2.0
TAME	<2.0	<2.0
TBA	**94**	**44**
DIPE	<2.0	<2.0

Groundwater samples collected by SCS Engineers on September 3, 2015 and December 10, 2015, and analyzed for gasoline- and diesel-range total petroleum hydrocarbons (TPHg and TPHd, respectively) by EPA Method 8015B; and benzene, toluene, ethylbenzene, and xylenes (BTEX), methyl tertiary butyl ether (MTBE), ethyl teritary butyl ether (ETBE), tertiary amyl methyl ether (TAME), tertiary butyl alcohol (TBA), and di-isopropyl ether (DIPE) by EPA Method 8260B. Results for reported in micrograms per liter (µg/L). **Bold** font indicates sample results above the laboratory reporting limit. < indicates results less than the laboratory reporting limit; number indicates individual analyte reporting limit.< indicates concentration not detected above indicated reporting limit for relevant analyte and analytical method.

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San Diego, California 92123

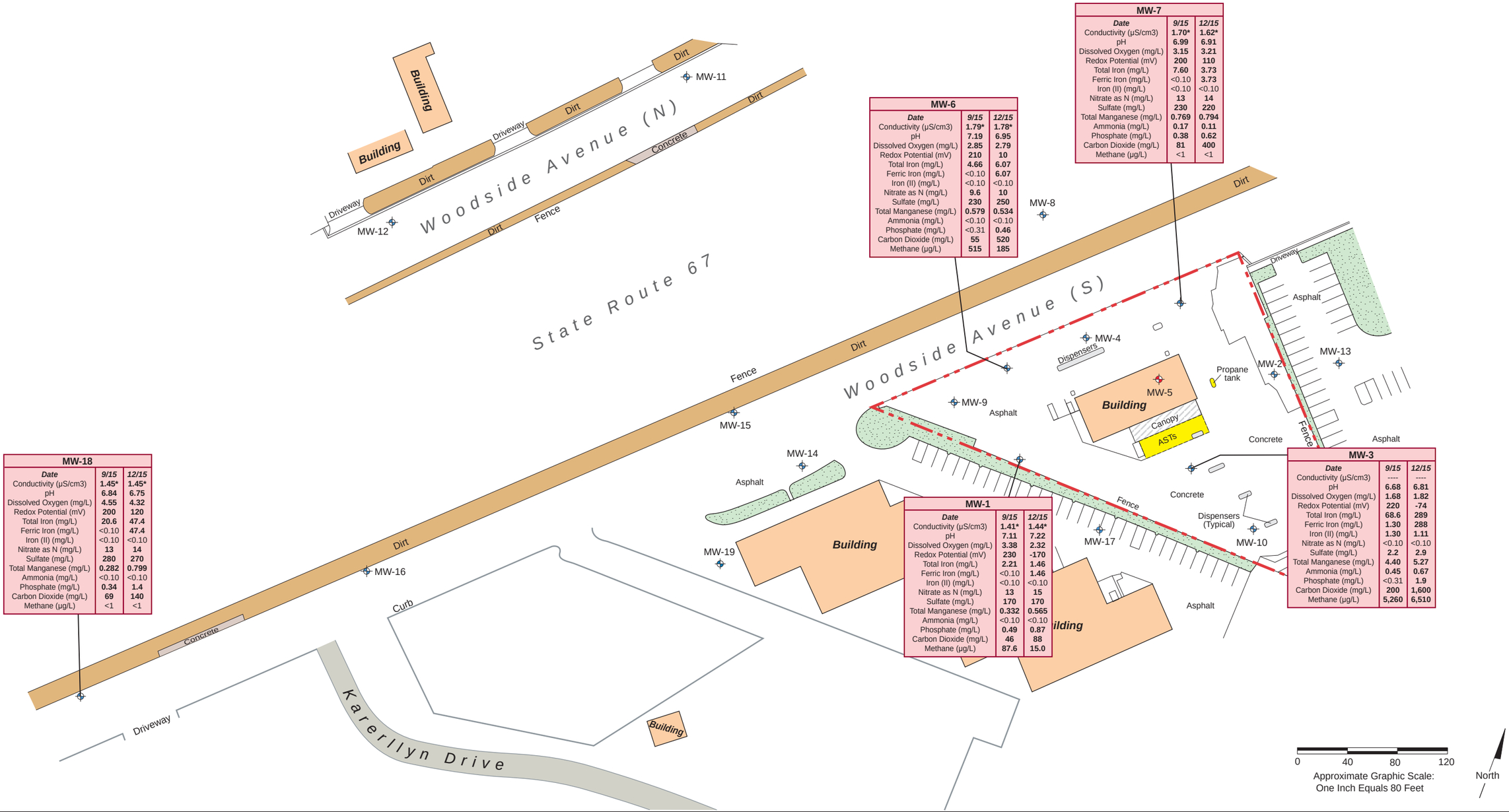
GROUNDWATER SAMPLE ANALYTICAL RESULTS FOR TPH AND VOCs

Wigington Oil
11427 Woodside Avenue
Santee, California

Project No.: 01208473.00

Figure 5

Date Drafted: 3/3/16



MW-6

Date	*9/15*	*12/15*
Conductivity (µS/cm3)	**1.79***	**1.78***
pH	**7.19**	**6.95**
Dissolved Oxygen (mg/L)	**2.85**	**2.79**
Redox Potential (mV)	**210**	**10**
Total Iron (mg/L)	**4.66**	**6.07**
Ferric Iron (mg/L)	<0.10	**6.07**
Iron (II) (mg/L)	<0.10	<0.10
Nitrate as N (mg/L)	**9.6**	**10**
Sulfate (mg/L)	**230**	**250**
Total Manganese (mg/L)	**0.579**	**0.534**
Ammonia (mg/L)	<0.10	<0.10
Phosphate (mg/L)	<0.31	**0.46**
Carbon Dioxide (mg/L)	**55**	**520**
Methane (µg/L)	**515**	**185**

MW-7

Date	*9/15*	*12/15*
Conductivity (µS/cm3)	**1.70***	**1.62***
pH	**6.99**	**6.91**
Dissolved Oxygen (mg/L)	**3.15**	**3.21**
Redox Potential (mV)	**200**	**110**
Total Iron (mg/L)	**7.60**	**3.73**
Ferric Iron (mg/L)	<0.10	**3.73**
Iron (II) (mg/L)	<0.10	<0.10
Nitrate as N (mg/L)	**13**	**14**
Sulfate (mg/L)	**230**	**220**
Total Manganese (mg/L)	**0.769**	**0.794**
Ammonia (mg/L)	**0.17**	**0.11**
Phosphate (mg/L)	**0.38**	**0.62**
Carbon Dioxide (mg/L)	**81**	**400**
Methane (µg/L)	<1	<1

MW-18

Date	*9/15*	*12/15*
Conductivity (µS/cm3)	**1.45***	**1.45***
pH	**6.84**	**6.75**
Dissolved Oxygen (mg/L)	**4.55**	**4.32**
Redox Potential (mV)	**200**	**120**
Total Iron (mg/L)	**20.6**	**47.4**
Ferric Iron (mg/L)	<0.10	**47.4**
Iron (II) (mg/L)	<0.10	<0.10
Nitrate as N (mg/L)	**13**	**14**
Sulfate (mg/L)	**280**	**270**
Total Manganese (mg/L)	**0.282**	**0.799**
Ammonia (mg/L)	<0.10	<0.10
Phosphate (mg/L)	**0.34**	**1.4**
Carbon Dioxide (mg/L)	**69**	**140**
Methane (µg/L)	<1	<1

MW-1

Date	*9/15*	*12/15*
Conductivity (µS/cm3)	**1.41***	**1.44***
pH	**7.11**	**7.22**
Dissolved Oxygen (mg/L)	**3.38**	**2.32**
Redox Potential (mV)	**230**	**-170**
Total Iron (mg/L)	**2.21**	**1.46**
Ferric Iron (mg/L)	<0.10	**1.46**
Iron (II) (mg/L)	<0.10	<0.10
Nitrate as N (mg/L)	**13**	**15**
Sulfate (mg/L)	**170**	**170**
Total Manganese (mg/L)	**0.332**	**0.565**
Ammonia (mg/L)	<0.10	<0.10
Phosphate (mg/L)	**0.49**	**0.87**
Carbon Dioxide (mg/L)	**46**	**88**
Methane (µg/L)	**87.6**	**15.0**

MW-3

Date	*9/15*	*12/15*
Conductivity (µS/cm3)	----	----
pH	**6.68**	**6.81**
Dissolved Oxygen (mg/L)	**1.68**	**1.82**
Redox Potential (mV)	**220**	**-74**
Total Iron (mg/L)	**68.6**	**289**
Ferric Iron (mg/L)	**1.30**	**288**
Iron (II) (mg/L)	**1.30**	**1.11**
Nitrate as N (mg/L)	<0.10	<0.10
Sulfate (mg/L)	**2.2**	**2.9**
Total Manganese (mg/L)	**4.40**	**5.27**
Ammonia (mg/L)	**0.45**	**0.67**
Phosphate (mg/L)	<0.31	**1.9**
Carbon Dioxide (mg/L)	**200**	**1,600**
Methane (µg/L)	**5,260**	**6,510**

EXPLANATION

MW-16 — Groundwater monitoring well location

MW-5 — Well destroyed

Approximate Site boundary

Disclaimer: This figure is based on available data. Actual conditions may differ. All locations and dimensions are approximate.

MW-1

Date	*9/15*	*12/15*
Conductivity (µS/cm3)	**1.41***	**1.44***
pH	**7.11**	**7.22**
Dissolved Oxygen (mg/L)	**3.38**	**2.32**
Redox Potential (mV)	**230**	**-170**
Total Iron (mg/L)	**2.21**	**1.46**
Ferric Iron (mg/L)	<0.10	**1.46**
Iron (II) (mg/L)	<0.10	<0.10
Nitrate as N (mg/L)	**13**	**15**
Sulfate (mg/L)	**170**	**170**
Total Manganese (mg/L)	**0.332**	**0.565**
Ammonia (mg/L)	<0.10	<0.10
Phosphate (mg/L)	**0.49**	**0.87**
Carbon Dioxide (mg/L)	**46**	**88**
Methane (µg/L)	**87.6**	**15.0**

Groundwater samples analyzed for geochemical parameters in accordance with Method SM3500-FE-D for ferrous iron, Method 300 for nitrate and sulfate, Method 6010B for manganese and iron, Method SM4500 for ammonia, phosphate, pH, dissolved oxygen, and carbon dioxide, Method RSK175 for methane, and ASTM-D-1498 for redox potential. < indicates not reported at concentrations greater than the indicated analytical method reporting limit. * indicates data collected from a field instrument. --- indicates no data available as field parameters were not collected. **Bold** font indicates sample results above the laboratory reporting limit.

µS/cm3 = microsiemens per centimeter
mg/L = milligrams per liter
mV = millivolts
µg/L = micrograms per liter

SCS ENGINEERS
Environmental Consultants
8799 Balboa Avenue, Suite 290
San Diego, California 92123

GROUNDWATER SAMPLE ANALYTICAL RESULTS FOR RNA PARAMETERS

Wigington Oil
11427 Woodside Avenue
Santee, California

Project No.: 01208473.00

Figure 6

Date Drafted: 3/3/16

APPENDICES

APPENDIX A

DEH Correspondence

County of San Diego

ELIZABETH A. POZZEBON
DIRECTOR

DEPARTMENT OF ENVIRONMENTAL HEALTH
LAND AND WATER QUALITY DIVISION
P.O. BOX 129261, SAN DIEGO, CA 92112-9261
Phone: (858) 505-6700 or (800) 253-9933 Fax: (858) 505-6786
www.sdcdeh.org

AMY HARBERT
ASSISTANT DIRECTOR

April 24, 2015

Mr. Matt Cullen
RMMC Land Company, LLC
1543 W. 16th Street
Long Beach, CA 90813

Ms. Linda Wigington
Wigington Petroleum Inc.
P.O. Box 2504
Spring Valley, CA 91979

Dear Responsible Parties:

UNAUTHORIZED RELEASE CASE H19469-001
EL CAPITAN OIL COMPANY
11427 WOODSIDE AVENUE, SANTEE, CA

Staff of the Department of Environmental Health (DEH) reviewed the March 30, 2015 *Corrective Action Plan*, prepared by SCS.

For the selected remedial alternative, SCS has chosen monitored natural attenuation as the most cost-effective and technically feasible strategy for the Site. Should monitored natural attenuation prove inadequate to achieve Site cleanup goals, then the second remedial option, high-vacuum dual-phase extraction and monitored natural attenuation, would be implemented.

To evaluate the applicability of using remediation by natural attenuation, the Site must be adequately assessed and groundwater monitoring locations must include an up-gradient monitoring point (MW-7), two or more monitoring points within the plume (MW-6 and MW-14) and a downgradient monitoring point (MW-18). In addition to analyzing groundwater samples from all wells for TPH, BTEX, MTBE, and oxygenates, groundwater samples from selected wells will be analyzed for natural attenuation parameters. Groundwater samples from upgradient well MW-7, source area wells MW-6 and MW-14, and downgradient well MW-18 will be analyzed for these parameters. The purpose of this analysis will be to evaluate whether natural attenuation is occurring at the Site.

Prior to concurring with the CAP, DEH requires implementation of the feasibility study to evaluate whether natural attenuation is occurring at the Site. Following two quarters of groundwater monitoring, conclusions and recommendations must be made whether natural attenuation is occurring at the Site. Please add groundwater wells MW-1, MW-3 and MW-5 in the source area to the evaluation. If you have any questions, please call me at (858) 505-6969.

Sincerely,

JAMES CLAY, Environmental Health Specialist III
Site Assessment and Mitigation Program

cc: Mr. Chuck Houser, SCS (by email)

From:	Clay, James
To:	"Houser, Chuck"
Cc:	William Fischbeck (WLF@lamesalaw.com)
Subject:	RE: H19469-001 - Response to CAP
Date:	Wednesday, April 29, 2015 10:28:00 AM

Hi Chuck,

Thanks for your response and the information about well MW-5. Please sample quarterly, for two quarters, the following wells for TPHg & d, BTEX, Oxygenates, and RNA parameters (from Table 7-1 of the SAM Manual):

MW-18 – Down Gradient
MW-1, MW-3, and MW-6 – Source Area (for MW-3 – drop a bailer through the product to collect a water sample)
MW-7 – Upgradient

Take care,

James

James G. Clay
Environmental Health Specialist III
Site Assessment and Mitigation Program
Land and Water Quality Division
Department of Environmental Health
County of San Diego
Phone: 858-505-6969
james.clay@sdcounty.ca.gov

From: Houser, Chuck [mailto:CHouser@scsengineers.com]
Sent: Friday, April 24, 2015 10:33 AM
To: Clay, James
Cc: William Fischbeck (WLF@lamesalaw.com)
Subject: RE: H19469-001 - Response to CAP

James,

We appreciate your timely review of the CAP for the project. Your letter requests additional sampling for RNA parameters and references several wells (MW-1, MW-3, and MW-5) you ask be sampled in addition to MW-18 (down gradient), MW-6 and MW-14 (source area), and MW-7 (upgradient). Adding well MW-1 as a source area well is agreeable and we will include it in the

sampling program. MW-5 was the apparent old production well located inside the building and it was destroyed by Petra 5 or 6 years ago.

Well MW-3 is within the red-dyed diesel fuel plume from Dion & Sons and in the last reported monitoring (January 9, 2015) was reported to have 1.9 feet of free product diesel fuel. You suggested that a sample could be obtained from below the free product. While we generally agree, there are a couple of things to consider. First, two methods we discussed have certain challenges or disadvantages. Using a pump would require dedicating the pump to the well as once a pump is exposed to free product, it cannot be used in other wells or other sites. However, a bailer could be dropped through the product to collect a sample of the water below, or a "bomb" type sampler could be used. In any case it seems that no-purge sampling would be the only option.

Second, in reviewing the RNA parameters in Table 7-1 of the SAM Manual, a couple of things come to mind. Dissolved oxygen is one of the stronger indicators of RNA. Wells MW-1, MW-6, and MW-19 have historically had relatively high dissolved petroleum hydrocarbon concentrations. Based on soil data from borings B1, B3, and B4, and well MW-19, we suspect that petroleum hydrocarbons have migrated in soil along the water table to the west-southwest from the site. Therefore, Wells MW-1, MW-6, MW-9, MW-14, and MW-19 could be considered "source area" wells since they are within this soil plume along the water table. We also know that among the 13 or so USTs that were reportedly present at the Site, there was a group of USTs reportedly located near the southwest end of the Site building near MW-1.

If we were to sample wells MW-1, MW-6, and MW-19 as "source area" wells, I believe this would give us an acceptable representation of RNA conditions in the source area. We could sample MW-3, but the sampling would be problematic, though doable, and the result may add little to our overall analysis of whether RNA is occurring. In short, I would expect the RNA parameters under a free product plume to be consistent with RNA (low DO, high CO_2, low/negative Eh). The non-free product source area wells (MW-1, MW-6, and MW-19) would, if consistent with RNA, provide a better justification that RNA is occurring. Similarly, if wells MW-1, MW-6, and MW-19 were not consistent with expected source area RNA results, then any result from MW-3 would be considered dubious.

My recommendation would be to sample, quarterly for two quarters, the following wells for TPHg&d, BTEX, Oxygenates, and RNA parameters (from Table 7-1 of the SAM manual):

MW-18 – Down Gradient
MW-1, MW-6, and MW-19 – Source Area
MW-7 – Upgradient

I would drop MW-14 in favor of MW-19 since soil concentrations were significantly higher in MW-19. We will provide a separate monitoring report for each sampling event.

If after the first quarterly sampling the RNA analysis is not consistent with my analysis of source area vs. up- and down-gradient well conditions, we can re-evaluate whether MW-3 should be part of the sampling. Thanks and let me know if you have any questions or need to discuss further.

Chuck Houser, CHg
Project Manager
SCS Engineers
O. 858-571-5500 Ext. 245
M. 858-805-5523
chouser@scsengineers.com

From: Clay, James [mailto:James.Clay@sdcounty.ca.gov]
Sent: Friday, April 24, 2015 7:20 AM
To: Houser, Chuck
Subject: H19469-001 - Response to CAP

Hi Chuck,

Attached is the CAP response for the above case. Please let me know if you have any questions.

Thanks,

James

James G. Clay
Environmental Health Specialist III
Site Assessment and Mitigation Program
Land and Water Quality Division
Department of Environmental Health
County of San Diego
Phone: 858-505-6969
james.clay@sdcounty.ca.gov

APPENDIX B

GROUNDWATER PURGING AND SAMPLING SHEETS

SCS ENGINEERS
Environmental Consultants
8799 Balboa Avenue, Suite 290
San Diego, California 92123

WELL PURGING/SAMPLING LOG

Project Name: Wigington 0.1 | Well No.: MW-1
Project Number: 01208473.00 | Date: 9-3-15
Project Address: 11427 Woodside Ave, Santee, CA
Well GPS: Latitude: Longitude:
Sampled by: A. Barrow | Checked by: CEH | License #: CHG 945

WELL SPECIFICATIONS & MEASUREMENTS

Borehole Diameter (in.) (BD): 6 8 (10) 12 ____
Casing Diameter (in.) (CD): 2 (4) 6 8 ____
Total Well Depth (ft.) (WD): 41.6
Product thickness (ft.):
Static Water Level (ft.) (SWL): 30.47
Time measured:
Water Column (ft.) (WC=WD-SWL): 11.13
Filter Pack Porosity (P): 0.30

Borehole Volume (BV) Calculations

BV (gal) = 0.041 [CD^2 + P (BD^2-CD^2)](WC)

This equation applies to wells constructed straddling the water table only. For submerged screens, document all calculations. Porosity is expressed in decimal form. **BV =** 18.9 **gallons**

PURGING & SAMPLING EQUIPMENT

Water Level Meter Type and ID:
Purging Equipment/Method: Bladder Pump ____ Bailer X Centrifugal Pump ____ Other ____
pH/Temp/Conductivity Meter Type and ID: Horiba U52
Sampler Type: ____ Teflon Bailer X Disposable Bailer ____ Bladder Pump ____ Centrifugal Pump ____ Other:
Decontamination Method: ____ Steam/High Pressure Wash X 3 Stage (Alconox, tap water & DI rinse) ____ Other:

PURGING AND SAMPLING METHODOLOGIES

Well Recovery Type

X Fast -recovers 80% within 2 hours -Methods 1, 2, 3, & 5 ____ Slow - more than 2 hours to recover 80% -Methods 3, 4, & 5

PURGING METHODS

___ Method 1, remove 3 BV, sample after well recovers 80% of total purged drawdown.
X Method 2, remove 1 BV, test parameters until stable per SAM Manual, sample after well recovers 80% of total purged drawdown.
___ Method 3, Low-flow - install pump at least 2 hours prior to start of purging. Follow detailed methodology in SAM Manual.
List the date and time the pump was installed: Date:_____ Time:_____
___ Method 4, remove 1 BV, sample after 2 hours. Note - if well recovers 80% of total purged drawdown, use another method.
___ Method 5, non-purge method. Only with prior written approval from SAM

PURGING INFORMATION

Time	Water Level (feet below top of casing)	Drawdown (feet)	Water Volume Purged (gal)	Measured Parameters: Conductivity (µmhos) mS/cm	Dissolved Oxygen	pH	Turbidity	Temp (°C)
16:35								
16:55	30.75	0.28	19	1.40	—	8.11	—	22.36
16:00	30.75	0.28	28.5	1.41	—	8.13	—	24.53

Borehole Volume: 19 (gal) | Total Volume Purge Water: 28.5 (gal) | Average pumping rate: — (gpm)

RECOVERY CALCULATIONS

Recovery of 80% of drawdown from purging = SWL + (0.2)(Maximum Drawdown during purging) 30.53

SAMPLING INFORMATION

Date & Time Sampled: 9-3-15; 17:15 | Depth to water at time of sampling (feet): 30.48

Quantity	Container Type	Filtered (Y/N)	Sample Preservatives	Analytical Methods to Perform
18	Various	N	Various	Tph gld; BTEX, OXY, Nap, RNA

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Environmental Consultants
8799 Balboa Avenue, Suite 290
San Diego, California 92123

WELL PURGING/SAMPLING LOG

Project Name: Wigington Oil — Well No.: MW-6
Project Number: 01208473.00 — Date: 9-3-15
Project Address: 11427 Woodside Ave, Santee, CA
Well GPS: Latitude: Longitude:
Sampled by: A. Barrow — Checked by: CBB — License #: CHG 945

WELL SPECIFICATIONS & MEASUREMENTS

Borehole Diameter (in.) (BD): 6 ~~8~~ (10) 12 _____
Casing Diameter (in.) (CD): 2 (4) 6 8 _____
Total Well Depth (ft.) (WD): 41.8
Product thickness (ft.):
Static Water Level (ft.) (SWL): 30.02
Time measured:
Water Column (ft.) (WC=WD-SWL): 11.78
Filter Pack Porosity (P): 0.30

Borehole Volume (BV) Calculations

BV (gal) = 0.041 [CD^2 + P (BD^2-CD^2)](WC)

This equation applies to wells constructed straddling the water table only. For submerged screens, document all calculations. Porosity is expressed in decimal form. **BV =** 20 **gallons**

PURGING & SAMPLING EQUIPMENT

Water Level Meter Type and ID:
Purging Equipment/Method: Bladder Pump _____ Bailer X Centrifugal Pump ___ Other _____
pH/Temp/Conductivity Meter Type and ID: Horiba U52
Sampler Type: ___Teflon Bailer X Disposable Bailer ___Bladder Pump ___ Centrifugal Pump ___Other: _____
Decontamination Method: ___ Steam/High Pressure Wash X 3 Stage (Alconox, tap water & DI rinse) ___ Other: _____

PURGING AND SAMPLING METHODOLOGIES

Well Recovery Type

X Fast -recovers 80% within 2 hours -Methods 1, 2, 3, & 5 ___ Slow - more than 2 hours to recover 80% -Methods 3, 4, & 5

PURGING METHODS

___Method 1, remove 3 BV, sample after well recovers 80% of total purged drawdown.
X Method 2, remove 1 BV, test parameters until stable per SAM Manual, sample after well recovers 80% of total purged drawdown.
___Method 3, Low-flow - install pump at least 2 hours prior to start of purging. Follow detailed methodology in SAM Manual.
List the date and time the pump was installed: Date:_____ Time:_____
___Method 4, remove 1 BV, sample after 2 hours. Note - if well recovers 80% of total purged drawdown, use another method.
___Method 5, non-purge method. Only with prior written approval from SAM

PURGING INFORMATION

Time	Water Level (feet below top of casing)	Drawdown (feet)	Water Volume Purged (gal)	Measured Parameters: Conductivity (~~µmhos~~) mS/cm	Dissolved Oxygen	pH	Turbidity	Temp (°C)
15:15								
15:31	30.10	0.08	20	1.79	—	8.40	—	21.91
15:41	30.10	0.08	30	1.79	—	8.40	—	21.85

Borehole Volume: 20 (gal) Total Volume Purge Water: 30 (gal) Average pumping rate: — (gpm)

RECOVERY CALCULATIONS

Recovery of 80% of drawdown from purging = SWL + (0.2)(Maximum Drawdown during purging) 30.09

SAMPLING INFORMATION

Date & Time Sampled: 9-3-15; 15:50 Depth to water at time of sampling (feet): 30.05

Quantity	Container Type	Filtered (Y/N)	Sample Preservatives	Analytical Methods to Perform

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Environmental Consultants
8799 Balboa Avenue, Suite 290
San Diego, California 92123

WELL PURGING/SAMPLING LOG

Project Name: Wigington Oil | Well No.: MW-7
Project Number: 01208473.00 | Date: 9-3-15
Project Address: 11427 Woodside Ave, Santee, CA
Well GPS: Latitude: Longitude:
Sampled by: A. Barrow | Checked by: CHH | License #: CHG 946

WELL SPECIFICATIONS & MEASUREMENTS

Borehole Diameter (in.) (BD): 6 8 (10) 12 ____
Casing Diameter (in.) (CD): 2 (4) 6 8 ____
Total Well Depth (ft.) (WD): 41.9
Static Water Level (ft.) (SWL): 28.80
Water Column (ft.) (WC=WD-SWL): 13.1
Product thickness (ft.):
Time measured:
Filter Pack Porosity (P): 0.30

Borehole Volume (BV) Calculations

$BV\ (gal) = 0.041\ [CD^2 + P\ (BD^2-CD^2)](WC)$

This equation applies to wells constructed straddling the water table only. For submerged screens, document all calculations. Porosity is expressed in decimal form. **BV =** 22.25 **gallons**

PURGING & SAMPLING EQUIPMENT

Water Level Meter Type and ID:
Purging Equipment/Method: Bladder Pump ____ Bailer X Centrifugal Pump ____ Other ____
pH/Temp/Conductivity Meter Type and ID: Horiba U52
Sampler Type: ____ Teflon Bailer X Disposable Bailer ____ Bladder Pump ____ Centrifugal Pump ____ Other: ____
Decontamination Method: ____ Steam/High Pressure Wash X 3 Stage (Alconox, tap water & DI rinse) ____ Other: ____

PURGING AND SAMPLING METHODOLOGIES

Well Recovery Type

X Fast -recovers 80% within 2 hours -Methods 1, 2, 3, & 5 ____ Slow - more than 2 hours to recover 80% -Methods 3, 4, & 5

PURGING METHODS

____ Method 1, remove 3 BV, sample after well recovers 80% of total purged drawdown.
X Method 2, remove 1 BV, test parameters until stable per SAM Manual, sample after well recovers 80% of total purged drawdown.
____ Method 3, Low-flow - install pump at least 2 hours prior to start of purging. Follow detailed methodology in SAM Manual.
List the date and time the pump was installed: Date:____ Time:____
____ Method 4, remove 1 BV, sample after 2 hours. Note - if well recovers 80% of total purged drawdown, use another method.
____ Method 5, non-purge method. Only with prior written approval from SAM

PURGING INFORMATION

Time	Water Level (feet below top of casing)	Drawdown (feet)	Water Volume Purged (gal)	Measured Parameters: Conductivity (µmhos) (mS/cm)	Dissolved Oxygen	pH	Turbidity	Temp (°C)
12:37								
12:50	30.10	1.3	22.25	1.69	—	8.96	—	22.48
13:00	30.05	1.25	33.75	1.70	—	8.90	—	22.01

Borehole Volume: 22.25 (gal) Total Volume Purge Water: 33.75 (gal) Average pumping rate: ____ (gpm)

RECOVERY CALCULATIONS

Recovery of 80% of drawdown from purging = SWL + (0.2)(Maximum Drawdown during purging) 29.86

SAMPLING INFORMATION

Date & Time Sampled: 9-3-15; 13:30 Depth to water at time of sampling (feet): 29.8; 13:30

Quantity	Container Type	Filtered (Y/N)	Sample Preservatives	Analytical Methods to Perform
	Various	N	various	TPHg/d; BTEX, OXY, Naph, RNA per notes

1.698

SCS ENGINEERS
Environmental Consultants
8799 Balboa Avenue, Suite 290
San Diego, California 92123

WELL PURGING/SAMPLING LOG

Project Name: Wigington Oil | Well No.: MW-18
Project Number: 01208473.00 | Date: 9-3-15
Project Address: 11427 Woodside Ave, Santee, CA
Well GPS: Latitude: Longitude:
Sampled by: A. Barrow | Checked by: CEH | License #: CHG 945

WELL SPECIFICATIONS & MEASUREMENTS

Borehole Diameter (in.) (BD): 6 (8) 10 12 _____
Casing Diameter (in.) (CD): (2) 4 6 8 _____
Total Well Depth (ft.) (WD): 39.1
Static Water Level (ft.) (SWL): 30.80
Product thickness (ft.):
Time measured:
Water Column (ft.) (WC=WD-SWL): 8.3
Filter Pack Porosity (P): 0.30

Borehole Volume (BV) Calculations

BV (gal) = 0.041 [CD^2 + P (BD^2-CD^2)](WC)

This equation applies to wells constructed straddling the water table only. For submerged screens, document all calculations. Porosity is expressed in decimal form. **BV =** 7.5 **gallons**

PURGING & SAMPLING EQUIPMENT

Water Level Meter Type and ID:
Purging Equipment/Method: Bladder Pump _____ Bailer X Centrifugal Pump ___ Other ____
pH/Temp/Conductivity Meter Type and ID: Horiba U52
Sampler Type: ___Teflon Bailer X Disposable Bailer ___Bladder Pump ____ Centrifugal Pump ___Other: _____
Decontamination Method: _____ Steam/High Pressure Wash X 3 Stage (Alconox, tap water & DI rinse) _____ Other: _____

PURGING AND SAMPLING METHODOLOGIES

Well Recovery Type

X Fast -recovers 80% within 2 hours -Methods 1, 2, 3, & 5 ___ Slow - more than 2 hours to recover 80% -Methods 3, 4, & 5

PURGING METHODS

___Method 1, remove 3 BV, sample after well recovers 80% of total purged drawdown.
X Method 2, remove 1 BV, test parameters until stable per SAM Manual, sample after well recovers 80% of total purged drawdown.
___Method 3, Low-flow - install pump at least 2 hours prior to start of purging. Follow detailed methodology in SAM Manual.
List the date and time the pump was installed: Date:_____ Time:_____
___Method 4, remove 1 BV, sample after 2 hours. Note - if well recovers 80% of total purged drawdown, use another method.
___Method 5, non-purge method. Only with prior written approval from SAM

PURGING INFORMATION

Time	Water Level (feet below top of casing)	Drawdown (feet)	Water Volume Purged (gal)	Measured Parameters: Conductivity (~~µmhos~~) mS/cm	Dissolved Oxygen	pH	Turbidity	Temp (°C)
14:05								
14:22	30.80	0	7.5	1.44	—	8.47	—	21.56
14:31	30.82	0.02	11.25	1.45	—	8.41	—	21.63

Borehole Volume: 7.5 (gal) Total Volume Purge Water: 11.25 (gal) Average pumping rate: — (gpm)

RECOVERY CALCULATIONS

Recovery of 80% of drawdown from purging = SWL + (0.2)(Maximum Drawdown during purging) 30.80

SAMPLING INFORMATION

Date & Time Sampled: 9-3-15; 14:45 Depth to water at time of sampling (feet): 30.80

Quantity	Container Type	Filtered (Y/N)	Sample Preservatives	Analytical Methods to Perform

SCS ENGINEERS

8799 Balboa Avenue, Suite 290
San Diego, California 92123

Client: Wigington Oil	Project No: 1208473.00	Recorded By:
Site Address: 11427 Woodside Avenue Santee, CA	Date: 9-3-15	AB

WELL MONITORING DATA

WELL NO.	DTB	DTW	DTP	PT	SWE	ELEV-W	ELEV-P
MW-1	41.6	30.47	—		362.84	362.84	
MW-2	44.6	33.99	31.55		365.08	365.08	
MW-3	43.2	30.93	35.82		364.16	364.16	
MW-4	41.6	29.85	—		362.38	362.38	
MW-6	41.8	30.02	—		362.44	362.44	
MW-7	41.9	29.80	—		362.57	362.57	
MW-8	39.5				364.51	364.51	
MW-9	38.3	30.01	—		362.33	362.33	
MW-10	38.3	32.92	-		367.28	367.28	
MW-11	37.4				362.48	362.48	
MW-12	36.2				361.88	361.88	
MW-13	44.7	33.43	—		366.91	366.91	
MW-14	36.8	30.63	—		362.79	362.79	
MW-15	37.2	30.23	—		362.36	362.36	
MW-16	38.3	30.55	—		362.48	362.48	
MW-17	44.4	33.47	—		367.97	367.97	
MW-18	39.1	30.80			362.28	362.28	
MW-19	40.4	33.39			365.07	365.07	

NOTES

WELL NO. - Monitoring well number
DTW - Depth to water from datum
DTP - Depth to product from datum
PT - Product Thickness

DTB - Depth to bottom of well
SWE - Surveyed well elevation in feet
ELEV-W - Relative elevation of water
ELEV-P - Relative elevation of product

SCS ENGINEERS
Environmental Consultants
8799 Balboa Avenue, Suite 290
San Diego, California 92123

WELL PURGING/SAMPLING LOG

Project Name: Wigington Oil | Well No.: MW-1
Project Number: 012084 73.00 | Date: 12-10-15
Project Address: 11427 Woodside Avenue, Santee CA
Well GPS: Latitude: Longitude:
Sampled by: A. Barraza | Checked by: CEH | License #: CHG 945

WELL SPECIFICATIONS & MEASUREMENTS

Borehole Diameter (in.) (BD): 6 8 (10) 12 _____
Casing Diameter (in.) (CD): 2 (4) 6 8 _____
Total Well Depth (ft.) (WD): 41.6
Static Water Level (ft.) (SWL): 30.38
Water Column (ft.) (WC=WD-SWL): 11.22
Product thickness (ft.):
Time measured:
Filter Pack Porosity (P): 0.30

Borehole Volume (BV) Calculations

BV (gal) = 0.041 [CD^2 + P (BD^2-CD^2)](WC)

This equation applies to wells constructed straddling the water table only. For submerged screens, document all calculations. Porosity is expressed in decimal form. **BV =** 19 **gallons**

PURGING & SAMPLING EQUIPMENT

Water Level Meter Type and ID: Solonist oWIP
Purging Equipment/Method: Bladder Pump _____ Bailer X
Centrifugal Pump ___ Other _____
pH/Temp/Conductivity Meter Type and ID:
Sampler Type: ___Teflon Bailer X Disposable Bailer
___Bladder Pump ___Centrifugal Pump
___Other: _____
Decontamination Method: _____ Steam/High Pressure Wash
X 3 Stage (Alconox, tap water & DI rinse)
_____ Other: _____

PURGING AND SAMPLING METHODOLOGIES

Well Recovery Type

X Fast -recovers 80% within 2 hours -Methods 1, 2, 3, & 5 ___ Slow - more than 2 hours to recover 80% -Methods 3, 4, & 5

PURGING METHODS

___Method 1, remove 3 BV, sample after well recovers 80% of total purged drawdown.
X Method 2, remove 1 BV, test parameters until stable per SAM Manual, sample after well recovers 80% of total purged drawdown.
___Method 3, Low-flow - install pump at least 2 hours prior to start of purging. Follow detailed methodology in SAM Manual.
List the date and time the pump was installed: Date:_____ Time:_____
___Method 4, remove 1 BV, sample after 2 hours. Note - if well recovers 80% of total purged drawdown, use another method.
___Method 5, non-purge method. Only with prior written approval from SAM

PURGING INFORMATION

Time	Water Level (feet below top of casing)	Drawdown (feet)	Water Volume Purged (gal)	Measured Parameters: Conductivity (µmhos)	Dissolved Oxygen	pH	Turbidity	Temp (°C)
16:30	30.75							
16:45	~~30.75~~	0.37	19	1.47	—	5.32	—	21.22
16:54	30.75	0.37	28.5	1.44	—	5.43	—	21.47

Borehole Volume: 19 (gal) Total Volume Purge Water: 28.5 (gal) Average pumping rate: — (gpm)

RECOVERY CALCULATIONS

Recovery of 80% of drawdown from purging = SWL + (0.2)(Maximum Drawdown during purging) 30.45

SAMPLING INFORMATION

Date & Time Sampled: 12-10-15; 17:10 Depth to water at time of sampling (feet): 30.40

Quantity	Container Type	Filtered (Y/N)	Sample Preservatives	Analytical Methods to Perform
18	Various	N	Various	TPHgd; BTEX, OXY, Nap; RMA

SCS ENGINEERS
Environmental Consultants
8799 Balboa Avenue, Suite 290
San Diego, California 92123

WELL PURGING/SAMPLING LOG

Project Name: Wigington Oil | Well No.: MW-6
Project Number: 012084 73.00 | Date: 12-10-15
Project Address: 11427 Woodside Avenue, Santee CA
Well GPS: Latitude: Longitude:
Sampled by: A. Barraza | Checked by: CEH | License #: CHG 945

WELL SPECIFICATIONS & MEASUREMENTS

Borehole Diameter (in.) (BD): 6 8 (10) 12 _____
Casing Diameter (in.) (CD): 2 (4) 6 8 _____
Total Well Depth (ft.) (WD): 41.8 | Product thickness (ft.):
Static Water Level (ft.) (SWL): 29.96 | Time measured:
Water Column (ft.) (WC=WD-SWL): 12.2 | Filter Pack Porosity (P): 0.30

Borehole Volume (BV) Calculations

BV (gal) = 0.041 [CD^2 + P (BD^2-CD^2)](WC)

This equation applies to wells constructed straddling the water table only. For submerged screens, document all calculations. Porosity is expressed in decimal form. **BV = 20.75 gallons**

PURGING & SAMPLING EQUIPMENT

Water Level Meter Type and ID: Solonist OWLEP
Purging Equipment/Method: Bladder Pump _____ Bailer X Centrifugal Pump ___ Other _____
pH/Temp/Conductivity Meter Type and ID:
Sampler Type: ___Teflon Bailer X Disposable Bailer ___Bladder Pump ___Centrifugal Pump ___Other: _____
Decontamination Method: _____ Steam/High Pressure Wash X 3 Stage (Alconox, tap water & DI rinse) _____ Other: _____

PURGING AND SAMPLING METHODOLOGIES

Well Recovery Type

X Fast -recovers 80% within 2 hours -Methods 1, 2, 3, & 5 ___ Slow - more than 2 hours to recover 80% -Methods 3, 4, & 5

PURGING METHODS

___Method 1, remove 3 BV, sample after well recovers 80% of total purged drawdown.
X Method 2, remove 1 BV, test parameters until stable per SAM Manual, sample after well recovers 80% of total purged drawdown.
___Method 3, Low-flow - install pump at least 2 hours prior to start of purging. Follow detailed methodology in SAM Manual.
List the date and time the pump was installed: Date:_____ Time:_____
___Method 4, remove 1 BV, sample after 2 hours. Note - if well recovers 80% of total purged drawdown, use another method.
___Method 5, non-purge method. Only with prior written approval from SAM

PURGING INFORMATION

Time	Water Level (feet below top of casing)	Drawdown (feet)	Water Volume Purged (gal)	Measured Parameters				
				Conductivity (µmhos)	Dissolved Oxygen	pH	Turbidity	Temp (°C)
13:15								
13:30	30.05	0.09	20.75	1.76	—	7.70	—	21.49
13:40	30.05	0.09	31.25	1.78	—	7.93	—	21.21

Borehole Volume: 20.75 (gal) | Total Volume Purge Water: 31.25 (gal) | Average pumping rate: — (gpm)

RECOVERY CALCULATIONS

Recovery of 80% of drawdown from purging = SWL + (0.2)(Maximum Drawdown during purging) 29.98

SAMPLING INFORMATION

Date & Time Sampled: 12-10-15, 13:50 | Depth to water at time of sampling (feet): 29.95

Quantity	Container Type	Filtered (Y/N)	Sample Preservatives	Analytical Methods to Perform
18	Various	N	Various	TPHgd; BTEX, OXY, Nap; RMA

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Environmental Consultants
8799 Balboa Avenue, Suite 290
San Diego, California 92123

WELL PURGING/SAMPLING LOG

Project Name: Wigington Oil | Well No.: MW-7
Project Number: J012084 73.00 | Date: 12-10-15
Project Address: 11427 Woodside Avenue, Santee CA
Well GPS: Latitude: Longitude:
Sampled by: A. Barrao | Checked by: CEW | License #: CH. 945

WELL SPECIFICATIONS & MEASUREMENTS

Borehole Diameter (in.) (BD): 6 8 (10) 12 ____
Casing Diameter (in.) (CD): 2 (4) 6 8 ____
Total Well Depth (ft.) (WD): 41.9
Static Water Level (ft.) (SWL): 29.66
Water Column (ft.) (WC=WD-SWL): 12.24
Product thickness (ft.):
Time measured:
Filter Pack Porosity (P): 0.30

Borehole Volume (BV) Calculations

BV (gal) = 0.041 [CD^2 + P (BD^2-CD^2)](WC)

This equation applies to wells constructed straddling the water table only. For submerged screens, document all calculations. Porosity is expressed in decimal form. **BV =** 20.80 **gallons**

PURGING & SAMPLING EQUIPMENT

Water Level Meter Type and ID: Solonist OWIP
Purging Equipment/Method: Bladder Pump ____ Bailer X Centrifugal Pump ___ Other ____
pH/Temp/Conductivity Meter Type and ID:
Sampler Type: ___Teflon Bailer X Disposable Bailer ___Bladder Pump ___Centrifugal Pump ___Other:
Decontamination Method: ____ Steam/High Pressure Wash X 3 Stage (Alconox, tap water & DI rinse) ____ Other:

PURGING AND SAMPLING METHODOLOGIES

Well Recovery Type

X Fast -recovers 80% within 2 hours -Methods 1, 2, 3, & 5 ___ Slow - more than 2 hours to recover 80% -Methods 3, 4, & 5

PURGING METHODS

___Method 1, remove 3 BV, sample after well recovers 80% of total purged drawdown.
X Method 2, remove 1 BV, test parameters until stable per SAM Manual, sample after well recovers 80% of total purged drawdown.
___Method 3, Low-flow - install pump at least 2 hours prior to start of purging. Follow detailed methodology in SAM Manual.
List the date and time the pump was installed: Date:_____ Time:_____
___Method 4, remove 1 BV, sample after 2 hours. Note - if well recovers 80% of total purged drawdown, use another method.
___Method 5, non-purge method. Only with prior written approval from SAM

PURGING INFORMATION

Time	Water Level (feet below top of casing)	Drawdown (feet)	Water Volume Purged (gal)	Measured Parameters: Conductivity (µmhos)	Dissolved Oxygen	pH	Turbidity	Temp (°C)
14:30								
14:50	29.80	0.14	20.75	1.61	<	5.23	~	21.24
14:58	29.80	0.14	31.25	1.62	<	5.48	~	21.17

Borehole Volume: 20.8 (gal) Total Volume Purge Water: 31.25 (gal) Average pumping rate: ____ (gpm)

RECOVERY CALCULATIONS

Recovery of 80% of drawdown from purging = SWL + (0.2)(Maximum Drawdown during purging) 29.69

SAMPLING INFORMATION

Date & Time Sampled: 12-10-15; 15:10 Depth to water at time of sampling (feet): 29.69

Quantity	Container Type	Filtered (Y/N)	Sample Preservatives	Analytical Methods to Perform
18	Various	N	Various	TPHgd; BTEX, OXY, Nap; RMA

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San Diego, California 92123

WELL PURGING/SAMPLING LOG

Project Name: Wigington Oil — Well No.: MW-18
Project Number: 012084 73.00 — Date: 12-10-15
Project Address: 11427 Woodside Avenue, Santee CA
Well GPS: Latitude: Longitude:
Sampled by: A. Barraza — Checked by: CEH — License #: CHG 945

WELL SPECIFICATIONS & MEASUREMENTS

Borehole Diameter (in.) (BD): 6 (8) 10 12 _____
Casing Diameter (in.) (CD): (2) 4 6 8 _____
Total Well Depth (ft.) (WD): 39.1
Product thickness (ft.):
Static Water Level (ft.) (SWL): 30.68
Time measured:
Water Column (ft.) (WC=WD-SWL): 8.42
Filter Pack Porosity (P): 0.30

Borehole Volume (BV) Calculations

BV (gal) = 0.041 [CD^2 + P (BD^2-CD^2)](WC)

This equation applies to wells constructed straddling the water table only. For submerged screens, document all calculations. Porosity is expressed in decimal form. **BV =** 7.57 **gallons**

PURGING & SAMPLING EQUIPMENT

Water Level Meter Type and ID: Heron ONYP Solinst
Purging Equipment/Method: Bladder Pump _____ Bailer X Centrifugal Pump ___ Other _____
pH/Temp/Conductivity Meter Type and ID:
Sampler Type: ___Teflon Bailer X Disposable Bailer ___Bladder Pump ___Centrifugal Pump ___Other: _____
Decontamination Method: ___Steam/High Pressure Wash X 3 Stage (Alconox, tap water & DI rinse) ___Other: _____

PURGING AND SAMPLING METHODOLOGIES

Well Recovery Type

X Fast -recovers 80% within 2 hours -Methods 1, 2, 3, & 5 ___ Slow - more than 2 hours to recover 80% -Methods 3, 4, & 5

PURGING METHODS

___Method 1, remove 3 BV, sample after well recovers 80% of total purged drawdown.
X Method 2, remove 1 BV, test parameters until stable per SAM Manual, sample after well recovers 80% of total purged drawdown.
___Method 3, Low-flow - install pump at least 2 hours prior to start of purging. Follow detailed methodology in SAM Manual.
List the date and time the pump was installed: Date:_____ Time:_____
___Method 4, remove 1 BV, sample after 2 hours. Note - if well recovers 80% of total purged drawdown, use another method.
___Method 5, non-purge method. Only with prior written approval from SAM

PURGING INFORMATION

Time	Water Level (feet below top of casing)	Drawdown (feet)	Water Volume Purged (gal)	Measured Parameters				
				Conductivity (µmhos)	Dissolved Oxygen	pH	Turbidity	Temp (°C)
12:04								
12:22	30.70	0.02	7.5	1.46	—	6.74	—	20.45
12:32	30.68	0.00	11.5	1.45	—	6.79	—	20.60

Borehole Volume: 7.5 (gal) Total Volume Purge Water: 11.5 (gal) Average pumping rate: — (gpm)

RECOVERY CALCULATIONS

Recovery of 80% of drawdown from purging = SWL + (0.2)(Maximum Drawdown during purging) 30.68

SAMPLING INFORMATION

Date & Time Sampled: 12-10-15; 12:45 Depth to water at time of sampling (feet): 30.68

Quantity	Container Type	Filtered (Y/N)	Sample Preservatives	Analytical Methods to Perform
18	Various	N	Various	TPHgd; BTEX, OXY, Nap; RMA

SCS ENGINEERS

8799 Balboa Avenue, Suite 290
San Diego, California 92123

Client: Wigington Oil	Project No: 1208473.00	Recorded By:
Site Address: 11427 Woodside Avenue Santee, CA	Date: 12-10-15	AB

WELL MONITORING DATA

WELL NO.	DTB	DTW	DTP	PT	SWE	ELEV-W	ELEV-P
MW-1	41.6	30.38	—		362.84	362.84	
MW-2	44.6	36.20	31.10	5.10	365.08	365.08	
MW-3	43.2	35.45	30.87	4.58	364.16	364.16	
MW-4	41.6	29.70	—		362.38	362.38	
MW-6	41.8	29.96	—		362.44	362.44	
MW-7	41.9	29.66	—		362.57	362.57	
MW-8	39.5				364.51	364.51	
MW-9	38.3	29.92	—		362.33	362.33	
MW-10	38.3	35.58	32.81	2.77	367.28	367.28	
MW-11	37.4				362.48	362.48	
MW-12	36.2				361.88	361.88	
MW-13	44.7	35.18	33.23	1.95	366.91	366.91	
MW-14	36.8	30.52	—		362.79	362.79	
MW-15	37.2	30.32	—		362.36	362.36	
MW-16	38.3	30.40	—		362.48	362.48	
MW-17	44.4	36.10	35.40	0.70	367.97	367.97	
MW-18	39.1	30.68	—		362.28	362.28	
MW-19	40.4	33.28	—		365.07	365.07	

NOTES

WELL NO. - Monitoring well number
DTW - Depth to water from datum
DTP - Depth to product from datum
PT - Product Thickness

DTB - Depth to bottom of well
SWE - Surveyed well elevation in feet
ELEV-W - Relative elevation of water
ELEV-P - Relative elevation of product

APPENDIX C

ANALYTICAL DATA AND CHAIN-OF-CUSTODY DOCUMENTATION

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WORK ORDER NUMBER: 15-09-0483

The difference is service

AIR | SOIL | WATER | MARINE CHEMISTRY

Analytical Report For

Client: SCS Engineers

Client Project Name: Wigington Oil / 01208473.00

Attention: Alissa Barrow
8799 Balboa Avenue, Suite 290
San Diego, CA 92123-1562

Approved for release on 09/18/2015 by:
Ranjit Clarke
Project Manager

ResultLink

Email your PM

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Work Order Number: 15-09-0483

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Work Order Narrative

Work Order: 15-09-0483 Page 1 of 1

Condition Upon Receipt:

Samples were received under Chain-of-Custody (COC) on 09/04/15. They were assigned to Work Order 15-09-0483.

Unless otherwise noted on the Sample Receiving forms all samples were received in good condition and within the recommended EPA temperature criteria for the methods noted on the COC. The COC and Sample Receiving Documents are integral elements of the analytical report and are presented at the back of the report.

Holding Times:

All samples were analyzed within prescribed holding times (HT) and/or in accordance with the Calscience Sample Acceptance Policy unless otherwise noted in the analytical report and/or comprehensive case narrative, if required.

Any parameter identified in 40CFR Part 136.3 Table II that is designated as "analyze immediately" with a holding time of <= 15 minutes (40CFR-136.3 Table II, footnote 4), is considered a "field" test and the reported results will be qualified as being received outside of the stated holding time unless received at the laboratory within 15 minutes of the collection time.

Quality Control:

All quality control parameters (QC) were within established control limits except where noted in the QC summary forms or described further within this report.

Subcontractor Information:

Unless otherwise noted below (or on the subcontract form), no samples were subcontracted.

Additional Comments:

Air - Sorbent-extracted air methods (EPA TO-4A, EPA TO-10, EPA TO-13A, EPA TO-17): Analytical results are converted from mass/sample basis to mass/volume basis using client-supplied air volumes.

Solid - Unless otherwise indicated, solid sample data is reported on a wet weight basis, not corrected for % moisture. All QC results are always reported on a wet weight basis.

Redox Potential, Nitrate, and Sulfate analysis were not listed on the COC. Their omission from the COC was discovered only upon a review of the SAM Manual Table 7-1. Per instructions from SCS Engineers, these analyses are included herein.

The MW-3 sample is a bi-layered sample (product / water). For the plastic bottles, there was not much product present since during the sampling process the product was decanted off. Unfortunately, for the amber bottles (Diesel, Gas, VOCs, and Ammonia), this was not the case since the product layer was not as obvious inside the container.

As a result, the TPH-Diesel analysis, which used the entire sample aliquot in the bottle, had fuel product present. The TPH-Gas analysis was also affected since the VOA vial is also amber and since there were no special instructions given to the chemist to report only the aqueous layer. The VOCs analysis was not affected, as the reported compounds are in a lower carbon range than that of the product. Ammonia analysis was also not affected since the chemist only used the water phase for this analysis (due to the limitations of the analytical method).

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Sample Summary

Client:	SCS Engineers	Work Order:	15-09-0483
	8799 Balboa Avenue, Suite 290	Project Name:	Wigington Oil / 01208473.00
	San Diego, CA 92123-1562	PO Number:	
		Date/Time Received:	09/04/15 18:00
		Number of Containers:	90
Attn:	Alissa Barrow		

Sample Identification	Lab Number	Collection Date and Time	Number of Containers	Matrix
MW-1	15-09-0483-1	09/03/15 17:15	18	Aqueous
MW-3	15-09-0483-2	09/03/15 11:45	18	Aqueous
MW-6	15-09-0483-3	09/03/15 15:50	18	Aqueous
MW-7	15-09-0483-4	09/03/15 13:30	18	Aqueous
MW-18	15-09-0483-5	09/03/15 14:45	18	Aqueous

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Analytical Report

SCS Engineers
8799 Balboa Avenue, Suite 290
San Diego, CA 92123-1562

Date Received: 09/04/15
Work Order: 15-09-0483
Preparation: N/A
Method: RSK-175M
Units: ug/L

Project: Wigington Oil / 01208473.00

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW-1	**15-09-0483-1-I**	**09/03/15 17:15**	**Aqueous**	**GC 52**	**N/A**	**09/08/15 12:25**	**150908L01**

Parameter	Result	RL	DF	Qualifiers
Methane	87.6	1.00	1.00	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW-3	**15-09-0483-2-I**	**09/03/15 11:45**	**Aqueous**	**GC 52**	**N/A**	**09/08/15 13:26**	**150908L01**

Parameter	Result	RL	DF	Qualifiers
Methane	5260	20.0	20.0	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW-6	**15-09-0483-3-I**	**09/03/15 15:50**	**Aqueous**	**GC 52**	**N/A**	**09/08/15 14:19**	**150908L01**

Parameter	Result	RL	DF	Qualifiers
Methane	515	1.00	1.00	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW-7	**15-09-0483-4-I**	**09/03/15 13:30**	**Aqueous**	**GC 52**	**N/A**	**09/08/15 14:44**	**150908L01**

Parameter	Result	RL	DF	Qualifiers
Methane	ND	1.00	1.00	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW-18	**15-09-0483-5-I**	**09/03/15 14:45**	**Aqueous**	**GC 52**	**N/A**	**09/08/15 15:10**	**150908L01**

Parameter	Result	RL	DF	Qualifiers
Methane	ND	1.00	1.00	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	**099-12-663-2471**	**N/A**	**Aqueous**	**GC 52**	**N/A**	**09/08/15 11:59**	**150908L01**

Parameter	Result	RL	DF	Qualifiers
Methane	ND	1.00	1.00	

Return to Contents

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

SCS Engineers
8799 Balboa Avenue, Suite 290
San Diego, CA 92123-1562

Date Received: 09/04/15
Work Order: 15-09-0483
Preparation: N/A
Method: EPA 300.0
Units: mg/L

Project: Wigington Oil / 01208473.00

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW-1	**15-09-0483-1-2**	**09/03/15 17:15**	**Aqueous**	**IC 15**	**N/A**	**09/15/15 16:23**	**150915L01**

Parameter	Result	RL	DF	Qualifiers
Nitrate (as N)	13	0.20	2.00	BU
Sulfate	170	2.0	2.00	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW-3	**15-09-0483-2-P**	**09/03/15 11:45**	**Aqueous**	**IC 15**	**N/A**	**09/15/15 01:05**	**150914L02**

Parameter	Result	RL	DF	Qualifiers
Nitrate (as N)	ND	0.10	1.00	BU
Sulfate	2.2	1.0	1.00	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW-6	**15-09-0483-3-5**	**09/03/15 15:50**	**Aqueous**	**IC 15**	**N/A**	**09/15/15 16:41**	**150915L01**

Parameter	Result	RL	DF	Qualifiers
Nitrate (as N)	9.6	0.50	5.00	BU
Sulfate	230	5.0	5.00	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW-7	**15-09-0483-4-5**	**09/03/15 13:30**	**Aqueous**	**IC 15**	**N/A**	**09/15/15 17:00**	**150915L01**

Parameter	Result	RL	DF	Qualifiers
Nitrate (as N)	13	0.50	5.00	BU
Sulfate	230	5.0	5.00	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW-18	**15-09-0483-5-5**	**09/03/15 14:45**	**Aqueous**	**IC 15**	**N/A**	**09/15/15 17:18**	**150915L01**

Parameter	Result	RL	DF	Qualifiers
Nitrate (as N)	13	0.50	5.00	BU
Sulfate	280	5.0	5.00	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	**099-12-906-6069**	**N/A**	**Aqueous**	**IC 15**	**N/A**	**09/15/15 00:10**	**150914L02**

Parameter	Result	RL	DF	Qualifiers
Nitrate (as N)	ND	0.10	1.00	
Sulfate	ND	1.0	1.00	

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RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

SCS Engineers
8799 Balboa Avenue, Suite 290
San Diego, CA 92123-1562

Date Received: 09/04/15
Work Order: 15-09-0483
Preparation: N/A
Method: EPA 300.0
Units: mg/L

Project: Wigington Oil / 01208473.00

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	**099-12-906-6071**	**N/A**	**Aqueous**	**IC 15**	**N/A**	**09/15/15 14:15**	**150915L01**

Parameter	Result	RL	DF	Qualifiers
Nitrate (as N)	ND	0.10	1.00	
Sulfate	ND	1.0	1.00	

Return to Contents

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

SCS Engineers
8799 Balboa Avenue, Suite 290
San Diego, CA 92123-1562

Date Received: 09/04/15
Work Order: 15-09-0483
Preparation: EPA 3510C
Method: EPA 8015B (M)
Units: ug/L

Project: Wigington Oil / 01208473.00

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW-1	**15-09-0483-1-M**	**09/03/15 17:15**	**Aqueous**	**GC 47**	**09/08/15**	**09/10/15 06:44**	**150908B14**

Parameter	Result	RL	DF	Qualifiers
TPH as Diesel	930	94	1.00	HD

Surrogate	Rec. (%)	Control Limits	Qualifiers
n-Octacosane	71	68-140	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW-3	**15-09-0483-2-M**	**09/03/15 11:45**	**Aqueous**	**GC 47**	**09/08/15**	**09/10/15 15:27**	**150908B14**

Parameter	Result	RL	DF	Qualifiers
TPH as Diesel	7200000	47000	500	HD

Surrogate	Rec. (%)	Control Limits	Qualifiers
n-Octacosane	107	68-140	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW-6	**15-09-0483-3-L**	**09/03/15 15:50**	**Aqueous**	**GC 47**	**09/08/15**	**09/10/15 14:53**	**150908B14**

Parameter	Result	RL	DF	Qualifiers
TPH as Diesel	440	94	1.00	HD

Surrogate	Rec. (%)	Control Limits	Qualifiers
n-Octacosane	68	68-140	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW-7	**15-09-0483-4-L**	**09/03/15 13:30**	**Aqueous**	**GC 47**	**09/08/15**	**09/10/15 15:09**	**150908B14**

Parameter	Result	RL	DF	Qualifiers
TPH as Diesel	610	94	1.00	HD

Surrogate	Rec. (%)	Control Limits	Qualifiers
n-Octacosane	72	68-140	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW-18	**15-09-0483-5-L**	**09/03/15 14:45**	**Aqueous**	**GC 47**	**09/08/15**	**09/10/15 01:44**	**150908B14**

Parameter	Result	RL	DF	Qualifiers
TPH as Diesel	ND	94	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
n-Octacosane	68	68-140	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

SCS Engineers
8799 Balboa Avenue, Suite 290
San Diego, CA 92123-1562

Date Received: 09/04/15
Work Order: 15-09-0483
Preparation: EPA 3510C
Method: EPA 8015B (M)
Units: ug/L

Project: Wigington Oil / 01208473.00

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	**099-15-282-313**	**N/A**	**Aqueous**	**GC 47**	**09/08/15**	**09/10/15 00:51**	**150908B14**

Parameter	Result	RL	DF	Qualifiers
TPH as Diesel	ND	100	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
n-Octacosane	73	68-140	

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RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

SCS Engineers
8799 Balboa Avenue, Suite 290
San Diego, CA 92123-1562

Date Received: 09/04/15
Work Order: 15-09-0483
Preparation: EPA 5030C
Method: EPA 8015B (M)
Units: ug/L

Project: Wigington Oil / 01208473.00

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW-1	**15-09-0483-1-F**	**09/03/15 17:15**	**Aqueous**	**GC 56**	**09/12/15**	**09/12/15 17:21**	**150912L046**

Parameter	Result	RL	DF	Qualifiers
TPH as Gasoline	240	100	1.00	HD

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,4-Bromofluorobenzene	71	38-134	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW-3	**15-09-0483-2-G**	**09/03/15 11:45**	**Aqueous**	**GC 25**	**09/14/15**	**09/15/15 16:41**	**150914L044**

Parameter	Result	RL	DF	Qualifiers
TPH as Gasoline	200000	10000	100	HD

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,4-Bromofluorobenzene	93	38-134	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW-6	**15-09-0483-3-F**	**09/03/15 15:50**	**Aqueous**	**GC 56**	**09/12/15**	**09/12/15 17:52**	**150912L046**

Parameter	Result	RL	DF	Qualifiers
TPH as Gasoline	1500	100	1.00	HD

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,4-Bromofluorobenzene	87	38-134	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW-7	**15-09-0483-4-G**	**09/03/15 13:30**	**Aqueous**	**GC 25**	**09/14/15**	**09/15/15 15:34**	**150914L044**

Parameter	Result	RL	DF	Qualifiers
TPH as Gasoline	120	100	1.00	HD

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,4-Bromofluorobenzene	72	38-134	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW-18	**15-09-0483-5-G**	**09/03/15 14:45**	**Aqueous**	**GC 25**	**09/14/15**	**09/15/15 16:08**	**150914L044**

Parameter	Result	RL	DF	Qualifiers
TPH as Gasoline	ND	100	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,4-Bromofluorobenzene	73	38-134	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

SCS Engineers
8799 Balboa Avenue, Suite 290
San Diego, CA 92123-1562

Date Received: 09/04/15
Work Order: 15-09-0483
Preparation: EPA 5030C
Method: EPA 8015B (M)
Units: ug/L

Project: Wigington Oil / 01208473.00

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	**099-15-704-1199**	**N/A**	**Aqueous**	**GC 56**	**09/12/15**	**09/12/15 13:09**	**150912L046**

Parameter	Result	RL	DF	Qualifiers
TPH as Gasoline	ND	100	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,4-Bromofluorobenzene	62	38-134	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	**099-15-704-1200**	**N/A**	**Aqueous**	**GC 25**	**09/14/15**	**09/15/15 12:48**	**150914L044**

Parameter	Result	RL	DF	Qualifiers
TPH as Gasoline	ND	100	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,4-Bromofluorobenzene	72	38-134	

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RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

SCS Engineers
8799 Balboa Avenue, Suite 290
San Diego, CA 92123-1562

Date Received: 09/04/15
Work Order: 15-09-0483
Preparation: EPA 3010A Total
Method: EPA 6010B
Units: mg/L

Project: Wigington Oil / 01208473.00

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW-1	**15-09-0483-1-M**	**09/03/15 17:15**	**Aqueous**	**ICP 7300**	**09/08/15**	**09/08/15 19:22**	**150908LA3**

Parameter	Result	RL	DF	Qualifiers
Iron	2.21	0.100	1.00	
Manganese	0.332	0.00500	1.00	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW-3	**15-09-0483-2-M**	**09/03/15 11:45**	**Aqueous**	**ICP 7300**	**09/08/15**	**09/08/15 19:24**	**150908LA3**

Parameter	Result	RL	DF	Qualifiers
Iron	68.6	0.100	1.00	
Manganese	4.40	0.00500	1.00	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW-6	**15-09-0483-3-M**	**09/03/15 15:50**	**Aqueous**	**ICP 7300**	**09/08/15**	**09/08/15 19:26**	**150908LA3**

Parameter	Result	RL	DF	Qualifiers
Iron	4.66	0.100	1.00	
Manganese	0.579	0.00500	1.00	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW-7	**15-09-0483-4-M**	**09/03/15 13:30**	**Aqueous**	**ICP 7300**	**09/08/15**	**09/08/15 19:27**	**150908LA3**

Parameter	Result	RL	DF	Qualifiers
Iron	7.60	0.100	1.00	
Manganese	0.769	0.00500	1.00	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW-18	**15-09-0483-5-M**	**09/03/15 14:45**	**Aqueous**	**ICP 7300**	**09/08/15**	**09/08/15 19:29**	**150908LA3**

Parameter	Result	RL	DF	Qualifiers
Iron	20.6	0.100	1.00	
Manganese	0.282	0.00500	1.00	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	**097-01-003-15326**	**N/A**	**Aqueous**	**ICP 7300**	**09/08/15**	**09/08/15 16:40**	**150908LA3**

Parameter	Result	RL	DF	Qualifiers
Iron	ND	0.100	1.00	
Manganese	ND	0.00500	1.00	

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RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

SCS Engineers
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Date Received: 09/04/15
Work Order: 15-09-0483
Preparation: N/A
Method: Ferric Iron by Calc
Units: mg/L

Project: Wigington Oil / 01208473.00

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW-1	**15-09-0483-1-M/R**	**09/03/15 17:15**	**Aqueous**	**N/A**	**N/A**	**09/09/15 12:24**	

Parameter	Result	RL	DF	Qualifiers
Ferric Iron	ND	0.100	1.00	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW-3	**15-09-0483-2-M/R**	**09/03/15 11:45**	**Aqueous**	**N/A**	**N/A**	**09/09/15 12:24**	

Parameter	Result	RL	DF	Qualifiers
Ferric Iron	1.30	0.100	1.00	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW-6	**15-09-0483-3-M/R**	**09/03/15 15:50**	**Aqueous**	**N/A**	**N/A**	**09/09/15 12:24**	

Parameter	Result	RL	DF	Qualifiers
Ferric Iron	ND	0.100	1.00	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW-7	**15-09-0483-4-M/R**	**09/03/15 13:30**	**Aqueous**	**N/A**	**N/A**	**09/09/15 12:24**	

Parameter	Result	RL	DF	Qualifiers
Ferric Iron	ND	0.100	1.00	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW-18	**15-09-0483-5-M/R**	**09/03/15 14:45**	**Aqueous**	**N/A**	**N/A**	**09/09/15 12:24**	

Parameter	Result	RL	DF	Qualifiers
Ferric Iron	ND	0.100	1.00	

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RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

SCS Engineers
8799 Balboa Avenue, Suite 290
San Diego, CA 92123-1562

Date Received: 09/04/15
Work Order: 15-09-0483
Preparation: EPA 5030C
Method: EPA 8260B
Units: ug/L

Project: Wigington Oil / 01208473.00

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW-1	**15-09-0483-1-A**	**09/03/15 17:15**	**Aqueous**	**GC/MS RR**	**09/11/15**	**09/12/15 04:31**	**150911L044**

Parameter	Result	RL	DF	Qualifiers
Benzene	120	0.50	1.00	
Ethylbenzene	1.1	1.0	1.00	
Toluene	ND	1.0	1.00	
p/m-Xylene	ND	1.0	1.00	
o-Xylene	ND	1.0	1.00	
Methyl-t-Butyl Ether (MTBE)	4.7	1.0	1.00	
Tert-Butyl Alcohol (TBA)	94	10	1.00	
Diisopropyl Ether (DIPE)	ND	2.0	1.00	
Ethyl-t-Butyl Ether (ETBE)	ND	2.0	1.00	
Tert-Amyl-Methyl Ether (TAME)	ND	2.0	1.00	
Ethanol	ND	100	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,4-Bromofluorobenzene	94	80-120	
Dibromofluoromethane	124	78-126	
1,2-Dichloroethane-d4	113	75-135	
Toluene-d8	98	80-120	

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RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

SCS Engineers
8799 Balboa Avenue, Suite 290
San Diego, CA 92123-1562

Date Received: 09/04/15
Work Order: 15-09-0483
Preparation: EPA 5030C
Method: EPA 8260B
Units: ug/L

Project: Wigington Oil / 01208473.00

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW-3	**15-09-0483-2-C**	**09/03/15 11:45**	**Aqueous**	**GC/MS JJ**	**09/15/15**	**09/15/15 17:41**	**150915L005**

Parameter	Result	RL	DF	Qualifiers
Benzene	170	0.50	1.00	
Ethylbenzene	48	1.0	1.00	
Toluene	ND	1.0	1.00	
p/m-Xylene	ND	1.0	1.00	
o-Xylene	ND	1.0	1.00	
Methyl-t-Butyl Ether (MTBE)	42	1.0	1.00	
Tert-Butyl Alcohol (TBA)	430	10	1.00	
Diisopropyl Ether (DIPE)	ND	2.0	1.00	
Ethyl-t-Butyl Ether (ETBE)	ND	2.0	1.00	
Tert-Amyl-Methyl Ether (TAME)	ND	2.0	1.00	
Ethanol	ND	100	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,4-Bromofluorobenzene	102	80-120	
Dibromofluoromethane	101	78-126	
1,2-Dichloroethane-d4	100	75-135	
Toluene-d8	100	80-120	

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RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

SCS Engineers
8799 Balboa Avenue, Suite 290
San Diego, CA 92123-1562

Date Received: 09/04/15
Work Order: 15-09-0483
Preparation: EPA 5030C
Method: EPA 8260B
Units: ug/L

Project: Wigington Oil / 01208473.00

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW-6	**15-09-0483-3-A**	**09/03/15 15:50**	**Aqueous**	**GC/MS RR**	**09/11/15**	**09/12/15 05:02**	**150911L044**

Parameter	Result	RL	DF	Qualifiers
Benzene	48	0.50	1.00	
Ethylbenzene	41	1.0	1.00	
Toluene	ND	1.0	1.00	
p/m-Xylene	2.8	1.0	1.00	
o-Xylene	ND	1.0	1.00	
Methyl-t-Butyl Ether (MTBE)	8.5	1.0	1.00	
Tert-Butyl Alcohol (TBA)	ND	10	1.00	
Diisopropyl Ether (DIPE)	ND	2.0	1.00	
Ethyl-t-Butyl Ether (ETBE)	ND	2.0	1.00	
Tert-Amyl-Methyl Ether (TAME)	ND	2.0	1.00	
Ethanol	ND	100	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,4-Bromofluorobenzene	97	80-120	
Dibromofluoromethane	115	78-126	
1,2-Dichloroethane-d4	105	75-135	
Toluene-d8	98	80-120	

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RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

SCS Engineers
8799 Balboa Avenue, Suite 290
San Diego, CA 92123-1562

Date Received: 09/04/15
Work Order: 15-09-0483
Preparation: EPA 5030C
Method: EPA 8260B
Units: ug/L

Project: Wigington Oil / 01208473.00

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW-7	**15-09-0483-4-A**	**09/03/15 13:30**	**Aqueous**	**GC/MS RR**	**09/11/15**	**09/12/15 05:33**	**150911L044**

Parameter	Result	RL	DF	Qualifiers
Benzene	ND	0.50	1.00	
Ethylbenzene	ND	1.0	1.00	
Toluene	ND	1.0	1.00	
p/m-Xylene	ND	1.0	1.00	
o-Xylene	ND	1.0	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	1.0	1.00	
Tert-Butyl Alcohol (TBA)	ND	10	1.00	
Diisopropyl Ether (DIPE)	ND	2.0	1.00	
Ethyl-t-Butyl Ether (ETBE)	ND	2.0	1.00	
Tert-Amyl-Methyl Ether (TAME)	ND	2.0	1.00	
Ethanol	ND	100	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,4-Bromofluorobenzene	95	80-120	
Dibromofluoromethane	115	78-126	
1,2-Dichloroethane-d4	107	75-135	
Toluene-d8	98	80-120	

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RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

SCS Engineers
8799 Balboa Avenue, Suite 290
San Diego, CA 92123-1562

Date Received: 09/04/15
Work Order: 15-09-0483
Preparation: EPA 5030C
Method: EPA 8260B
Units: ug/L

Project: Wigington Oil / 01208473.00

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW-18	**15-09-0483-5-A**	**09/03/15 14:45**	**Aqueous**	**GC/MS RR**	**09/11/15**	**09/12/15 06:04**	**150911L044**

Parameter	Result	RL	DF	Qualifiers
Benzene	ND	0.50	1.00	
Ethylbenzene	ND	1.0	1.00	
Toluene	ND	1.0	1.00	
p/m-Xylene	ND	1.0	1.00	
o-Xylene	ND	1.0	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	1.0	1.00	
Tert-Butyl Alcohol (TBA)	ND	10	1.00	
Diisopropyl Ether (DIPE)	ND	2.0	1.00	
Ethyl-t-Butyl Ether (ETBE)	ND	2.0	1.00	
Tert-Amyl-Methyl Ether (TAME)	ND	2.0	1.00	
Ethanol	ND	100	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,4-Bromofluorobenzene	96	80-120	
Dibromofluoromethane	115	78-126	
1,2-Dichloroethane-d4	107	75-135	
Toluene-d8	98	80-120	

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RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

SCS Engineers
8799 Balboa Avenue, Suite 290
San Diego, CA 92123-1562

Date Received: 09/04/15
Work Order: 15-09-0483
Preparation: EPA 5030C
Method: EPA 8260B
Units: ug/L

Project: Wigington Oil / 01208473.00

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	**099-14-001-18137**	**N/A**	**Aqueous**	**GC/MS RR**	**09/11/15**	**09/12/15 03:29**	**150911L044**

Parameter	Result	RL	DF	Qualifiers
Benzene	ND	0.50	1.00	
Ethylbenzene	ND	1.0	1.00	
Toluene	ND	1.0	1.00	
p/m-Xylene	ND	1.0	1.00	
o-Xylene	ND	1.0	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	1.0	1.00	
Tert-Butyl Alcohol (TBA)	ND	10	1.00	
Diisopropyl Ether (DIPE)	ND	2.0	1.00	
Ethyl-t-Butyl Ether (ETBE)	ND	2.0	1.00	
Tert-Amyl-Methyl Ether (TAME)	ND	2.0	1.00	
Ethanol	ND	100	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,4-Bromofluorobenzene	95	80-120	
Dibromofluoromethane	114	78-126	
1,2-Dichloroethane-d4	111	75-135	
Toluene-d8	98	80-120	

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RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

SCS Engineers
8799 Balboa Avenue, Suite 290
San Diego, CA 92123-1562

Date Received: 09/04/15
Work Order: 15-09-0483
Preparation: EPA 5030C
Method: EPA 8260B
Units: ug/L

Project: Wigington Oil / 01208473.00

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	**099-14-001-18153**	**N/A**	**Aqueous**	**GC/MS JJ**	**09/15/15**	**09/15/15 12:34**	**150915L005**

Parameter	Result	RL	DF	Qualifiers
Benzene	ND	0.50	1.00	
Ethylbenzene	ND	1.0	1.00	
Toluene	ND	1.0	1.00	
p/m-Xylene	ND	1.0	1.00	
o-Xylene	ND	1.0	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	1.0	1.00	
Tert-Butyl Alcohol (TBA)	ND	10	1.00	
Diisopropyl Ether (DIPE)	ND	2.0	1.00	
Ethyl-t-Butyl Ether (ETBE)	ND	2.0	1.00	
Tert-Amyl-Methyl Ether (TAME)	ND	2.0	1.00	
Ethanol	ND	100	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,4-Bromofluorobenzene	99	80-120	
Dibromofluoromethane	99	78-126	
1,2-Dichloroethane-d4	96	75-135	
Toluene-d8	101	80-120	

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RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

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San Diego, CA 92123-1562
Project: Wigington Oil / 01208473.00

Date Received: 09/04/15
Work Order: 15-09-0483

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix
MW-1	**15-09-0483-1**	**09/03/15 17:15**	**Aqueous**

Parameter	Results	RL	DF	Qualifiers	Units	Date Prepared	Date Analyzed	Method
Redox Potential	230	-800	1.00	BV,BU	mV	09/14/15	09/14/15	ASTM D 1498
Iron (II)	ND	0.100	1.00	BV,BU	mg/L	09/04/15	09/04/15	SM 3500-FeB
pH	7.11	0.01	1.00	BV,BU	pH units	N/A	09/04/15	SM 4500 H+ B
Total Phosphate	0.49	0.31	1.00		mg/L	N/A	09/04/15	SM 4500 P B/E
Ammonia (as N)	ND	0.10	1.00		mg/L	09/14/15	09/14/15	SM 4500-NH3 B/C
Dissolved Oxygen	3.38	0.0100	1.00	BV,BU	mg/L	09/04/15	09/04/15	SM 4500-O G
Carbon Dioxide	46	1.0	1.00	BV,BU	mg/L	N/A	09/04/15	SM4500-CO2D

MW-3	**15-09-0483-2**	**09/03/15 11:45**	**Aqueous**

Parameter	Results	RL	DF	Qualifiers	Units	Date Prepared	Date Analyzed	Method
Redox Potential	220	-800	1.00	BV,BU	mV	09/14/15	09/14/15	ASTM D 1498
Iron (II)	1.30	0.100	1.00	BV,BU	mg/L	09/04/15	09/04/15	SM 3500-FeB
pH	6.68	0.01	1.00	BV,BU	pH units	N/A	09/04/15	SM 4500 H+ B
Total Phosphate	ND	0.31	1.00		mg/L	N/A	09/04/15	SM 4500 P B/E
Ammonia (as N)	0.45	0.20	2.00		mg/L	09/14/15	09/14/15	SM 4500-NH3 B/C
Dissolved Oxygen	1.68	0.0100	1.00	BV,BU	mg/L	09/04/15	09/04/15	SM 4500-O G
Carbon Dioxide	200	5.0	1.00	BV,BU	mg/L	N/A	09/04/15	SM4500-CO2D

MW-6	**15-09-0483-3**	**09/03/15 15:50**	**Aqueous**

Parameter	Results	RL	DF	Qualifiers	Units	Date Prepared	Date Analyzed	Method
Redox Potential	210	-800	1.00	BV,BU	mV	09/14/15	09/14/15	ASTM D 1498
Iron (II)	ND	0.100	1.00	BV,BU	mg/L	09/04/15	09/04/15	SM 3500-FeB
pH	7.19	0.01	1.00	BV,BU	pH units	N/A	09/04/15	SM 4500 H+ B
Total Phosphate	ND	0.31	1.00		mg/L	N/A	09/04/15	SM 4500 P B/E
Ammonia (as N)	ND	0.10	1.00		mg/L	09/14/15	09/14/15	SM 4500-NH3 B/C
Dissolved Oxygen	2.85	0.0100	1.00	BV,BU	mg/L	09/04/15	09/04/15	SM 4500-O G
Carbon Dioxide	55	1.0	1.00	BV,BU	mg/L	N/A	09/04/15	SM4500-CO2D

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RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

SCS Engineers
8799 Balboa Avenue, Suite 290
San Diego, CA 92123-1562
Project: Wigington Oil / 01208473.00

Date Received: 09/04/15
Work Order: 15-09-0483

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix
MW-7	**15-09-0483-4**	**09/03/15 13:30**	**Aqueous**

Parameter	Results	RL	DF	Qualifiers	Units	Date Prepared	Date Analyzed	Method
Redox Potential	200	-800	1.00	BV,BU	mV	09/14/15	09/14/15	ASTM D 1498
Iron (II)	ND	0.100	1.00	BV,BU	mg/L	09/04/15	09/04/15	SM 3500-FeB
pH	6.99	0.01	1.00	BV,BU	pH units	N/A	09/04/15	SM 4500 H+ B
Total Phosphate	0.38	0.31	1.00		mg/L	N/A	09/04/15	SM 4500 P B/E
Ammonia (as N)	0.17	0.10	1.00		mg/L	09/14/15	09/14/15	SM 4500-NH3 B/C
Dissolved Oxygen	3.15	0.0100	1.00	BV,BU	mg/L	09/04/15	09/04/15	SM 4500-O G
Carbon Dioxide	81	1.0	1.00	BV,BU	mg/L	N/A	09/04/15	SM4500-CO2D

MW-18	**15-09-0483-5**	**09/03/15 14:45**	**Aqueous**

Parameter	Results	RL	DF	Qualifiers	Units	Date Prepared	Date Analyzed	Method
Redox Potential	200	-800	1.00	BV,BU	mV	09/14/15	09/14/15	ASTM D 1498
Iron (II)	ND	0.100	1.00	BV,BU	mg/L	09/04/15	09/04/15	SM 3500-FeB
pH	6.84	0.01	1.00	BV,BU	pH units	N/A	09/04/15	SM 4500 H+ B
Total Phosphate	0.34	0.31	1.00		mg/L	N/A	09/04/15	SM 4500 P B/E
Ammonia (as N)	ND	0.10	1.00		mg/L	09/14/15	09/14/15	SM 4500-NH3 B/C
Dissolved Oxygen	4.55	0.0100	1.00	BV,BU	mg/L	09/04/15	09/04/15	SM 4500-O G
Carbon Dioxide	69	1.0	1.00	BV,BU	mg/L	N/A	09/04/15	SM4500-CO2D

Method Blank						**N/A**		**Aqueous**
Parameter	Results	RL	DF	Qualifiers	Units	Date Prepared	Date Analyzed	Method
Iron (II)	ND	0.100	1.00		mg/L	09/04/15	09/04/15	SM 3500-FeB
Total Phosphate	ND	0.31	1.00		mg/L	N/A	09/04/15	SM 4500 P B/E
Ammonia (as N)	ND	0.10	1.00		mg/L	09/14/15	09/14/15	SM 4500-NH3 B/C

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RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Quality Control - Spike/Spike Duplicate

SCS Engineers
8799 Balboa Avenue, Suite 290
San Diego, CA 92123-1562

Project: Wigington Oil / 01208473.00

Date Received: 09/04/15
Work Order: 15-09-0483
Preparation: N/A
Method: EPA 300.0

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
15-09-0996-1	**Sample**	**Aqueous**	**IC 15**	**N/A**	**09/15/15 02:18**	**150914S02**
15-09-0996-1	**Matrix Spike**	**Aqueous**	**IC 15**	**N/A**	**09/15/15 03:13**	**150914S02**
15-09-0996-1	**Matrix Spike Duplicate**	**Aqueous**	**IC 15**	**N/A**	**09/15/15 03:32**	**150914S02**

Parameter	Sample Conc.	Spike Added	MS Conc.	MS %Rec.	MSD Conc.	MSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
Nitrate (as N)	7.357	5.000	13.01	113	13.08	114	80-120	1	0-20	
Sulfate	171.3	50.00	236.2	130	236.4	130	80-120	0	0-20	3

RPD: Relative Percent Difference. CL: Control Limits

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Quality Control - Spike/Spike Duplicate

SCS Engineers
8799 Balboa Avenue, Suite 290
San Diego, CA 92123-1562

Project: Wigington Oil / 01208473.00

Date Received: 09/04/15
Work Order: 15-09-0483
Preparation: N/A
Method: EPA 300.0

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
15-09-1018-2	**Sample**	**Aqueous**	**IC 15**	**N/A**	**09/15/15 15:10**	**150915S01**
15-09-1018-2	**Matrix Spike**	**Aqueous**	**IC 15**	**N/A**	**09/15/15 15:46**	**150915S01**
15-09-1018-2	**Matrix Spike Duplicate**	**Aqueous**	**IC 15**	**N/A**	**09/15/15 16:05**	**150915S01**

Parameter	Sample Conc.	Spike Added	MS Conc.	MS %Rec.	MSD Conc.	MSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
Nitrate (as N)	0.1101	5.000	5.121	100	5.117	100	80-120	0	0-20	
Sulfate	10.62	50.00	62.19	103	62.14	103	80-120	0	0-20	

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RPD: Relative Percent Difference. CL: Control Limits

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Quality Control - Spike/Spike Duplicate

SCS Engineers
8799 Balboa Avenue, Suite 290
San Diego, CA 92123-1562

Project: Wigington Oil / 01208473.00

Date Received: 09/04/15
Work Order: 15-09-0483
Preparation: N/A
Method: SM 3500-FeB

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
15-09-0476-2	**Sample**	**Aqueous**	**UV 8**	**09/04/15**	**09/04/15 20:05**	**F0904FES2**
15-09-0476-2	**Matrix Spike**	**Aqueous**	**UV 8**	**09/04/15**	**09/04/15 20:05**	**F0904FES2**
15-09-0476-2	**Matrix Spike Duplicate**	**Aqueous**	**UV 8**	**09/04/15**	**09/04/15 20:05**	**F0904FES2**

Parameter	Sample Conc.	Spike Added	MS Conc.	MS %Rec.	MSD Conc.	MSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
Iron (II)	ND	1.000	0.9500	95	0.9700	97	70-130	2	0-25	

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RPD: Relative Percent Difference. CL: Control Limits

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Quality Control - Spike/Spike Duplicate

SCS Engineers	Date Received:	09/04/15
8799 Balboa Avenue, Suite 290	Work Order:	15-09-0483
San Diego, CA 92123-1562	Preparation:	N/A
	Method:	SM 4500 P B/E
Project: Wigington Oil / 01208473.00		Page 4 of 9

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
MW-6	**Sample**	**Aqueous**	**UV 8**	**N/A**	**09/04/15 19:20**	**F0904PO4S2**
MW-6	**Matrix Spike**	**Aqueous**	**UV 8**	**N/A**	**09/04/15 19:20**	**F0904PO4S2**
MW-6	**Matrix Spike Duplicate**	**Aqueous**	**UV 8**	**N/A**	**09/04/15 19:20**	**F0904PO4S2**

Parameter	Sample Conc.	Spike Added	MS Conc.	MS %Rec.	MSD Conc.	MSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
Total Phosphate	ND	1.220	1.247	102	1.240	102	70-130	1	0-25	

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RPD: Relative Percent Difference. CL: Control Limits

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Quality Control - Spike/Spike Duplicate

SCS Engineers		Date Received:	09/04/15
8799 Balboa Avenue, Suite 290		Work Order:	15-09-0483
San Diego, CA 92123-1562		Preparation:	EPA 5030C
		Method:	EPA 8015B (M)
Project: Wigington Oil / 01208473.00			Page 5 of 9

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
15-09-0542-1	**Sample**	**Aqueous**	**GC 25**	**09/15/15**	**09/15/15 13:54**	**150915S012**
15-09-0542-1	**Matrix Spike**	**Aqueous**	**GC 25**	**09/15/15**	**09/15/15 14:28**	**150915S012**
15-09-0542-1	**Matrix Spike Duplicate**	**Aqueous**	**GC 25**	**09/15/15**	**09/15/15 15:01**	**150915S012**

Parameter	Sample Conc.	Spike Added	MS Conc.	MS %Rec.	MSD Conc.	MSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
TPH as Gasoline	ND	2000	2128	106	2090	105	68-122	2	0-18	

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RPD: Relative Percent Difference. CL: Control Limits

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Quality Control - Spike/Spike Duplicate

SCS Engineers		Date Received:	09/04/15
8799 Balboa Avenue, Suite 290		Work Order:	15-09-0483
San Diego, CA 92123-1562		Preparation:	EPA 5030C
		Method:	EPA 8015B (M)
Project: Wigington Oil / 01208473.00			Page 6 of 9

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
15-09-0235-2	**Sample**	**Aqueous**	**GC 56**	**09/12/15**	**09/12/15 13:40**	**150912S019**
15-09-0235-2	**Matrix Spike**	**Aqueous**	**GC 56**	**09/12/15**	**09/12/15 14:12**	**150912S019**
15-09-0235-2	**Matrix Spike Duplicate**	**Aqueous**	**GC 56**	**09/12/15**	**09/12/15 14:43**	**150912S019**

Parameter	Sample Conc.	Spike Added	MS Conc.	MS %Rec.	MSD Conc.	MSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
TPH as Gasoline	ND	2000	1831	92	1796	90	68-122	2	0-18	

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RPD: Relative Percent Difference. CL: Control Limits

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Quality Control - Spike/Spike Duplicate

SCS Engineers		Date Received:	09/04/15
8799 Balboa Avenue, Suite 290		Work Order:	15-09-0483
San Diego, CA 92123-1562		Preparation:	EPA 3010A Total
		Method:	EPA 6010B
Project: Wigington Oil / 01208473.00			Page 7 of 9

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
15-09-0363-2	**Sample**	**Aqueous**	**ICP 7300**	**09/08/15**	**09/08/15 19:13**	**150908SA3**
15-09-0363-2	**Matrix Spike**	**Aqueous**	**ICP 7300**	**09/08/15**	**09/08/15 19:15**	**150908SA3**
15-09-0363-2	**Matrix Spike Duplicate**	**Aqueous**	**ICP 7300**	**09/08/15**	**09/08/15 19:18**	**150908SA3**

Parameter	Sample Conc.	Spike Added	MS Conc.	MS %Rec.	MSD Conc.	MSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
Iron	123.8	0.5000	124.1	4X	115.8	4X	65-149	4X	0-21	Q
Manganese	3.740	0.5000	4.134	4X	3.975	4X	86-116	4X	0-7	Q

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RPD: Relative Percent Difference. CL: Control Limits

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Quality Control - Spike/Spike Duplicate

SCS Engineers
8799 Balboa Avenue, Suite 290
San Diego, CA 92123-1562

Date Received: 09/04/15
Work Order: 15-09-0483
Preparation: EPA 5030C
Method: EPA 8260B

Project: Wigington Oil / 01208473.00

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
15-09-0629-2	**Sample**	**Aqueous**	**GC/MS JJ**	**09/15/15**	**09/15/15 17:16**	**150915S009**
15-09-0629-2	**Matrix Spike**	**Aqueous**	**GC/MS JJ**	**09/15/15**	**09/15/15 10:43**	**150915S009**
15-09-0629-2	**Matrix Spike Duplicate**	**Aqueous**	**GC/MS JJ**	**09/15/15**	**09/15/15 11:10**	**150915S009**

Parameter	Sample Conc.	Spike Added	MS Conc.	MS %Rec.	MSD Conc.	MSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
Benzene	ND	50.00	56.56	113	59.10	118	74-122	4	0-21	
Ethylbenzene	ND	50.00	56.28	113	58.44	117	77-125	4	0-24	
Toluene	ND	50.00	55.71	111	58.22	116	72-126	4	0-23	
p/m-Xylene	ND	100.0	117.7	118	121.8	122	63-129	3	0-25	
o-Xylene	ND	50.00	56.62	113	58.71	117	62-128	4	0-24	
Methyl-t-Butyl Ether (MTBE)	ND	50.00	48.95	98	51.32	103	68-134	5	0-21	
Tert-Butyl Alcohol (TBA)	ND	250.0	242.2	97	244.8	98	65-143	1	0-30	
Diisopropyl Ether (DIPE)	ND	50.00	49.00	98	50.90	102	61-139	4	0-20	
Ethyl-t-Butyl Ether (ETBE)	ND	50.00	50.16	100	51.83	104	64-136	3	0-20	
Tert-Amyl-Methyl Ether (TAME)	ND	50.00	52.87	106	54.87	110	67-133	4	0-20	
Ethanol	ND	500.0	631.3	126	657.5	132	34-178	4	0-58	

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RPD: Relative Percent Difference. CL: Control Limits

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Quality Control - Spike/Spike Duplicate

SCS Engineers
8799 Balboa Avenue, Suite 290
San Diego, CA 92123-1562

Date Received: 09/04/15
Work Order: 15-09-0483
Preparation: EPA 5030C
Method: EPA 8260B

Project: Wigington Oil / 01208473.00

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
MW-18	**Sample**	**Aqueous**	**GC/MS RR**	**09/11/15**	**09/12/15 06:04**	**150911S012**
MW-18	**Matrix Spike**	**Aqueous**	**GC/MS RR**	**09/11/15**	**09/12/15 01:24**	**150911S012**
MW-18	**Matrix Spike Duplicate**	**Aqueous**	**GC/MS RR**	**09/11/15**	**09/12/15 01:56**	**150911S012**

Parameter	Sample Conc.	Spike Added	MS Conc.	MS %Rec.	MSD Conc.	MSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
Benzene	ND	50.00	55.16	110	55.78	112	74-122	1	0-21	
Ethylbenzene	ND	50.00	57.59	115	58.84	118	77-125	2	0-24	
Toluene	ND	50.00	56.71	113	57.25	115	72-126	1	0-23	
p/m-Xylene	ND	100.0	114.2	114	117.2	117	63-129	3	0-25	
o-Xylene	ND	50.00	56.45	113	58.28	117	62-128	3	0-24	
Methyl-t-Butyl Ether (MTBE)	ND	50.00	55.44	111	56.48	113	68-134	2	0-21	
Tert-Butyl Alcohol (TBA)	ND	250.0	260.7	104	266.4	107	65-143	2	0-30	
Diisopropyl Ether (DIPE)	ND	50.00	57.67	115	58.06	116	61-139	1	0-20	
Ethyl-t-Butyl Ether (ETBE)	ND	50.00	53.22	106	54.51	109	64-136	2	0-20	
Tert-Amyl-Methyl Ether (TAME)	ND	50.00	52.51	105	52.92	106	67-133	1	0-20	
Ethanol	ND	500.0	435.6	87	450.2	90	34-178	3	0-58	

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RPD: Relative Percent Difference. CL: Control Limits

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Quality Control - PDS/PDSD

SCS Engineers
8799 Balboa Avenue, Suite 290
San Diego, CA 92123-1562

Project: Wigington Oil / 01208473.00

Date Received: 09/04/15
Work Order: 15-09-0483
Preparation: EPA 3010A Total
Method: EPA 6010B
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Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	PDS/PDSD Batch Number
15-09-0363-2	**Sample**	**Aqueous**	**ICP 7300**	**09/08/15 00:00**	**09/08/15 19:13**	**150908SA3**
15-09-0363-2	**PDS**	**Aqueous**	**ICP 7300**	**09/04/15 00:00**	**09/09/15 13:04**	**150908SA3**
15-09-0363-2	**PDSD**	**Aqueous**	**ICP 7300**	**09/04/15 00:00**	**09/09/15 13:06**	**150908SA3**

Parameter	Sample Conc.	Spike Added	PDS Conc.	PDS %Rec.	PDSD Conc.	PDSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
Iron	123.8	2.500	137.5	4X	134.4	4X	75-125	4X	0-20	Q
Manganese	3.740	2.500	6.389	106	6.254	101	75-125	2	0-20	

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RPD: Relative Percent Difference. CL: Control Limits

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Quality Control - Sample Duplicate

SCS Engineers		Date Received:	09/04/15
8799 Balboa Avenue, Suite 290		Work Order:	15-09-0483
San Diego, CA 92123-1562		Preparation:	N/A
		Method:	ASTM D 1498
Project: Wigington Oil / 01208473.00			Page 1 of 4

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	Duplicate Batch Number
MW-18	**Sample**	**Aqueous**	**ISE 1**	**09/14/15 00:00**	**09/14/15 16:00**	**F0914RDD1**
MW-18	**Sample Duplicate**	**Aqueous**	**ISE 1**	**09/14/15 00:00**	**09/14/15 16:00**	**F0914RDD1**

Parameter	Sample Conc.	DUP Conc.	RPD	RPD CL	Qualifiers
Redox Potential	202.1	199.1	1	0-20	

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RPD: Relative Percent Difference. CL: Control Limits

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Quality Control - Sample Duplicate

SCS Engineers		Date Received:	09/04/15
8799 Balboa Avenue, Suite 290		Work Order:	15-09-0483
San Diego, CA 92123-1562		Preparation:	N/A
		Method:	SM 4500 H+ B
Project: Wigington Oil / 01208473.00			Page 2 of 4

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	Duplicate Batch Number
MW-1	**Sample**	**Aqueous**	**PH 1**	**N/A**	**09/04/15 20:01**	**F0904PHD4**
MW-1	**Sample Duplicate**	**Aqueous**	**PH 1**	**N/A**	**09/04/15 20:01**	**F0904PHD4**

Parameter	Sample Conc.	DUP Conc.	RPD	RPD CL	Qualifiers
pH	7.110	7.090	0	0-25	

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RPD: Relative Percent Difference. CL: Control Limits

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Quality Control - Sample Duplicate

SCS Engineers		Date Received:	09/04/15
8799 Balboa Avenue, Suite 290		Work Order:	15-09-0483
San Diego, CA 92123-1562		Preparation:	N/A
		Method:	SM 4500-O G
Project: Wigington Oil / 01208473.00			Page 3 of 4

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	Duplicate Batch Number
15-09-0418-3	**Sample**	**Aqueous**	**BOD 1**	**09/04/15 00:00**	**09/04/15 18:50**	**F0904DOD1**
15-09-0418-3	**Sample Duplicate**	**Aqueous**	**BOD 1**	**09/04/15 00:00**	**09/04/15 18:50**	**F0904DOD1**

Parameter	Sample Conc.	DUP Conc.	RPD	RPD CL	Qualifiers
Dissolved Oxygen	7.410	7.470	1	0-25	

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RPD: Relative Percent Difference. CL: Control Limits

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Quality Control - Sample Duplicate

SCS Engineers		Date Received:	09/04/15
8799 Balboa Avenue, Suite 290		Work Order:	15-09-0483
San Diego, CA 92123-1562		Preparation:	N/A
		Method:	SM4500-CO2D
Project: Wigington Oil / 01208473.00			Page 4 of 4

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	Duplicate Batch Number
MW-1	**Sample**	**Aqueous**	**BUR03**	**N/A**	**09/04/15 19:29**	**F0904CO2B2**
MW-1	**Sample Duplicate**	**Aqueous**	**BUR03**	**N/A**	**09/04/15 19:29**	**F0904CO2B2**

Parameter	Sample Conc.	DUP Conc.	RPD	RPD CL	Qualifiers
Carbon Dioxide	46.25	44.00	5	0-25	

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RPD: Relative Percent Difference. CL: Control Limits

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Quality Control - LCS/LCSD

SCS Engineers
8799 Balboa Avenue, Suite 290
San Diego, CA 92123-1562

Project: Wigington Oil / 01208473.00

Date Received: 09/04/15
Work Order: 15-09-0483
Preparation: N/A
Method: RSK-175M

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-12-663-2471	**LCS**	**Aqueous**	**GC 52**	**N/A**	**09/08/15 10:43**	**150908L01**
099-12-663-2471	**LCSD**	**Aqueous**	**GC 52**	**N/A**	**09/08/15 11:08**	**150908L01**

Parameter	Spike Added	LCS Conc.	LCS %Rec.	LCSD Conc.	LCSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
Methane	102.0	102.9	101	103.1	101	80-120	0	0-20	

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RPD: Relative Percent Difference. CL: Control Limits

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Quality Control - LCS

SCS Engineers		Date Received:	09/04/15
8799 Balboa Avenue, Suite 290		Work Order:	15-09-0483
San Diego, CA 92123-1562		Preparation:	N/A
		Method:	EPA 300.0
Project: Wigington Oil / 01208473.00			Page 2 of 12

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS Batch Number
099-12-906-6069	**LCS**	**Aqueous**	**IC 15**	**N/A**	**09/15/15 00:28**	**150914L02**

Parameter	Spike Added	Conc. Recovered	LCS %Rec.	%Rec. CL	Qualifiers
Nitrate (as N)	5.000	4.816	96	90-110	
Sulfate	50.00	47.64	95	90-110	

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RPD: Relative Percent Difference. CL: Control Limits

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Quality Control - LCS/LCSD

SCS Engineers
8799 Balboa Avenue, Suite 290
San Diego, CA 92123-1562

Project: Wigington Oil / 01208473.00

Date Received: 09/04/15
Work Order: 15-09-0483
Preparation: N/A
Method: EPA 300.0

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-12-906-6071	**LCS**	**Aqueous**	**IC 15**	**N/A**	**09/15/15 14:33**	**150915L01**
099-12-906-6071	**LCSD**	**Aqueous**	**IC 15**	**N/A**	**09/15/15 14:51**	**150915L01**

Parameter	Spike Added	LCS Conc.	LCS %Rec.	LCSD Conc.	LCSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
Nitrate (as N)	5.000	4.960	99	4.960	99	90-110	0	0-15	
Sulfate	50.00	49.27	99	49.18	98	90-110	0	0-15	

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RPD: Relative Percent Difference. CL: Control Limits

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Quality Control - LCS

SCS Engineers		Date Received:	09/04/15
8799 Balboa Avenue, Suite 290		Work Order:	15-09-0483
San Diego, CA 92123-1562		Preparation:	N/A
		Method:	SM 3500-FeB
Project: Wigington Oil / 01208473.00			Page 4 of 12

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS Batch Number
099-05-111-5159	**LCS**	**Aqueous**	**UV 8**	**09/04/15**	**09/04/15 20:05**	**F0904FEL2**

Parameter	Spike Added	Conc. Recovered	LCS %Rec.	%Rec. CL	Qualifiers
Iron (II)	1.000	0.9700	97	80-120	

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RPD: Relative Percent Difference. CL: Control Limits

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Quality Control - LCS/LCSD

SCS Engineers
8799 Balboa Avenue, Suite 290
San Diego, CA 92123-1562

Project: Wigington Oil / 01208473.00

Date Received: 09/04/15
Work Order: 15-09-0483
Preparation: N/A
Method: SM 4500 P B/E

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-14-276-166	**LCS**	**Aqueous**	**UV 8**	**N/A**	**09/04/15 19:20**	**F0904PO4L2**
099-14-276-166	**LCSD**	**Aqueous**	**UV 8**	**N/A**	**09/04/15 19:20**	**F0904PO4L2**

Parameter	Spike Added	LCS Conc.	LCS %Rec.	LCSD Conc.	LCSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
Total Phosphate	1.220	1.168	96	1.204	99	80-120	3	0-20	

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RPD: Relative Percent Difference. CL: Control Limits

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Quality Control - LCS/LCSD

SCS Engineers
8799 Balboa Avenue, Suite 290
San Diego, CA 92123-1562

Project: Wigington Oil / 01208473.00

Date Received: 09/04/15
Work Order: 15-09-0483
Preparation: N/A
Method: SM 4500-NH3 B/C

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-12-814-2190	**LCS**	**Aqueous**	**BUR05**	**09/14/15**	**09/14/15 14:00**	**F0914NH3L1**
099-12-814-2190	**LCSD**	**Aqueous**	**BUR05**	**09/14/15**	**09/14/15 14:00**	**F0914NH3L1**

Parameter	Spike Added	LCS Conc.	LCS %Rec.	LCSD Conc.	LCSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
Ammonia (as N)	5.000	4.540	91	4.510	90	80-120	1	0-20	

RPD: Relative Percent Difference. CL: Control Limits

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Quality Control - LCS/LCSD

SCS Engineers
8799 Balboa Avenue, Suite 290
San Diego, CA 92123-1562

Project: Wigington Oil / 01208473.00

Date Received: 09/04/15
Work Order: 15-09-0483
Preparation: EPA 3510C
Method: EPA 8015B (M)
Page 7 of 12

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-15-282-313	**LCS**	**Aqueous**	**GC 47**	**09/08/15**	**09/10/15 01:09**	**150908B14**
099-15-282-313	**LCSD**	**Aqueous**	**GC 47**	**09/08/15**	**09/10/15 01:26**	**150908B14**

Parameter	Spike Added	LCS Conc.	LCS %Rec.	LCSD Conc.	LCSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
TPH as Diesel	4000	4407	110	4565	114	75-117	4	0-13	

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RPD: Relative Percent Difference. CL: Control Limits

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Quality Control - LCS

SCS Engineers		Date Received:	09/04/15
8799 Balboa Avenue, Suite 290		Work Order:	15-09-0483
San Diego, CA 92123-1562		Preparation:	EPA 5030C
		Method:	EPA 8015B (M)
Project: Wigington Oil / 01208473.00			Page 8 of 12

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS Batch Number
099-15-704-1200	**LCS**	**Aqueous**	**GC 25**	**09/14/15**	**09/15/15 11:41**	**150914L044**

Parameter	Spike Added	Conc. Recovered	LCS %Rec.	%Rec. CL	Qualifiers
TPH as Gasoline	2000	2142	107	78-120	

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RPD: Relative Percent Difference. CL: Control Limits

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Quality Control - LCS

SCS Engineers		Date Received:	09/04/15
8799 Balboa Avenue, Suite 290		Work Order:	15-09-0483
San Diego, CA 92123-1562		Preparation:	EPA 5030C
		Method:	EPA 8015B (M)
Project: Wigington Oil / 01208473.00			Page 9 of 12

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS Batch Number
099-15-704-1199	**LCS**	**Aqueous**	**GC 56**	**09/12/15**	**09/12/15 12:37**	**150912L046**

Parameter	Spike Added	Conc. Recovered	LCS %Rec.	%Rec. CL	Qualifiers
TPH as Gasoline	2000	2014	101	78-120	

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RPD: Relative Percent Difference. CL: Control Limits

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Quality Control - LCS

SCS Engineers		Date Received:	09/04/15
8799 Balboa Avenue, Suite 290		Work Order:	15-09-0483
San Diego, CA 92123-1562		Preparation:	EPA 3010A Total
		Method:	EPA 6010B
Project: Wigington Oil / 01208473.00			Page 10 of 12

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS Batch Number
097-01-003-15326	**LCS**	**Aqueous**	**ICP 7300**	**09/08/15**	**09/08/15 16:42**	**150908LA3**

Parameter	Spike Added	Conc. Recovered	LCS %Rec.	%Rec. CL	Qualifiers
Iron	0.5000	0.4948	99	80-120	
Manganese	0.5000	0.5139	103	80-120	

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RPD: Relative Percent Difference. CL: Control Limits

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Quality Control - LCS

SCS Engineers		Date Received:	09/04/15
8799 Balboa Avenue, Suite 290		Work Order:	15-09-0483
San Diego, CA 92123-1562		Preparation:	EPA 5030C
		Method:	EPA 8260B
Project: Wigington Oil / 01208473.00			Page 11 of 12

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS Batch Number
099-14-001-18153	**LCS**	**Aqueous**	**GC/MS JJ**	**09/15/15**	**09/15/15 10:09**	**150915L005**

Parameter	Spike Added	Conc. Recovered	LCS %Rec.	%Rec. CL	ME CL	Qualifiers
Benzene	50.00	51.07	102	80-120	73-127	
Ethylbenzene	50.00	50.01	100	80-123	73-130	
Toluene	50.00	50.35	101	80-120	73-127	
p/m-Xylene	100.0	104.4	104	75-123	67-131	
o-Xylene	50.00	50.89	102	74-122	66-130	
Methyl-t-Butyl Ether (MTBE)	50.00	45.33	91	69-129	59-139	
Tert-Butyl Alcohol (TBA)	250.0	225.7	90	69-129	59-139	
Diisopropyl Ether (DIPE)	50.00	44.91	90	68-128	58-138	
Ethyl-t-Butyl Ether (ETBE)	50.00	46.61	93	63-135	51-147	
Tert-Amyl-Methyl Ether (TAME)	50.00	49.21	98	67-133	56-144	
Ethanol	500.0	634.7	127	42-168	21-189	

Total number of LCS compounds: 11
Total number of ME compounds: 0
Total number of ME compounds allowed: 1
LCS ME CL validation result: Pass

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RPD: Relative Percent Difference. CL: Control Limits

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Quality Control - LCS

SCS Engineers		Date Received:	09/04/15
8799 Balboa Avenue, Suite 290		Work Order:	15-09-0483
San Diego, CA 92123-1562		Preparation:	EPA 5030C
		Method:	EPA 8260B
Project: Wigington Oil / 01208473.00			Page 12 of 12

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS Batch Number
099-14-001-18137	**LCS**	**Aqueous**	**GC/MS RR**	**09/11/15**	**09/12/15 00:53**	**150911L044**

Parameter	Spike Added	Conc. Recovered	LCS %Rec.	%Rec. CL	ME CL	Qualifiers
Benzene	50.00	53.23	106	80-120	73-127	
Ethylbenzene	50.00	55.69	111	80-123	73-130	
Toluene	50.00	54.53	109	80-120	73-127	
p/m-Xylene	100.0	112.5	112	75-123	67-131	
o-Xylene	50.00	56.19	112	74-122	66-130	
Methyl-t-Butyl Ether (MTBE)	50.00	55.04	110	69-129	59-139	
Tert-Butyl Alcohol (TBA)	250.0	259.2	104	69-129	59-139	
Diisopropyl Ether (DIPE)	50.00	56.22	112	68-128	58-138	
Ethyl-t-Butyl Ether (ETBE)	50.00	52.34	105	63-135	51-147	
Tert-Amyl-Methyl Ether (TAME)	50.00	51.80	104	67-133	56-144	
Ethanol	500.0	462.4	92	42-168	21-189	

Total number of LCS compounds: 11
Total number of ME compounds: 0
Total number of ME compounds allowed: 1
LCS ME CL validation result: Pass

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RPD: Relative Percent Difference. CL: Control Limits

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Sample Analysis Summary Report

Work Order: 15-09-0483 Page 1 of 1

Method	Extraction	Chemist ID	Instrument	Analytical Location
ASTM D 1498	N/A	687	ISE 1	1
EPA 300.0	N/A	834	IC 15	1
EPA 300.0	N/A	1027	IC 15	1
EPA 6010B	EPA 3010A Total	935	ICP 7300	1
EPA 8015B (M)	EPA 3510C	682	GC 47	1
EPA 8015B (M)	EPA 3510C	972	GC 47	1
EPA 8015B (M)	EPA 5030C	933	GC 25	2
EPA 8015B (M)	EPA 5030C	933	GC 56	2
EPA 8260B	EPA 5030C	823	GC/MS JJ	2
EPA 8260B	EPA 5030C	996	GC/MS RR	2
Ferric Iron by Calc	N/A	1012	N/A	1
RSK-175M	N/A	929	GC 52	2
SM 3500-FeB	N/A	687	UV 8	1
SM 4500 H+ B	N/A	650	PH 1	1
SM 4500 P B/E	N/A	650	UV 8	1
SM 4500-NH3 B/C	N/A	685	BUR05	1
SM 4500-O G	N/A	691	BOD 1	1
SM4500-CO2D	N/A	688	BUR03	1

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Glossary of Terms and Qualifiers

Work Order: 15-09-0483 Page 1 of 1

Qualifiers	Definition
*	See applicable analysis comment.
<	Less than the indicated value.
>	Greater than the indicated value.
1	Surrogate compound recovery was out of control due to a required sample dilution. Therefore, the sample data was reported without further clarification.
2	Surrogate compound recovery was out of control due to matrix interference. The associated method blank surrogate spike compound was in control and, therefore, the sample data was reported without further clarification.
3	Recovery of the Matrix Spike (MS) or Matrix Spike Duplicate (MSD) compound was out of control due to suspected matrix interference. The associated LCS recovery was in control.
4	The MS/MSD RPD was out of control due to suspected matrix interference.
5	The PDS/PDSD or PES/PESD associated with this batch of samples was out of control due to suspected matrix interference.
6	Surrogate recovery below the acceptance limit.
7	Surrogate recovery above the acceptance limit.
B	Analyte was present in the associated method blank.
BU	Sample analyzed after holding time expired.
BV	Sample received after holding time expired.
CI	See case narrative.
E	Concentration exceeds the calibration range.
ET	Sample was extracted past end of recommended max. holding time.
HD	The chromatographic pattern was inconsistent with the profile of the reference fuel standard.
HDH	The sample chromatographic pattern for TPH matches the chromatographic pattern of the specified standard but heavier hydrocarbons were also present (or detected).
HDL	The sample chromatographic pattern for TPH matches the chromatographic pattern of the specified standard but lighter hydrocarbons were also present (or detected).
J	Analyte was detected at a concentration below the reporting limit and above the laboratory method detection limit. Reported value is estimated.
JA	Analyte positively identified but quantitation is an estimate.
ME	LCS Recovery Percentage is within Marginal Exceedance (ME) Control Limit range (+/- 4 SD from the mean).
ND	Parameter not detected at the indicated reporting limit.
Q	Spike recovery and RPD control limits do not apply resulting from the parameter concentration in the sample exceeding the spike concentration by a factor of four or greater.
SG	The sample extract was subjected to Silica Gel treatment prior to analysis.
X	% Recovery and/or RPD out-of-range.
Z	Analyte presence was not confirmed by second column or GC/MS analysis.
	Solid - Unless otherwise indicated, solid sample data is reported on a wet weight basis, not corrected for % moisture. All QC results are reported on a wet weight basis.
	Any parameter identified in 40CFR Part 136.3 Table II that is designated as "analyze immediately" with a holding time of <= 15 minutes (40CFR-136.3 Table II, footnote 4), is considered a "field" test and the reported results will be qualified as being received outside of the stated holding time unless received at the laboratory within 15 minutes of the collection time.
	A calculated total result (Example: Total Pesticides) is the summation of each component concentration and/or, if "J" flags are reported, estimated concentration. Component concentrations showing not detected (ND) are summed into the calculated total result as zero concentrations.

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Calscience Environmental Laboratories, Inc.

CHAIN OF CUSTODY RECORD

☒ SoCal Laboratory
7440 Lincoln Way
Garden Grove, CA 92841-1427
(714) 895-5494

☐ NorCal Service Center
5063 Commercial Circle, Suite H
Concord, CA 94520-8577
(925) 689-9022

WO # / LAB USE ONLY: 15-09-0483

Date 9-3-15

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LABORATORY CLIENT: SCS Engineers

CLIENT PROJECT NAME / NUMBER: Wigington 0.1 / 01208473.00

P.O. NO.: 01208473.00

ADDRESS: 8799 Balboa Ave; Ste 290

PROJECT CONTACT: Alissa Barrow

SAMPLER(S): (PRINT) A. Barrow

CITY: San Diego STATE: CA ZIP: 92123

TEL: 858-571-5500 E-MAIL: abarrow@scsengineers.com

TURNAROUND TIME: ☐ SAME DAY ☐ 24 HR ☐ 48 HR ☐ 72 HR ☒ STANDARD

☐ COELT EDF GLOBAL ID LOG CODE

SPECIAL INSTRUCTIONS: Please analyze for TPHg/d; BTEX/OXY; and RWA parameters (from table 7.1 of the SAM manual).

REQUESTED ANALYSES

LAB USE ONLY	SAMPLE ID	SAMPLING DATE	SAMPLING TIME	MATRIX	NO. OF CONT.	Unpreserved	Preserved	Field Filtered	TPH (g) or GRO	TPH (d) or DRO or (C6C36) or (C6-C44)	TPH ( )	BTEX / MTBE (8260) or ( )	VOCs (8260)	Oxygenates (8260)	En Core / Terra Core Prep (5035)	SVOCs (8270)	Pesticides (8081)	PCBs (8082)	PNAs (8310) or (8270)	T22 Metals (6010B/747X) Manganese only	Cr(VI) [7196 or 7199 or 218.6]	Ferrous Iron (SM 3500) FE2+	Methane	DO; CO2	Nitrogen, ammonia	Hold
1	MW-1	9-3-15	17:15	GW	18	X	X		X	X		X		X						X		X	X	X	X	X
2	MW-3	↓	11:45	↓	↓	X	X		X	X		X		X						X		X	X	X	X	X
3	MW-6		15:50			X	X		X	X		X		X						X		X	X	X	X	X
4	MW-7		13:30			X	X		X	X		X		X						X		X	X	X	X	X
5	MW-18		14:45			X	X		X	X		X		X						X		X	X	X	X	X

Relinquished by: (Signature) Alissa Barrow	Received by: (Signature/Affiliation) EQ	Date: 9-4-15	Time: 14:20
Relinquished by: (Signature)	Received by: (Signature/Affiliation) ECL	Date: 9-4-15	Time: 1800
Relinquished by: (Signature)	Received by: (Signature/Affiliation)	Date:	Time:

DISTRIBUTION: White with final report, Green and Yellow to Client.
Please note that pages 1 and 2 of 2 of our T/Cs are printed on the reverse side of the Green and Yellow copies respectively.

09/01/13 Revision

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WORK ORDER NUMBER: 15-09- 0484 3

SAMPLE RECEIPT CHECKLIST

COOLER 1 OF 2

CLIENT: SCS

DATE: 09 / 04 / 2015

TEMPERATURE: (Criteria: 0.0°C – 6.0°C, not frozen except sediment/tissue)

Thermometer ID: SC5 (CF:-0.2°C); Temperature (w/o CF): 2.6 °C (w/ CF): 2.4 °C; ☑ Blank ☐ Sample

☐ Sample(s) outside temperature criteria (PM/APM contacted by: _____)

☐ Sample(s) outside temperature criteria but received on ice/chilled on same day of sampling

☐ Sample(s) received at ambient temperature; placed on ice for transport by courier

Ambient Temperature: ☐ Air ☐ Filter Checked by: 671

CUSTODY SEAL:

Cooler ☐ Present and Intact ☐ Present but Not Intact ☑ Not Present ☐ N/A Checked by: 671

Sample(s) ☐ Present and Intact ☐ Present but Not Intact ☑ Not Present ☐ N/A Checked by: 1013

SAMPLE CONDITION:	Yes	No	N/A
Chain-of-Custody (COC) document(s) received with samples	☑	☐	☐
COC document(s) received complete	☑	☐	☐
☐ Sampling date ☐ Sampling time ☐ Matrix ☐ Number of containers			
☐ No analysis requested ☐ Not relinquished ☐ No relinquished date ☐ No relinquished time			
Sampler's name indicated on COC	☑	☐	☐
Sample container label(s) consistent with COC	☑	☐	☐
Sample container(s) intact and in good condition	☑ JC 9/4/15	☑	☐
Proper containers for analyses requested	☑	☐	☐
Sufficient volume/mass for analyses requested	☑	☐	☐
Samples received within holding time	☑	☐	☐
Aqueous samples for certain analyses received within 15-minute holding time			
☑ pH ☐ Residual Chlorine ☐ Dissolved Sulfide ☐ Dissolved Oxygen	☐	☑	☐
Proper preservation chemical(s) noted on COC and/or sample container	☑	☐	☐
Unpreserved aqueous sample(s) received for certain analyses			
☐ Volatile Organics ☐ Total Metals ☐ Dissolved Metals			
Container(s) for certain analysis free of headspace	☑ JC	☑	☐
☐ Volatile Organics ☐ Dissolved Gases (RSK-175) ☐ Dissolved Oxygen (SM 4500)			
☐ Carbon Dioxide (SM 4500) ☑ Ferrous Iron (SM 3500) ☐ Hydrogen Sulfide (Hach)			
Tedlar™ bag(s) free of condensation	☐	☐	☑

CONTAINER TYPE: (Trip Blank Lot Number: _____)

Aqueous: ☐ VOA ☑ VOA**h** (10) ☐ VOA**na$_2$** ☐ 100PJ ☐ 100PJ**na$_2$** ☐ 125AGB ☐ 125AGB**h** ☐ 125AGB**p** ☐ 125PB

☐ 125PB**znna** ☑ 250AGB (2) ☐ 250CGB ☑ 250CGB**s** ☐ 250PB ☑ 250PB**n** ☑ 500AGB ☑ 500AGJ ☐ 500AGJ**s**

☑ 500PB ☐ 1AGB ☐ 1AGB**na$_2$** ☑ 1AGB**s** ☐ 1PB ☐ 1PB**na** ☐ _____ ☐ _____ ☐ _____ ☐ _____

Solid: ☐ 4ozCGJ ☐ 8ozCGJ ☐ 16ozCGJ ☐ Sleeve (_____) ☐ EnCores® (_____) ☐ TerraCores® (_____) ☐ _____

Air: ☐ Tedlar™ ☐ Canister ☐ Sorbent Tube ☐ PUF ☐ _____ **Other Matrix** (_____): ☐ _____ ☐ _____

Container: **A** = Amber, **B** = Bottle, **C** = Clear, **E** = Envelope, **G** = Glass, **J** = Jar, **P** = Plastic, and **Z** = Ziploc/Resealable Bag

Preservative: **b** = buffered, **f** = filtered, **h** = HCl, **n** = HNO_3, **na** = NaOH, **na$_2$** = $Na_2S_2O_3$, **p** = H_3PO_4, **s** = H_2SO_4, **u** = ultra-pure, **znna** = $Zn(CH_3CO_2)_2$ + NaOH

Labeled/Checked by: 1013

Reviewed by: 659

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WORK ORDER NUMBER: 15-09- 0484 C

SAMPLE RECEIPT CHECKLIST

COOLER 2 OF 2

CLIENT: SCS

DATE: 09/04/2015

TEMPERATURE: (Criteria: 0.0°C – 6.0°C, not frozen except sediment/tissue)

Thermometer ID: SC5 (CF:-0.2°C); Temperature (w/o CF): 2.9 °C (w/ CF): 2.7 °C; ☑ Blank ☐ Sample

☐ Sample(s) outside temperature criteria (PM/APM contacted by: _____)

☐ Sample(s) outside temperature criteria but received on ice/chilled on same day of sampling

☐ Sample(s) received at ambient temperature; placed on ice for transport by courier

Ambient Temperature: ☐ Air ☐ Filter Checked by: 671

CUSTODY SEAL:

Cooler ☐ Present and Intact ☐ Present but Not Intact ☑ Not Present ☐ N/A Checked by: 671

Sample(s) ☐ Present and Intact ☐ Present but Not Intact ☑ Not Present ☐ N/A Checked by: 1013

SAMPLE CONDITION:	Yes	No	N/A
Chain-of-Custody (COC) document(s) received with samples	☑	☐	☐
COC document(s) received complete	☑	☐	☐
☐ Sampling date ☐ Sampling time ☐ Matrix ☐ Number of containers			
☐ No analysis requested ☐ Not relinquished ☐ No relinquished date ☐ No relinquished time			
Sampler's name indicated on COC	☑	☐	☐
Sample container label(s) consistent with COC	☑	☐	☐
Sample container(s) intact and in good condition	☑	☐ (9/4/15)	☐
Proper containers for analyses requested	☑	☐	☐
Sufficient volume/mass for analyses requested	☑	☐	☐
Samples received within holding time	☑	☐	☐
Aqueous samples for certain analyses received within 15-minute holding time			
☑ pH ☐ Residual Chlorine ☐ Dissolved Sulfide ☐ Dissolved Oxygen	☐	☑	☐
Proper preservation chemical(s) noted on COC and/or sample container	☑	☐	☐
Unpreserved aqueous sample(s) received for certain analyses			
☐ Volatile Organics ☐ Total Metals ☐ Dissolved Metals			
Container(s) for certain analysis free of headspace	☐	☑	☐
☐ Volatile Organics ☐ Dissolved Gases (RSK-175) ☐ Dissolved Oxygen (SM 4500)			
☐ Carbon Dioxide (SM 4500) ☑ Ferrous Iron (SM 3500) ☐ Hydrogen Sulfide (Hach)			
Tedlar™ bag(s) free of condensation	☐	☐	☑

CONTAINER TYPE: (Trip Blank Lot Number: _____)

Aqueous: ☐ VOA ☑ VOA**h** (10) ☐ VOA**na$_2$** ☐ 100PJ ☐ 100PJ**na$_2$** ☐ 125AGB ☐ 125AGB**h** ☐ 125AGB**p** ☐ 125PB

☐ 125PB**znna** ☑ 250AGB (3) ☐ 250CGB ☐ 250CGB**s** ☐ 250PB ☑ 250PB**n** ☑ 500AGB ☑ 500AGJ ☐ 500AGJ**s**

☑ 500PB ☐ 1AGB ☐ 1AGB**na$_2$** ☑ 1AGB**s** ☐ 1PB ☐ 1PB**na** ☐ _____ ☐ _____ ☐ _____ ☐ _____

Solid: ☐ 4ozCGJ ☐ 8ozCGJ ☐ 16ozCGJ ☐ Sleeve (_____) ☐ EnCores® (_____) ☐ TerraCores® (_____) ☐ _____

Air: ☐ Tedlar™ ☐ Canister ☐ Sorbent Tube ☐ PUF ☐ _____ **Other Matrix** (_____): ☐ _____ ☐ _____

Container: **A** = Amber, **B** = Bottle, **C** = Clear, **E** = Envelope, **G** = Glass, **J** = Jar, **P** = Plastic, and **Z** = Ziploc/Resealable Bag

Preservative: **b** = buffered, **f** = filtered, **h** = HCl, **n** = HNO_3, **na** = NaOH, **na$_2$** = $Na_2S_2O_3$, **p** = H_3PO_4, **s** = H_2SO_4, **u** = ultra-pure, **znna** = $Zn(CH_3CO_2)_2$ + NaOH

Labeled/Checked by: 1013

Reviewed by: 671

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WORK ORDER NUMBER: 15-09- 0483

SAMPLE ANOMALY REPORT

DATE: 09 / 04 / 2015

SAMPLES, CONTAINERS, AND LABELS:

- ☐ Sample(s) NOT RECEIVED but listed on COC
- ☐ Sample(s) received but NOT LISTED on COC
- ☐ Holding time expired (list client or ECI sample ID and analysis)
- ☐ Insufficient sample amount for requested analysis (list analysis)
- ☐ Improper container(s) used (list analysis)
- ☐ Improper preservative used (list analysis)
- ☐ No preservative noted on COC or label (list analysis and notify lab)
- ☐ Sample container(s) not labeled
- ☐ Client sample label(s) illegible (list container type and analysis)
- ☐ Client sample label(s) do not match COC (comment)
  - ☐ Project information
  - ☐ Client sample ID
  - ☐ Sampling date and/or time
  - ☐ Number of container(s)
  - ☐ Requested analysis
- ☐ Sample container(s) compromised (comment)
  - ☐ Broken
  - ☐ Water present in sample container
- ☐ Air sample container(s) compromised (comment)
  - ☐ Flat
  - ☐ Very low in volume
  - ☐ Leaking (not transferred; duplicate bag submitted)
  - ☐ Leaking (transferred into ECI Tedlar™ bags*)
  - ☐ Leaking (transferred into client's Tedlar™ bags*)

* Transferred at client's request.

Comments

* (-2) Phosphate and Ferrous Iron bottle cap is switched.

MISCELLANEOUS: (Describe)

* Cap switched.

Comments

HEADSPACE:

(Containers with bubble > 6 mm or ¼ inch for volatile organic or dissolved gas analysis)

ECI Sample ID	ECI Container ID	Total Number**	ECI Sample ID	ECI Container ID	Total Number**

(Containers with bubble for other analysis)

ECI Sample ID	ECI Container ID	Total Number**	Requested Analysis
1 to 5	R	1	Ferrous Iron

Comments: _____

** Record the total number of containers (i.e., vials or bottles) for the affected sample.

Reported by: 10/2

Reviewed by: 6/9

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WORK ORDER NUMBER: 15-12-0967

The difference is service

AIR | SOIL | WATER | MARINE CHEMISTRY

Analytical Report For

Client: SCS Engineers

Client Project Name: Wigington Oil / 01208473.00

Attention: Alissa Barrow
8799 Balboa Avenue, Suite 290
San Diego, CA 92123-1562

Approved for release on 12/21/2015 by:
Don Burley
Project Manager

ResultLink

Email your PM

Eurofins Calscience, Inc. (Calscience) certifies that the test results provided in this report meet all NELAC requirements for parameters for which accreditation is required or available. Any exceptions to NELAC requirements are noted in the case narrative. The original report of subcontracted analyses, if any, is attached to this report. The results in this report are limited to the sample(s) tested and any reproduction thereof must be made in its entirety. The client or recipient of this report is specifically prohibited from making material changes to said report and, to the extent that such changes are made, Calscience is not responsible, legally or otherwise. The client or recipient agrees to indemnify Calscience for any defense to any litigation which may arise.

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Work Order Number: 15-12-0967

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Work Order Narrative

Work Order: 15-12-0967 Page 1 of 1

Condition Upon Receipt:

Samples were received under Chain-of-Custody (COC) on 12/11/15. They were assigned to Work Order 15-12-0967.

Unless otherwise noted on the Sample Receiving forms all samples were received in good condition and within the recommended EPA temperature criteria for the methods noted on the COC. The COC and Sample Receiving Documents are integral elements of the analytical report and are presented at the back of the report.

Holding Times:

All samples were analyzed within prescribed holding times (HT) and/or in accordance with the Calscience Sample Acceptance Policy unless otherwise noted in the analytical report and/or comprehensive case narrative, if required.

Any parameter identified in 40CFR Part 136.3 Table II that is designated as "analyze immediately" with a holding time of <= 15 minutes (40CFR-136.3 Table II, footnote 4), is considered a "field" test and the reported results will be qualified as being received outside of the stated holding time unless received at the laboratory within 15 minutes of the collection time.

Quality Control:

All quality control parameters (QC) were within established control limits except where noted in the QC summary forms or described further within this report.

Subcontractor Information:

Unless otherwise noted below (or on the subcontract form), no samples were subcontracted.

Additional Comments:

Air - Sorbent-extracted air methods (EPA TO-4A, EPA TO-10, EPA TO-13A, EPA TO-17): Analytical results are converted from mass/sample basis to mass/volume basis using client-supplied air volumes.

Solid - Unless otherwise indicated, solid sample data is reported on a wet weight basis, not corrected for % moisture. All QC results are always reported on a wet weight basis.

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Sample Summary

Client:	SCS Engineers	Work Order:	15-12-0967
	8799 Balboa Avenue, Suite 290	Project Name:	Wigington Oil / 01208473.00
	San Diego, CA 92123-1562	PO Number:	
		Date/Time Received:	12/11/15 18:00
		Number of Containers:	90
Attn:	Alissa Barrow		

Sample Identification	Lab Number	Collection Date and Time	Number of Containers	Matrix
MW-1	15-12-0967-1	12/10/15 17:10	18	Aqueous
MW-3	15-12-0967-2	12/10/15 16:00	18	Aqueous
MW-6	15-12-0967-3	12/10/15 13:50	18	Aqueous
MW-7	15-12-0967-4	12/10/15 15:10	18	Aqueous
MW-18	15-12-0967-5	12/10/15 12:45	18	Aqueous

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Analytical Report

SCS Engineers
8799 Balboa Avenue, Suite 290
San Diego, CA 92123-1562

Date Received: 12/11/15
Work Order: 15-12-0967
Preparation: N/A
Method: RSK-175M
Units: ug/L

Project: Wigington Oil / 01208473.00

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW-1	**15-12-0967-1-I**	**12/10/15 17:10**	**Aqueous**	**GC 61**	**N/A**	**12/15/15 14:51**	**151215L03**

Parameter	Result	RL	DF	Qualifiers
Methane	15.0	1.00	1.00	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW-3	**15-12-0967-2-I**	**12/10/15 16:00**	**Aqueous**	**GC 61**	**N/A**	**12/15/15 15:22**	**151215L03**

Parameter	Result	RL	DF	Qualifiers
Methane	6510	20.0	20.0	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW-6	**15-12-0967-3-I**	**12/10/15 13:50**	**Aqueous**	**GC 61**	**N/A**	**12/15/15 15:56**	**151215L03**

Parameter	Result	RL	DF	Qualifiers
Methane	185	1.00	1.00	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW-7	**15-12-0967-4-I**	**12/10/15 15:10**	**Aqueous**	**GC 61**	**N/A**	**12/15/15 16:21**	**151215L03**

Parameter	Result	RL	DF	Qualifiers
Methane	ND	1.00	1.00	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW-18	**15-12-0967-5-I**	**12/10/15 12:45**	**Aqueous**	**GC 61**	**N/A**	**12/15/15 16:52**	**151215L03**

Parameter	Result	RL	DF	Qualifiers
Methane	ND	1.00	1.00	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	**099-12-663-2525**	**N/A**	**Aqueous**	**GC 61**	**N/A**	**12/15/15 10:56**	**151215L03**

Parameter	Result	RL	DF	Qualifiers
Methane	ND	1.00	1.00	

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RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

SCS Engineers
8799 Balboa Avenue, Suite 290
San Diego, CA 92123-1562

Date Received: 12/11/15
Work Order: 15-12-0967
Preparation: N/A
Method: EPA 300.0
Units: mg/L

Project: Wigington Oil / 01208473.00

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW-1	**15-12-0967-1-Q**	**12/10/15 17:10**	**Aqueous**	**IC 7**	**N/A**	**12/11/15 23:49**	**151211L01**

Parameter	Result	RL	DF	Qualifiers
Nitrate (as N)	15	0.20	2.00	
Sulfate	170	2.0	2.00	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW-3	**15-12-0967-2-Q**	**12/10/15 16:00**	**Aqueous**	**IC 7**	**N/A**	**12/11/15 22:43**	**151211L01**

Parameter	Result	RL	DF	Qualifiers
Nitrate (as N)	ND	0.10	1.00	
Sulfate	2.9	1.0	1.00	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW-6	**15-12-0967-3-Q**	**12/10/15 13:50**	**Aqueous**	**IC 7**	**N/A**	**12/12/15 00:05**	**151211L01**

Parameter	Result	RL	DF	Qualifiers
Nitrate (as N)	10	0.50	5.00	
Sulfate	250	5.0	5.00	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW-7	**15-12-0967-4-Q**	**12/10/15 15:10**	**Aqueous**	**IC 7**	**N/A**	**12/12/15 00:21**	**151211L01**

Parameter	Result	RL	DF	Qualifiers
Nitrate (as N)	14	0.50	5.00	
Sulfate	220	5.0	5.00	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW-18	**15-12-0967-5-Q**	**12/10/15 12:45**	**Aqueous**	**IC 7**	**N/A**	**12/12/15 00:38**	**151211L01**

Parameter	Result	RL	DF	Qualifiers
Nitrate (as N)	14	0.50	5.00	
Sulfate	270	5.0	5.00	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	**099-12-906-6315**	**N/A**	**Aqueous**	**IC 7**	**N/A**	**12/11/15 07:07**	**151211L01**

Parameter	Result	RL	DF	Qualifiers
Nitrate (as N)	ND	0.10	1.00	
Sulfate	ND	1.0	1.00	

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RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

SCS Engineers
8799 Balboa Avenue, Suite 290
San Diego, CA 92123-1562

Date Received: 12/11/15
Work Order: 15-12-0967
Preparation: EPA 3510C
Method: EPA 8015B (M)
Units: ug/L

Project: Wigington Oil / 01208473.00

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW-1	**15-12-0967-1-O**	**12/10/15 17:10**	**Aqueous**	**GC 49**	**12/14/15**	**12/15/15 13:54**	**151214B11**

Parameter	Result	RL	DF	Qualifiers
TPH as Diesel	ND	94	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
n-Octacosane	77	68-140	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW-3	**15-12-0967-2-O**	**12/10/15 16:00**	**Aqueous**	**GC 49**	**12/14/15**	**12/15/15 13:17**	**151214B11**

Parameter	Result	RL	DF	Qualifiers
TPH as Diesel	86000	1000	10.0	HD

Surrogate	Rec. (%)	Control Limits	Qualifiers
n-Octacosane	87	68-140	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW-6	**15-12-0967-3-O**	**12/10/15 13:50**	**Aqueous**	**GC 49**	**12/14/15**	**12/15/15 12:59**	**151214B11**

Parameter	Result	RL	DF	Qualifiers
TPH as Diesel	280	94	1.00	HD

Surrogate	Rec. (%)	Control Limits	Qualifiers
n-Octacosane	79	68-140	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW-7	**15-12-0967-4-O**	**12/10/15 15:10**	**Aqueous**	**GC 49**	**12/14/15**	**12/15/15 12:41**	**151214B11**

Parameter	Result	RL	DF	Qualifiers
TPH as Diesel	510	94	1.00	HD

Surrogate	Rec. (%)	Control Limits	Qualifiers
n-Octacosane	77	68-140	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW-18	**15-12-0967-5-O**	**12/10/15 12:45**	**Aqueous**	**GC 49**	**12/14/15**	**12/15/15 12:24**	**151214B11**

Parameter	Result	RL	DF	Qualifiers
TPH as Diesel	ND	94	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
n-Octacosane	78	68-140	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

SCS Engineers
8799 Balboa Avenue, Suite 290
San Diego, CA 92123-1562

Date Received: 12/11/15
Work Order: 15-12-0967
Preparation: EPA 3510C
Method: EPA 8015B (M)
Units: ug/L

Project: Wigington Oil / 01208473.00

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	**099-15-282-338**	**N/A**	**Aqueous**	**GC 49**	**12/14/15**	**12/15/15 11:14**	**151214B11**

Parameter	Result	RL	DF	Qualifiers
TPH as Diesel	ND	100	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
n-Octacosane	118	68-140	

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RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

SCS Engineers
8799 Balboa Avenue, Suite 290
San Diego, CA 92123-1562

Date Received: 12/11/15
Work Order: 15-12-0967
Preparation: EPA 5030C
Method: EPA 8015B (M)
Units: ug/L

Project: Wigington Oil / 01208473.00

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW-1	**15-12-0967-1-G**	**12/10/15 17:10**	**Aqueous**	**GC 57**	**12/18/15**	**12/18/15 21:56**	**151218L047**

Parameter	Result	RL	DF	Qualifiers
TPH as Gasoline	ND	100	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,4-Bromofluorobenzene	86	38-134	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW-3	**15-12-0967-2-G**	**12/10/15 16:00**	**Aqueous**	**GC 57**	**12/18/15**	**12/19/15 10:24**	**151218L047**

Parameter	Result	RL	DF	Qualifiers
TPH as Gasoline	29000	10000	100	HD

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,4-Bromofluorobenzene	77	38-134	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW-6	**15-12-0967-3-G**	**12/10/15 13:50**	**Aqueous**	**GC 57**	**12/18/15**	**12/19/15 09:20**	**151218L047**

Parameter	Result	RL	DF	Qualifiers
TPH as Gasoline	270	100	1.00	HD

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,4-Bromofluorobenzene	62	38-134	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW-7	**15-12-0967-4-G**	**12/10/15 15:10**	**Aqueous**	**GC 57**	**12/18/15**	**12/19/15 09:52**	**151218L047**

Parameter	Result	RL	DF	Qualifiers
TPH as Gasoline	ND	100	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,4-Bromofluorobenzene	65	38-134	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW-18	**15-12-0967-5-G**	**12/10/15 12:45**	**Aqueous**	**GC 57**	**12/18/15**	**12/18/15 17:08**	**151218L047**

Parameter	Result	RL	DF	Qualifiers
TPH as Gasoline	ND	100	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,4-Bromofluorobenzene	66	38-134	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

SCS Engineers
8799 Balboa Avenue, Suite 290
San Diego, CA 92123-1562

Date Received: 12/11/15
Work Order: 15-12-0967
Preparation: EPA 5030C
Method: EPA 8015B (M)
Units: ug/L

Project: Wigington Oil / 01208473.00

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	**099-15-704-1296**	**N/A**	**Aqueous**	**GC 57**	**12/18/15**	**12/18/15 16:36**	**151218L047**

Parameter	Result	RL	DF	Qualifiers
TPH as Gasoline	ND	100	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,4-Bromofluorobenzene	46	38-134	

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RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

SCS Engineers
8799 Balboa Avenue, Suite 290
San Diego, CA 92123-1562

Date Received: 12/11/15
Work Order: 15-12-0967
Preparation: EPA 3010A Total
Method: EPA 6010B
Units: mg/L

Project: Wigington Oil / 01208473.00

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW-1	**15-12-0967-1-N**	**12/10/15 17:10**	**Aqueous**	**ICP 7300**	**12/14/15**	**12/15/15 22:56**	**151214LA7**

Parameter	Result	RL	DF	Qualifiers
Iron	1.46	0.100	1.00	
Manganese	0.565	0.00500	1.00	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW-3	**15-12-0967-2-N**	**12/10/15 16:00**	**Aqueous**	**ICP 7300**	**12/14/15**	**12/15/15 22:58**	**151214LA7**

Parameter	Result	RL	DF	Qualifiers
Iron	289	0.100	1.00	
Manganese	5.27	0.00500	1.00	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW-6	**15-12-0967-3-N**	**12/10/15 13:50**	**Aqueous**	**ICP 7300**	**12/14/15**	**12/15/15 23:02**	**151214LA7**

Parameter	Result	RL	DF	Qualifiers
Iron	6.07	0.100	1.00	
Manganese	0.534	0.00500	1.00	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW-7	**15-12-0967-4-N**	**12/10/15 15:10**	**Aqueous**	**ICP 7300**	**12/14/15**	**12/15/15 23:04**	**151214LA7**

Parameter	Result	RL	DF	Qualifiers
Iron	3.73	0.100	1.00	
Manganese	0.794	0.00500	1.00	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW-18	**15-12-0967-5-N**	**12/10/15 12:45**	**Aqueous**	**ICP 7300**	**12/14/15**	**12/15/15 23:05**	**151214LA7**

Parameter	Result	RL	DF	Qualifiers
Iron	47.4	0.100	1.00	
Manganese	0.799	0.00500	1.00	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	**097-01-003-15556**	**N/A**	**Aqueous**	**ICP 7300**	**12/14/15**	**12/17/15 13:49**	**151214LA7**

Parameter	Result	RL	DF	Qualifiers
Iron	ND	0.100	1.00	
Manganese	ND	0.00500	1.00	

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RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

SCS Engineers
8799 Balboa Avenue, Suite 290
San Diego, CA 92123-1562

Date Received: 12/11/15
Work Order: 15-12-0967
Preparation: N/A
Method: Ferric Iron by Calc
Units: mg/L

Project: Wigington Oil / 01208473.00

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW-1	**15-12-0967-1-N/K**	**12/10/15 17:10**	**Aqueous**	**N/A**	**N/A**	**12/18/15 18:20**	

Parameter	Result	RL	DF	Qualifiers
Ferric Iron	1.46	0.100	1.00	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW-3	**15-12-0967-2-N/K**	**12/10/15 16:00**	**Aqueous**	**N/A**	**N/A**	**12/18/15 18:20**	

Parameter	Result	RL	DF	Qualifiers
Ferric Iron	288	0.100	1.00	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW-6	**15-12-0967-3-N/K**	**12/10/15 13:50**	**Aqueous**	**N/A**	**N/A**	**12/18/15 18:20**	

Parameter	Result	RL	DF	Qualifiers
Ferric Iron	6.07	0.100	1.00	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW-7	**15-12-0967-4-N/K**	**12/10/15 15:10**	**Aqueous**	**N/A**	**N/A**	**12/18/15 18:20**	

Parameter	Result	RL	DF	Qualifiers
Ferric Iron	3.73	0.100	1.00	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW-18	**15-12-0967-5-N/K**	**12/10/15 12:45**	**Aqueous**	**N/A**	**N/A**	**12/18/15 18:20**	

Parameter	Result	RL	DF	Qualifiers
Ferric Iron	47.4	0.100	1.00	

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RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

SCS Engineers
8799 Balboa Avenue, Suite 290
San Diego, CA 92123-1562

Date Received: 12/11/15
Work Order: 15-12-0967
Preparation: EPA 5030C
Method: EPA 8260B
Units: ug/L

Project: Wigington Oil / 01208473.00

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW-1	**15-12-0967-1-A**	**12/10/15 17:10**	**Aqueous**	**GC/MS LL**	**12/14/15**	**12/15/15 05:18**	**151214L047**

Parameter	Result	RL	DF	Qualifiers
Benzene	58	0.50	1.00	
Ethylbenzene	2.3	1.0	1.00	
Toluene	ND	1.0	1.00	
p/m-Xylene	ND	1.0	1.00	
o-Xylene	ND	1.0	1.00	
Methyl-t-Butyl Ether (MTBE)	2.2	1.0	1.00	
Tert-Butyl Alcohol (TBA)	44	10	1.00	
Diisopropyl Ether (DIPE)	ND	2.0	1.00	
Ethyl-t-Butyl Ether (ETBE)	ND	2.0	1.00	
Tert-Amyl-Methyl Ether (TAME)	ND	2.0	1.00	
Ethanol	ND	100	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,4-Bromofluorobenzene	90	80-120	
Dibromofluoromethane	105	78-126	
1,2-Dichloroethane-d4	105	75-135	
Toluene-d8	99	80-120	

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RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

SCS Engineers
8799 Balboa Avenue, Suite 290
San Diego, CA 92123-1562

Date Received: 12/11/15
Work Order: 15-12-0967
Preparation: EPA 5030C
Method: EPA 8260B
Units: ug/L

Project: Wigington Oil / 01208473.00

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW-3	**15-12-0967-2-A**	**12/10/15 16:00**	**Aqueous**	**GC/MS LL**	**12/14/15**	**12/15/15 05:47**	**151214L047**

Parameter	Result	RL	DF	Qualifiers
Benzene	97	0.50	1.00	
Ethylbenzene	14	1.0	1.00	
Toluene	ND	1.0	1.00	
p/m-Xylene	ND	1.0	1.00	
o-Xylene	ND	1.0	1.00	
Methyl-t-Butyl Ether (MTBE)	28	1.0	1.00	
Tert-Butyl Alcohol (TBA)	190	10	1.00	
Diisopropyl Ether (DIPE)	ND	2.0	1.00	
Ethyl-t-Butyl Ether (ETBE)	ND	2.0	1.00	
Tert-Amyl-Methyl Ether (TAME)	ND	2.0	1.00	
Ethanol	ND	100	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,4-Bromofluorobenzene	98	80-120	
Dibromofluoromethane	101	78-126	
1,2-Dichloroethane-d4	102	75-135	
Toluene-d8	99	80-120	

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RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

SCS Engineers
8799 Balboa Avenue, Suite 290
San Diego, CA 92123-1562

Date Received: 12/11/15
Work Order: 15-12-0967
Preparation: EPA 5030C
Method: EPA 8260B
Units: ug/L

Project: Wigington Oil / 01208473.00

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW-6	**15-12-0967-3-A**	**12/10/15 13:50**	**Aqueous**	**GC/MS LL**	**12/14/15**	**12/15/15 06:17**	**151214L047**

Parameter	Result	RL	DF	Qualifiers
Benzene	19	0.50	1.00	
Ethylbenzene	17	1.0	1.00	
Toluene	ND	1.0	1.00	
p/m-Xylene	1.1	1.0	1.00	
o-Xylene	ND	1.0	1.00	
Methyl-t-Butyl Ether (MTBE)	5.4	1.0	1.00	
Tert-Butyl Alcohol (TBA)	ND	10	1.00	
Diisopropyl Ether (DIPE)	ND	2.0	1.00	
Ethyl-t-Butyl Ether (ETBE)	ND	2.0	1.00	
Tert-Amyl-Methyl Ether (TAME)	ND	2.0	1.00	
Ethanol	ND	100	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,4-Bromofluorobenzene	96	80-120	
Dibromofluoromethane	98	78-126	
1,2-Dichloroethane-d4	98	75-135	
Toluene-d8	97	80-120	

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RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

SCS Engineers
8799 Balboa Avenue, Suite 290
San Diego, CA 92123-1562

Date Received: 12/11/15
Work Order: 15-12-0967
Preparation: EPA 5030C
Method: EPA 8260B
Units: ug/L

Project: Wigington Oil / 01208473.00

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW-7	**15-12-0967-4-A**	**12/10/15 15:10**	**Aqueous**	**GC/MS LL**	**12/14/15**	**12/15/15 06:46**	**151214L047**

Parameter	Result	RL	DF	Qualifiers
Benzene	ND	0.50	1.00	
Ethylbenzene	ND	1.0	1.00	
Toluene	ND	1.0	1.00	
p/m-Xylene	ND	1.0	1.00	
o-Xylene	ND	1.0	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	1.0	1.00	
Tert-Butyl Alcohol (TBA)	ND	10	1.00	
Diisopropyl Ether (DIPE)	ND	2.0	1.00	
Ethyl-t-Butyl Ether (ETBE)	ND	2.0	1.00	
Tert-Amyl-Methyl Ether (TAME)	ND	2.0	1.00	
Ethanol	ND	100	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,4-Bromofluorobenzene	93	80-120	
Dibromofluoromethane	101	78-126	
1,2-Dichloroethane-d4	102	75-135	
Toluene-d8	98	80-120	

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RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

SCS Engineers
8799 Balboa Avenue, Suite 290
San Diego, CA 92123-1562

Date Received: 12/11/15
Work Order: 15-12-0967
Preparation: EPA 5030C
Method: EPA 8260B
Units: ug/L

Project: Wigington Oil / 01208473.00

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW-18	**15-12-0967-5-A**	**12/10/15 12:45**	**Aqueous**	**GC/MS LL**	**12/14/15**	**12/15/15 07:16**	**151214L047**

Parameter	Result	RL	DF	Qualifiers
Benzene	ND	0.50	1.00	
Ethylbenzene	ND	1.0	1.00	
Toluene	ND	1.0	1.00	
p/m-Xylene	ND	1.0	1.00	
o-Xylene	ND	1.0	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	1.0	1.00	
Tert-Butyl Alcohol (TBA)	ND	10	1.00	
Diisopropyl Ether (DIPE)	ND	2.0	1.00	
Ethyl-t-Butyl Ether (ETBE)	ND	2.0	1.00	
Tert-Amyl-Methyl Ether (TAME)	ND	2.0	1.00	
Ethanol	ND	100	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,4-Bromofluorobenzene	94	80-120	
Dibromofluoromethane	102	78-126	
1,2-Dichloroethane-d4	101	75-135	
Toluene-d8	99	80-120	

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RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

SCS Engineers
8799 Balboa Avenue, Suite 290
San Diego, CA 92123-1562

Date Received: 12/11/15
Work Order: 15-12-0967
Preparation: EPA 5030C
Method: EPA 8260B
Units: ug/L

Project: Wigington Oil / 01208473.00

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	**099-14-001-19066**	**N/A**	**Aqueous**	**GC/MS LL**	**12/14/15**	**12/15/15 03:50**	**151214L047**

Parameter	Result	RL	DF	Qualifiers
Benzene	ND	0.50	1.00	
Ethylbenzene	ND	1.0	1.00	
Toluene	ND	1.0	1.00	
p/m-Xylene	ND	1.0	1.00	
o-Xylene	ND	1.0	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	1.0	1.00	
Tert-Butyl Alcohol (TBA)	ND	10	1.00	
Diisopropyl Ether (DIPE)	ND	2.0	1.00	
Ethyl-t-Butyl Ether (ETBE)	ND	2.0	1.00	
Tert-Amyl-Methyl Ether (TAME)	ND	2.0	1.00	
Ethanol	ND	100	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,4-Bromofluorobenzene	92	80-120	
Dibromofluoromethane	103	78-126	
1,2-Dichloroethane-d4	105	75-135	
Toluene-d8	98	80-120	

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RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

SCS Engineers
8799 Balboa Avenue, Suite 290
San Diego, CA 92123-1562
Project: Wigington Oil / 01208473.00

Date Received: 12/11/15
Work Order: 15-12-0967

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix
MW-1	**15-12-0967-1**	**12/10/15 17:10**	**Aqueous**

Parameter	Results	RL	DF	Qualifiers	Units	Date Prepared	Date Analyzed	Method
Redox Potential	-170	-800	1.00	BV,BU	mV	N/A	12/11/15	ASTM D 1498
Iron (II)	ND	0.100	1.00	BV,BU	mg/L	12/11/15	12/11/15	SM 3500-FeB
pH	7.22	0.01	1.00	BV,BU	pH units	N/A	12/11/15	SM 4500 H+ B
Total Phosphate	0.87	0.31	1.00		mg/L	12/17/15	12/17/15	SM 4500 P B/E
Ammonia (as N)	ND	0.10	1.00		mg/L	12/16/15	12/16/15	SM 4500-NH3 B/C
Dissolved Oxygen	2.32	0.0100	1.00	BV,BU	mg/L	N/A	12/11/15	SM 4500-O G
Carbon Dioxide	88	1.0	1.00	BV,BU	mg/L	N/A	12/12/15	SM4500-CO2D

MW-3	**15-12-0967-2**	**12/10/15 16:00**	**Aqueous**

Parameter	Results	RL	DF	Qualifiers	Units	Date Prepared	Date Analyzed	Method
Redox Potential	-74	-800	1.00	BV,BU	mV	N/A	12/11/15	ASTM D 1498
Iron (II)	1.11	0.100	1.00	BV,BU	mg/L	12/11/15	12/11/15	SM 3500-FeB
pH	6.81	0.01	1.00	BV,BU	pH units	N/A	12/11/15	SM 4500 H+ B
Total Phosphate	1.9	0.31	1.00		mg/L	12/17/15	12/17/15	SM 4500 P B/E
Ammonia (as N)	0.67	0.10	1.00		mg/L	12/16/15	12/16/15	SM 4500-NH3 B/C
Dissolved Oxygen	1.82	0.0100	1.00	BV,BU	mg/L	N/A	12/11/15	SM 4500-O G
Carbon Dioxide	1600	10	1.00	BV,BU	mg/L	N/A	12/12/15	SM4500-CO2D

MW-6	**15-12-0967-3**	**12/10/15 13:50**	**Aqueous**

Parameter	Results	RL	DF	Qualifiers	Units	Date Prepared	Date Analyzed	Method
Redox Potential	10	-800	1.00	BV,BU	mV	N/A	12/11/15	ASTM D 1498
Iron (II)	ND	0.100	1.00	BV,BU	mg/L	12/11/15	12/11/15	SM 3500-FeB
pH	6.95	0.01	1.00	BV,BU	pH units	N/A	12/11/15	SM 4500 H+ B
Total Phosphate	0.46	0.31	1.00		mg/L	12/17/15	12/17/15	SM 4500 P B/E
Ammonia (as N)	ND	0.10	1.00		mg/L	12/16/15	12/16/15	SM 4500-NH3 B/C
Dissolved Oxygen	2.79	0.0100	1.00	BV,BU	mg/L	N/A	12/11/15	SM 4500-O G
Carbon Dioxide	520	5.0	1.00	BV,BU	mg/L	N/A	12/12/15	SM4500-CO2D

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RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

SCS Engineers
8799 Balboa Avenue, Suite 290
San Diego, CA 92123-1562
Project: Wigington Oil / 01208473.00

Date Received: 12/11/15
Work Order: 15-12-0967

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix
MW-7	**15-12-0967-4**	**12/10/15 15:10**	**Aqueous**

Parameter	Results	RL	DF	Qualifiers	Units	Date Prepared	Date Analyzed	Method
Redox Potential	110	-800	1.00	BV,BU	mV	N/A	12/11/15	ASTM D 1498
Iron (II)	ND	0.100	1.00	BV,BU	mg/L	12/11/15	12/11/15	SM 3500-FeB
pH	6.91	0.01	1.00	BV,BU	pH units	N/A	12/11/15	SM 4500 H+ B
Total Phosphate	0.62	0.31	1.00		mg/L	12/17/15	12/17/15	SM 4500 P B/E
Ammonia (as N)	0.11	0.10	1.00		mg/L	12/16/15	12/16/15	SM 4500-NH3 B/C
Dissolved Oxygen	3.21	0.0100	1.00	BV,BU	mg/L	N/A	12/11/15	SM 4500-O G
Carbon Dioxide	400	5.0	1.00	BV,BU	mg/L	N/A	12/12/15	SM4500-CO2D

MW-18	**15-12-0967-5**	**12/10/15 12:45**	**Aqueous**

Parameter	Results	RL	DF	Qualifiers	Units	Date Prepared	Date Analyzed	Method
Redox Potential	120	-800	1.00	BV,BU	mV	N/A	12/11/15	ASTM D 1498
Iron (II)	ND	0.100	1.00	BV,BU	mg/L	12/11/15	12/11/15	SM 3500-FeB
pH	6.75	0.01	1.00	BV,BU	pH units	N/A	12/11/15	SM 4500 H+ B
Total Phosphate	1.4	0.31	1.00		mg/L	12/17/15	12/17/15	SM 4500 P B/E
Ammonia (as N)	ND	0.10	1.00		mg/L	12/16/15	12/16/15	SM 4500-NH3 B/C
Dissolved Oxygen	4.32	0.0100	1.00	BV,BU	mg/L	N/A	12/11/15	SM 4500-O G
Carbon Dioxide	140	5.0	1.00	BV,BU	mg/L	N/A	12/12/15	SM4500-CO2D

Method Blank						**N/A**		**Aqueous**
Parameter	Results	RL	DF	Qualifiers	Units	Date Prepared	Date Analyzed	Method
Iron (II)	ND	0.100	1.00		mg/L	12/11/15	12/11/15	SM 3500-FeB
Total Phosphate	ND	0.31	1.00		mg/L	12/17/15	12/17/15	SM 4500 P B/E
Ammonia (as N)	ND	0.10	1.00		mg/L	12/16/15	12/16/15	SM 4500-NH3 B/C

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RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Quality Control - Spike/Spike Duplicate

SCS Engineers
8799 Balboa Avenue, Suite 290
San Diego, CA 92123-1562

Project: Wigington Oil / 01208473.00

Date Received: 12/11/15
Work Order: 15-12-0967
Preparation: N/A
Method: EPA 300.0

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
15-12-0769-1	**Sample**	**Aqueous**	**IC 7**	**N/A**	**12/11/15 09:36**	**151211S01**
15-12-0769-1	**Matrix Spike**	**Aqueous**	**IC 7**	**N/A**	**12/11/15 11:47**	**151211S01**
15-12-0769-1	**Matrix Spike Duplicate**	**Aqueous**	**IC 7**	**N/A**	**12/11/15 12:04**	**151211S01**

Parameter	Sample Conc.	Spike Added	MS Conc.	MS %Rec.	MSD Conc.	MSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
Nitrate (as N)	ND	5.000	4.854	97	5.020	100	80-120	3	0-20	
Sulfate	4.394	50.00	53.26	98	55.10	101	80-120	3	0-20	

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RPD: Relative Percent Difference. CL: Control Limits

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Quality Control - Spike/Spike Duplicate

SCS Engineers
8799 Balboa Avenue, Suite 290
San Diego, CA 92123-1562

Project: Wigington Oil / 01208473.00

Date Received: 12/11/15
Work Order: 15-12-0967
Preparation: N/A
Method: SM 3500-FeB
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Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
MW-18	**Sample**	**Aqueous**	**UV 8**	**12/11/15**	**12/11/15 20:58**	**F1211FES1**
MW-18	**Matrix Spike**	**Aqueous**	**UV 8**	**12/11/15**	**12/11/15 20:58**	**F1211FES1**
MW-18	**Matrix Spike Duplicate**	**Aqueous**	**UV 8**	**12/11/15**	**12/11/15 20:58**	**F1211FES1**

Parameter	Sample Conc.	Spike Added	MS Conc.	MS %Rec.	MSD Conc.	MSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
Iron (II)	ND	1.000	0.9800	98	0.9600	96	70-130	2	0-25	

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RPD: Relative Percent Difference. CL: Control Limits

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Quality Control - Spike/Spike Duplicate

SCS Engineers		Date Received:	12/11/15
8799 Balboa Avenue, Suite 290		Work Order:	15-12-0967
San Diego, CA 92123-1562		Preparation:	N/A
		Method:	SM 4500 P B/E
Project: Wigington Oil / 01208473.00			Page 3 of 5

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
MW-1	**Sample**	**Aqueous**	**UV 7**	**12/17/15**	**12/17/15 17:53**	**F1217PO4S1**
MW-1	**Matrix Spike**	**Aqueous**	**UV 7**	**12/17/15**	**12/17/15 17:53**	**F1217PO4S1**
MW-1	**Matrix Spike Duplicate**	**Aqueous**	**UV 7**	**12/17/15**	**12/17/15 17:53**	**F1217PO4S1**

Parameter	Sample Conc.	Spike Added	MS Conc.	MS %Rec.	MSD Conc.	MSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
Total Phosphate	0.8730	1.220	1.752	72	1.736	71	70-130	1	0-25	

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RPD: Relative Percent Difference. CL: Control Limits

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Quality Control - Spike/Spike Duplicate

SCS Engineers		Date Received:	12/11/15
8799 Balboa Avenue, Suite 290		Work Order:	15-12-0967
San Diego, CA 92123-1562		Preparation:	EPA 5030C
		Method:	EPA 8015B (M)
Project: Wigington Oil / 01208473.00			Page 4 of 5

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
MW-18	**Sample**	**Aqueous**	**GC 57**	**12/18/15**	**12/18/15 17:08**	**151218S029**
MW-18	**Matrix Spike**	**Aqueous**	**GC 57**	**12/18/15**	**12/18/15 17:40**	**151218S029**
MW-18	**Matrix Spike Duplicate**	**Aqueous**	**GC 57**	**12/18/15**	**12/18/15 18:13**	**151218S029**

Parameter	Sample Conc.	Spike Added	MS Conc.	MS %Rec.	MSD Conc.	MSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
TPH as Gasoline	ND	2000	2063	103	1978	99	68-122	4	0-18	

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RPD: Relative Percent Difference. CL: Control Limits

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Quality Control - Spike/Spike Duplicate

SCS Engineers	Date Received:	12/11/15
8799 Balboa Avenue, Suite 290	Work Order:	15-12-0967
San Diego, CA 92123-1562	Preparation:	EPA 3005A Filt.
	Method:	EPA 6010B
Project: Wigington Oil / 01208473.00		Page 5 of 5

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
15-12-0785-1	**Sample**	**Aqueous**	**ICP 7300**	**12/14/15**	**12/17/15 14:47**	**151214SA7**
15-12-0785-1	**Matrix Spike**	**Aqueous**	**ICP 7300**	**12/14/15**	**12/17/15 14:48**	**151214SA7**
15-12-0785-1	**Matrix Spike Duplicate**	**Aqueous**	**ICP 7300**	**12/14/15**	**12/17/15 14:49**	**151214SA7**

Parameter	Sample Conc.	Spike Added	MS Conc.	MS %Rec.	MSD Conc.	MSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
Iron	0.1572	0.5000	0.6707	103	0.6991	108	65-149	4	0-21	
Manganese	0.02141	0.5000	0.5297	102	0.5376	103	86-116	1	0-7	

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RPD: Relative Percent Difference. CL: Control Limits

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Quality Control - Sample Duplicate

SCS Engineers		Date Received:	12/11/15
8799 Balboa Avenue, Suite 290		Work Order:	15-12-0967
San Diego, CA 92123-1562		Preparation:	N/A
		Method:	ASTM D 1498
Project: Wigington Oil / 01208473.00			Page 1 of 4

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	Duplicate Batch Number
MW-7	**Sample**	**Aqueous**	**ISE 1**	**N/A**	**12/11/15 21:20**	**F1211RDD1**
MW-7	**Sample Duplicate**	**Aqueous**	**ISE 1**	**N/A**	**12/11/15 21:20**	**F1211RDD1**

Parameter	Sample Conc.	DUP Conc.	RPD	RPD CL	Qualifiers
Redox Potential	108.5	105.7	3	0-20	

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RPD: Relative Percent Difference. CL: Control Limits

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Quality Control - Sample Duplicate

SCS Engineers		Date Received:	12/11/15
8799 Balboa Avenue, Suite 290		Work Order:	15-12-0967
San Diego, CA 92123-1562		Preparation:	N/A
		Method:	SM 4500 H+ B
Project: Wigington Oil / 01208473.00			Page 2 of 4

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	Duplicate Batch Number
15-12-0877-5	**Sample**	**Aqueous**	**PH 1**	**N/A**	**12/11/15 22:42**	**F1211PHD1**
15-12-0877-5	**Sample Duplicate**	**Aqueous**	**PH 1**	**N/A**	**12/11/15 22:42**	**F1211PHD1**

Parameter	Sample Conc.	DUP Conc.	RPD	RPD CL	Qualifiers
pH	6.720	6.720	0	0-25	

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RPD: Relative Percent Difference. CL: Control Limits

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Quality Control - Sample Duplicate

SCS Engineers		Date Received:	12/11/15
8799 Balboa Avenue, Suite 290		Work Order:	15-12-0967
San Diego, CA 92123-1562		Preparation:	N/A
		Method:	SM 4500-O G
Project: Wigington Oil / 01208473.00			Page 3 of 4

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	Duplicate Batch Number
15-12-0904-1	**Sample**	**Aqueous**	**BOD 1**	**N/A**	**12/11/15 19:10**	**F1211DOD1**
15-12-0904-1	**Sample Duplicate**	**Aqueous**	**BOD 1**	**N/A**	**12/11/15 19:10**	**F1211DOD1**

Parameter	Sample Conc.	DUP Conc.	RPD	RPD CL	Qualifiers
Dissolved Oxygen	8.350	8.180	2	0-25	

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RPD: Relative Percent Difference. CL: Control Limits

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Quality Control - Sample Duplicate

SCS Engineers		Date Received:	12/11/15
8799 Balboa Avenue, Suite 290		Work Order:	15-12-0967
San Diego, CA 92123-1562		Preparation:	N/A
		Method:	SM4500-CO2D
Project: Wigington Oil / 01208473.00			Page 4 of 4

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	Duplicate Batch Number
MW-1	**Sample**	**Aqueous**	**BUR03**	**N/A**	**12/12/15 12:38**	**F1212CO2B1**
MW-1	**Sample Duplicate**	**Aqueous**	**BUR03**	**N/A**	**12/12/15 12:38**	**F1212CO2B1**

Parameter	Sample Conc.	DUP Conc.	RPD	RPD CL	Qualifiers
Carbon Dioxide	87.66	84.12	4	0-25	

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RPD: Relative Percent Difference. CL: Control Limits

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Quality Control - LCS/LCSD

SCS Engineers
8799 Balboa Avenue, Suite 290
San Diego, CA 92123-1562

Project: Wigington Oil / 01208473.00

Date Received: 12/11/15
Work Order: 15-12-0967
Preparation: N/A
Method: RSK-175M

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-12-663-2525	**LCS**	**Aqueous**	**GC 61**	**N/A**	**12/15/15 10:10**	**151215L03**
099-12-663-2525	**LCSD**	**Aqueous**	**GC 61**	**N/A**	**12/15/15 10:33**	**151215L03**

Parameter	Spike Added	LCS Conc.	LCS %Rec.	LCSD Conc.	LCSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
Methane	102.0	95.83	94	95.85	94	80-120	0	0-20	

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RPD: Relative Percent Difference. CL: Control Limits

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Quality Control - LCS

SCS Engineers		Date Received:	12/11/15
8799 Balboa Avenue, Suite 290		Work Order:	15-12-0967
San Diego, CA 92123-1562		Preparation:	N/A
		Method:	EPA 300.0
Project: Wigington Oil / 01208473.00			Page 2 of 9

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS Batch Number
099-12-906-6315	**LCS**	**Aqueous**	**IC 7**	**N/A**	**12/11/15 07:23**	**151211L01**

Parameter	Spike Added	Conc. Recovered	LCS %Rec.	%Rec. CL	Qualifiers
Nitrate (as N)	5.000	4.850	97	90-110	
Sulfate	50.00	48.75	97	90-110	

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RPD: Relative Percent Difference. CL: Control Limits

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Quality Control - LCS/LCSD

SCS Engineers
8799 Balboa Avenue, Suite 290
San Diego, CA 92123-1562

Project: Wigington Oil / 01208473.00

Date Received: 12/11/15
Work Order: 15-12-0967
Preparation: N/A
Method: SM 3500-FeB
Page 3 of 9

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-05-111-5241	**LCS**	**Aqueous**	**UV 8**	**12/11/15**	**12/11/15 20:58**	**F1211FEL1**
099-05-111-5241	**LCSD**	**Aqueous**	**UV 8**	**12/11/15**	**12/11/15 20:58**	**F1211FEL1**

Parameter	Spike Added	LCS Conc.	LCS %Rec.	LCSD Conc.	LCSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
Iron (II)	1.000	0.9800	98	0.9500	95	80-120	3	0-20	

RPD: Relative Percent Difference. CL: Control Limits

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Quality Control - LCS/LCSD

SCS Engineers
8799 Balboa Avenue, Suite 290
San Diego, CA 92123-1562

Project: Wigington Oil / 01208473.00

Date Received: 12/11/15
Work Order: 15-12-0967
Preparation: N/A
Method: SM 4500 P B/E
Page 4 of 9

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-14-276-183	**LCS**	**Aqueous**	**UV 7**	**12/17/15**	**12/17/15 17:53**	**F1217PO4L1**
099-14-276-183	**LCSD**	**Aqueous**	**UV 7**	**12/17/15**	**12/17/15 17:53**	**F1217PO4L1**

Parameter	Spike Added	LCS Conc.	LCS %Rec.	LCSD Conc.	LCSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
Total Phosphate	1.220	1.307	107	1.238	101	80-120	5	0-20	

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RPD: Relative Percent Difference. CL: Control Limits

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Quality Control - LCS/LCSD

SCS Engineers
8799 Balboa Avenue, Suite 290
San Diego, CA 92123-1562

Project: Wigington Oil / 01208473.00

Date Received: 12/11/15
Work Order: 15-12-0967
Preparation: N/A
Method: SM 4500-NH3 B/C

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-12-814-2255	**LCS**	**Aqueous**	**BUR05**	**12/16/15**	**12/16/15 17:47**	**F1216NH3L1**
099-12-814-2255	**LCSD**	**Aqueous**	**BUR05**	**12/16/15**	**12/16/15 17:47**	**F1216NH3L1**

Parameter	Spike Added	LCS Conc.	LCS %Rec.	LCSD Conc.	LCSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
Ammonia (as N)	5.000	4.536	91	4.592	92	80-120	1	0-20	

RPD: Relative Percent Difference. CL: Control Limits

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Quality Control - LCS/LCSD

SCS Engineers
8799 Balboa Avenue, Suite 290
San Diego, CA 92123-1562

Project: Wigington Oil / 01208473.00

Date Received: 12/11/15
Work Order: 15-12-0967
Preparation: EPA 3510C
Method: EPA 8015B (M)
Page 6 of 9

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-15-282-338	**LCS**	**Aqueous**	**GC 49**	**12/14/15**	**12/15/15 11:31**	**151214B11**
099-15-282-338	**LCSD**	**Aqueous**	**GC 49**	**12/14/15**	**12/15/15 11:49**	**151214B11**

Parameter	Spike Added	LCS Conc.	LCS %Rec.	LCSD Conc.	LCSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
TPH as Diesel	4000	4075	102	3827	96	75-117	6	0-13	

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RPD: Relative Percent Difference. CL: Control Limits

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Quality Control - LCS

SCS Engineers		Date Received:	12/11/15
8799 Balboa Avenue, Suite 290		Work Order:	15-12-0967
San Diego, CA 92123-1562		Preparation:	EPA 5030C
		Method:	EPA 8015B (M)
Project: Wigington Oil / 01208473.00			Page 7 of 9

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS Batch Number
099-15-704-1296	**LCS**	**Aqueous**	**GC 57**	**12/18/15**	**12/18/15 16:05**	**151218L047**

Parameter	Spike Added	Conc. Recovered	LCS %Rec.	%Rec. CL	Qualifiers
TPH as Gasoline	2000	2046	102	78-120	

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RPD: Relative Percent Difference. CL: Control Limits

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Quality Control - LCS

SCS Engineers		Date Received:	12/11/15
8799 Balboa Avenue, Suite 290		Work Order:	15-12-0967
San Diego, CA 92123-1562		Preparation:	EPA 3010A Total
		Method:	EPA 6010B
Project: Wigington Oil / 01208473.00			Page 8 of 9

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS Batch Number
097-01-003-15556	**LCS**	**Aqueous**	**ICP 7300**	**12/14/15**	**12/17/15 17:48**	**151214LA7**

Parameter	Spike Added	Conc. Recovered	LCS %Rec.	%Rec. CL	Qualifiers
Iron	0.5000	0.4974	99	80-120	
Manganese	0.5000	0.4990	100	80-120	

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RPD: Relative Percent Difference. CL: Control Limits

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Quality Control - LCS/LCSD

SCS Engineers
8799 Balboa Avenue, Suite 290
San Diego, CA 92123-1562

Date Received: 12/11/15
Work Order: 15-12-0967
Preparation: EPA 5030C
Method: EPA 8260B

Project: Wigington Oil / 01208473.00

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-14-001-19066	**LCS**	**Aqueous**	**GC/MS LL**	**12/14/15**	**12/15/15 01:51**	**151214L047**
099-14-001-19066	**LCSD**	**Aqueous**	**GC/MS LL**	**12/14/15**	**12/15/15 02:21**	**151214L047**

Parameter	Spike Added	LCS Conc.	LCS %Rec.	LCSD Conc.	LCSD %Rec.	%Rec. CL	ME CL	RPD	RPD CL	Qualifiers
Benzene	50.00	50.78	102	51.40	103	80-120	73-127	1	0-20	
Ethylbenzene	50.00	54.47	109	56.37	113	80-123	73-130	3	0-20	
Toluene	50.00	53.31	107	54.21	108	80-120	73-127	2	0-20	
p/m-Xylene	100.0	105.2	105	108.0	108	75-123	67-131	3	0-20	
o-Xylene	50.00	53.38	107	54.58	109	74-122	66-130	2	0-20	
Methyl-t-Butyl Ether (MTBE)	50.00	51.86	104	49.44	99	69-129	59-139	5	0-20	
Tert-Butyl Alcohol (TBA)	250.0	260.0	104	259.8	104	69-129	59-139	0	0-20	
Diisopropyl Ether (DIPE)	50.00	51.31	103	52.78	106	68-128	58-138	3	0-20	
Ethyl-t-Butyl Ether (ETBE)	50.00	53.36	107	54.48	109	63-135	51-147	2	0-20	
Tert-Amyl-Methyl Ether (TAME)	50.00	55.08	110	56.39	113	67-133	56-144	2	0-20	
Ethanol	500.0	482.5	96	476.4	95	42-168	21-189	1	0-20	

Total number of LCS compounds: 11
Total number of ME compounds: 0
Total number of ME compounds allowed: 1
LCS ME CL validation result: Pass

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RPD: Relative Percent Difference. CL: Control Limits

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Sample Analysis Summary Report

Work Order: 15-12-0967 Page 1 of 1

Method	Extraction	Chemist ID	Instrument	Analytical Location
ASTM D 1498	N/A	990	ISE 1	1
EPA 300.0	N/A	1027	IC 7	1
EPA 6010B	EPA 3010A Total	935	ICP 7300	1
EPA 8015B (M)	EPA 3510C	974	GC 49	1
EPA 8015B (M)	EPA 5030C	933	GC 57	2
EPA 8260B	EPA 5030C	867	GC/MS LL	2
Ferric Iron by Calc	N/A	1012	N/A	1
RSK-175M	N/A	929	GC 61	2
RSK-175M	N/A	1008	GC 61	2
SM 3500-FeB	N/A	990	UV 8	1
SM 4500 H+ B	N/A	977	PH 1	1
SM 4500 P B/E	N/A	977	UV 7	1
SM 4500-NH3 B/C	N/A	685	BUR05	1
SM 4500-O G	N/A	691	BOD 1	1
SM4500-CO2D	N/A	977	BUR03	1

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Glossary of Terms and Qualifiers

Work Order: 15-12-0967 Page 1 of 1

Qualifiers	Definition
*	See applicable analysis comment.
<	Less than the indicated value.
>	Greater than the indicated value.
1	Surrogate compound recovery was out of control due to a required sample dilution. Therefore, the sample data was reported without further clarification.
2	Surrogate compound recovery was out of control due to matrix interference. The associated method blank surrogate spike compound was in control and, therefore, the sample data was reported without further clarification.
3	Recovery of the Matrix Spike (MS) or Matrix Spike Duplicate (MSD) compound was out of control due to suspected matrix interference. The associated LCS recovery was in control.
4	The MS/MSD RPD was out of control due to suspected matrix interference.
5	The PDS/PDSD or PES/PESD associated with this batch of samples was out of control due to suspected matrix interference.
6	Surrogate recovery below the acceptance limit.
7	Surrogate recovery above the acceptance limit.
B	Analyte was present in the associated method blank.
BU	Sample analyzed after holding time expired.
BV	Sample received after holding time expired.
CI	See case narrative.
E	Concentration exceeds the calibration range.
ET	Sample was extracted past end of recommended max. holding time.
HD	The chromatographic pattern was inconsistent with the profile of the reference fuel standard.
HDH	The sample chromatographic pattern for TPH matches the chromatographic pattern of the specified standard but heavier hydrocarbons were also present (or detected).
HDL	The sample chromatographic pattern for TPH matches the chromatographic pattern of the specified standard but lighter hydrocarbons were also present (or detected).
J	Analyte was detected at a concentration below the reporting limit and above the laboratory method detection limit. Reported value is estimated.
JA	Analyte positively identified but quantitation is an estimate.
ME	LCS Recovery Percentage is within Marginal Exceedance (ME) Control Limit range (+/- 4 SD from the mean).
ND	Parameter not detected at the indicated reporting limit.
Q	Spike recovery and RPD control limits do not apply resulting from the parameter concentration in the sample exceeding the spike concentration by a factor of four or greater.
SG	The sample extract was subjected to Silica Gel treatment prior to analysis.
X	% Recovery and/or RPD out-of-range.
Z	Analyte presence was not confirmed by second column or GC/MS analysis.
	Solid - Unless otherwise indicated, solid sample data is reported on a wet weight basis, not corrected for % moisture. All QC results are reported on a wet weight basis.
	Any parameter identified in 40CFR Part 136.3 Table II that is designated as "analyze immediately" with a holding time of <= 15 minutes (40CFR-136.3 Table II, footnote 4), is considered a "field" test and the reported results will be qualified as being received outside of the stated holding time unless received at the laboratory within 15 minutes of the collection time.
	A calculated total result (Example: Total Pesticides) is the summation of each component concentration and/or, if "J" flags are reported, estimated concentration. Component concentrations showing not detected (ND) are summed into the calculated total result as zero concentrations.

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Calscience Environmental Laboratories, Inc.

CHAIN OF CUSTODY RECORD

SoCal Laboratory
7440 Lincoln Way
Garden Grove, CA 92841-1427
(714) 895-5494

NorCal Service Center
5063 Commercial Circle, Suite H
Concord, CA 94520-8577
(925) 689-9022

WO # / LAB USE ONLY: 15-12-0967

Date 12-10-15

Page 1 of 1

LABORATORY CLIENT: SCS Engineers

ADDRESS: 8799 Balboa Ave, ste 290

CITY: San Diego STATE: CA ZIP: 92123

TEL: 858-571-5500 E-MAIL: abarrow@scsengineers.com

CLIENT PROJECT NAME / NUMBER: Wigington 0.1 / 01208473.00

P.O. NO.: 01208473.00

PROJECT CONTACT: Missa Barrow

SAMPLER(S): (PRINT) A. Barrow

TURNAROUND TIME: ☐ SAME DAY ☐ 24 HR ☐ 48 HR ☐ 72 HR ☒ STANDARD

☐ COELT EDF

GLOBAL ID: T0607303173

LOG CODE:

SPECIAL INSTRUCTIONS:
Please analyze liquid phase for MW-3.
Please analyze all samples for RNA parameters only ~~only~~

REQUESTED ANALYSES

LAB USE ONLY	SAMPLE ID	SAMPLING DATE	SAMPLING TIME	MATRIX	NO. OF CONT.	Unpreserved	Preserved	Field Filtered	TPH (g) or GRO	TPH (d) or DRO or (C6C36) or (C6-C44)	TPH ( )	BTEX / MTBE (8260) or ( )	VOCs (8260)	Oxygenates (8260)	En Core / Terra Core Prep (5035)	SVOCs (8270)	Pesticides (8081)	PCBs (8082)	PNAs (8310) or (8270)	T22 Metals (6010B/747X) Iron & Manganese only	Cr(VI) [7196 or 7199 or 218.6]	Ferrous Iron (SM3500)	Nitrate & Sulfate (300.0)	Ammonia, Phosphate, pH, DO, CO_2 (SM4500)	Redox Potential ASTM D-1498	Methane (RSK 175)
1	MW-1	12-10-15	17:10	GW	18	X	X		X	X		X		X						X		X	X	X	X	X
2	MW-3		16:00			X	X		X	X		X		X						X		X	X	X	X	X
3	MW-6		13:50			X	X		X	X		X		X						X		X	X	X	X	X
4	MW-7		15:10			X	X		X	X		X		X						X		X	X	X	X	X
5	MW-18		12:45			X	X		X	X		X		X						X		X	X	X	X	X

Relinquished by: (Signature)	Received by: (Signature/Affiliation)	Date:	Time:
Missa Barrow	ECL	12-10-15	1435
Relinquished by: (Signature)	Received by: (Signature/Affiliation)	Date:	Time:
	EC	12/11/15	1800
Relinquished by: (Signature)	Received by: (Signature/Affiliation)	Date:	Time:

DISTRIBUTION: White with final report, Green and Yellow to Client.
Please note that pages 1 and 2 of 2 of our T/Cs are printed on the reverse side of the Green and Yellow copies respectively.

09/01/13 Revision

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WORK ORDER NUMBER: 15-12- 6967

SAMPLE RECEIPT CHECKLIST

COOLER 1 OF 2

CLIENT: SCS ENGINEERS

DATE: 12 / 11 / 2015

TEMPERATURE: (Criteria: 0.0°C – 6.0°C, not frozen except sediment/tissue)

Thermometer ID: SC2 (CF:-0.4°C); Temperature (w/o CF): 3.2 °C (w/ CF): 2.8 °C; ☑ Blank ☐ Sample

☐ Sample(s) outside temperature criteria (PM/APM contacted by: _____)

☐ Sample(s) outside temperature criteria but received on ice/chilled on same day of sampling

☐ Sample(s) received at ambient temperature; placed on ice for transport by courier

Ambient Temperature: ☐ Air ☐ Filter Checked by: 671

CUSTODY SEAL:

Cooler	☐ Present and Intact	☐ Present but Not Intact	☑ Not Present	☐ N/A	Checked by: 671
Sample(s)	☐ Present and Intact	☐ Present but Not Intact	☑ Not Present	☐ N/A	Checked by: 965

SAMPLE CONDITION:	Yes	No	N/A
Chain-of-Custody (COC) document(s) received with samples	☑	☐	☐
COC document(s) received complete	☑	☐	☐
☐ Sampling date ☐ Sampling time ☐ Matrix ☐ Number of containers			
☐ No analysis requested ☐ Not relinquished ☐ No relinquished date ☐ No relinquished time			
Sampler's name indicated on COC	☑	☐	☐
Sample container label(s) consistent with COC	☑	☐	☐
Sample container(s) intact and in good condition	☑	☐	☐
Proper containers for analyses requested	☑	☐	☐
Sufficient volume/mass for analyses requested	☑	☐	☐
Samples received within holding time	☒ 12/11/15	☑	☐
Aqueous samples for certain analyses received within 15-minute holding time			
☑ pH ☐ Residual Chlorine ☐ Dissolved Sulfide ☑ Dissolved Oxygen	☐	☑	☐
Proper preservation chemical(s) noted on COC and/or sample container	☑	☐	☐
Unpreserved aqueous sample(s) received for certain analyses			
☐ Volatile Organics ☐ Total Metals ☐ Dissolved Metals			
Container(s) for certain analysis free of headspace	☑	☐	☐
☐ Volatile Organics ☐ Dissolved Gases (RSK-175) ☐ Dissolved Oxygen (SM 4500)			
☐ Carbon Dioxide (SM 4500) ☑ Ferrous Iron (SM 3500) ☐ Hydrogen Sulfide (Hach)			
Tedlar™ bag(s) free of condensation	☐	☐	☑

CONTAINER TYPE: (Trip Blank Lot Number: _____)

Aqueous: ☐ VOA ☑ VOAh ☐ VOA**na$_2$** ☐ 100PJ ☐ 100PJ**na$_2$** ☐ 125AGB ☐ 125AGB**h** ☐ 125AGB**p** ☐ 125PB

☐ 125PB**znna** ☑ 250AGB ☐ 250CGB ☑ 250CGB**s** ☐ 250PB ☑ 250PB**n** ☑ 500AGB ☑ 500AGJ ☐ 500AGJ**s**

☐ 500PB ☐ 1AGB ☐ 1AGB**na$_2$** ☑ 1AGB**s** ☐ 1PB ☐ 1PB**na** ☐ _____ ☐ _____ ☐ _____ ☐ _____

Solid: ☐ 4ozCGJ ☐ 8ozCGJ ☐ 16ozCGJ ☐ Sleeve (_____) ☐ EnCores® (_____) ☐ TerraCores® (_____) ☐ _____

Air: ☐ Tedlar™ ☐ Canister ☐ Sorbent Tube ☐ PUF ☐ _____ **Other Matrix** (_____): ☐ _____ ☐ _____

Container: **A** = Amber, **B** = Bottle, **C** = Clear, **E** = Envelope, **G** = Glass, **J** = Jar, **P** = Plastic, and **Z** = Ziploc/Resealable Bag

Preservative: **b** = buffered, **f** = filtered, **h** = HCl, **n** = HNO_3, **na** = NaOH, **na$_2$** = $Na_2S_2O_3$, **p** = H_3PO_4, **s** = H_2SO_4, **u** = ultra-pure, **znna** = $Zn(CH_3CO_2)_2$ + NaOH

Labeled/Checked by: 965

Reviewed by: 689

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eurofins | Calscience

WORK ORDER NUMBER: 15-12- 0967

SAMPLE RECEIPT CHECKLIST

COOLER 2 OF 2

CLIENT: SCS ENGINEERS

DATE: 12 / 11 / 2015

TEMPERATURE: (Criteria: 0.0°C – 6.0°C, not frozen except sediment/tissue)

Thermometer ID: SC2 (CF:-0.4°C); Temperature (w/o CF): 3.2 °C (w/ CF): 2.8 °C; ☑ Blank ☐ Sample

☐ Sample(s) outside temperature criteria (PM/APM contacted by: _____)

☐ Sample(s) outside temperature criteria but received on ice/chilled on same day of sampling

☐ Sample(s) received at ambient temperature; placed on ice for transport by courier

Ambient Temperature: ☐ Air ☐ Filter Checked by: 671

CUSTODY SEAL:

Cooler	☐ Present and Intact	☐ Present but Not Intact	☑ Not Present	☐ N/A	Checked by: 671
Sample(s)	☐ Present and Intact	☐ Present but Not Intact	☑ Not Present	☐ N/A	Checked by: 965

SAMPLE CONDITION:

	Yes	No	N/A
Chain-of-Custody (COC) document(s) received with samples	☑	☐	☐
COC document(s) received complete	☑	☐	☐
☐ Sampling date ☐ Sampling time ☐ Matrix ☐ Number of containers			
☐ No analysis requested ☐ Not relinquished ☐ No relinquished date ☐ No relinquished time			
Sampler's name indicated on COC	☑	☐	☐
Sample container label(s) consistent with COC	☑	☐	☐
Sample container(s) intact and in good condition	☑	☐	☐
Proper containers for analyses requested	☑	☐	☐
Sufficient volume/mass for analyses requested	☑	☐	☐
Samples received within holding time	☑ 12/11/15	☑	☐
Aqueous samples for certain analyses received within 15-minute holding time			
☑ pH ☐ Residual Chlorine ☐ Dissolved Sulfide ☑ Dissolved Oxygen	☐	☑	☐
Proper preservation chemical(s) noted on COC and/or sample container	☑	☐	☐
Unpreserved aqueous sample(s) received for certain analyses			
☐ Volatile Organics ☐ Total Metals ☐ Dissolved Metals			
Container(s) for certain analysis free of headspace	☐	☑	☐
☐ Volatile Organics ☐ Dissolved Gases (RSK-175) ☐ Dissolved Oxygen (SM 4500)			
☐ Carbon Dioxide (SM 4500) ☑ Ferrous Iron (SM 3500) ☐ Hydrogen Sulfide (Hach)			
Tedlar™ bag(s) free of condensation	☐	☐	☑

CONTAINER TYPE: 10 (Trip Blank Lot Number: _____)

Aqueous: ☐ VOA ☑ VOAh ☐ VOAna_2 ☐ 100PJ ☐ 100PJna_2 ☐ 125AGB ☐ 125AGBh ☐ 125AGBp ☐ 125PB

☐ 125PBznna ☑ 250AGB ☐ 250CGB ☑ 250CGBs ☐ 250PB ☑ 250PBn ☑ 500AGB ☑ 500AGJ ☐ 500AGJs

☑ 500PB ☐ 1AGB ☐ 1AGBna_2 ☑ 1AGBs ☐ 1PB ☐ 1PBna ☐ _____ ☐ _____ ☐ _____ ☐ _____

Solid: ☐ 4ozCGJ ☐ 8ozCGJ ☐ 16ozCGJ ☐ Sleeve (_____) ☐ EnCores® (_____) ☐ TerraCores® (_____) ☐ _____

Air: ☐ Tedlar™ ☐ Canister ☐ Sorbent Tube ☐ PUF ☐ _____ **Other Matrix** (_____): ☐ _____ ☐ _____

Container: **A** = Amber, **B** = Bottle, **C** = Clear, **E** = Envelope, **G** = Glass, **J** = Jar, **P** = Plastic, and **Z** = Ziploc/Resealable Bag

Preservative: **b** = buffered, **f** = filtered, **h** = HCl, **n** = HNO_3, **na** = NaOH, **na_2** = $Na_2S_2O_3$, **p** = H_3PO_4, **s** = H_2SO_4, **u** = ultra-pure, **znna** = $Zn(CH_3CO_2)_2$ + NaOH

Labeled/Checked by: 965

Reviewed by: 802/659

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WORK ORDER NUMBER: 15-12- 0967

SAMPLE ANOMALY REPORT

DATE: 12 / 11 / 2015

SAMPLES, CONTAINERS, AND LABELS:

- ☐ Sample(s) NOT RECEIVED but listed on COC
- ☐ Sample(s) received but NOT LISTED on COC
- ☑ Holding time expired (list client or ECI sample ID and analysis)
- ☐ Insufficient sample amount for requested analysis (list analysis)
- ☐ Improper container(s) used (list analysis)
- ☐ Improper preservative used (list analysis)
- ☐ No preservative noted on COC or label (list analysis and notify lab)
- ☐ Sample container(s) not labeled
- ☐ Client sample label(s) illegible (list container type and analysis)
- ☐ Client sample label(s) do not match COC (comment)
  - ☐ Project information
  - ☐ Client sample ID
  - ☐ Sampling date and/or time
  - ☐ Number of container(s)
  - ☐ Requested analysis
- ☐ Sample container(s) compromised (comment)
  - ☐ Broken
  - ☐ Water present in sample container
- ☐ Air sample container(s) compromised (comment)
  - ☐ Flat
  - ☐ Very low in volume
  - ☐ Leaking (not transferred; duplicate bag submitted)
  - ☐ Leaking (transferred into ECI Tedlar™ bags*)
  - ☐ Leaking (transferred into client's Tedlar™ bags*)

* Transferred at client's request.

Comments

(-1) to (-5) Redox Potential, CO_2, Ferrous Iron received expired.

MISCELLANEOUS: (Describe)

Comments

HEADSPACE:

(Containers with bubble > 6 mm or ¼ inch for volatile organic or dissolved gas analysis)

ECI Sample ID	ECI Container ID	Total Number**	ECI Sample ID	ECI Container ID	Total Number**

(Containers with bubble for other analysis)

ECI Sample ID	ECI Container ID	Total Number**	Requested Analysis
1 to 5	K	1	Ferrous Iron

Comments:

Reported by:

Reviewed by: BRY

** Record the total number of containers (i.e., vials or bottles) for the affected sample.

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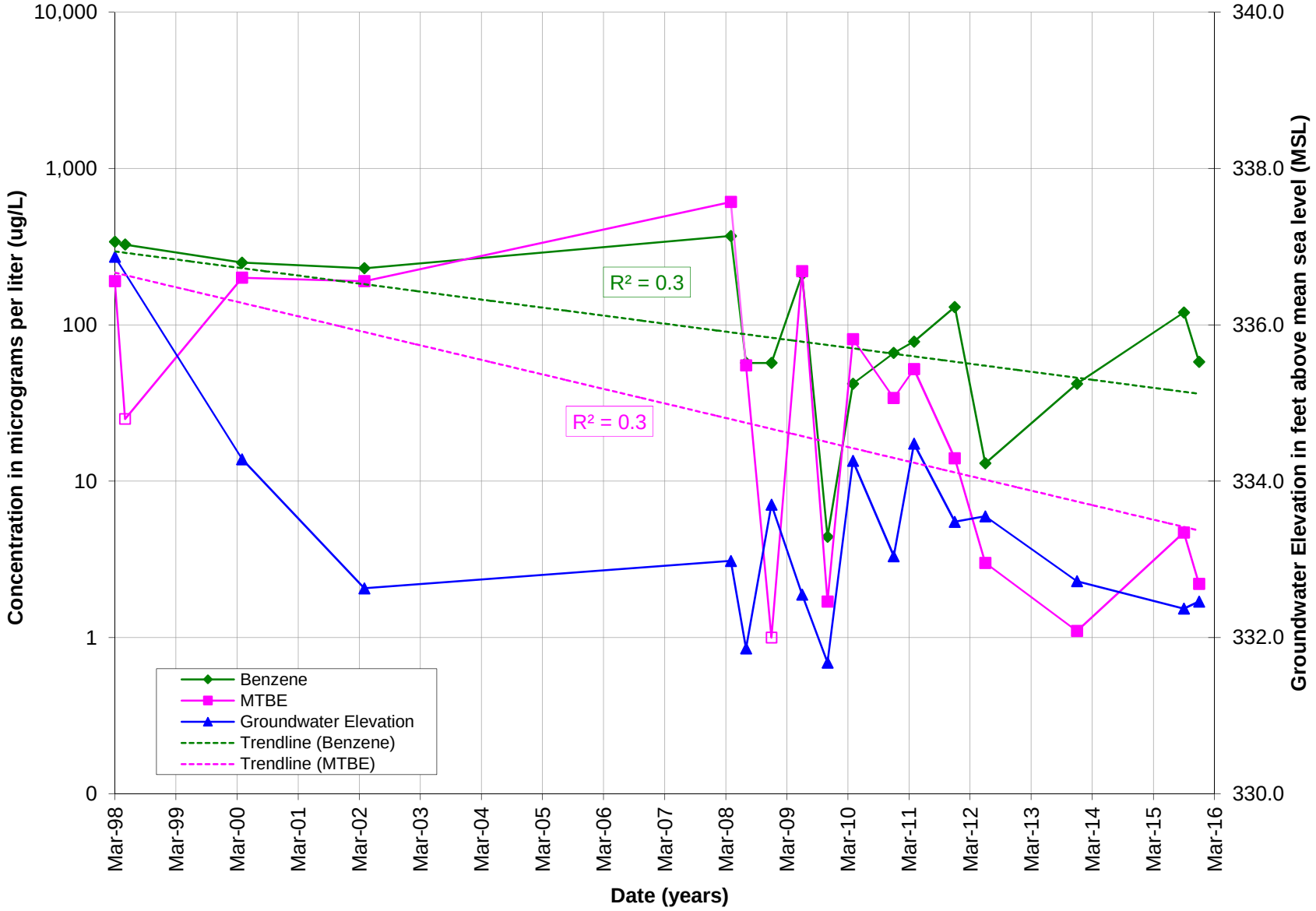
APPENDIX D

HYDROGRAPHS

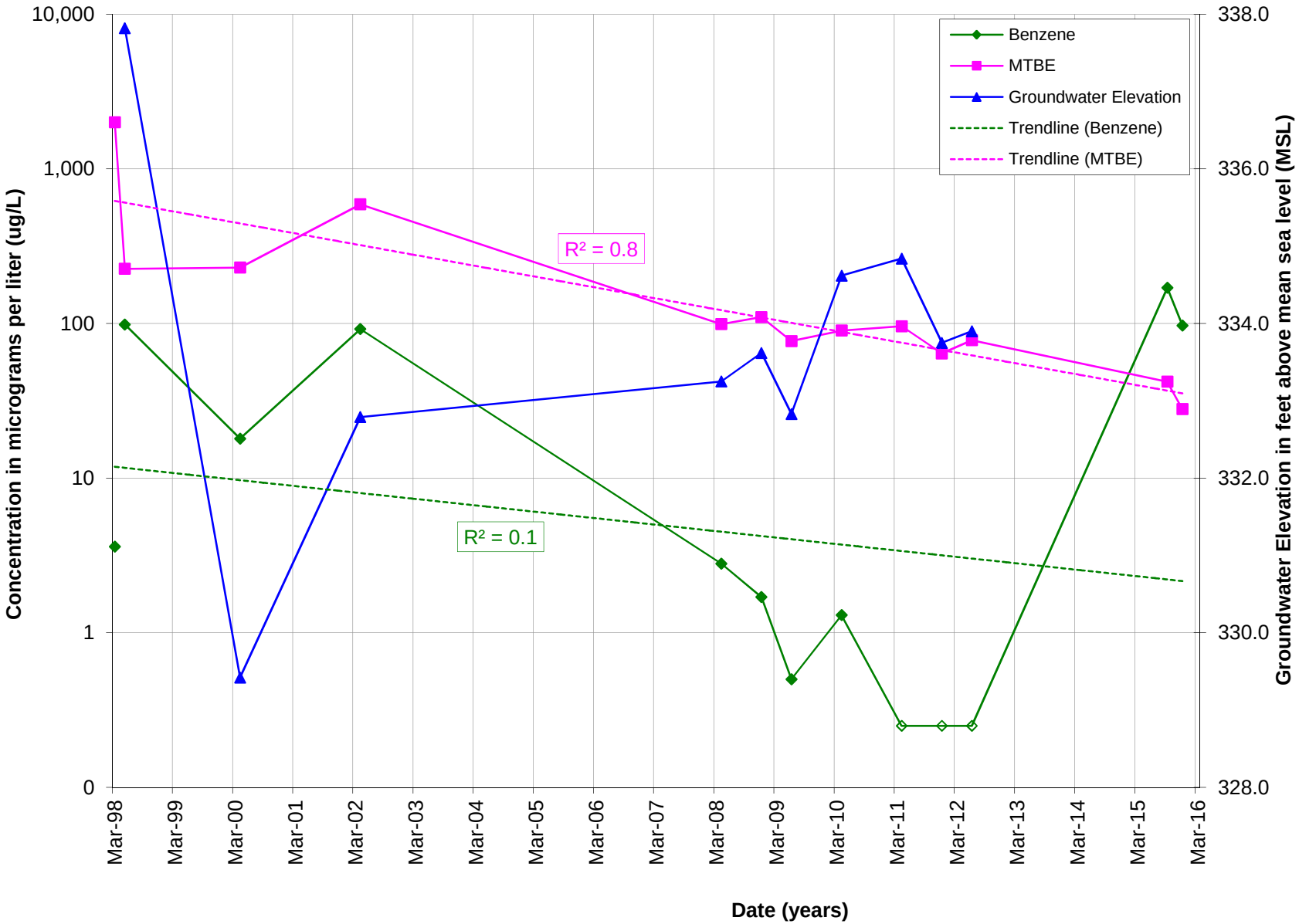
MW-1
Benzene and MTBE Concentrations and Groundwater Elevation versus Time
Wigington Petroleum
11427 Woodside Avenue, Santee, California



SCS ENGINEERS

Hollow points represent half of the detection limit

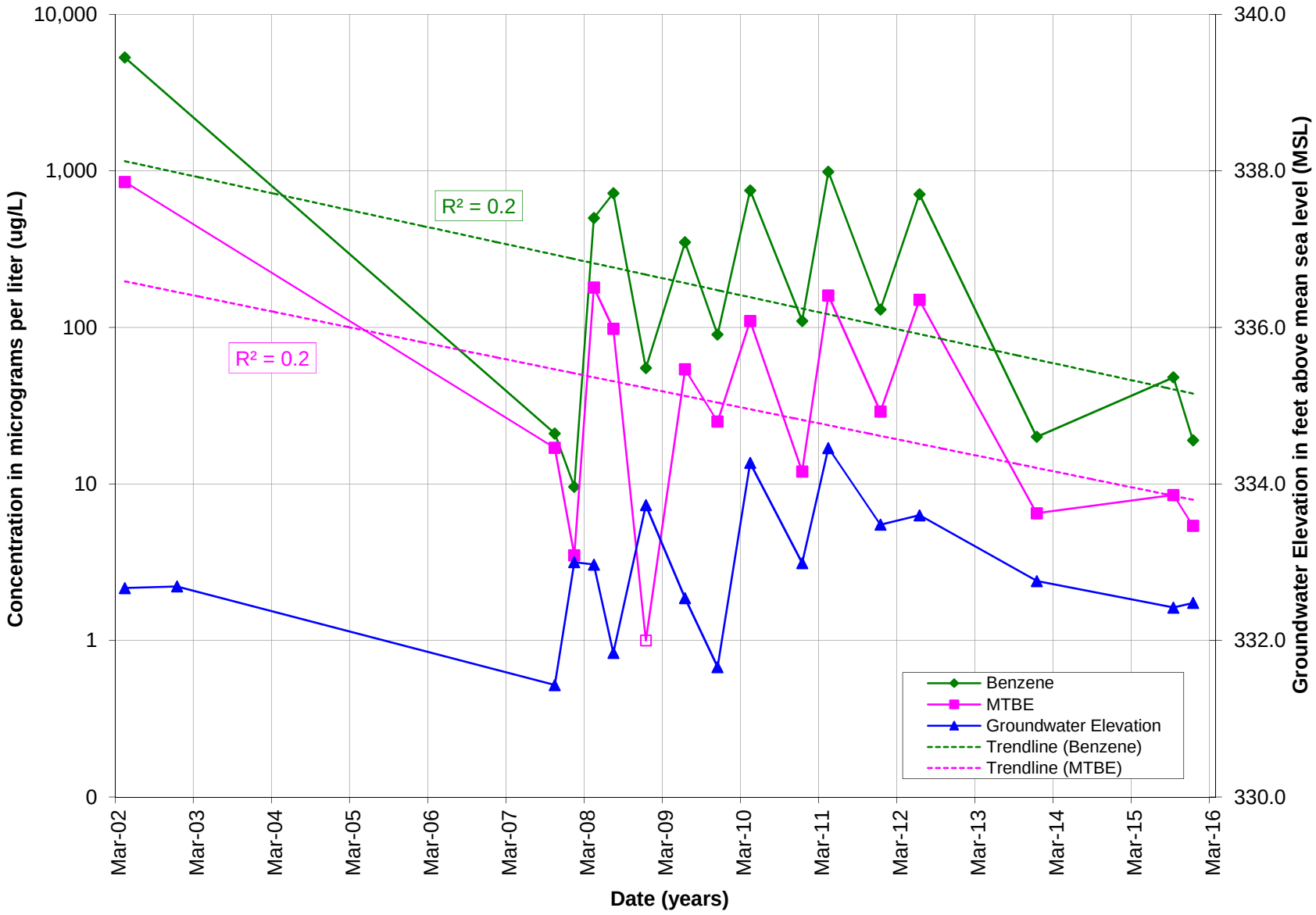
MW-3
Benzene and MTBE Concentrations and Groundwater Elevation versus Time
Wigington Petroleum
11427 Woodside Avenue, Santee, California



SCS ENGINEERS

Hollow points represent half of the detection limit

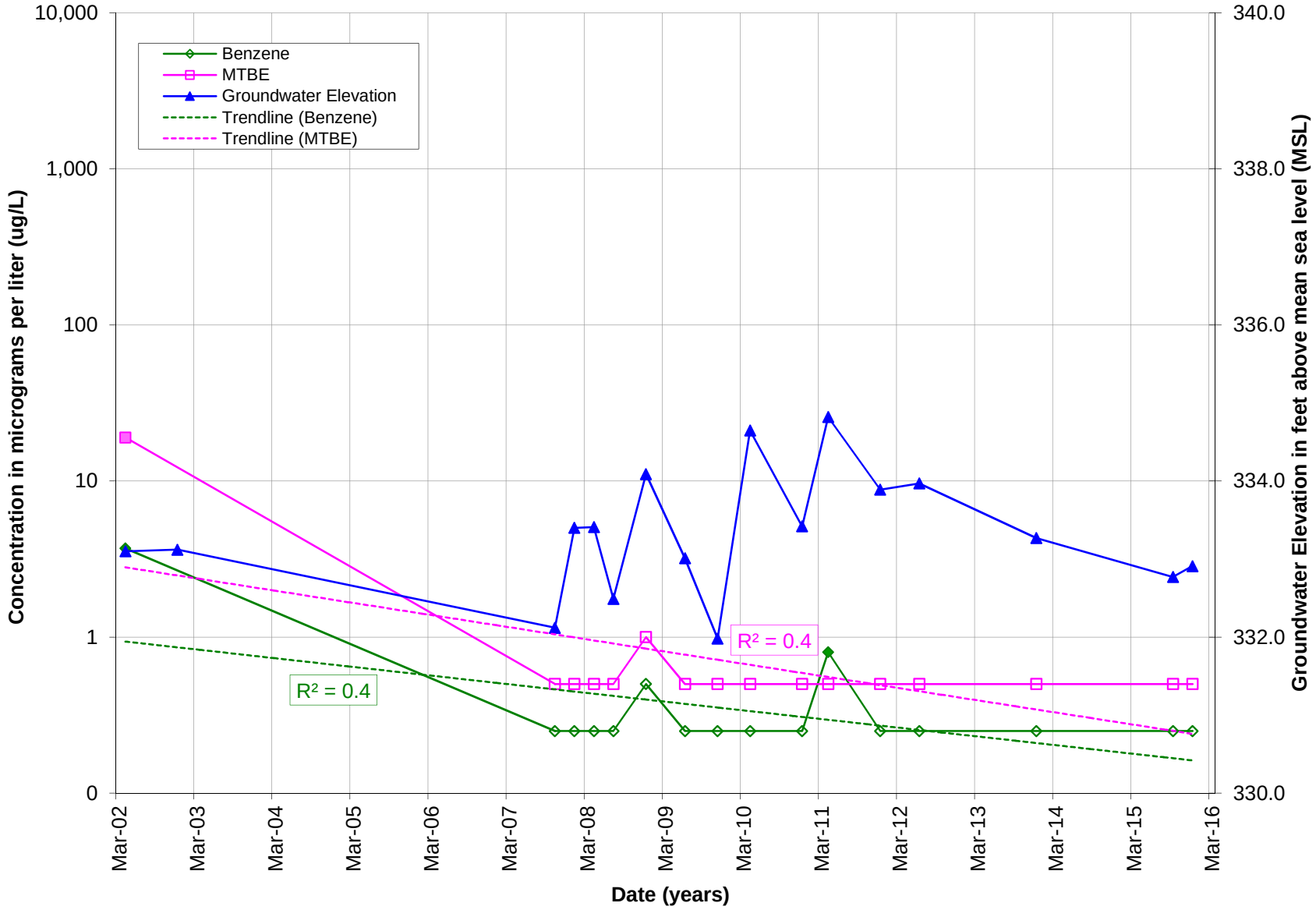
MW-6
Benzene and MTBE Concentrations and Groundwater Elevation versus Time
Wigington Petroleum
11427 Woodside Avenue, Santee, California



SCS ENGINEERS

Hollow points represent half of the detection limit

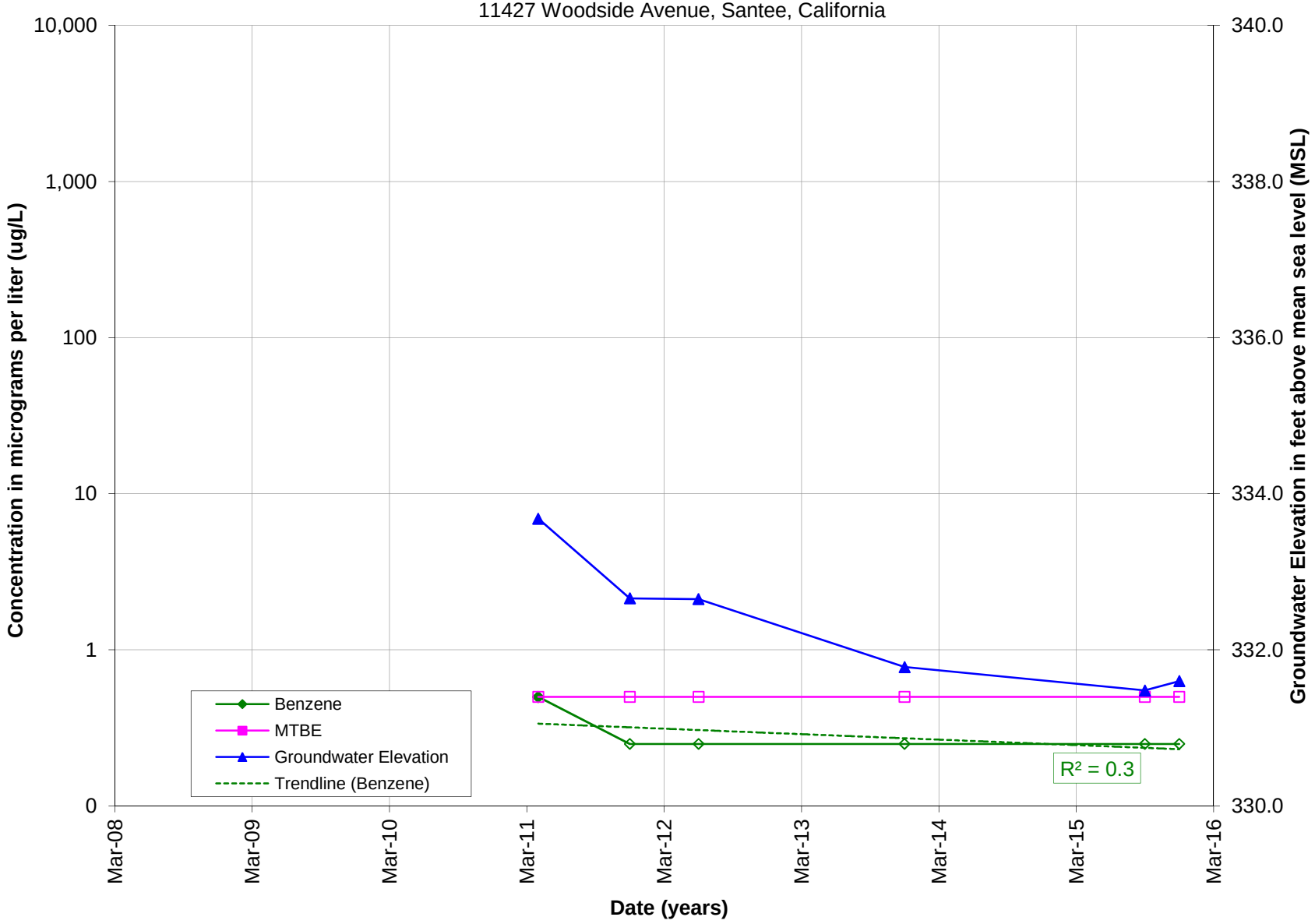
MW-7
Benzene and MTBE Concentrations and Groundwater Elevation versus Time
Wigington Petroleum
11427 Woodside Avenue, Santee, California



SCS ENGINEERS

Hollow points represent half of the detection limit

MW-18
Benzene and MTBE Concentrations and Groundwater Elevation versus Time
Wigington Petroleum
11427 Woodside Avenue, Santee, California



SCS ENGINEERS

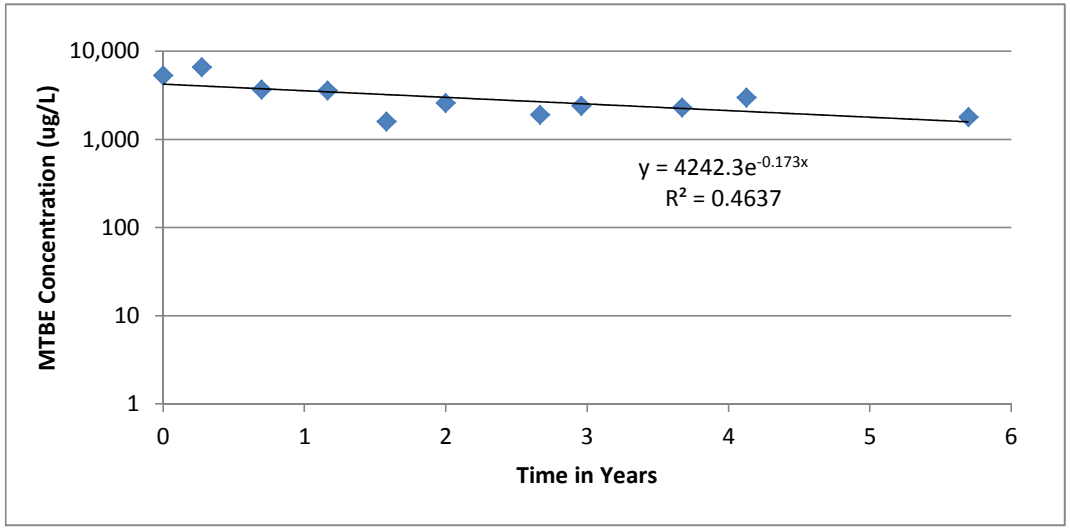
Hollow points represent half of the detection limit

APPENDIX E

TIME TO MCL CALCULATION SPREADSHEETS

Calculation for Time to MCL
Benzene - MW-14
County of San Diego Department of Public Works
Divison One Headquarters
11970 Singer Lane
Spring Valley, California

Date	Days	Years	Benzene (MW-14)
04/21/08	0	0.00	**5,300**
07/30/08	100	0.27	**6,600**
12/31/08	254	0.70	**3,700**
06/19/09	424	1.16	**3,600**
11/18/09	576	1.58	**1,600**
04/20/10	729	2.00	**2,600**
12/20/10	973	2.67	**1,900**
04/05/11	1079	2.96	**2,400**
12/22/11	1340	3.67	**2,300**
06/05/12	1506	4.13	**3,000**
12/30/13	2079	5.70	**1,800**



Time (years) to reach goal: 1 ug/l

48.28 years from 4/21/2008

Date to reach goal: 7/21/2056

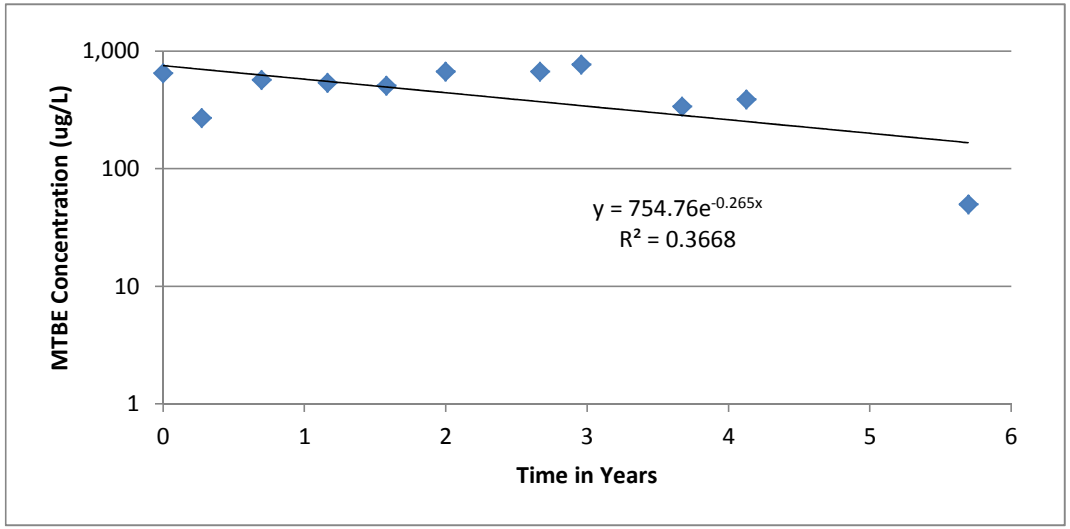
Note: 1/2 the reporting limit was used for Non-detect values.

Reference: *Calculation and Use of First-Order Rate Constants for Monitored Natural Attenuation Studies,* Groundwater Issue EPA/540/S-02/500, United States Environmental Protection Agency, November 2002.

SCS ENGINEERS

Calculation for Time to MCL
MTBE - MW-14
County of San Diego Department of Public Works
Divison One Headquarters
11970 Singer Lane
Spring Valley, California

Date	Days	Years	MTBE (MW-14)
04/21/08	0	0.00	**650**
07/30/08	100	0.27	**270**
12/31/08	254	0.70	**570**
06/19/09	424	1.16	**540**
11/18/09	576	1.58	**510**
04/20/10	729	2.00	**670**
12/20/10	973	2.67	**670**
04/05/11	1079	2.96	**770**
12/22/11	1340	3.67	**340**
06/05/12	1506	4.13	**390**
12/30/13	2079	5.70	**50**



Time (years) to reach goal: 1 ug/l

25.01 years from 4/21/2008

Date to reach goal: 4/16/2033

Note: 1/2 the reporting limit was used for Non-detect values.

Reference: *Calculation and Use of First-Order Rate Constants for Monitored Natural Attenuation Studies,* Groundwater Issue EPA/540/S-02/500, United States Environmental Protection Agency, November 2002.

SCS ENGINEERS

RECEIVED
2005 APR 22 PM 12 55
D. L. H.
MAILROOM

P.O. BOX 129261
SAN DIEGO, CA 92112-9261
ATTN: NASSER SIONIT
(619) 338-2239
(619) 338-2315 (FAX)
WEB SITE: www.co.san-diego.ca.us/deh/lwq/sam

FOR OFFICE USE:
Date Received 4-22-05
Submittal Fee Paid ORG#5663, Work#7960
Establishment # H39667-001

COUNTY OF SAN DIEGO
DEPARTMENT OF ENVIRONMENTAL HEALTH

VOLUNTARY ASSISTANCE PROGRAM
APPLICATION FOR ASSISTANCE

(PLEASE READ BOTH PAGES OF THIS APPLICATION PRIOR TO COMPLETION)

w/2 RPTs
county DPLU site
KD 4-25

cnt.
12124 Industry

A. Site Name USDRIP FHR Assessors Parcel Number 382-250-32 387-011-35

Site Address ~~H/H~~ 12124 Industry Rd., Lakeside 92040 → no address
Street City State Zip Code

B. Property Owner Lakeside River Park Conservancy

Mailing Address 11769 Waterhill Rd. Lakeside CA 92040
Street City State Zip Code

Contact Person Robin Rierdan Telephone (619) 443-4770

C. Application Submitted By:

Contact Person Bob Forsythe ✓ Telephone (858) 694-3856 ✓

Company Name S. D. County DPLU ✓

Mailing Address 5201 Ruffin Rd. San Diego CA 92123 ✓
Street City State Zip Code

Note: Invoices will be sent to the applicant at this address unless other arrangements are made.

D. Brief Project Description The Project proposes to remove 700,000 cubic yards of fill for a restoration project on the San Diego River. DPLU work authorization number is WA 7960. Org - 5663

Type of Assistance Requested Review of chemical tests and recomendations for conditions of approval

I accept the application requirements and project review conditions listed on Page 2 of 2 and I agree to pay all costs associated with DEH staff time and services within 30 days of receiving an invoice.

R. C. Forsythe — Original Signature of Applicant
R. C. Forsythe — Printed Name
4/21/05 — Date

County DPLV site (Lakeside Riverpark)
Work Auth. #7960
Project Org # 5663

COUNTY OF SAN DIEGO
DEPARTMENT OF ENVIRONMENTAL HEALTH

VOLUNTARY ASSISTANCE PROGRAM

The Voluntary Assistance Program is designed to provide the applicant with staff consultation, project review, and public health assessment pertaining to properties suspected or known to be contaminated with hazardous substances. California Health and Safety Code Sections 101480-101490 authorize the County Department of Environmental Health (DEH) to enter into voluntary agreements for the oversight of remedial action at sites contaminated by wastes.

The DEH staff will review and manage all projects in accordance with applicable regulatory requirements, industry practices, and the current version of the DEH Site Assessment and Mitigation Manual. Our goal throughout project review is the protection of human health, water resources and the environment. Upon completion of a project, DEH will issue a letter addressing the applicant's specific project goals. Open lines of communication between DEH and the applicant provide the best opportunities for expedient review and successful project resolution.

Application Requirements

- Sections A, B, C, and D must be completed on the "Application for Assistance" form (Page 1 of 2), along with the applicant's original signature.
- Fully describe your project and your specific request(s) for DEH review and written response (Section D). As necessary, include a cover letter to clarify your project needs.
- Submit all relevant documentation/reports with the application. All documents containing geologic and/or contaminant migration interpretations must be signed by an experienced professional with the appropriate California registration or certification.
- An **initial fee of $220, payable to the County of San Diego,** is required at the time of application submittal. This fee covers two (2) hours of staff review time. Staff time in excess of two hours will be invoiced to applicant and must be paid within 30 days of receipt of the invoice. The staff billing rate is currently $110/hour. **Staff assistance will not be provided on delinquent accounts.**

Project Review Conditions

- Within five (5) workdays of DEH receipt of your complete application, the project is identified by a DEH Case No. and assigned to a DEH project manager.
- The DEH will notify the Department of Toxic Substances Control (DTSC) and the Regional Water Quality Control Board (RWQCB) that the project has been submitted for DEH review.
- A copy of all written DEH correspondence will be sent to the applicant and forwarded to the legal property owner. Project files will be available for public review.
- DEH has the option of referring the project to the DTSC or RWQCB at any time during the project review process. If the applicant ceases work, or requests DEH to cease work, on a project prior to resolving site contamination issues, then DEH would refer the project to the appropriate agency and/or identify the project as unresolved in the DEH database.

TO: H39667-001 Former DPLU FHR – Non-billable
DATE: 7/24/2012
SUBJECT: ADMINISTRATIVE CASE CLOSURE/NO FURTHER ACTION
FROM: ELLEN BEACON, EHSII

This case was opened in April 2005 for DEH to review the data and make recommendations regarding the proposed 400,000 yards of fill material for a restoration project on the San Diego River. DEH initially reviewed several documents and attended meetings. Later a Section 401 permit was issued by the Regional Water Quality Control Board (RWQCB) and the project was completed. According to Bob Forsythe formerly with DPLU and now with the Lakeside River Park Conservancy, the fill material came from a river constriction and the adjacent property owned by Hanson aggregates. He has no documentation of the source of the fill material other than the permits. DEH reviewed documentation/data for this material. Mike Porter of RWQCB verified that the project was completed in compliance with the Section 401 Waiver of Waste Discharge Requirements for Discharge of Dredged and Fill Materials; therefore, we are administratively closing this case.

Beacon, Ellen

From: Porter, Mike@Waterboards [MPorter@waterboards.ca.gov]
Sent: Tuesday, July 24, 2012 12:08 PM
To: Beacon, Ellen
Cc: Bob Forsythe; Harris, Sara
Subject: RE: H39766-001 - San Diego River Habitat, Flood Control, Restoration and Recharge Project File No. 04C-144 -

Hello.

Yes it was.

Mike Porter, Engineering Geologist
San Diego Water Board
9174 Sky Park Court
Suite 100
San Diego, CA 92123-4340
Phone 858-467-2726
Fax 858-571-6972
Email mporter@waterboards.ca.gov

From: Ellen Beacon [mailto:Ellen.Beacon@sdcounty.ca.gov]
Sent: Tuesday, July 24, 2012 11:48 AM
To: Porter, Mike@Waterboards
Cc: Bob Forsythe; Sara Harris
Subject: H39766-001 - San Diego River Habitat, Flood Control, Restoration and Recharge Project File No. 04C-144 -

Greetings:

Can you please verify if the above project was completed in compliance with the above referenced Waiver of Waste Discharge Requirements for Discharge of Dredged and Fill Materials?
Thank you.
Sincerely

Ellen Beacon, P.G. 7566
Project Manager
Site Assessment & Mitigation Program
Department of Environmental Health
County of San Diego
P.O. Box 129261, San Diego, CA 92112-9261
858.505.6983

EB

#2

H39667-1 County VAP/VX1394

IA# 0009

- RP is city Redevelopment
- Redevelop. agencies else work on Feb 1, 2012 per email from DEH Fiscal of 1-27-12

- File shows SAM was a 3rd party reviewer on all etc. & Filling of riverbed & pond.
- Last SAM requirements was submitted / RWQCB's 401 permit That was received 6-1-2010
  Therefore: case changed to Non-Billable 2-2-12 & one folder sent to Main File -

Beacon, Ellen

From: Cammall, Barbara
Sent: Friday, January 27, 2012 3:21 PM
To: Beacon, Ellen
Cc: DeOCampo, Arlene
Subject: FW: USDRIP Internal Agreements

Importance: High

Hi Ellen – please see below. Contact Arlene if you need clarification.

Thanks.

Barb Cammall
X6975

From: DeOCampo, Arlene
Sent: Friday, January 27, 2012 3:17 PM
To: Cammall, Barbara
Cc: Lansang, Cheryl
Subject: Fw: USDRIP Internal Agreements
Importance: High

Barb, can you forward to Ellen Beacon for me?

Thanks,
Arlene

Sent from my BlackBerry Wireless Handheld

From: Loewer, Renee
Sent: Friday, January 27, 2012 09:29 AM
To: Lim-Viernes, Marigene; Zeitounian, Pat; Vargas, Theresa; DeOCampo, Arlene
Subject: USDRIP Internal Agreements

Effective February 1, 2012, the redevelopment agencies will be dissolved in accordance with AB 26. As such all existing internal agreements must be closed. I have submitted the closure to your workflow. Please approve as soon as possible as time is of the essence.

Theresa – the last charge on this IA was January 3rd (Mario Rubio). Please make sure staff know that USDRIP will no longer pay for any time worked on TIF work for projects in the redevelopment area.

Arlene – the only charge on this IA was December 28th (Ellen Beacon) for VAP # H39667-001. Please make sure staff know that USDRIP will no longer pay for any time worked on the project at 12124 Industry Road, Lakeside.

If you have any questions, please contact me immediately. Thank you.

Have a wonderful day,

Renee Loewer
Principal Administrative Analyst

Department of Planning and Land Use
Support Services Division
5201 Ruffin Road, Ste B
San Diego, CA 92123
MS O-650
(858) 694-3009
SAVE A TREE, DON'T PRINT ME!

Beacon, Ellen

From: Robert Forsythe [bobriverpark@gmail.com]
Sent: Tuesday, June 01, 2010 2:28 PM
To: Beacon, Ellen
Subject: Re: Your Letter to DPLU

Sorry. I meant the contract from the time the ponds were filled that stated such. Yes, the ponds were filled in back in '07.

On Tue, Jun 1, 2010 at 1:48 PM, Beacon, Ellen <Ellen.Beacon@sdcounty.ca.gov> wrote:

> Hi Bob,
>
> Did you mean was used to fill the ponds – the last sentence of your email says will be. I thought the ponds were filled several years ago.
>
> Ellen
>
> ---
>
> **From:** Robert Forsythe [mailto:bobriverpark@gmail.com]
> **Sent:** Tuesday, June 01, 2010 8:32 AM
> **To:** Beacon, Ellen
> **Subject:** Your Letter to DPLU
>
> Ellen, our 401 permit is attached. These are things DPLU most likely won't have. As itturns out, the dirt for filling the ponds did not come from the soil removed by Caltrans but rather from a river constriction on our property and adjacent property owned by Hanson Aggregates. I'm still trying to find the contract stating that it will be removed and used to fill the ponds.
>
> --
> Bob Forsythe
> Special Projects Coordinator
> Lakeside's River Park Conservancy
> 619/443-4770

--
Bob Forsythe

Special Projects Coordinator
Lakeside's River Park Conservancy
619/443-4770

401 Waiver of Waste Discharge 04C-144

Comment	Response
STANDARD CONDITIONS: The following three standard conditions apply to all certification actions, except as noted under Condition 3 for denials (Action 3).	
1. This certification action is subject to modification or revocation upon administrative or judicial review, including review and amendment pursuant to section 13330 of the California Water Code and section 3867 of Title 23 of the California Code of Regulations (23 CCR).	Understood.
2. This certification action is not intended and shall not be construed to apply to any discharge from any activity involving a hydroelectric facility requiring a Federal Energy Regulatory Commission (FERC) license or an amendment to a FERC license unless the pertinent certification application was filed pursuant to 23 CCR subsection 3855(b) and the application specifically identified that a FERC license or amendment to a FERC license for a hydroelectric facility was being sought.	Understood.
3. The validity of any non-denial certification action (Actions 1 and 2) shall be conditioned upon total payment of the full fee required under 23 CCR section 3833, unless otherwise stated in writing by the certifying agency.	Filing fees have been in the amount of $ paid date
ADDITIONAL CONDITIONS: In addition to the three standard conditions, the Lakeside River Park Conservancy, shall satisfy the following:	

401 Waiver of Waste Discharge 04C-144

A. General Conditions 1. The Lakeside River Park Conservancy, shall, at all times, fully comply with the engineering plans, specifications and technical reports submitted with this application for 401 Water Quality Certification and all subsequent submittals required as part of this certification.	The engineering plans, specifications and technical reports would be followed for development of this project.
2. The Lakeside River Park Conservancy, shall comply with the requirements of State Water Resources Control Board Water Quality Order No. 99-08-DWQ, the NPDES General Permit for Storm Water Discharges Associated with Construction Activity.	The Lakeside Conservancy has filed for and received an NPDES General Permit for Storm Water Discharges Associated With Construction Activity. A Stormwater Pollution Prevention Plan was developed for this project to comply with NPDES Requirements.
3. The Lakeside River Park Conservancy, shall maintain a copy of this certification, the application, and supporting documentation at the project site at all times for review by site personnel and agencies.	A copy of this certification, application, and supporting documentation would be kept at the job site in the "job shack"
4. Prior to the start of the project and annually thereafter, the Lakeside River Park Conservancy, shall educate all personnel on the requirements in this certification, pollution prevention measures, and spill response.	The environmental monitors would at the start of the project and annually thereafter educate all personnel on the requirements of this certification, pollution prevention measures, and spill response.

5. The Lakeside River Park Conservancy, shall permit the Board or its authorized representative at all times, upon presentation of credentials: a.). Entry onto project premises, including all areas on which wetland fill or wetland mitigation is located or in which records are kept. b.) Access to copy any records required to be kept under the terms and conditions of this certification. c.) Inspection of any treatment equipment, monitoring equipment, or monitoring method required by this certification. d.) Sampling of any discharge or surface water covered by this Order.	Lakeside River Park Conservancy has signed a "right of entry" agreement date. Records kept under the conditions of this certification would be kept on site in the "job shack" and the Board would be given access to these records. Per the right of entry agreement, the Board or its authorized representative upon presentation of credentials would be allowed entry onto premises, inspection of BMPs, and sampling of any discharge as covered by this Order.
6. The Lakeside River Park Conservancy, shall notify the Regional Board within 24 hours of any unauthorized discharge to waters of the U.S. and/or State; measures that were implemented to stop and contain the discharge; measures implemented to clean-up the discharge; the volume and type of materials discharged and recovered; and additional BMPs or other measures that will be implemented to prevent future discharges.	Spill contingency plan Section 18.0 of SWPPP
7. The Lakeside River Park Conservancy, shall, at all times, maintain appropriate types and sufficient quantities of materials onsite to contain any spill or inadvertent release of materials that may cause a condition of pollution or nuisance if the materials reached a waters of the U.S. and/or State.	Spill contingency plan Section 18.0 of SWPPP

8. This Certification is not transferable to any person(s) except after notice to the Executive Officer of the San Diego Regional Water Quality Control Board (Regional Board). The applicant shall submit this notice in writing at least 30 days in advance of any proposed transfer. The notice must include a written agreement between the existing and new owner(s) containing a specific date for the transfer of this Certification's responsibility and coverage between the current discharger and the new discharger(s). This agreement shall include an acknowledgement that the existing owner is liable for compliance and violations up to the transfer date and that the new owner(s) is/are liable from the transfer date on.	Understood.
9. In the event of any violation or threatened violation of the conditions of this certification, the violation or threatened violation shall be subject to any remedies, penalties, process or sanctions as provided for under state law. For purposes of section 401(d) of the Clean Water Act, the applicability of any state law authorizing remedies, penalties, process or sanctions for the violation or threatened violation constitutes a limitation necessary to assure compliance with the water quality standards and other pertinent requirements incorporated into this certification.	Understood.

10. In response to a suspected violation of any condition of this certification, the Regional Water Quality Control Board (RWQCB) may require the holder of any permit or license subject to this certification to furnish, under penalty of perjury, any technical or monitoring reports the RWQCB deems appropriate, provided that the burden, including costs, of the reports shall be a reasonable relationship to the need for the reports and the benefits to be obtained from the reports.	Understood.
11. In response to any violation of the conditions of this certification, the RWQCB may add to or modify the conditions of this certification as appropriate to ensure compliance.	Understood.
B. Mitigation	
1. Maintenance plan and success criteria: The Lakeside River Park Conservancy shall monitor and maintain the mitigation areas *until success criteria is met* as outlined in the Mitigation Plan.	The LRPC would monitor and maintain the abandoned sand/gravel pits as describe in Volume 2, Section 10.0 Maintenance.

2. Within 90 days of the issuance of this certification, Lakeside River Park Conservancy, shall provide a draft preservation mechanism (e.g. deed restriction, conservation easement, etc.) that will protect all mitigation areas and their buffers in perpetuity. The conservation easement or other legal limitation on the mitigation property shall be adequate to demonstrate that the site will be maintained without future development or encroachment on the site or which could otherwise reduce the functions and values of the site for the variety of beneficial uses of waters of the U.S. that it supports. The conservation easement or other appropriate legal limitation shall prohibit, without exception, all residential, commercial, industrial, institutional, and transportation development, and any other infrastructure development that would not maintain or enhance the wetland functions and values of the site. The Lakeside River Park Conservancy, shall submit proof of a completed preservation mechanism within one year of issuance of this certification.	The LRPC plans to provide a conservation easement on the property. As a requirement of the project's Reclamation Plan, LRPC would be granting an easement to the County of San Diego for transportation at the conclusion of the project.
3. Lakeside River Park Conservancy, shall submit a report (including topography maps and planting locations) to the Regional Board within 90 days of completion of site preparation and planting, describing as-built status of the mitigation project. If the site grading and planting are not completed within six weeks of each other, separate reports will be submitted describing those specific as-built conditions.	The Contractor would be responsible for providing as-builts.

4. The construction of proposed mitigation shall be completed within the same calendar year as impacts occur, or at least no later than 9 months following the close of the calendar year in which impacts first occur (e.g., if impacts occur in June 2003, construction of mitigation for all impacts must be completed no later than September 2004). Delays in implementing mitigation shall result in an increased mitigation ratio by 1.0 acre for each acre of impact for each year, or part thereof, of delay.	Understood.
5. Mitigation areas shall be maintained free of perennial exotic plant species including, but not limited to, pampas grass, giant reed, tamarisk, sweet fennel, tree tobacco, castor bean, and pepper tree. Annual exotic plant species shall not occupy more than 5 percent of the onsite or offsite mitigation areas.	The LRPC plans to use teams of trained volunteers to maintain the site and remove invasive vegetation on a routine basis. Invasive vegetation removal techniques are described in Volume 2, Section 6.0.
6. If at any time during the implementation and establishment of the mitigation area(s), and prior to verification of meeting success criteria, a catastrophic natural event (e.g., fire, flood) occurs and impacts the mitigation area, Lakeside River Park Conservancy, shall be responsible for repair and replanting of the damaged area(s).	Understood.

7. Restoration monitoring reports shall be submitted annually until restoration has been deemed successful. Monitoring reports shall be submitted no later than 30 days following the end of the monitoring period. Monitoring reports shall include, but not be limited to, the following: a.) Names, qualifications, and affiliations of the persons contributing to the report; b.) Tables presenting the raw data collected in the field as well as analyses of the physical and biological data; c.) Qualitative and quantitative comparisons of current restoration conditions with pre-construction restoration and previous mitigation monitoring results; d.) Photodocumentation from established reference points; e.) Survey report documenting boundaries of restoration area; and	The LRPC would provide annual monitoring reports to the Board until the restoration is deemed successful.
8. For the purpose of determining mitigation credit for the removal of exotic/invasive plant species, only the actual area occupied by exotic/invasive plant species shall be quantified to comply with mitigation requirements.	The Application for 401 Water Quality Certification did not request mitigation credit for the removal of exotic/invasive plant species.

9. For purposes of this certification, creation is defined as the creation of vegetated or unvegetated waters of the U.S. where they have never been documented or known to occur (e.g., conversion of nonnative grassland to freshwater marsh). Restoration is defined as the creation of waters of the U.S. where they previously occurred (e.g., removal of fill material to restore a drainage). Enhancement is defined as modifying existing waters of the U.S. to enhance functions and values (e.g., removal of exotic plant species from jurisdictional areas and replacing with native species).	Understood.
D. Reporting	
1. All information requested in this Certification is pursuant to California Water Code (CWC) section 13267. Civil liability may be administratively imposed by the Regional Board for failure to furnish requested information pursuant to CWC section 13268.	Understood.

2. All applications, reports, or information submitted to the Regional Board shall be signed and certified as follows: *"I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment."*	Understood.
3. Lakeside River Park Conservancy, shall submit reports required under this certification, or other information required by the Regional Board, to: Executive Officer California Regional Water Quality Control Board San Diego Region Attn: 401 Certification; File No. 04C-144 9174 Sky Park Court, Suite 100 San Diego, California 92123	Understood.

PUBLIC NOTIFICATION OF PROJECT APPLICATION: On December 24, 2004, receipt of the project application was posted on the SDRWQCB web site to serve as appropriate notification to the public.	Understood.
REGIONAL WATER QUALITY CONTROL BOARD CONTACT PERSON: Mike Porter California Regional Water Quality Control Board, San Diego Region 9174 Sky Park Court, Suite 100 San Diego, CA 92123 858-467-2726 mporter@waterboards.ca.gov	Understood.

401 Waiver of Waste Discharge 04C-144

WATER QUALITY CERTIFICATION: I hereby certify that the proposed discharge from the **San Diego River Habitat, Flood Control, Restoration and Recharge** project (File No. 04C-144) will comply with the applicable provisions of sections 301 ("Effluent Limitations"), 302 ("Water Quality Related Effluent Limitations"), 303 ("Water Quality Standards and Implementation Plans"), 306 ("National Standards of Performance"), and 307 ("Toxic and Pretreatment Effluent Standards") of the Clean Water Act. This discharge is also regulated under California Regional Water Quality Control Board, San Diego Region, Waiver of Waste Discharge Requirements (Waiver Policy) No. 17. Please note that this waiver is conditional and, should new information come to our attention that indicates a water quality problem, the regional Board may issue waste discharge requirements at that time. Except insofar as may be modified by any preceding conditions, all certification actions are contingent on (a) the discharge being limited and all proposed mitigation being completed in strict compliance with the applicants' project description and/or on the attached Project Information Sheet, and (b) on compliance with all applicable requirements of the Regional Water Quality Control Board's Water Quality Control Plan (Basin Plan).	Understood.

H 39667-001

California Regional Water Quality Control Board

San Diego Region

Over 50 Years Serving San Diego, Orange, and Riverside Counties
Recipient of the 2004 Environmental Award for Outstanding Achievement from USEPA

Alan C. Lloyd, Ph.D.
Secretary for Environmental Protection

Arnold Schwarzenegger
Governor

9174 Sky Park Court, Suite 100, San Diego, California 92123-4340
(858) 467-2952 • Fax (858) 571-6972
http:// www.waterboards.ca.gov/sandiego

Action on Request for
Clean Water Act section 401 Water Quality Certification
and Waiver of Waste Discharge Requirements
for Discharge of Dredged and/or Fill Materials

PROJECT: San Diego River Habitat, Flood Control, Restoration and Recharge Project (File No.04C-144)

APPLICANT: Lakeside River Park Conservancy
Attention: Deborah Jones, Executive Director
11769 Waterhill Road
Lakeside, CA 92040

ACTION:

☐ Order for Low Impact Certification

☐ Order for Denial of Certification

☑ Order for Technically-conditioned Certification

☑ Waiver of Waste Discharge Requirements

STANDARD CONDITIONS:

The following three standard conditions apply to all certification actions, except as noted under Condition 3 for denials (Action 3).

1. This certification action is subject to modification or revocation upon administrative or judicial review, including review and amendment pursuant to section 13330 of the California Water Code and section 3867 of Title 23 of the California Code of Regulations (23 CCR).

2. This certification action is not intended and shall not be construed to apply to any discharge from any activity involving a hydroelectric facility requiring a Federal Energy Regulatory Commission (FERC) license or an amendment to a FERC license unless the pertinent certification application was filed pursuant to 23 CCR subsection 3855(b) and the application specifically identified that a FERC license or amendment to a FERC license for a hydroelectric facility was being sought.

3. The validity of any non-denial certification action (Actions 1 and 2) shall be conditioned upon total payment of the full fee required under 23 CCR section 3833, unless otherwise stated in writing by the certifying agency.

The energy challenge facing California is real. Every Californian needs to take immediate action to reduce energy consumption. For a list of simple ways you can reduce demand and cut your energy costs, see our Web-site at http://www.swrcb.ca.gov.
Recycled Paper

ADDITIONAL CONDITIONS:

In addition to the three standard conditions, the Lakeside River Park Conservancy, shall satisfy the following:

A. GENERAL CONDITIONS

1. The Lakeside River Park Conservancy, shall, at all times, fully comply with the engineering plans, specifications and technical reports submitted with this application for 401 Water Quality Certification and all subsequent submittals required as part of this certification.

2. The Lakeside River Park Conservancy, shall comply with the requirements of State Water Resources Control Board Water Quality Order No. 99-08-DWQ, the NPDES General Permit for Storm Water Discharges Associated with Construction Activity.

3. The Lakeside River Park Conservancy, shall maintain a copy of this certification, the application, and supporting documentation at the project site at all times for review by site personnel and agencies.

4. Prior to the start of the project and annually thereafter, the Lakeside River Park Conservancy, shall educate all personnel on the requirements in this certification, pollution prevention measures, and spill response.

5. The Lakeside River Park Conservancy, shall permit the Board or its authorized representative at all times, upon presentation of credentials:

   a) Entry onto project premises, including all areas on which wetland fill or wetland mitigation is located or in which records are kept.
   b) Access to copy any records required to be kept under the terms and conditions of this certification.
   c) Inspection of any treatment equipment, monitoring equipment, or monitoring method required by this certification.
   d) Sampling of any discharge or surface water covered by this Order.

6. The Lakeside River Park Conservancy, shall notify the Regional Board within 24 hours of any unauthorized discharge to waters of the U.S. and/or State; measures that were implemented to stop and contain the discharge; measures implemented to clean-up the discharge; the volume and type of materials discharged and recovered; and additional BMPs or other measures that will be implemented to prevent future discharges.

7. The Lakeside River Park Conservancy, shall, at all times, maintain appropriate types and sufficient quantities of materials onsite to contain any spill or inadvertent release of materials that may cause a condition of pollution or nuisance if the materials reached a waters of the U.S. and/or State.

8. This Certification is not transferable to any person(s) except after notice to the Executive Officer of the San Diego Regional Water Quality Control Board (Regional Board). The applicant shall submit this notice in writing at least 30 days in advance of any proposed transfer. The notice must include a written agreement between the existing and new owner(s) containing a specific date for the transfer of this Certification's responsibility and coverage between the current discharger and the new discharger(s). This agreement shall include an acknowledgement that the existing owner is liable for compliance and violations up to the transfer date and that the new owner(s) is/are liable from the transfer date on.

9. In the event of any violation or threatened violation of the conditions of this certification, the violation or threatened violation shall be subject to any remedies, penalties, process or sanctions as provided for under state law. For purposes of section 401(d) of the Clean Water Act, the applicability of any state law authorizing remedies, penalties, process or sanctions for the violation or threatened violation constitutes a limitation necessary to assure compliance with the water quality standards and other pertinent requirements incorporated into this certification.

10. In response to a suspected violation of any condition of this certification, the Regional Water Quality Control Board (RWQCB) may require the holder of any permit or license subject to this certification to furnish, under penalty of perjury, any technical or monitoring reports the RWQCB deems appropriate, provided that the burden, including costs, of the reports shall be a reasonable relationship to the need for the reports and the benefits to be obtained from the reports.

11. In response to any violation of the conditions of this certification, the RWQCB may add to or modify the conditions of this certification as appropriate to ensure compliance.

B. MITIGATION

1. Maintenance plan and success criteria: The Lakeside River Park Conservancy shall monitor and maintain the mitigation areas *until success criteria is met* as outlined in the Mitigation Plan.

2. Within 90 days of the issuance of this certification, Lakeside River Park Conservancy, shall provide a draft preservation mechanism (e.g. deed restriction, conservation easement, etc.) that will protect all mitigation areas and their buffers in perpetuity. The conservation easement or other legal limitation on the mitigation property shall be adequate to demonstrate that the site will be maintained without future development or encroachment on the site or which could otherwise reduce the functions and values of the site for the variety of beneficial uses of waters of the U.S. that it supports. The conservation easement or other appropriate legal limitation shall prohibit, without exception, all residential, commercial, industrial, institutional, and transportation development, and any other infrastructure development that would not maintain or enhance the wetland functions and values of the site. The Lakeside River Park Conservancy, shall submit proof of a completed preservation mechanism within one year of issuance of this certification.

3. Lakeside River Park Conservancy, shall submit a report (including topography maps and planting locations) to the Regional Board within 90 days of completion of site preparation and planting, describing as-built status of the mitigation project. If the site grading and planting are not completed within six weeks of each other, separate reports will be submitted describing those specific as-built conditions.

4. The construction of proposed mitigation shall be completed within the same calendar year as impacts occur, or at least no later than 9 months following the close of the calendar year in which impacts first occur (e.g., if impacts occur in June 2003, construction of mitigation for all impacts must be completed no later than September 2004). Delays in implementing mitigation shall result in an increased mitigation ratio by 1.0 acre for each acre of impact for each year, or part thereof, of delay.

5. Mitigation areas shall be maintained free of perennial exotic plant species including, but not limited to, pampas grass, giant reed, tamarisk, sweet fennel, tree tobacco, castor bean, and pepper tree. Annual exotic plant species shall not occupy more than 5 percent of the onsite or offsite mitigation areas.

6. If at any time during the implementation and establishment of the mitigation area(s), and prior to verification of meeting success criteria, a catastrophic natural event (e.g., fire, flood) occurs and impacts the mitigation area, Lakeside River Park Conservancy, shall be responsible for repair and replanting of the damaged area(s).

7. Restoration monitoring reports shall be submitted annually until restoration has been deemed successful. Monitoring reports shall be submitted no later than 30 days following the end of the monitoring period. Monitoring reports shall include, but not be limited to, the following:

    a) Names, qualifications, and affiliations of the persons contributing to the report;
    b) Tables presenting the raw data collected in the field as well as analyses of the physical and biological data;

c) Qualitative and quantitative comparisons of current restoration conditions with pre-construction restoration and previous mitigation monitoring results;
d) Photodocumentation from established reference points;
e) Survey report documenting boundaries of restoration area; and

8. For the purpose of determining mitigation credit for the removal of exotic/invasive plant species, only the actual area occupied by exotic/invasive plant species shall be quantified to comply with mitigation requirements

9. For purposes of this certification, creation is defined as the creation of vegetated or unvegetated waters of the U.S. where they have never been documented or known to occur (e.g., conversion of nonnative grassland to freshwater marsh). Restoration is defined as the creation of waters of the U.S. where they previously occurred (e.g., removal of fill material to restore a drainage). Enhancement is defined as modifying existing waters of the U.S. to enhance functions and values (e.g., removal of exotic plant species from jurisdictional areas and replacing with native species).

D. REPORTING

1. All information requested in this Certification is pursuant to California Water Code (CWC) section 13267. Civil liability may be administratively imposed by the Regional Board for failure to furnish requested information pursuant to CWC section 13268.

2. All applications, reports, or information submitted to the Regional Board shall be signed and certified as follows:

> *"I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment."*

3. Lakeside River Park Conservancy, shall submit reports required under this certification, or other information required by the Regional Board, to:

> Executive Officer
> California Regional Water Quality Control Board
> San Diego Region
> Attn: 401 Certification; File No. 04C-144
> 9174 Sky Park Court, Suite 100
> San Diego, California 92123

PUBLIC NOTIFICATION OF PROJECT APPLICATION:

On December 24, 2004, receipt of the project application was posted on the SDRWQCB web site to serve as appropriate notification to the public.

REGIONAL WATER QUALITY CONTROL BOARD CONTACT PERSON:

Mike Porter
California Regional Water Quality Control Board, San Diego Region
9174 Sky Park Court, Suite 100
San Diego, CA 92123
858-467-2726
mporter@waterboards.ca.gov

WATER QUALITY CERTIFICATION:

I hereby certify that the proposed discharge from the **San Diego River Habitat, Flood Control, Restoration and Recharge** project (File No. 04C-144) will comply with the applicable provisions of sections 301 ("Effluent Limitations"), 302 ("Water Quality Related Effluent Limitations"), 303 ("Water Quality Standards and Implementation Plans"), 306 ("National Standards of Performance"), and 307 ("Toxic and Pretreatment Effluent Standards") of the Clean Water Act. This discharge is also regulated under California Regional Water Quality Control Board, San Diego Region, Waiver of Waste Discharge Requirements (Waiver Policy) No. 17. Please note that this waiver is conditional and, should new information come to our attention that indicates a water quality problem, the regional Board may issue waste discharge requirements at that time.

Except insofar as may be modified by any preceding conditions, all certification actions are contingent on (a) the discharge being limited and all proposed mitigation being completed in strict compliance with the applicants' project description and/or on the attached Project Information Sheet, and (b) on compliance with all applicable requirements of the Regional Water Quality Control Board's Water Quality Control Plan (Basin Plan).

John H. Robertus
Executive Officer
Regional Water Quality Control Board

1/12/2006
Date

ATTACHMENT 1
PROJECT INFORMATION

Applicant:	Lakeside River Park Conservancy Ms. Deborah Jones, Executive Director Ms. Robin Rierdan 11769 Waterhill Road Lakeside, CA 92040 Telephone: 619-443-4770 Facsimile: 619-443-4740 E-mail: r2rierdan@cox.net
Applicant Representatives:	Huffman and Carpenter Ms. Lori Carpenter 500 Damonte Ranch Parkway #929 Reno, Nevada, 89521 Telephone: 775-828-1991 Facsimile: 775-828-2302 E-mail: lori@nvwetlands.com
Project Name:	San Diego River Habitat, Flood Control, Restoration and Recharge Project
Project Location:	The project is in the unincorporated community of Lakeside, San Diego County, California. The project is located in the active channel, banks, and floodplain of the San Diego River, between Channel and Riverford Roads. This reach of the River is parallel and north of State Route 67. Access to the project site is best gained from Wintergardens Blvd. The confluence of Los Coches Creek and the River occur within the project area. The center of the project is approximately located at latitude 32°51'30" north, longitude 116°56'10" west.
Type of Project:	Riverine restoration, flood control, and groundwater recharge.
Project Description:	The proposed project is the morphologic restoration of a 127.6-acre reach of the San Diego River. The objectives of the project is to improve riverine/riparian habitat, improve water quality, lower flood elevations, and improve recharge of the unconfined alluvial aquifer. The project components will include filling former sand mining pits (ponds) that are in the active channel of the River, creating a marsh, removing fill from floodplain of the River, creating woodlands, and building a constructed water quality wetland to capture and treat Los Coches Creek upstream of the confluence.
Federal Agency/Permit:	1 - Army Corps of Engineers, Nationwide Permit 27. 2 - Federal Emergency Management Agency, Conditional Letter of Map Revision.

Other Required Regulatory Approvals:	1 - California Department of Fish and Game, Streambed Alteration Agreement. 2 – County of San Diego, Surface Mining and Reclamation Act, Reclamation Plan.
California Environmental Quality Act (CEQA) Compliance:	County of San Diego, Addendum to an Environmental Impact Report, Upper San Diego River Improvement Project, 1998, State Clearing House No. 98041146; Notice of Determination finding that the project will not have a significant effect on the environment, August 19, 2005.
Receiving Water:	San Diego River and Los Coches Creek. San Diego Hydrologic Unit, Lower San Diego hydrologic area, Santee hydrologic subarea (907.12).
Impacted Waters of the United States:	The proposed project will temporarily impact 1.46-acre of vegetated and 9.69-acres of unvegetated (open water) waters of the U.S.
Dredge Volume:	None
Related Projects Implemented/to be Implemented by the Applicant(s):	The Lakeside River Park Conservancy has not disclosed a related project.
Compensatory Mitigation:	This restoration project is self-mitigating.
Best Management Practices (BMPs):	The Storm Water Pollution Plan for San Diego River Habitat, Flood Control, Restoration and Recharge Project (July 2005), prepared by Huffman & Carpenter, proposes adequate construction and post-construction BMPs. *Construction Phase* This project is subject to the General Storm Water Permit for Construction Activity (SWRCB Order 99-08). The Storm Water Pollution Prevention Plan proposes standard construction structural and non-structural Best Management Practices (BMPs). Some of these BMP categories include housekeeping, solid waste containment, erosion control, sediment control, construction materials delivery and storage, vehicle and equipment maintenance, and re-vegetation with native plants. *Post-Construction Phase* This project will not add impervious areas or add urban pollutants to the runoff. Instead, this project will improve water quality by the construction of a wetland designed to treat the existing pollutants in Los Coches Creek. Also, the conversion of open-water ponds in the River to freshwater marsh will assimilate and sequester existing pollutants in the San Diego River.
Public Notice:	December 24, 2004

EB

County of San Diego

JACK MILLER
DIRECTOR

DEPARTMENT OF ENVIRONMENTAL HEALTH
LAND AND WATER QUALITY DIVISION
P.O. BOX 129261, SAN DIEGO, CA 92112-9261
619-338-2222/FAX 619-338-2315/1-800-253-9933
www.sdcdeh.org

ELIZABETH POZZEBON
ASSISTANT DIRECTOR

OFFICIAL NOTICE

May 21, 2010

Mr. Carl Stiehl
Redevelopment Coordinator
San Diego County Department of Land Use
5201 Ruffin Road
San Diego, CA 92123

Dear Mr. Stiehl:

PAST DUE NOTICE
VOLUNTARY ASSISTANCE PROGRAM CASE FILE NO: H39667-001
USDRIP FHR/LAKESIDE RIVER PARK CONSERVANCY
12124 INDUSTRY ROAD, LAKESIDE, CA 92040

A review of the Voluntary Assistance Program files indicates that a copy of the Section 401 Certification from the Regional Water Quality Control Board that is required to close this case is **PAST DUE**.

Within thirty (30) days of receipt of this letter, please submit a copy of this document or a written update stating when the document will be made available. Update letters must be submitted until such time as the Voluntary Assistance Program case is resolved.

Please contact me at (619) 338-2243 if you have any questions regarding this matter.

Sincerely,

Ellen Beacon

ELLEN BEACON, PG #7566
Project Manager
Site Assessment and Mitigation Program

EB:kd

cc: Bob Forsythe, Lakeside Conservancy

WP/H39667-001-510VAPPD

PERSONNEL

Hwy 52 →

redevelopment area

lots of dirt moved from that area for Hwy 52 etc — redevelopment —

Robin Rierdan 11/18/09

— when ponds filled in — 2007?

Bob Forsythe now with Lakeside River Park Restoration project.

ask Bob Forsythe who in land use → is in charge of project

County of San Diego

DEPARTMENT OF ENVIRONMENTAL HEALTH
LAND AND WATER QUALITY DIVISION
P.O. BOX 129261, SAN DIEGO, CA 92112-9261
619-338-2222/FAX 619-338-2315/1-800-253-9933
www.sdcounty.ca.gov/deh/lwater/sam

PONDS filled in

TELEPHONE LOG – ELLEN BEACON

PHONE NUMBER:
DATE: 11/17/09 **FILE NO.: H39667-001**

PERSON CONTACTED: Robin Rierdan, Lakeside's River Park Restoration Project

Left message → see back 443-4770

Jarrett Kanaya – 693018

Public works grading work

Carl Stiehl – 858-694-2216 landscape planner – Coordinate Redevelop

PM –

KIVA – open – site Plan –

2008 –

Property APN 382-250-32-00 · 11424 Industry Road Lakeside 92040

858 694-3030

~~Bob Forsythe~~ 858-694-3856 (?) 3556 ?

Don Kraft →

0

Rachel Rodriedez Public Rd

Bob Forsythe 443-4770 Works for River Park Conservancy – (Feb 2006)

KIVA →

County of San Diego

GARY W. ERBECK
DIRECTOR

DEPARTMENT OF ENVIRONMENTAL HEALTH
LAND AND WATER QUALITY DIVISION
P.O. BOX 129261, SAN DIEGO, CA 92112-9261
619-338-2222/FAX 619-338-2315/1-800-253-9933
http://www.sdcdeh.org

JACK MILLER
ASSISTANT DIRECTOR

November 30, 2009

Mr. Carl Stiehl
San Diego County DPLU
5201 Ruffin Road, Ste. B
San Diego, CA 92123

RE: VOLUNTARY ASSISTANCE PROGRAM CASE – H39667-001
COUNTY DPLU, LAKESIDE'S RIVERPARK, 12124 INDUSTRY RD., LAKESIDE, CA 92040

Dear Responsible Party:

This letter has been prepared to inform the responsible parties of all Voluntary Assistance Program (VAP) cases in the Department of Environmental Health, Site Assessment and Mitigation (SAM), of a new requirement for electronic submittals of project information and progress reports. The following information about your VAP case generated after the effective date of January 1, 2010, must be uploaded to the State Water Resources Control Board's (SWRCB) GeoTracker Geographic Information System:

- Completed reports of results of soil, soil vapor, and water analyses,
- Groundwater monitoring reports, and
- Work plans for proposing further work.

Please note that electronic uploading of the above information does not replace the requirement for submittal of paper copies. Submittals of paper copies of the above information and all other communications to SAM must be continued as usual.

Please contact your environmental consultant(s) and have them submit their data and reports to the GeoTracker on a regular basis until the closure of the case has been obtained.

For information related to electronic submittal of above case information to GeoTracker please call the GeoTracker Help Desk at 866-480-1028, contact geotracker@waterboards.ca.gov or visit the following SWRCB's web site:

http://www.waterboards.ca.gov/ust/cleanup/electronic_submittal/index.shtml

Should you have any questions, please contact me at Nasser.sionit@sdcounty.ca.gov or 619-338-2239.

Sincerely,

NASSER SIONIT, Ph.D.
VAP Program Coordinator
Environmental Health Specialist
Site Assessment and Mitigation
Department of Environmental Health

WP/VAPGEOTRACKERMAILING-1109(H39667-001)

NS:kd

cc: SAM case files

Area 3 – Fill –

Kleinfelder 2004 report

11 borings – KB1 – KB-11

The 22 metals 6010/7470 – Where Table

TRPH 418.1

(TPHg & TPHd) 8015

Pesticides/PCBs 8081A / 8082

VOCs 8260B

SVOCs 8270

Tables in Kleinfelder report

verify – pits filled w/ debris from Area 3

&

Who's in charge of permit in Landuse –

11/25/09 Bob Forsythe = DEH / DPLU =

he said

→ Carl Stiehl → Landuse · 858-694-2264

Coordinator Redevelopment

Land use Planner

Advanced planning policy/ordinance section

1/5/10 - talked to Bob F again – he's going to email Kleinfelder report – explained what I need to close case data + something stating – that pits were filled w material from Area 3

Approved 2008 ↔

Restoration of a Reach of the San Diego River within the Unincorporated Community of Lakeside, San Diego County, California

The San Diego River is approximately 45 miles long and extends from the mountains in the Cleveland National Forest to the Pacific Ocean. The River flows through unincorporated areas (including the community of Lakeside), the City of Santee, and the City of San Diego. In a portion of Lakeside, the River was been mined for aggregate for some 60-80 years. After various mining projects were completed, abandoned mining pits were left in the active channel, banks, and floodplain of the river. Also, mining waste – aggregate material not suitable for sale – was dumped on the floodplain, on the banks, in the channel, and in riparian areas. Over the years, these disturbed areas became infested with invasive, non-native plant species, such as *Arundo donax* (giant reed). The combination of these impacts degraded water quality, beneficial uses, and habitats. In response to these problems, local citizens formed the Lakeside Conservancy, with the purpose of implementing projects to restore a reach of the San Diego River. These restoration projects improved water quality functions, beneficial uses, and habitats.

Fig. 1. Invasive, non-native *Arundo donax* (giant reed) stand before removal.

The lower 20 miles of the San Diego River is on the 303(d) list for TDS, phosphorus, and low dissolved oxygen. A TMDL has not been developed for this portion of the river and there are no immediate plans to develop one. The reach of the San Diego River where this restoration project was implemented is within the lower portion of the River that is 303(d)-listed and is approximately 1.5 miles long and 0.25 mile wide. A tributary to the river, Los Coches Creek, drains an urbanized watershed and meets the River in this reach.

Fig. 2. First constructed wetland treatment cell before construction.

Over time, groundwater flowed into the abandoned mining pits and the mining pits became deep, open water lakes. The pits / lakes had steep-sides, which limited establishment of marshes, which in turn limited pollutant and nutrient sequestration and transformation. The mining waste that was dumped (discharged) was very fine-grained sands, silts, and clays. Invasive, non-native plants in riparian areas replaced most of the native riparian vegetation and impacted WILD, RARE, REC-1, and REC-2, beneficial uses.

In 2005, the non-profit Lakeside Conservancy broke ground on the San Diego River Restoration Project. The goals of the project were to restore riverine and riparian functions - habitat, water quality, and beneficial uses. These goals were accomplished by removing fill in floodplain and riparian areas, filling most of the depth of the mining pits with clean fill, eradicating invasive, non-native plant species, planting native plants, and constructing a treatment wetland to treat urban runoff in Los Coches Creek before it entered the river. Real time water quality data from one pit / lake is being collected and transmitted telemetrically.

Fig. 3. First constructed wetland treatment cell after grading.

Fig. 4. Removed *Arundo donax* (giant reed) biomass stockpiled for grinding.

Most of the project goals were met. Additional fill will be removed in January 2008, more native riparian plants will be planted, and more floodplain will be restored. By summer of 2008, telemetrically transmitted water quality data will be available at the Lakeside Conservancy website (http://www.lakesideriverpark.org/index.html).

As of December 2007, this project has resulted in significant restoration of the physical and biological integrity of this reach of the San Diego River. Additional restoration will be accomplished with the removal of additional mining waste from the floodplain starting in January 2008. Water quality has been improved through the removal of fine-grained mining waste, the installation of a treatment wetland at the Los Coches Creek confluence, and the introduction of freshwater marsh where only open water or fill was present. The project has resulted in significant restoration of WILD, RARE, REC-1, and REC-2 beneficial uses.

Fig. 5. Constructed wetland (1st and 2nd cells) during final grading.

The success of this 1.5-mile long project will not result in removing the lower 20 miles of the San Diego River from the 303(d) list. However, this project should be viewed as a model for improving water quality, beneficial uses, and riverine functions elsewhere along the San Diego River. Implementation of projects like this in other degraded portions of the San Diego River would result in significant restoration of the physical and biological integrity of the river as a whole and could result in removal of the entire river from the 303(d) list.

Project partners include:

- California State Water Resources Control Board (Proposition 40 grant)
- California Resources Agency (Environmental Enhancement and Mitigation Program)
- California Department of Water Resources (Proposition 40 grant)
- California Coastal Conservancy
- San Diego River Conservancy
- California Wildlife Conservation Board
- California Department of Transportation
- U.S. Fish and Wildlife Service
- Metropolitan Water District of Southern California
- San Diego County Water Authority
- San Diego Association of Governments
- Riverview Water District (now merged with Lakeside Water District)
- San Diego River Park Foundation
- Hanson Aggregates
- Union Bank of California
- The Parker Foundation
- The Ed and Mary Fletcher Family Foundation
- Las Patronas
- The Hattie Ettinger Fund
- The Linnie Cooper Fund
- The Bill Kuni Fund
- The Szekely Farley Foundation
- The McCarthy Fund

Over $16.5 million has been raised for the project, most of which has been used to acquire land for restoration. This project did not receive 319 funds. However, the San Diego Regional Water Quality Control Board used 319 program resources to provide project oversight and consultation.

The project site is located in the 52nd Congressional District.

Baseline water quality data has been collected since the bioswales and constructed wetland for water quality treatment were graded. However, bioswales and constructed wetlands are not functional until they are fully vegetated as designed. The baseline water quality data collected (previous and ongoing) during the vegetation planting and vegetation maturation phases will be compared to future data when the bioswales and constructed wetlands are fully vegetated as designed. It is anticipated that vegetation will be mature, as designed, by fall 2008.

CONTACT INFORMATION:

Mike Porter
California Regional Water Quality Control Board San Diego Region
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858-467-2726

Chiara Clemente
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Bruce Posthumus
California Regional Water Quality Control Board San Diego Region
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858-467-2964

US

Bob Forsythe – SD DPW –

Clay, James

From: Tappen, Dan
Sent: Thursday, September 29, 2005 11:17 AM
To: Clay, James
Subject: Review of proposed asbestos soil testing

James,

It is difficult to comment on this since I do not have a good sense of what is going on. Given that, my comments are:

- they list Forensic Analytical of Garden Grove as the certified NVLAP lab. Only Forensic Analytical in Rancho Dominguez and Hayward are listed on the NVLAP web site. http://ts.nist.gov/ts/htdocs/210/214/scopes/plmtm.htm This could be an error in listing the city.

- If you are planning on disposal of the soil, the lab should also be a California haz waste (ELAP) lab although enforcement of this is vague. Forensic Analytical in Rancho Dominguez and Hayward are listed on the ELAP web site. http://www.dhs.ca.gov/ps/ls/elap/lab_lists/ELAPLablist.xls

- There was a technical mistake referring to when point counting is required by APCD. It is if the sample contains less than 10% asbestos, not 1%.

- There is a relatively new Air Resources Board regulation dealing with asbestos containing material used in unpaved roads (see attached web link). We do not get involved too much with this, but they have a 0.25 % asbestos criteria and they also require point counting http://www.arb.ca.gov/toxics/asbestos/atcm/asbp1igd.pdf

I am not sure I have answered your questions. Feel free to call and discuss this with me.

Dan Tappen
Supervising Industrial Hygienist
Department of Environmental Health
Occupational Health Program
work # (858) 694-2532
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June 17, 2005 Regional Board

Name	Agency	email
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Darryl Fowler	DEH-SAM	dfowler@sdcounty.ca.gov
James Clay	DEH-SAM	james.clay@sdcounty.ca.gov
Kelly Fisher	CDFG	kfisher@dfg.ca.gov
STACEY BACZKOWSKI	RWQCB	sbaczkowski@waterboards.ca.gov
CHIARA CLEMENTE	"	cclemente@waterboards.ca.gov
JACQUES LORD, CEG	KA	jlord@kleinfelder.com

Lakeside River park Conservancy

- 100 acres
- Sand mined
- Northside - remove constriction
  - Area 1, 2 not touching
  - Area 3 - remove fill - export offsite
- 2 loop ponds
  - fill
    - 600,000 yd^3
    - 113,000 of it into ponds
    - export rest,
    - 500,000 yd^3 Caltrans
      - thru 52 extension
      - until then - stockpile in area

Origin of Fill

- 2,000,000 yd^3 fill as part of Calmat pla
  - residue from mining
  - from all over the county
  - crushed - asphalt, concrete
  - 11 borings - No metals beyond background
    - 200 ppm TRPH
- Section 401 certification needed from RWQCB
- homogeneous fill - Area 3
  - no construction debris 3
  - Arsenic > PRGGs but above goal
- deepest 16-19' of fill
  - then fluvial deposits

- leachate testing asphalt
  - TCLP
  - SPLP
  - Nothing found leaching out

From hot samples
- Bioassay. fathead minnows 100% alive 6 animals
  Screening. Water flea - some died. but area may not be used as fill
  - Acute effects in small #s
- Substrate issues
- may need to CAP
- Scouring conditions - better for downstream
  - Chemical + physical issues

early

= confirm in early??

Permits
= SAMARA R plan
- RWQCB WDR. we need copy?
- Asbestos
- NEA for Area J
  - in place
- statistical/grid

Clay, James

From: James Dodson [jamesdodson@cox.net]

Sent: Tuesday, May 31, 2005 1:11 PM

To: Jacques Lord; Clay, James; kfisher@dfg.ca.gov; waynewchang@changconsultants.com; McNeill, Kerry

Cc: Robin Rierdan; Lori Carpenter; Chiara Clemente

Subject: Lakeside's River Park Conservancy//Management of Inert Debris

Jacques Lord, Kleinfelder
James Clay, County DEH
Kelly Fisher, CDFG
Kerry McNeill, County LEA
Wayne Chang, Chang Consultants

As I have discussed with each of you, a large quantity of fill materials were deposited on the Lakeside Conservancy project site as a part of a SMARA reclamation plan.
Under U.S. Army Corps of Engineer's Nationwide Permit 27 and a Section 401 Certification from the RWQCB, the Lakeside Conservancy would partially backfill two water-filled sand and gravel extraction pits (not addressed in the mining operator's reclamation plan) to create emergent freshwater marshes using fill materials from the site (i.e., from Area 3).

Data generated by Kleinfelder, Inc., after extensive geotechnical and environmental analysis of the materials, supports the conservancy's belief that the fill materials from Area 3 constitute "inert debris" as defined by the Integrated Waste Management Board regulations and that the proposed use of these inert debris would be safe for potential public and environmental receptors.

Because of the "public benefit" nature of this project, the Lakeside Conservancy seeks close coordination with each of you to ensure that such use appropriately protects public health and safety and environmental health and integrity.

The primary reviewing agency is the RWQCB. The Lakeside Conservancy is requesting a meeting among the applicant and relevant agencies regarding it's proposed use of the fill materials. The RWQCB is available on the 13th, 14th, and 17th of June. Its preference is for the 13th of June at 2:00 pm. Please respond at your earliest opportunity regarding your (or your agency's) availability to meet on each of the aforementioned dates.

Regards,
James R. Dodson

James R. Dodson Consulting
12963 Creek Park Dr.
Poway, CA 92064
858-395-3681

Mr. Forsythe:

Yes, we sent a detailed letter and a complete package of the Kleinfelder reports to the RWQCB in early April 2005. You should have a copy of the submittal letter addressed to John Odermatt. If you do not, let me know and I will FAX an additional copy to you.

For a variety of reasons the RWQCB has not yet reviewed the package and our belief that the fill materials from Area 3 are properly termed "inert debris"/"inert waste" within the meaning of the Integrated Waste Management Board regulations. The package has been delivered from Mr. Odermatt's group to Mike Porter (who would be issuing the 401 Certification from RWQCB).

As I believe Ms. Millman has advised you, Mr. Porter will not be able to review the package until after June 8 given his requirements for regulating the construction of the new Fashion Valley bridge. At that time (unless a sooner time can be arranged), LEA, CDFG, County DEH, RWQCB, and the Lakeside Conservancy will meet to discuss the matter and an appropriate resolution.

Regards,

James R. Dodson

James R. Dodson Consulting

12963 Creek Park Dr.

Poway, CA 92064

858-395-3681

May 20, 2005

TO: James Clay
County Department of Environmental Health
VAP Group

Phone: 1-619-338-2205
FAX No. 1-619-338-2315

FROM: James R Dodson Consulting

Phone: 1-858-395-3681
FAX No. 1-858-842-1059

Re: Lakeside's River Park Conservancy
River Restoration Project

VX1394

Dear Mr. Clay:

Attached is a copy of the April 6, 2005, letter I forwarded to Mr. John Odermatt at RWQCB concerning the Fill Materials described in the various Kleinfelder reports.

The letter summarizes the activities planned for the project site, including those activities that would reuse or remove the fill materials from Area 3. The letter also summarizes the finding made by Kleinfelder in its three reports and based on those findings describes why the lakeside Conservancy believes that the fill materials in Area 3 are "inert debris".

Please let me know if there is anything else you need as a part of your review process.

Regards,
James R Dodson

James R Dodson Consulting
12963 Creek Park Dr.
Poway, CA 92064
1-858-395-3681
jamesdodson@cox.net

James:
For your VAP File H39667 (VX1394). Please contact Mike Porter (RWQCB) & Richard Haas (Assistant Director) Chiara Clemente (RWQCB) based on John Anderson's suggestion.
Thanks, NS

County of San Diego

GARY W. ERBECK
DIRECTOR

DEPARTMENT OF ENVIRONMENTAL HEALTH
LAND AND WATER QUALITY DIVISION
P.O. BOX 129261, SAN DIEGO, CA 92112-9261
(619) 338-2222 FAX (619) 338-2377
1-800-253-9933

SB 1248 NOTIFICATION

April 26, 2005

NUMBER OF PAGES: 6

FAX TO:

✓John Anderson	Senior Engineering Geologist San Diego RWQCB	Fax Tel	858-571-6972 858-467-2975
Greg Holmes	Unit Chief, Cleanup Operations Southern California DTSC, Cypress Office	Fax Tel	714-484-5438 714-484-5461

FROM:

Nasser Sionit	VAP Coordinator Dept. Environmental Health	Fax Tel	619-338-2377 619-338-2239

The County of San Diego, Department of Environmental Health (DEH) proposes to enter into a Remedial Action Agreement with the Responsible Parties/Applicants on sites listed below. Pursuant to the Health and Safety Code 101480-101490, the following information is provided as notification to your agency. A copy of the following application(s) is attached.

DEH File No:	Site Name & Address	Any Known Regulatory Involvement at Site?
H06263-002	Frmr. E&E Transport., 13420 Community, Poway	
H39666-110	Gran Havana Cigars, 502 J St., SD	
H39667-001	County DPLU, 12124 Industry Rd., Lakeside	Yes
H39668-001	Lilac Ranch, 31928 Lilac Rd., Valley Center	

Mike Porter is working on 401 Permit & Chiara Clemente is working on their Grant (Prop)

John P. Anderson — RWQCB / DTSC (Circle one) — 4/27/05 (Date)
Signature

Please sign to acknowledge receipt of this notification. Please fax a copy to Nasser Sionit at (619) 338-2377. Thank you.

County of San Diego

GARY W. ERBECK
DIRECTOR

DEPARTMENT OF ENVIRONMENTAL HEALTH
LAND AND WATER QUALITY DIVISION
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RICHARD HAAS
ASSISTANT DIRECTOR

SB 1248 NOTIFICATION

April 26, 2005

NUMBER OF PAGES: 6

FAX TO:

John Anderson	Senior Engineering Geologist San Diego RWQCB	Fax Tel	858-571-6972 858-467-2975
✓ Greg Holmes	Unit Chief, Cleanup Operations Southern California DTSC, Cypress Office	Fax Tel	714-484-5438 714-484-5461

FROM:

Nasser Sionit	VAP Coordinator Dept. Environmental Health	Fax Tel	619-338-2377 619-338-2239

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H39668-001	Lilac Ranch, 31928 Lilac Rd., Valley Center	

Greg Holmes
Signature

RWQCB / DTSC (Circle one)

4/27/05
Date

Signature only indicates receipt of notification.

Please sign to acknowledge receipt of this notification. Please fax a copy to Nasser Sionit at (619) 338-2377. Thank you.

REPORT OF
AREA 1 ADDITIONAL UNDOCUMENTED FILL ASSESSMENT ACTIVITIES FUTURE LAKESIDE RIVERPARK HIGHWAY 67 AND WINTER GARDENS BOULEVARD LAKESIDE, CALIFORNIA

December 14, 2004

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A Report Prepared for:

Ms. Robin Rierden
Lakeside Conservancy
11769 Waterhill Road
Lakeside, California 92040-2905

REPORT OF
AREA 1 UNDOCUMENTED FILL
ADDITIONAL ASSESSMENT ACTIVITIES
FUTURE LAKESIDE RIVERPARK
HIGHWAY 67 AND
WINTER GARDENS BOULEVARD
LAKESIDE, CALIFORNIA

Project No. 44102

Prepared by:

Dan Eldredge
Project Senior Technician

Jacques P. Lord, CEG 2232
Environmental Department Manager

KLEINFELDER, INC.
5015 Shoreham Place
San Diego, California 92122
(858) 320-2000

December 14, 2004

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APPENDICES

Appendix A Trench Logs
Appendix B Laboratory Reports and Chain-of-Custody Documents

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1.0 SITE INFORMATION

Name of Facility:	Area 1; Future Lakeside Riverpark Former VULCAN materials property
Site Address:	Channel Road & Maple View Road Lakeside, California 92040
Assessor's Parcel Number:	382-250-3000
Current Property Owner:	Lakeside Conservancy
Contact Person:	Ms. Robin Rierdon Lakeside Conservancy 11769 Waterhill Road Lakeside, CA 92040-2905 (619) 443-4770
Consultant:	Kleinfelder, Inc. 5015 Shoreham Place San Diego, CA 92122 (858) 320-2000

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2.0 INTRODUCTION

Kleinfelder, Inc. (Kleinfelder) was contracted by the Lakeside Conservancy in a competitive bid process to perform an assessment of the undocumented fill at the three parcels located north of Highway 67 and Winter Gardens Boulevard in Lakeside, California. The assessment activities for the undocumented fill were conducted in general accordance with the *Proposal to Assess Undocumented Fill Areas*, dated April 1, 2004, prepared by Kleinfelder, Inc. Fieldwork was performed on May 17, 2004, and the final report was issued July 20, 2004.

Part of the results from the activities of May 17, 2004, was reported petroleum hydrocarbon-bearing fill material in Area 1, the eastern-most parcel, adjacent to Channel Road. In addition to reported hydrocarbons, two of the four borings did not penetrate below 5 feet from the surface. After meeting with the Client and discussing questions that the assessment raised and options for answering those questions, Kleinfelder prepared a Scope of Services Change Order #1 (SSC#1) entitled *Petroleum Hydrocarbon-Bearing Soils Assessment*, dated August 6, 2004.

The objectives for the proposed SSC #1 were to:

- Assess the nature and extent of the petroleum hydrocarbon-bearing soils reported at the Site Area 1, Boring KB-17;
- Assess the potential for a petroleum hydrocarbon release into the San Diego River; and
- Assess the geotechnical nature of the fill material in Area 1 between KB-17 and KB-18 as boring refusals at all 4 borings in the Area 1 truncated collection of sufficient fill data.

The Client authorized the additional field work, and Kleinfelder mobilized to the Site August 26, 2004, and performed the additional assessment activities.

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3.0 BACKGROUND

The Site consists of one of three parcels that will be included in the proposed Lakeside Riverpark restoration project, located Northwest of the intersection of Channel Road and Maple View Road, in the Lakeside area of San Diego County, California (Figure 1). Adjacent properties include the San Diego River to the north and west, Channel Road to the east, and a mobile crane maintenance yard to the south. The Site is an approximately 20-acre area formerly operated by the Vulcan Materials, Co. for sand and gravel mining. Apparently mined areas of the Site were backfilled with undocumented fill materials, including demolition debris (e.g., concrete and asphalt), petroleum hydrocarbon-bearing soils, and bricks.

The Lakeside Conservancy would like to use the fill material as a barrier berm or have it removed from the parcel as a part of the San Diego River restoration efforts. The results of the first round of sampling in July indicated that additional information was needed in Area 1, the eastern-most parcel. Kleinfelder proposed a supplemental assessment program of Area 1 to provide additional fill documentation in order for the Lakeside Conservancy to assess the fill and evaluate the options for how to handle the Area 1 material. This report presents the results, recommendations, and conclusions based on the additional activities performed in Area 1.

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4.0 FIELD INVESTIGATION

Field investigation activities were performed on August 26, 2004. Kleinfelder applied biased or judgemental, sampling to the additional assessment activities in Area 1. KB-17 was known to contain concentrations of total recoverable petroleum hydrocarbon (TRPH). The first sampling location was placed beside KB-17 to correcate the boring log to the trenching samples. A Caterpillar 315 Excavator with an 18-inch wide toothed bucket (Provided by SOCLARIS Contracting) was used to dig short trenches, or potholes, to a maximum depth of 16 feet below grade. A County of San Diego boring permit was not required since trenching with an excavator was used to collect subsurface information, rather than a drilling rig.

Six (6) locations were chosen as a pragmatic yet effective balance between controlling cost and assessing the Area 1 fill material. Kleinfelder had proposed additional potholes or sampling trenches in SSC#1, but the subsurface conditions and field observations in the trenches made Kleinfelder revise the sampling strategy during the work. The petroleum-bearing fill material appeared in all six trenches, and additional sampling after the first six was judged unnecessary at the time.

Kleinfelder advanced six trenches to depths ranging from 12 to 16 feet below ground surface (bgs). Figure 2 presents the Site and the approximate trench locations. Kleinfelder attempted to collect soil samples of petroleum hydrocarbon-bearing material in each boring, as well as native soils beneath the fill. The samples were submitted for environmental laboratory testing as follows:

- A total of 13 soil samples were collected from six trenches;
- 13 were submitted for TRPH; and
- The two samples reporting the highest TRPH were also analyzed for Title 22 metals, volatile organics (VOCs), semi-volatile organics (SVOCs), Pesticides and polychlorinated biphenols (Pest/PCBs) and total petroleum hydrocarbon-gasoline, diesel, and heavy oil ranges (TPH-g, TPH-d, and TPH-ho).

Table 1 presents a summary of the samples collected and submitted for analysis during the fieldwork performed on August 26.

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Table 1
Area 1 Trench Soil Sampling Summary for August 26,2004

Pothole Number	Sample Depth (feet bgs)	Sample Name	Sample Material
KPH-1	11	KPH-1-11	Fill
KPH-1	13	KPH-1-13	Fill
KPH-1	15	KPH-1-15	Fill
KPH-2	13	KPH-2-13	Fill
KPH-2	16	KPH-2-16	Indigenous soil
KPH-3	8	KPH-3-8	Fill
KPH-3	16	KPH-3-16	Fill
KPH-4	7	KPH-4-7	Fill
KPH-4	12	KPH-4-12	Fill
KPH-4	12.5	KPH-4-12.5	Indigenous soil
KPH-5	10	KPH-5-10	Fill
KPH-6	10	KPH-6-10	Fill
KPH-6	16	KPH-6-16	Fill
The borehole sample data below from May 17, 2004 at Area 1 was inadequate due to lack of recovery and inability to drill past 5 feet below the surface. The potholing efforts of August 26 faired better.			
Boring	**Depth**	**Sample**	**Comment**
KB-15	15	KB-15@5'	No recovery to 15 ft
KB-16	11	No sample	No recovery to 11 ft
KB-17	10	KB-17@5'	No recovery to 10 ft
KB-18	5	No sample	Refusal at 5 feet

bgs: below ground surface

Environmental soil samples were submitted to Enviromatrix Analytical, Inc. in San Diego, California, a state-certified environmental chemistry laboratory, for analyses of TRPH in general accordance with EPA Method 418.1. Additionally, two soil samples with the highest detected TRPH concentrations reported were analyzed for TPH-g, TPH-d, and TPH-ho in general accordance with EPA Method 8015M, PCBs in general accordance with EPA Method 8082, VOCs in general accordance EPA Method 8260B, and SVOCs in general accordance with EPA Method 8270C. Geotechnical soil samples were not collected due to the ubiquitous distribution of concrete, debris, and petroleum hydrocarbon in the fill material, making the material unsuitable for most engineering applications.

Figure 2 presents the soil trench locations and designations. Trench logs are included as Appendix A. Laboratory results and chain-of-custodies are included as Appendix B.

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5.0 INVESTIGATIVE RESULTS

5.1 SITE SUBSURFACE CONDITIONS

Soils encountered within the potholes consisted predominately of fill, however, indigenous alluvium was encountered in two of the six potholes. Detailed descriptions of these materials are included in the trench logs (Appendix A), and generalized descriptions are provided below. Pothole locations are shown on Figure 2. Groundwater was not encountered within the depths explored.

5.1.1 Fill

With the exception of potholes KPH-2 and KPH-4, fill was observed within all of the potholes from the ground surface to the maximum depths explored, no more than 16 feet below ground surface (bgs). Fill within the potholes at Area 1 was consistently observed to be divided into two general layers. The near-surface layer was mostly unstained soil with construction debris and concrete, and typically 2 to 4 feet thick. Beneath this shallow layer was a unit of fill that consistently smelled of diesel- or kerosene-range hydrocarbons or sometimes like an engine or lubricating oil. This second fill material layer generally consisted of brown to very dark brown stained silty sand to poorly graded clayey sand with gravel, brick debris, plastic-coated wire, plastic sheeting, and occasional cobbles all of which varied from slightly moist to damp at the deepest locations. Some trenches had free-flowing perched water. No obvious evidence of barrels or other containers were seen in association with the free-flowing seeps of water noted in the Trench Logs. Layers of concrete cobbles and 1-foot-sized blocks, which often resulted in the excavator having a difficult time digging, were also observed within the potholes.

5.1.2 Indigenous Alluvium

Alluvium was encountered from approximately 12.5 to 16 feet bgs in two of the six potholes. The alluvium consisted of well graded organic silty fine sand with a micaceous appearance. It had a humic odor and was damp.

5.2 ENVIRONMENTAL LABORATORY TEST RESULTS

A total of 13 samples were collected and submitted for environmental analysis. Environmental samples were initially analyzed for TRPH by EPA Method 418.1. The two samples with the highest reported concentrations of TRPH were further analyzed for TPH-g, TPH-d, and TPH-ho by EPA Method 8015 Modified, VOCs by EPA Method 8260B, SVOCs by EPA Method 8270C,

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pesticides by EPA Method 8081A, PCBs by EPA Method 8082, and Title 22 metals by EPA 6010B/7470. Title 22 metals includes: antimony, arsenic, barium, beryllium, cadmium, chromium, cobalt, copper, lead, mercury, molybdenum, nickel, selenium, silver, thallium, vanadium, and zinc. Table 2 summarizes the TRPH and the TPH results. Table 3 summarizes the VOC, SVOC, Pest/PCB results. Table 4 summarizes the Title 22 metals analytical results.

Table 2
Summary of TRPH and TPH Analytical Results

Boring Number	Sample Name	Sample Depth (feet bgs)	TRPH Concentration (mg/kg)	TPHg Concentration (mg/kg)	TPHd Concentration (mg/kg)	TPHho Concentration (mg/kg)
KPH-1	KPH-1-11	11	1,930	NA	NA	NA
KPH-1	KPH-1-13	13	2,580	NA	NA	NA
KPH-1	KPH-1-15	15	258	NA	NA	NA
KPH-2	KPH-2-13	13	888	NA	NA	NA
KPH-2	KPH-2-16	16	919	NA	NA	NA
KPH-3	KPH-3-8	8	2,960	NA	NA	NA
KPH-3	KPH-3-16	16	139	NA	NA	NA
KPH-4	KPH-4-7	7	1,850	NA	NA	NA
KPH-4	KPH-4-12	12	164	NA	NA	NA
KPH-4	KPH-4-12.5	12.5	<10	NA	NA	NA
KPH-5	KPH-5-10	10	1,050	NA	NA	NA
KPH-6	KPH-6-10	10	**3,950**	<10	<10	**506**
KPH-6	KPH-6-16	16	**3,270**	<10	<10	**819**

TRPH: total recoverable petroleum hydrocarbon
TPH: total petroleum hydrocarbon (g - gasoline range) (d – diesel range)(ho – heavy oil range)
bgs: below ground surface
mg/kg: milligram per kilogram
<: not detected above reporting limit
NA: no sample collected
BOLD: Two highest reported concentrations

TRPH was detected in 12 of 13 samples with concentrations ranging from 139 milligrams per kilogram (mg/kg) to 3,950 mg/kg. The two highest reported concentrations of TRPH were from pothole KPH-6, the one closest to the river. The TPH analysis results indicate that the petroleum is not a gasoline or diesel range hydrocarbon, but a heavy oil petroleum product. The two samples from Trench 6 were submitted for the additional analyses listed on page 4. The results are summarized in Table 3. The results from the KB-17 sample from the original work is also included in Table 3 for comparison.

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Table 3
Summary of Additional Analytical Results
Organic Compounds

EPA Analytical Test Method	Chemical Analysis	Constituent Detected	Sample Name		
			KPH-6-10'	KPH-6-16'	KB1-7@5'
EPA 418.1	TRPH	TRPH	**3,950 mg/kg**	**3,270 mg/kg**	**24,000 mg/kg**
EPA 8015M	TPH	TPHg	<10 mg/kg	<10 mg/kg	**14 mg/kg**
		TPHd	<10 mg/kg	<10 mg/kg	**5,100 mg/kg**
		TPHho	**506**	**819**	NA
EPA 8081A	Pesticides	alpha-BHC	<20 ug/kg	<20 ug/kg	<31 ug/kg
		beta-BHC	<20 ug/kg	<20 ug/kg	<31 ug/kg
		gamma-BHC	<20 ug/kg	<20 ug/kg	<31 ug/kg
		alpha-Chlordane	<50 ug/kg	<50 ug/kg	<31 ug/kg
		gamma-Chlordane	<50 ug/kg	<50 ug/kg	**4.7 ug/kg J**
		4,4'-DDD	<20 ug/kg	<20 ug/kg	<62 ug/kg
		4,4'-DDE	<20 ug/kg	<20 ug/kg	<62 ug/kg
		4,4'-DDT	<20 ug/kg	<20 ug/kg	<62 ug/kg
		Dieldrin	<20 ug/kg	<20 ug/kg	<62 ug/kg
		Endrin Aldehyde	<20 ug/kg	<20 ug/kg	<62 ug/kg
		Endrin Ketone	<20 ug/kg	<20 ug/kg	<62 ug/kg
		Methoxychlor	<50 ug/kg	<50 ug/kg	<310 ug/kg
EPA 8082	PCBs	PCBs	ND	ND	ND
EPA 8260B	VOCs	Acetone	<22 ug/kg	<22 ug/kg	**6.6 ug/kg J**
		Benzene	**2 ug/kg**	ND	ND
EPA 8270C	SVOCs	Benzo(a)anthracene	**127 ug/kg**	ND	ND
		Benzo(b)fluoranthene	**134 ug/kg**	ND	ND
		Bis(2-ethylhexyl)phthalate	**485 ug/kg**	ND	ND
		Chrysene	**154 ug/kg**	**124 ug/kg**	ND
		Fluoranthene	**164 ug/kg**	**145 ug/kg**	ND
		Phenanthrene	**137 ug/kg**	**118 ug/kg**	ND
		Pyrene	**171 ug/kg**	**164 ug/kg**	ND

TRPH: total recoverable petroleum hydrocarbon
TPHd: total petroleum hydrocarbon as diesel
TPHg: total petroleum hydrocarbon as gasoline
TPHho: total petroleum hydrocarbon as heavy oil
PCB: polychlorinated biphenyl
VOC: volatile organic compound
SVOC: semivolatile organic compound
limit,
BHC: benzenehexachloride
DDD: dichlorodiphenyldichloroethane
DDE: dichlorodiphenyldichloroethylene
DDT: dichlorodiphenyltrichloroethane

mg/kg: milligrams per kilogram
ug/kg: micrograms per kilogram
NA: not applicable, not analyzed
ND: not detected, no constituents detected
<: not detected above reporting limit
BOLD: constituent detected
J:laboratory estimated concentration greater than method detection

but less than reporting limit

The final data set to report is the Title 22 metals for the two samples with the highest TRPH results. These results are summarized in Table 4. As with Table 3, the results from Trench

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KPH-6 are compared to the Title 22 results reported from the original soil sample at Boring KB-17.

Table 4
Summary of Additional Analytical Results
Inorganic Compounds

Metal	Reported Concentration (mg/kg)		
	KPH-6-10'	KPH-6-16'	KB-17@5'
Antimony	<10	11.7	<10.3
Arsenic	**3.34**	**3.95**	**7.91**
Barium	78.1	**113**	63.7
Beryllium	<1.0	<1.0	0.235**J**
Cadmium	<1.0	1.28	<1.03
Chromium	10.2	**13.2**	2.81
Cobalt	<1.0	<1.0	1.77**J**
Copper	7.46	**19.2**	5.7
Lead	<10.0	**1,410**	4.42
Mercury	**0.02**	**0.04**	<0.103
Molybdenum	<5.0	<5.0	<5.17
Nickel	9.43	10.6	7.33
Selenium	<1.0	<1.0	**1.75**
Silver	<0.1	<0.1	<2.07
Thallium	<0.5	<0.5	<1.03
Vanadium	34.7	40.0	12.8
Zinc	37.1	56.1	30.6

mg/kg: milligrams per kilogram
J: laboratory estimated concentration above method detection limit, but below reporting limit

5.3 LABORATORY TEST RESULT DISCUSSION

The reported results indicate that a majority of the fill material in Area 1 has some petroleum hydrocarbon component to it. The nature of the petroleum hydrocarbons that are in the fill material apparently varies across the Area. The TRPH results are fairly uniform across the six potholes, ranging from the hundreds to the thousands of mg/kg. The anomaly to this pattern is the sample from KB-17 in the tens of thousands of mg/kg. The highest reported concentration of TRPH for the two assessment events is still KB-17@5' at 2.4% petroleum hydrocarbons in the soil.

The variation between KB-17 and Pothole 6 is apparent in the differences between the two locations for TPH, VOCs, SVOCs, pesticides, and metals. The high metals in the lower sample of KPH-6 is especially problematic with the river bed being so close to the north.

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6.0 CONCLUSIONS AND RECOMMENDATIONS

Based on the results of our subsurface investigation, environmental laboratory testing, and data analysis, we make following conclusions and recommendations:

- Kleinfelder Assessed the 20-acre parcel known as Area 1 using an excavator and digging potholes to assess subsurface materials. Thirteen samples of fill and soil material were collected;
- Soil is classified as hazardous if the soil concentration for metals exceeds Total Threshold Limit Concentrations (TTLC) regulatory limits. Or, if the soil concentration is greater than 10x the soluble threshold limit concentration (STLC), the soil may be classified as hazardous. With the exception of lead in sample KPH-6-16, the highest detected metal concentrations reported in the Area 1 fill materials are below the TTLC and 10 x STLC regulatory limits. Therefore, the risk of fill being designated hazardous due to metals is moderate. The level of lead in sample KPH-6-16 is sufficiently high to classify the sample as RCRA-hazardous (A federal designation). The average reported values are below state and federal hazardous concentrations, but it is now established that at least one sample of hazardous material is present in the fill;
- Based on laboratory results, there were no detectable concentrations of PCBs. There were detectable concentrations of TPHho, TPHd, TPHg, pesticides, and VOCs. However, the detectable concentrations of pesticides, SVOCs and VOCs are below the EPA Region 9 rPRG values. The SVOCs detected in KPH-6 indicate inefficient burning of plastics and fibrous (wood) material. Therefore, the risk of fill material being designated hazardous due to organic compounds is still low; and
- The suitability of the fill material for disposal onsite as berm fill should be further assessed. The trench logs, laboratory test results and report text descriptions/discussions presented herein are insufficient to meet Regional Water Quality Control Board Waste Discharge Requirements (WDRs) for disposal of petroleum-bearing soils on site. Additional soil samples are required to perform leachate tests and bio-assay analysis. Material that is not suitable for reuse onsite will have to be disposed of at an appropriate off-site facility, or left in place possibly with a cap or other containment. Further assessment of the fill material at Area 1 should proceed only when the future use(s) of the fill material are more completely identified by the design plans being generated by the Conservancy.

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7.0 LIMITATIONS

Kleinfelder has performed the services for this project in accordance with our contract with the Lakeside Conservancy and with the current practices in this geographic area for site assessment investigations. No guarantees are either expressed or implied. There is no investigation which is thorough enough to preclude the presence of materials at the site which presently, or in the future may be considered hazardous. Because regulatory evaluation criteria change, acceptable concentrations of contaminants present at the time of investigation may in the future become subject to different regulatory standards.

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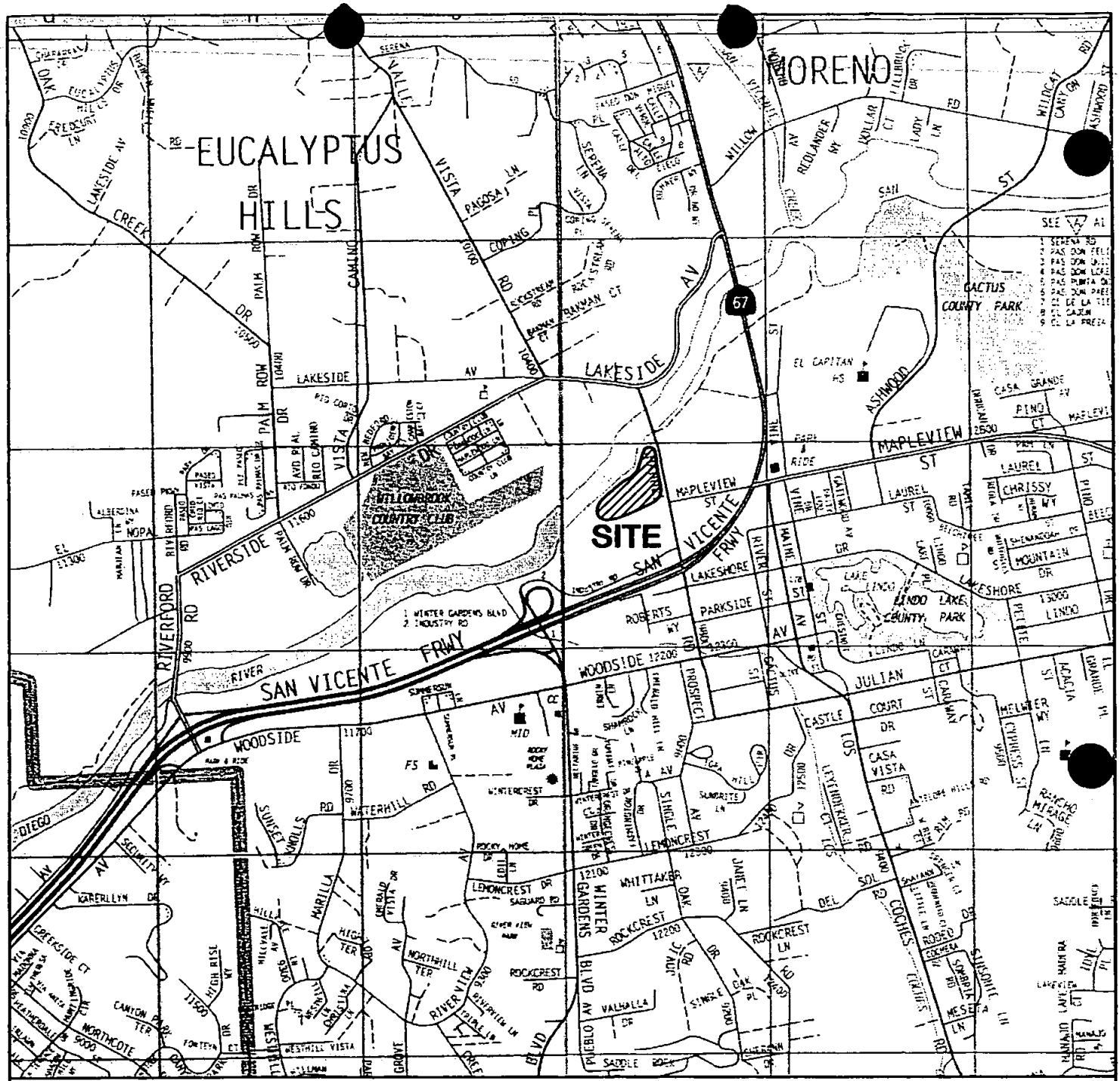
FIGURES



KLEINFELDER

5015 SHOREHAM PLACE
SAN DIEGO, CALIFORNIA 92122

CHECKED BY: MV	FN: 44102VIC
PROJECT NO. 44102	DATE: 12/2004

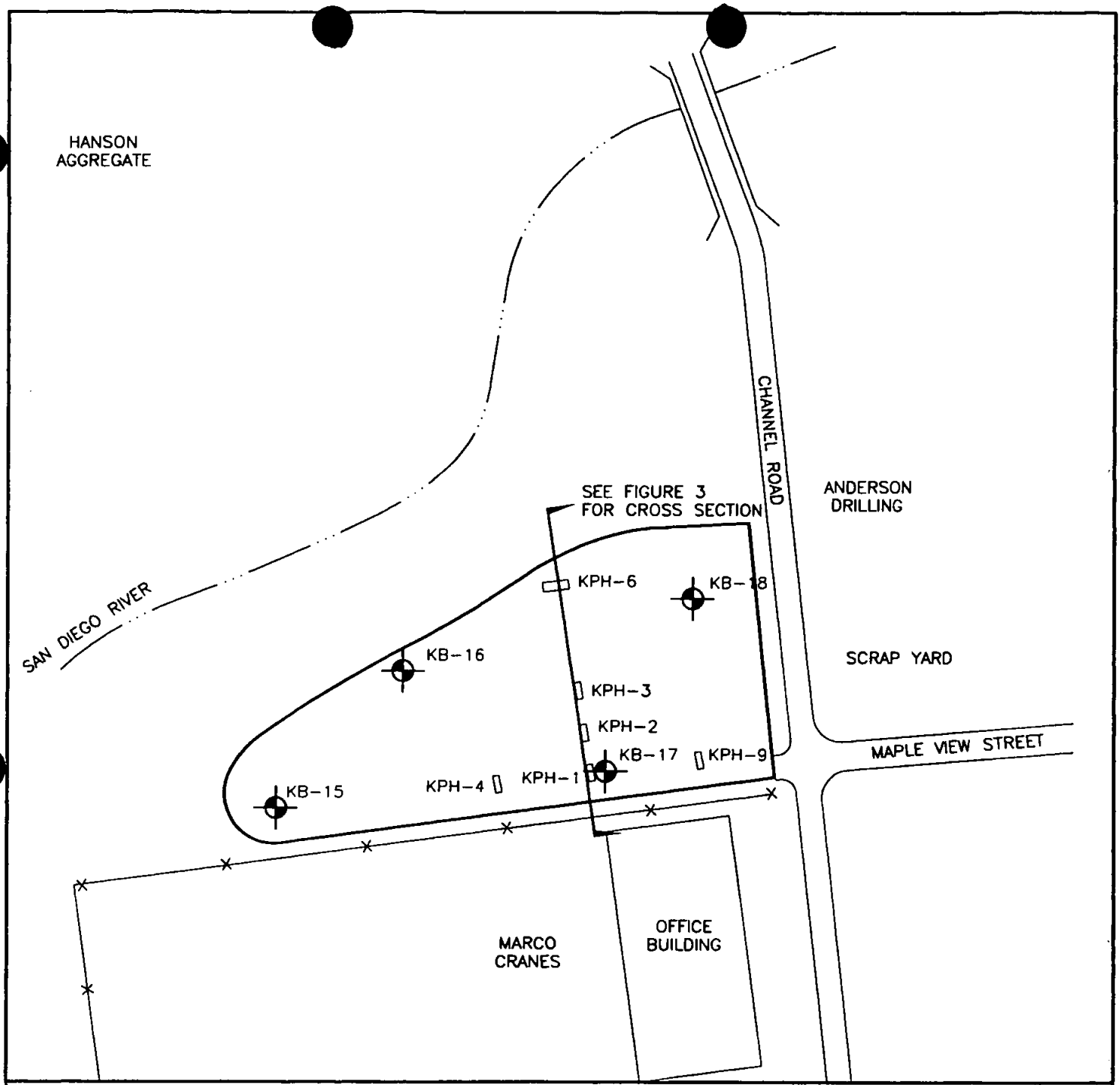
VICINITY MAP

LAKESIDE CONSERVANCY FILL

LAKESIDE, CALIFORNIA

FIGURE

1



LEGEND:

- BOREHOLE
- POTHOLE TRENCH
- CROSS SECTION LOCATION

N

0 100 200

FEET

KLEINFELDER

5015 SHOREHAM PLACE
SAN DIEGO, CALIFORNIA 92122

CHECKED BY: JL	FN: 44102TRNLOC
PROJECT NO. 44102	DATE: 12/2004

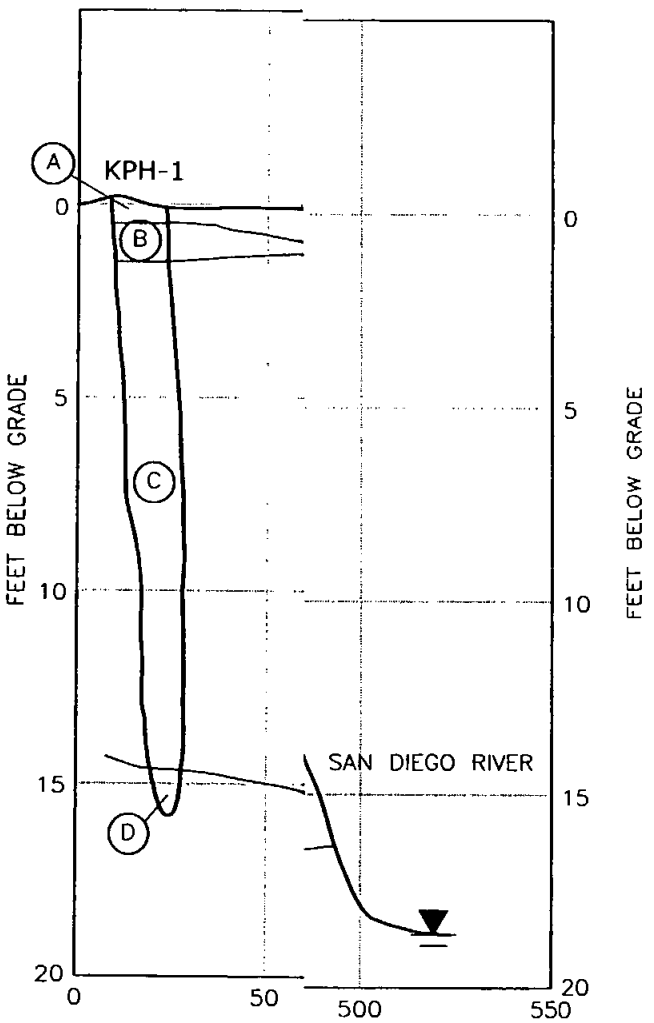
AREA 1 TRENCH LOCATIONS

LAKESIDE CONSERVANCY FILL

LAKESIDE, CALIFORNIA

FIGURE

2



10:1 VERTICAL EXAGGERATION
APPROXIMATE GRAPHIC SCALE

5 10 – VERTICAL

50 500 – HORIZONTAL

(FEET)

CROSS-SECTION FOR AREA 1

LAKESIDE RIVER PARK

SAN DIEGO, CALIFORNIA

FIGURE

3

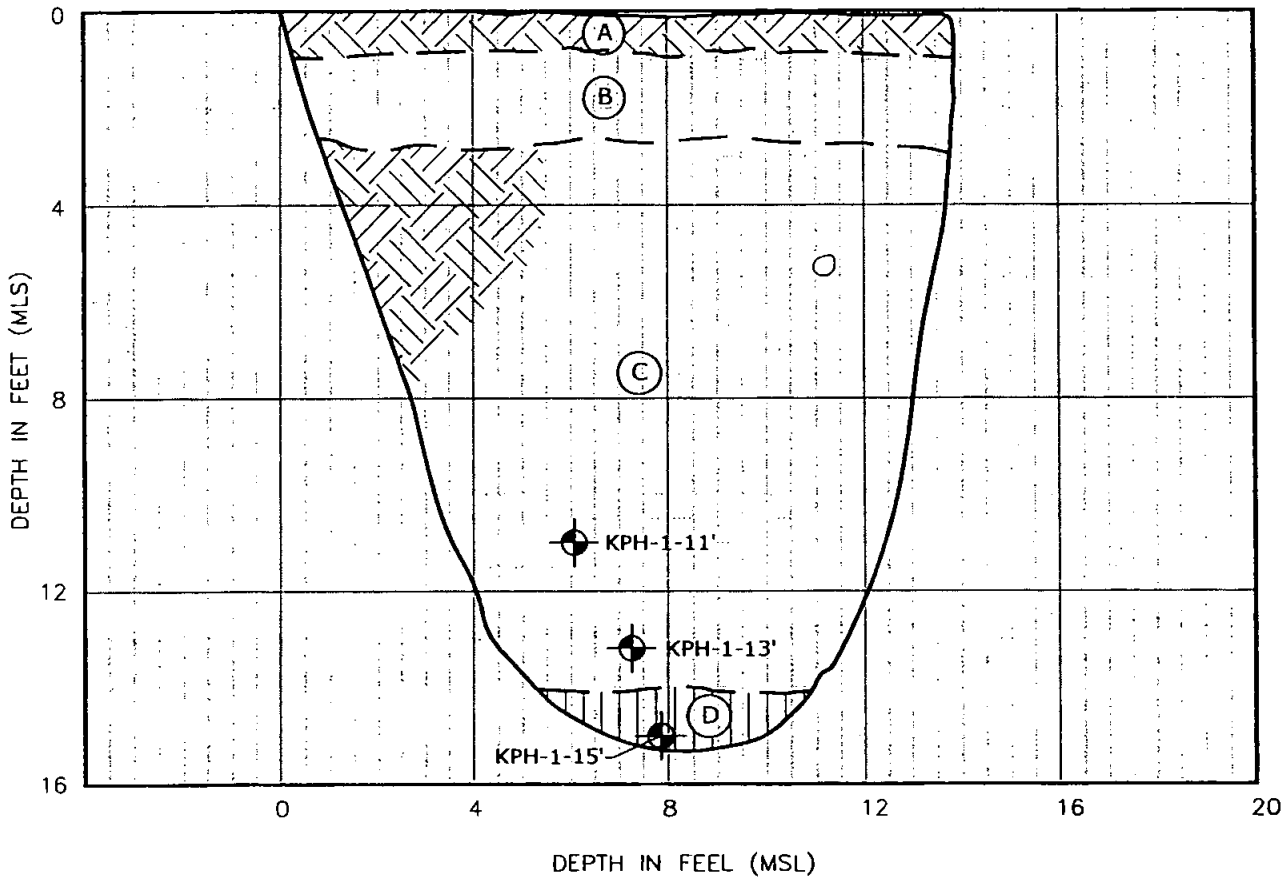
APPENDIX A

Trench Logs

PROJECT NO.	LOG OF TEST PIT NO. KPH-1	SHEET
44102		1 OF 1

EXCAVATION EQUIPMENT	PROJECT NAME	LOCATION
CAT 315CL Excavator wtih toothed 18" bucket	LAKESIDE RIVER PARK	CHANNEL ROAD PARCEL

DATE:	LOGGED BY:	CHECKED BY:	DEPTH:	ELEVATION:	DIRECTION:
8/26/2004	JPL	JPL	15'	--	



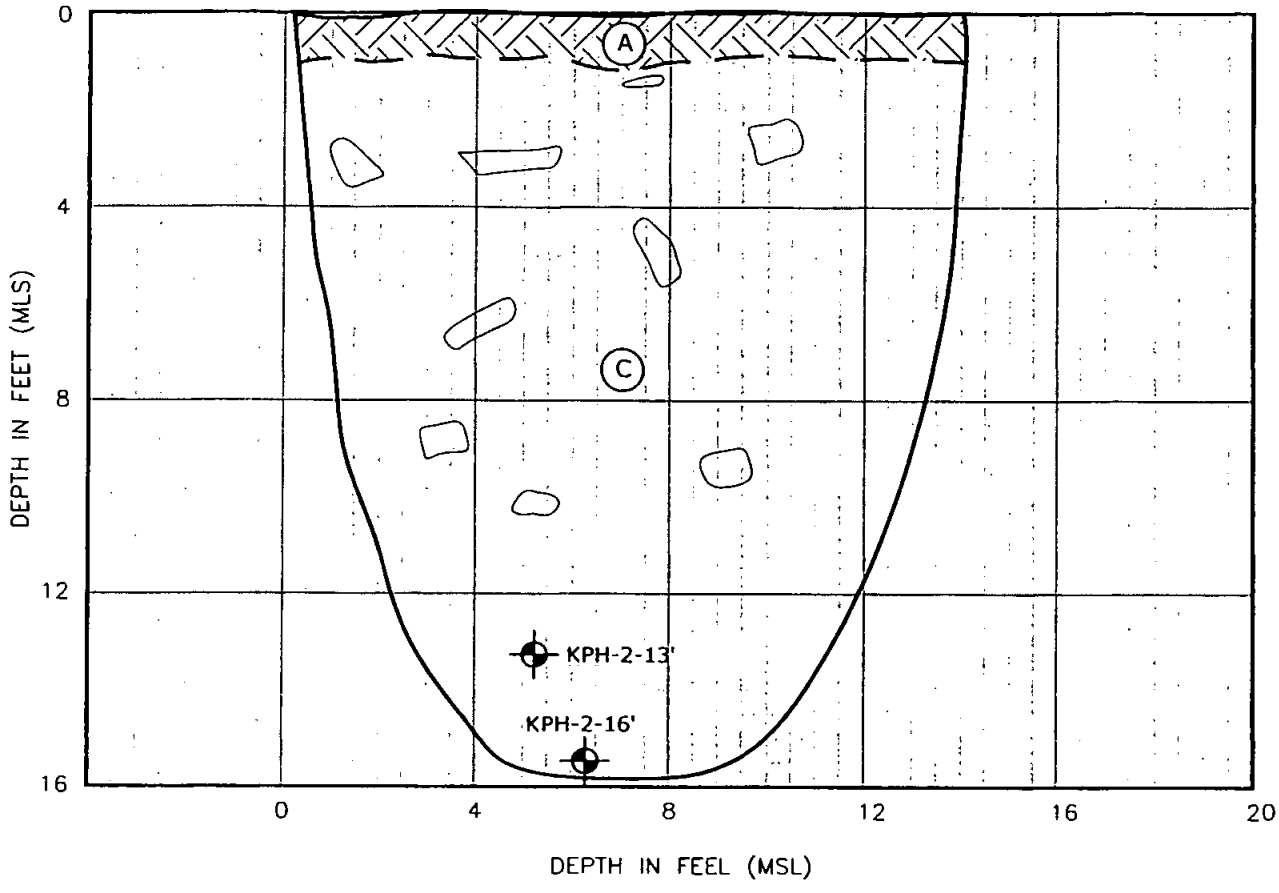
DEPTH IN FEET	MATERIAL DESCRIPTION
0-1' (A)	GRAVEL, ASPHALT, CONCRETE RUBBLE, CONSTRUCTION DEBRIS
1'-3' (B)	FILL SOIL, ROOTS, SAND AND SILT
3'-14' (C)	DIESEL AND OIL - BEARING SOIL, CINDERS, ASPHALT AND CONCRETE IN SILT, SAND AND CLAY FILL MATERIAL, STAINED (5G 4/2) GRAYISH BROWN
14'-15' (D)	CLEAN ORGANIC SILT, VERY DARK BROWN, WELL SORTED, MICACEOUS SILT, HUMIC ODOR, (OL)
KPH-1-15' ⊕	APPROXIMATE LOCATION OF GRAB SAMPLE FOR ANALYSIS BY EPA 418.1

FN: 44102tp	KLEINFELDER	5015 SHOREHAM PLACE SAN DIEGO, CALIFORNIA 92122	FIGURE NO.: A-1

PROJECT NO.	LOG OF TEST PIT NO. KPH-2	SHEET
44102		1 OF 1

EXCAVATION EQUIPMENT	PROJECT NAME	LOCATION
CAT 315CL Excavator wtih toothed 18" bucket	LAKESIDE RIVER PARK	CHANNEL ROAD PARCEL

DATE:	LOGGED BY:	CHECKED BY:	DEPTH:	ELEVATION:	DIRECTION:
8/26/2004	JPL	JPL	16'	--	

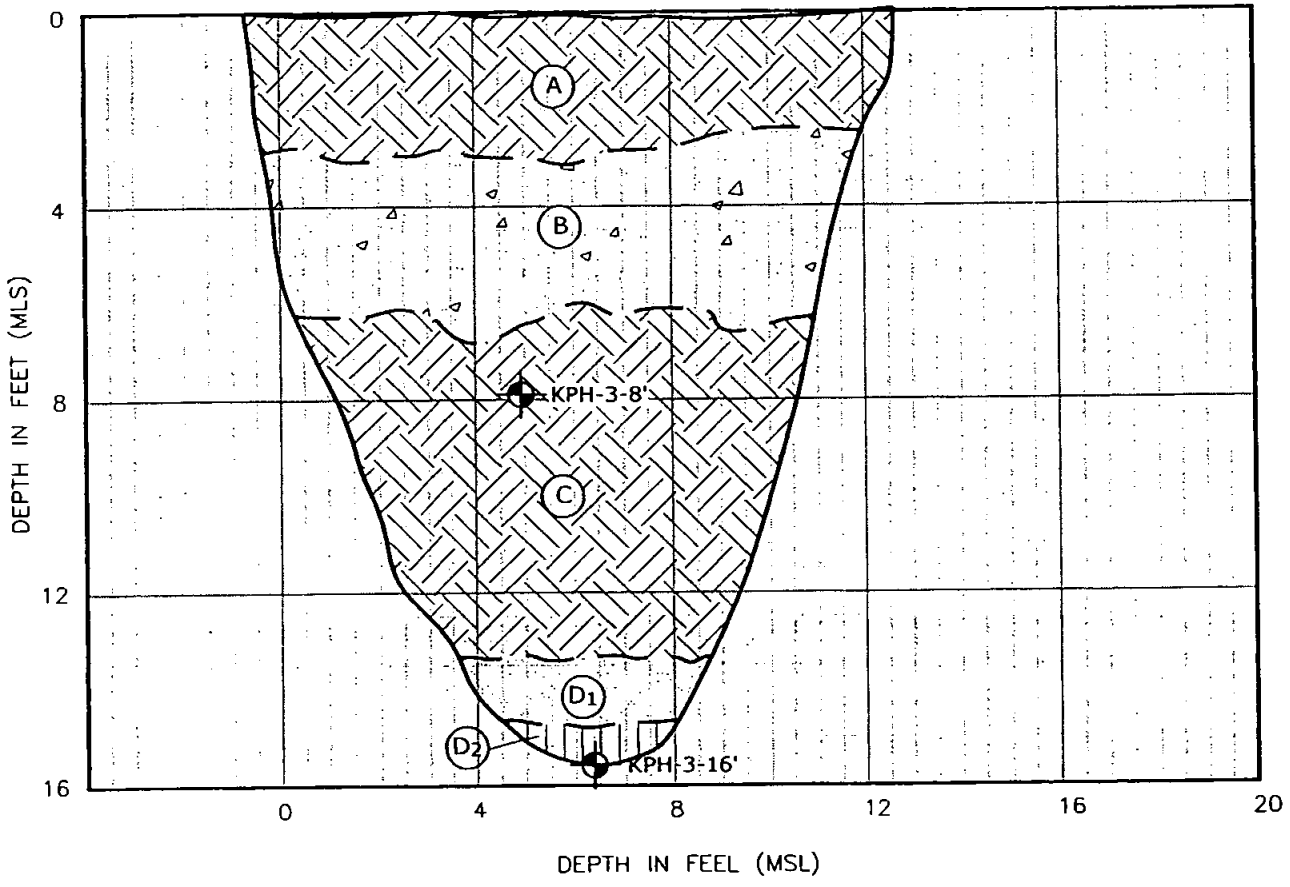


DEPTH IN FEET	MATERIAL DESCRIPTION
0–1' (A)	GRAVEL, ASPHALT, CONCRETE RUBBLE, CONSTRUCTION DEBRIS
1'–16' (C)	DIESEL AND OIL – BEARING SOIL, CINDERS, ASPHALT AND CONCRETE IN SILT, SAND AND CLAY FILL MATERIAL, STAINED (5G 4/2) GRAYISH BROWN
KPH-2-16' ⊕	APPROXIMATE LOCATION OF GRAB SAMPLE FOR ANALYSIS BY EPA 418.1

PROJECT NO.	LOG OF TEST PIT NO. KPH-3	SHEET
44102		1 OF 1

EXCAVATION EQUIPMENT	PROJECT NAME	LOCATION
CAT 315CL Excavator wtih toothed 18" bucket	LAKESIDE RIVER PARK	CHANNEL ROAD PARCEL

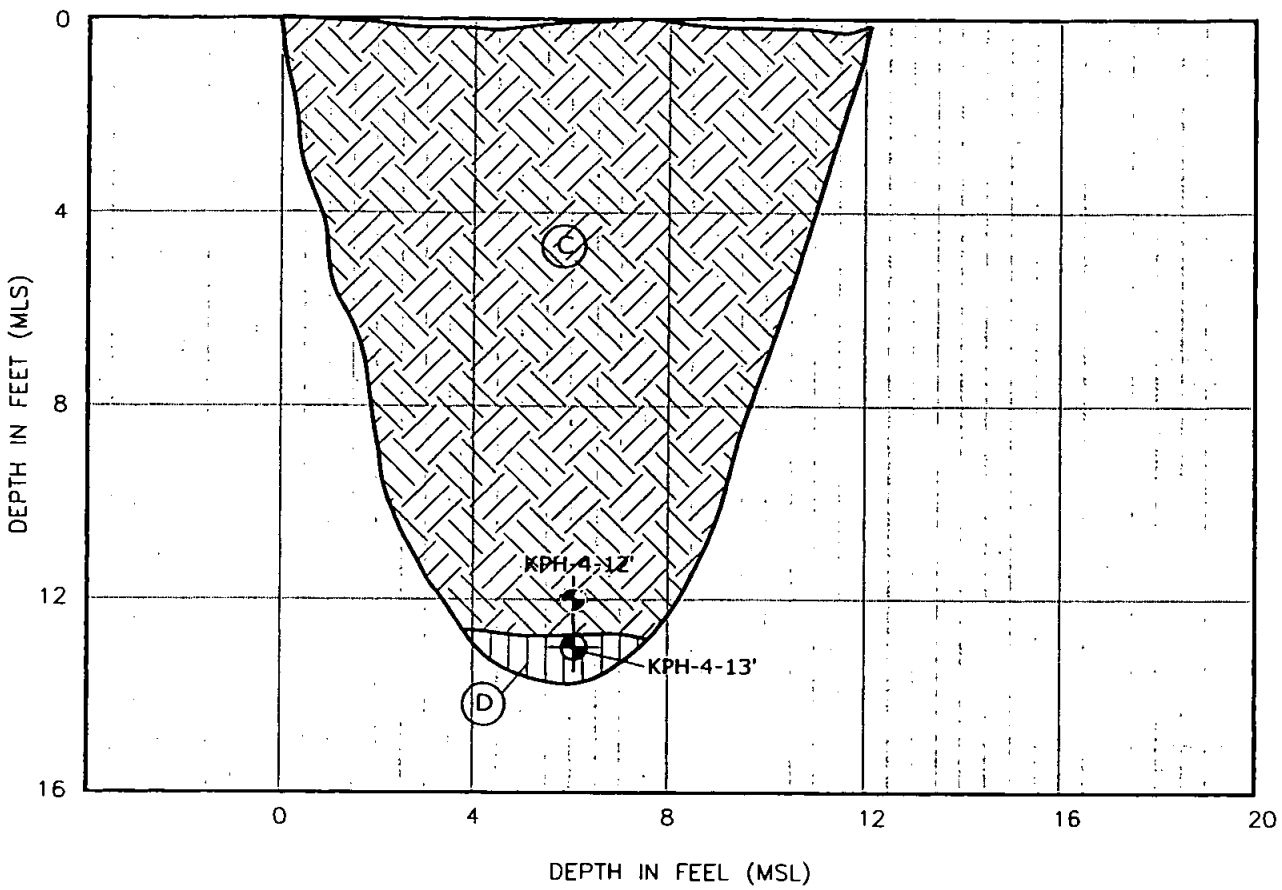
DATE:	LOGGED BY:	CHECKED BY:	DEPTH:	ELEVATION:	DIRECTION:
8/26/2004	JPL	JPL	16'	--	



DEPTH IN FEET	MATERIAL DESCRIPTION
0–3' (A)	GRAVEL, ASPHALT, CONCRETE RUBBLE, CONSTRUCTION DEBRIS
3'–6' (B)	CONCRETE RUBBLE
6'–13.5' (C)	DIESEL AND OIL – BEARING SOIL, CINDERS, ASPHALT AND CONCRETE IN SILT, SAND AND CLAY FILL MATERIAL, STAINED (5G 4/2) GRAYISH BROWN
13.5'–15' (D_1)	IN SILTY SAND AND COBBLE, FLUVIAL CHANNEL DEPOSIT
15'–16' (D_2)	CLEAN ORGANIC SILT, VERY DARK BROWN, WELL SORTED, MICACEOUS SILT, HUMIC ODOR, (OL)
KPH-3-16' ⌖	APPROXIMATE LOCATION OF GRAB SAMPLE FOR ANALYSIS BY EPA 418.1

FN: 44102tp	KLEINFELDER	5015 SHOREHAM PLACE SAN DIEGO, CALIFORNIA 92122	FIGURE NO.: A-3

PROJECT NO.					SHEET
44102	LOG OF TEST PIT NO. KPH-4				1 OF 1
EXCAVATION EQUIPMENT: CAT 315CL Excavator wtih toothed 18" bucket	PROJECT NAME: LAKESIDE RIVER PARK			LOCATION: CHANNEL ROAD PARCEL	
DATE: 8/26/2004	LOGGED BY: JPL	CHECKED BY: JPL	DEPTH: 13.5'	ELEVATION: --	DIRECTION:



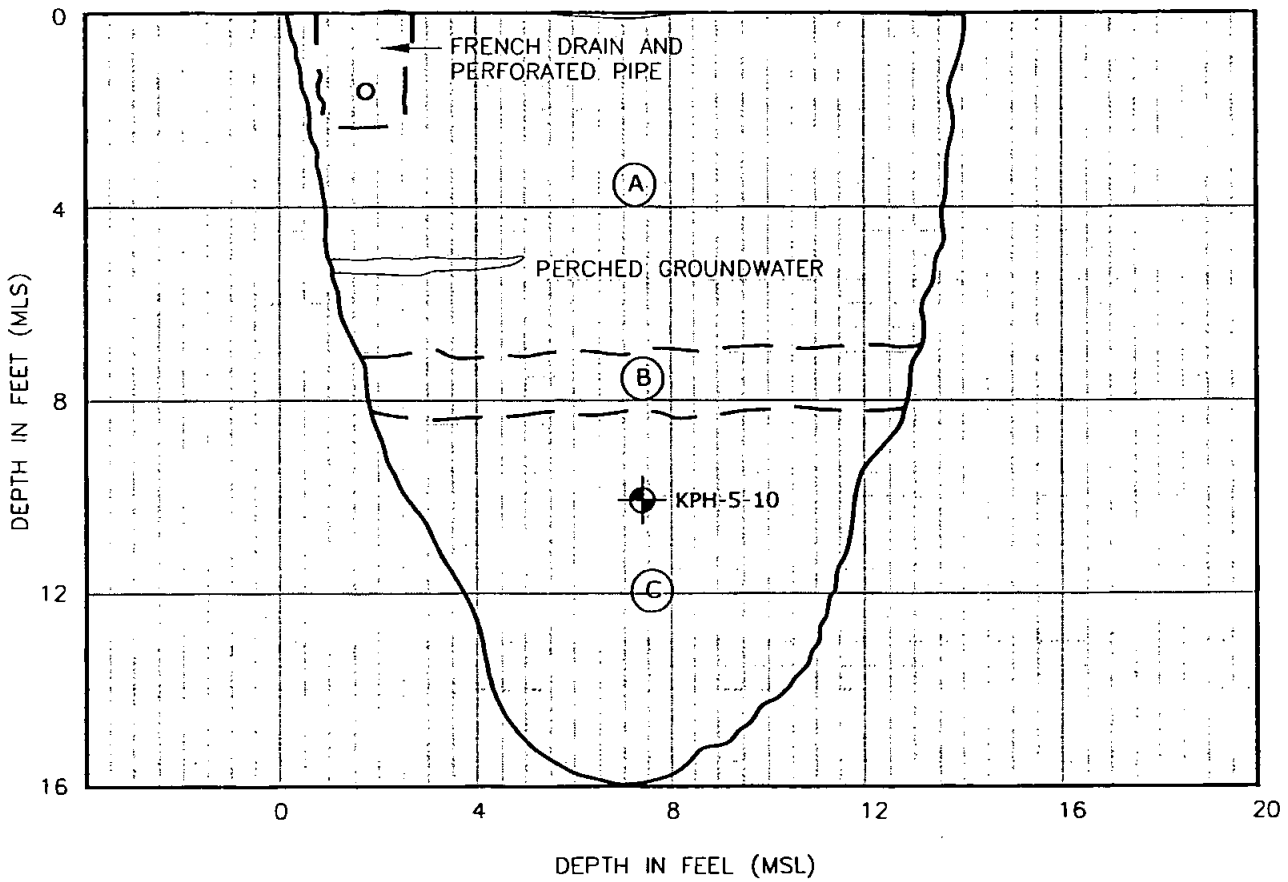
DEPTH IN FEET	MATERIAL DESCRIPTION
0–13' (A)	GRAVEL, ASPHALT, CONCRETE RUBBLE, CONSTRUCTION DEBRIS
13'–13.5' (B)	FILL SOIL, ROOTS, SAND AND SILT
KPH-4-13' ⊕	APPROXIMATE LOCATION OF GRAB SAMPLE FOR ANALYSIS BY EPA 418.1

FN: 44102tp	KLEINFELDER	5015 SHOREHAM PLACE SAN DIEGO, CALIFORNIA 92122	FIGURE NO.: A–4

PROJECT NO.	LOG OF TEST PIT NO. KPH-5	SHEET
44102		1 OF 1

EXCAVATION EQUIPMENT	PROJECT NAME	LOCATION
CAT 315CL Excavator with toothed 18" bucket	LAKESIDE RIVER PARK	CHANNEL ROAD PARCEL

DATE:	LOGGED BY:	CHECKED BY:	DEPTH:	ELEVATION:	DIRECTION:
8/26/2004	JPL	JPL	16'	--	

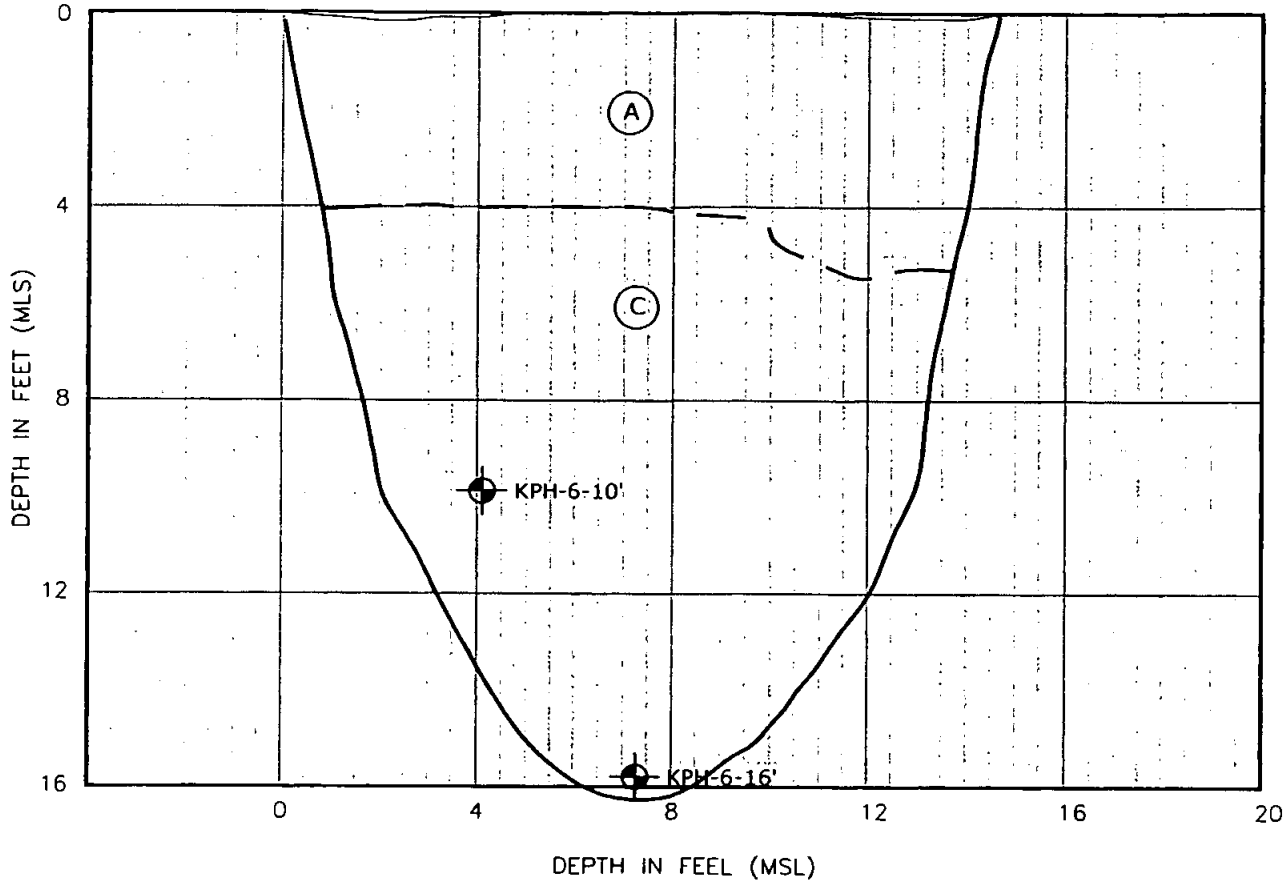


DEPTH IN FEET	MATERIAL DESCRIPTION
0–7' (A)	GRAVEL, ASPHALT, CONCRETE RUBBLE, CONSTRUCTION DEBRIS
7'–8' (B)	FILL SOIL, ROOTS, SAND AND SILT
8'–16' (C)	PETROLEUM HYDROCARBON – BEARING FILL, CONCRETE, CLAY, COBBLES
KPH-5-10'	APPROXIMATE LOCATION OF GRAB SAMPLE FOR ANALYSIS BY EPA 418.1

PROJECT NO.	LOG OF TEST PIT NO. KPH-6	SHEET
44102		1 OF 1

EXCAVATION EQUIPMENT	PROJECT NAME	LOCATION
CAT 315CL Excavator wtih toothed 18" bucket	LAKESIDE RIVER PARK	CHANNEL ROAD PARCEL

DATE:	LOGGED BY:	CHECKED BY:	DEPTH:	ELEVATION:	DIRECTION:
8/26/2004	JPL	JPL	16'	--	



DEPTH IN FEET	MATERIAL DESCRIPTION
0-4' (A)	CONCRETE AND CLEAN FILL, SILTY SAND AND COBBLES
4'-16' (C)	DIESEL AND OIL - BEARING SOIL, CINDERS, ASPHALT AND CONCRETE IN SILT, SAND AND CLAY FILL MATERIAL, STAINED (5G 4/2) GRAYISH BROWN
KPH-6-10' ⊕	APPROXIMATE LOCATION OF GRAB SAMPLE FOR ANALYSIS BY EPA 418.1

FN: 44102tp	KLEINFELDER	5015 SHOREHAM PLACE SAN DIEGO, CALIFORNIA 92122	FIGURE NO.: A-6

APPENDIX B

Laboratory Reports and Chain-Of-Custody Documents

EnviroMatrix Analytical, Inc.

09 September 2004

Kleinfelder, Inc.
Attn: Jacques Lord
5015 Shoreham Place
San Diego, CA 92122

EMA Log #: 0408282

Project Name: Lakeside River Park

Enclosed are the results of analyses for samples received by the laboratory on 08/26/04 16:30. Samples were analyzed pursuant to client request utilizing EPA or other ELAP approved methodologies. I certify that this data is in compliance both technically and for completeness.

an Verdon
Laboratory Director

CA ELAP Certification #: 1931

Client Name: Kleinfelder, Inc.
Project Name: Lakeside River Park

EMA Log #: 0408282

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
KPH-1-11	0408282-01	Soil	08/26/04 08:40	08/26/04 16:30
KPH-1-13	0408282-02	Soil	08/26/04 09:05	08/26/04 16:30
KPH-1-15	0408282-03	Soil	08/26/04 09:20	08/26/04 16:30
KPH-2-13	0408282-04	Soil	08/26/04 10:10	08/26/04 16:30
KPH-2-16	0408282-05	Soil	08/26/04 10:45	08/26/04 16:30
KPH-3-8	0408282-06	Soil	08/26/04 11:20	08/26/04 16:30
KPH-3-16	0408282-07	Soil	08/26/04 11:50	08/26/04 16:30
KPH-4-7	0408282-08	Soil	08/26/04 13:10	08/26/04 16:30
KPH-4-12	0408282-09	Soil	08/26/04 13:25	08/26/04 16:30
KPH-4-12.5	0408282-10	Soil	08/26/04 13:30	08/26/04 16:30
KPH-5-10	0408282-11	Soil	08/26/04 14:15	08/26/04 16:30
KPH-6-10	0408282-12	Soil	08/26/04 15:00	08/26/04 16:30
KPH-6-16	0408282-13	Soil	08/26/04 15:25	08/26/04 16:30

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Client Name: Kleinfelder, Inc.
Project Name: Lakeside River Park

EMA Log #: 0408282

Total Metals by EPA 6000/7000 Series Methods

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
KPH-6-10 (0408282-12) Soil Sampled: 08/26/04 15:00 Received: 08/26/04 16:30									
Antimony	ND	10.0	mg/kg	1	4090206	09/02/04	09/07/04	EPA 6010	
Barium	**78.1**	1.00	"	"	"	"	"	"	
Beryllium	ND	1.00	"	"	"	"	"	"	
Cadmium	ND	1.00	"	"	"	"	"	"	
Chromium	**10.2**	1.00	"	"	"	"	"	"	
Cobalt	ND	1.00	"	"	"	"	"	"	
Copper	**7.46**	1.00	"	"	"	"	"	"	
Lead	ND	10.0	"	"	"	"	"	"	
Molybdenum	ND	5.00	"	"	"	"	"	"	
Nickel	**9.43**	1.00	"	"	"	"	"	"	
Vanadium	**34.7**	1.00	"	"	"	"	"	"	
Zinc	**37.1**	1.00	"	"	"	"	"	"	
Arsenic	**3.34**	0.500	"	"	4090304	09/03/04	09/07/04	EPA 6020	
Selenium	ND	1.00	"	"	"	"	"	"	
Silver	ND	0.100	"	"	"	"	"	"	
Thallium	ND	0.500	"	"	"	"	"	"	
Mercury	**0.02**	0.02	"	"	4090305	09/03/04	09/03/04	EPA 7471	
KPH-6-16 (0408282-13) Soil Sampled: 08/26/04 15:25 Received: 08/26/04 16:30									
Antimony	**11.7**	10.0	mg/kg	1	4090206	09/02/04	09/07/04	EPA 6010	
Barium	**113**	1.00	"	"	"	"	"	"	
Beryllium	ND	1.00	"	"	"	"	"	"	
Cadmium	**1.28**	1.00	"	"	"	"	"	"	
Chromium	**13.2**	1.00	"	"	"	"	"	"	
Cobalt	ND	1.00	"	"	"	"	"	"	
Copper	**19.2**	1.00	"	"	"	"	"	"	
Lead	**1410**	10.0	"	"	"	"	"	"	
Molybdenum	ND	5.00	"	"	"	"	"	"	
Nickel	**10.6**	1.00	"	"	"	"	"	"	
Vanadium	**40.0**	1.00	"	"	"	"	"	"	
Zinc	**56.1**	1.00	"	"	"	"	"	"	
Arsenic	**3.95**	0.500	"	"	4090304	09/03/04	09/07/04	EPA 6020	
Selenium	ND	1.00	"	"	"	"	"	"	
Silver	ND	0.100	"	"	"	"	"	"	
Thallium	ND	0.500	"	"	"	"	"	"	
Mercury	**0.04**	0.02	"	"	4090305	09/03/04	09/03/04	EPA 7471	

Results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Client Name: Kleinfelder, Inc.
Project Name: Lakeside River Park

EMA Log #: 0408282

Organochlorine Pesticides by EPA Method 8081A

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
KPH-6-10 (0408282-12) Soil Sampled: 08/26/04 15:00 Received: 08/26/04 16:30									**R-06**
Aldrin	ND	20.0	ug/kg	10	4090208	09/02/04	09/08/04	EPA 8081	
alpha-BHC	ND	20.0	"	"	"	"	"	"	
beta-BHC	ND	20.0	"	"	"	"	"	"	
gamma-BHC (Lindane)	ND	20.0	"	"	"	"	"	"	
delta-BHC	ND	20.0	"	"	"	"	"	"	
alpha-Chlordane	ND	50.0	"	"	"	"	"	"	
gamma-Chlordane	ND	50.0	"	"	"	"	"	"	
Chlordane (Total)	ND	50.0	"	"	"	"	"	"	
4,4´-DDD	ND	20.0	"	"	"	"	"	"	
4,4´-DDE	ND	20.0	"	"	"	"	"	"	
4,4´-DDT	ND	20.0	"	"	"	"	"	"	
Dieldrin	ND	20.0	"	"	"	"	"	"	
Endosulfan I	ND	20.0	"	"	"	"	"	"	
Endosulfan II	ND	20.0	"	"	"	"	"	"	
Endosulfan sulfate	ND	20.0	"	"	"	"	"	"	
Endrin	ND	20.0	"	"	"	"	"	"	
Endrin aldehyde	ND	20.0	"	"	"	"	"	"	
Endrin ketone	ND	20.0	"	"	"	"	"	"	
Heptachlor	ND	20.0	"	"	"	"	"	"	
Heptachlor epoxide	ND	20.0	"	"	"	"	"	"	
Methoxychlor	ND	50.0	"	"	"	"	"	"	
Toxaphene	ND	250	"	"	"	"	"	"	
Surrogate: TCMX		*57 %*	*26-146*		"	"	"	"	
KPH-6-16 (0408282-13) Soil Sampled: 08/26/04 15:25 Received: 08/26/04 16:30									**R-06**
Aldrin	ND	20.0	ug/kg	10	4090208	09/02/04	09/08/04	EPA 8081	
alpha-BHC	ND	20.0	"	"	"	"	"	"	
beta-BHC	ND	20.0	"	"	"	"	"	"	
gamma-BHC (Lindane)	ND	20.0	"	"	"	"	"	"	
delta-BHC	ND	20.0	"	"	"	"	"	"	
alpha-Chlordane	ND	50.0	"	"	"	"	"	"	
gamma-Chlordane	ND	50.0	"	"	"	"	"	"	
Chlordane (Total)	ND	50.0	"	"	"	"	"	"	
4,4´-DDD	ND	20.0	"	"	"	"	"	"	
4,4´-DDE	ND	20.0	"	"	"	"	"	"	
4,4´-DDT	ND	20.0	"	"	"	"	"	"	
Dieldrin	ND	20.0	"	"	"	"	"	"	
Endosulfan I	ND	20.0	"	"	"	"	"	"	
Endosulfan II	ND	20.0	"	"	"	"	"	"	
Endosulfan sulfate	ND	20.0	"	"	"	"	"	"	
Endrin	ND	20.0	"	"	"	"	"	"	
Endrin aldehyde	ND	20.0	"	"	"	"	"	"	
Endrin ketone	ND	20.0	"	"	"	"	"	"	

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Client Name: Kleinfelder, Inc. **EMA Log #: 0408282**
Project Name: Lakeside River Park

Organochlorine Pesticides by EPA Method 8081A

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
KPH-6-16 (0408282-13) Soil Sampled: 08/26/04 15:25 Received: 08/26/04 16:30									**R-06**
Heptachlor	ND	20.0	ug/kg	10	4090208	09/02/04	09/08/04	EPA 8081	
Heptachlor epoxide	ND	20.0	"	"	"	"	"	"	
Methoxychlor	ND	50.0	"	"	"	"	"	"	
Toxaphene	ND	250	"	"	"	"	"	"	
Surrogate: TCMX		*62 %*	*26-146*		"	"	"	"	

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Client Name: Kleinfelder, Inc.
Project Name: Lakeside River Park

EMA Log #: 0408282

Polychlorinated Biphenyls by EPA Method 8082

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
KPH-6-10 (0408282-12) Soil Sampled: 08/26/04 15:00 Received: 08/26/04 16:30									**R-06**
Aroclor 1016	ND	200	ug/kg	10	4090208	09/02/04	09/08/04	EPA 8082	
Aroclor 1221	ND	200	"	"	"	"	"	"	
Aroclor 1232	ND	200	"	"	"	"	"	"	
Aroclor 1242	ND	200	"	"	"	"	"	"	
Aroclor 1248	ND	200	"	"	"	"	"	"	
Aroclor 1254	ND	200	"	"	"	"	"	"	
Aroclor 1260	ND	200	"	"	"	"	"	"	
Surrogate: TCMX		*57 %*	*26-146*		"	"	"	"	
KPH-6-16 (0408282-13) Soil Sampled: 08/26/04 15:25 Received: 08/26/04 16:30									**R-06**
Aroclor 1016	ND	200	ug/kg	10	4090208	09/02/04	09/08/04	EPA 8082	
Aroclor 1221	ND	200	"	"	"	"	"	"	
Aroclor 1232	ND	200	"	"	"	"	"	"	
Aroclor 1242	ND	200	"	"	"	"	"	"	
Aroclor 1248	ND	200	"	"	"	"	"	"	
Aroclor 1254	ND	200	"	"	"	"	"	"	
Aroclor 1260	ND	200	"	"	"	"	"	"	
Surrogate: TCMX		*62 %*	*26-146*		"	"	"	"	

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Client Name: Kleinfelder, Inc.
Project Name: Lakeside River Park

EMA Log #: 0408282

Volatile Organic Compounds by EPA Method 8260B

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
KPH-6-10 (0408282-12) Soil Sampled: 08/26/04 15:00 Received: 08/26/04 16:30									
Acetone	ND	50.0	ug/kg	1	4090101	09/01/04	09/01/04	EPA 8260B	
Acetonitrile	ND	50.0	"	"	"	"	"	"	
Acrolein	ND	100	"	"	"	"	"	"	
Acrylonitrile	ND	25.0	"	"	"	"	"	"	
Allyl chloride	ND	5.00	"	"	"	"	"	"	
Benzene	**2.00**	2.00	"	"	"	"	"	"	
Bromobenzene	ND	2.00	"	"	"	"	"	"	
Bromochloromethane	ND	2.00	"	"	"	"	"	"	
Bromodichloromethane	ND	2.00	"	"	"	"	"	"	
Bromoform	ND	2.00	"	"	"	"	"	"	
Bromomethane	ND	5.00	"	"	"	"	"	"	
2-Butanone	ND	50.0	"	"	"	"	"	"	
n-Butylbenzene	ND	2.00	"	"	"	"	"	"	
sec-Butylbenzene	ND	5.00	"	"	"	"	"	"	
tert-Butylbenzene	ND	5.00	"	"	"	"	"	"	
Carbon disulfide	ND	5.00	"	"	"	"	"	"	
Carbon tetrachloride	ND	5.00	"	"	"	"	"	"	
Chlorobenzene	ND	2.00	"	"	"	"	"	"	
Chlorodibromomethane	ND	2.00	"	"	"	"	"	"	
Chloroethane	ND	5.00	"	"	"	"	"	"	
2-Chloroethylvinyl ether	ND	5.00	"	"	"	"	"	"	
Chloroform	ND	2.00	"	"	"	"	"	"	
Chloromethane	ND	5.00	"	"	"	"	"	"	
2-Chlorotoluene	ND	5.00	"	"	"	"	"	"	
4-Chlorotoluene	ND	5.00	"	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	ND	5.00	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	2.00	"	"	"	"	"	"	
Dibromomethane	ND	2.00	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	2.00	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	2.00	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	2.00	"	"	"	"	"	"	
trans-1,4-Dichloro-2-butene	ND	5.00	"	"	"	"	"	"	
Dichlorodifluoromethane	ND	5.00	"	"	"	"	"	"	
1,1-Dichloroethane	ND	2.00	"	"	"	"	"	"	
1,2-Dichloroethane	ND	2.00	"	"	"	"	"	"	
1,1-Dichloroethene	ND	2.00	"	"	"	"	"	"	
cis-1,2-Dichloroethene	ND	2.00	"	"	"	"	"	"	
trans-1,2-Dichloroethene	ND	2.00	"	"	"	"	"	"	
1,2-Dichloropropane	ND	2.00	"	"	"	"	"	"	
1,3-Dichloropropane	ND	2.00	"	"	"	"	"	"	
2,2-Dichloropropane	ND	5.00	"	"	"	"	"	"	
1,1-Dichloropropene	ND	5.00	"	"	"	"	"	"	
cis-1,3-Dichloropropene	ND	2.00	"	"	"	"	"	"	

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Client Name: Kleinfelder, Inc.
Project Name: Lakeside River Park

EMA Log #: 0408282

Volatile Organic Compounds by EPA Method 8260B

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
KPH-6-10 (0408282-12) Soil Sampled: 08/26/04 15:00 Received: 08/26/04 16:30									
trans-1,3-Dichloropropene	ND	2.00	ug/kg	1	4090101	09/01/04	09/01/04	EPA 8260B	
Diethyl ether	ND	5.00	"	"	"	"	"	"	
Ethylbenzene	ND	2.00	"	"	"	"	"	"	
Hexachlorobutadiene	ND	2.00	"	"	"	"	"	"	
Hexachloroethane	ND	2.00	"	"	"	"	"	"	
2-Hexanone	ND	10.0	"	"	"	"	"	"	
Iodomethane	ND	2.00	"	"	"	"	"	"	
Isopropylbenzene	ND	2.00	"	"	"	"	"	"	
Methylene chloride	ND	5.00	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	2.00	"	"	"	"	"	"	
4-Methyl-2-pentanone	ND	25.0	"	"	"	"	"	"	
Naphthalene	ND	5.00	"	"	"	"	"	"	
n-Propylbenzene	ND	2.00	"	"	"	"	"	"	
Styrene	ND	2.00	"	"	"	"	"	"	
1,1,1,2-Tetrachloroethane	ND	2.00	"	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	ND	5.00	"	"	"	"	"	"	
Tetrachloroethene	ND	2.00	"	"	"	"	"	"	
Toluene	ND	2.00	"	"	"	"	"	"	
1,2,3-Trichlorobenzene	ND	2.00	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	2.00	"	"	"	"	"	"	
1,1,1-Trichloroethane	ND	2.00	"	"	"	"	"	"	
1,1,2-Trichloroethane	ND	5.00	"	"	"	"	"	"	
Trichloroethene	ND	2.00	"	"	"	"	"	"	
Trichlorofluoromethane	ND	5.00	"	"	"	"	"	"	
1,2,3-Trichloropropane	ND	5.00	"	"	"	"	"	"	
1,1,2-Trichlorotrifluoroethane	ND	10.0	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	2.00	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	2.00	"	"	"	"	"	"	
Vinyl acetate	ND	10.0	"	"	"	"	"	"	
Vinyl chloride	ND	5.00	"	"	"	"	"	"	
m,p-Xylene	ND	5.00	"	"	"	"	"	"	
o-Xylene	ND	2.00	"	"	"	"	"	"	
Surrogate: Dibromofluoromethane		*15 %*	*61-141*		"	"	"	"	*S-04*
Surrogate: 4-Bromofluorobenzene		*77 %*	*70-124*		"	"	"	"	
Surrogate: Toluene-d8		*91 %*	*80-121*		"	"	"	"	

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Client Name: Kleinfelder, Inc. **EMA Log #: 0408282**
Project Name: Lakeside River Park

Volatile Organic Compounds by EPA Method 8260B

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
KPH-6-16 (0408282-13) Soil Sampled: 08/26/04 15:25 Received: 08/26/04 16:30									
Acetone	ND	50.0	ug/kg	1	4090101	09/01/04	09/01/04	EPA 8260B	
Acetonitrile	ND	50.0	"	"	"	"	"	"	
Acrolein	ND	100	"	"	"	"	"	"	
Acrylonitrile	ND	25.0	"	"	"	"	"	"	
Allyl chloride	ND	5.00	"	"	"	"	"	"	
Benzene	ND	2.00	"	"	"	"	"	"	
Bromobenzene	ND	2.00	"	"	"	"	"	"	
Bromochloromethane	ND	2.00	"	"	"	"	"	"	
Bromodichloromethane	ND	2.00	"	"	"	"	"	"	
Bromoform	ND	2.00	"	"	"	"	"	"	
Bromomethane	ND	5.00	"	"	"	"	"	"	
2-Butanone	ND	50.0	"	"	"	"	"	"	
n-Butylbenzene	ND	2.00	"	"	"	"	"	"	
sec-Butylbenzene	ND	5.00	"	"	"	"	"	"	
tert-Butylbenzene	ND	5.00	"	"	"	"	"	"	
Carbon disulfide	ND	5.00	"	"	"	"	"	"	
Carbon tetrachloride	ND	5.00	"	"	"	"	"	"	
Chlorobenzene	ND	2.00	"	"	"	"	"	"	
Chlorodibromomethane	ND	2.00	"	"	"	"	"	"	
Chloroethane	ND	5.00	"	"	"	"	"	"	
2-Chloroethylvinyl ether	ND	5.00	"	"	"	"	"	"	
Chloroform	ND	2.00	"	"	"	"	"	"	
Chloromethane	ND	5.00	"	"	"	"	"	"	
2-Chlorotoluene	ND	5.00	"	"	"	"	"	"	
4-Chlorotoluene	ND	5.00	"	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	ND	5.00	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	2.00	"	"	"	"	"	"	
Dibromomethane	ND	2.00	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	2.00	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	2.00	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	2.00	"	"	"	"	"	"	
trans-1,4-Dichloro-2-butene	ND	5.00	"	"	"	"	"	"	
Dichlorodifluoromethane	ND	5.00	"	"	"	"	"	"	
1,1-Dichloroethane	ND	2.00	"	"	"	"	"	"	
1,2-Dichloroethane	ND	2.00	"	"	"	"	"	"	
1,1-Dichloroethene	ND	2.00	"	"	"	"	"	"	
cis-1,2-Dichloroethene	ND	2.00	"	"	"	"	"	"	
trans-1,2-Dichloroethene	ND	2.00	"	"	"	"	"	"	
1,2-Dichloropropane	ND	2.00	"	"	"	"	"	"	
1,3-Dichloropropane	ND	2.00	"	"	"	"	"	"	
2,2-Dichloropropane	ND	5.00	"	"	"	"	"	"	
1,1-Dichloropropene	ND	5.00	"	"	"	"	"	"	
cis-1,3-Dichloropropene	ND	2.00	"	"	"	"	"	"	

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Client Name: Kleinfelder, Inc.
Project Name: Lakeside River Park

EMA Log #: 0408282

Volatile Organic Compounds by EPA Method 8260B

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
KPH-6-16 (0408282-13) Soil Sampled: 08/26/04 15:25 Received: 08/26/04 16:30									
trans-1,3-Dichloropropene	ND	2.00	ug/kg	1	4090101	09/01/04	09/01/04	EPA 8260B	
Diethyl ether	ND	5.00	"	"	"	"	"	"	
Ethylbenzene	ND	2.00	"	"	"	"	"	"	
Hexachlorobutadiene	ND	2.00	"	"	"	"	"	"	
Hexachloroethane	ND	2.00	"	"	"	"	"	"	
2-Hexanone	ND	10.0	"	"	"	"	"	"	
Iodomethane	ND	2.00	"	"	"	"	"	"	
Isopropylbenzene	ND	2.00	"	"	"	"	"	"	
Methylene chloride	ND	5.00	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	2.00	"	"	"	"	"	"	
4-Methyl-2-pentanone	ND	25.0	"	"	"	"	"	"	
Naphthalene	ND	5.00	"	"	"	"	"	"	
n-Propylbenzene	ND	2.00	"	"	"	"	"	"	
Styrene	ND	2.00	"	"	"	"	"	"	
1,1,1,2-Tetrachloroethane	ND	2.00	"	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	ND	5.00	"	"	"	"	"	"	
Tetrachloroethene	ND	2.00	"	"	"	"	"	"	
Toluene	ND	2.00	"	"	"	"	"	"	
1,2,3-Trichlorobenzene	ND	2.00	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	2.00	"	"	"	"	"	"	
1,1,1-Trichloroethane	ND	2.00	"	"	"	"	"	"	
1,1,2-Trichloroethane	ND	5.00	"	"	"	"	"	"	
Trichloroethene	ND	2.00	"	"	"	"	"	"	
Trichlorofluoromethane	ND	5.00	"	"	"	"	"	"	
1,2,3-Trichloropropane	ND	5.00	"	"	"	"	"	"	
1,1,2-Trichlorotrifluoroethane	ND	10.0	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	2.00	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	2.00	"	"	"	"	"	"	
Vinyl acetate	ND	10.0	"	"	"	"	"	"	
Vinyl chloride	ND	5.00	"	"	"	"	"	"	
m,p-Xylene	ND	5.00	"	"	"	"	"	"	
o-Xylene	ND	2.00	"	"	"	"	"	"	
Surrogate: Dibromofluoromethane		*94 %*	*61-141*		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*70 %*	*70-124*		"	"	"	"	
Surrogate: Toluene-d8		*90 %*	*80-121*		"	"	"	"	

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Client Name: Kleinfelder, Inc. **EMA Log #: 0408282**
Project Name: Lakeside River Park

Semivolatile Organic Compounds by EPA Method 8270C

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
KPH-6-10 (0408282-12) Soil Sampled: 08/26/04 15:00 Received: 08/26/04 16:30									
Acenaphthene	ND	100	ug/kg	5	4090209	09/03/04	09/08/04	EPA 8270C	
Acenaphthylene	ND	100	"	"	"	"	"	"	
Anthracene	ND	100	"	"	"	"	"	"	
Benzidine	ND	750	"	"	"	"	"	"	
Benzo (a) anthracene	**127**	100	"	"	"	"	"	"	
Benzo (b) fluoranthene	**134**	100	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	100	"	"	"	"	"	"	
Benzo (g,h,i) perylene	ND	200	"	"	"	"	"	"	
Benzo (a) pyrene	ND	100	"	"	"	"	"	"	
Benzyl alcohol	ND	375	"	"	"	"	"	"	
Bis(2-chloroethoxy)methane	ND	100	"	"	"	"	"	"	
Bis(2-chloroethyl)ether	ND	125	"	"	"	"	"	"	
Bis(2-chloroisopropyl)ether	ND	125	"	"	"	"	"	"	
Bis(2-ethylhexyl)phthalate	**485**	225	"	"	"	"	"	"	
4-Bromophenyl phenyl ether	ND	100	"	"	"	"	"	"	
Butyl benzyl phthalate	ND	200	"	"	"	"	"	"	
Carbazole	ND	300	"	"	"	"	"	"	
4-Chloroaniline	ND	500	"	"	"	"	"	"	
4-Chloro-3-methylphenol	ND	100	"	"	"	"	"	"	
2-Chloronaphthalene	ND	100	"	"	"	"	"	"	
2-Chlorophenol	ND	100	"	"	"	"	"	"	
4-Chlorophenyl phenyl ether	ND	100	"	"	"	"	"	"	
Chrysene	**154**	100	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	200	"	"	"	"	"	"	
Dibenzofuran	ND	100	"	"	"	"	"	"	
Di-n-butyl phthalate	ND	200	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	100	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	100	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	100	"	"	"	"	"	"	
3,3'-Dichlorobenzidine	ND	750	"	"	"	"	"	"	
2,4-Dichlorophenol	ND	100	"	"	"	"	"	"	
Diethyl phthalate	ND	100	"	"	"	"	"	"	
2,4-Dimethylphenol	ND	400	"	"	"	"	"	"	
Dimethyl phthalate	ND	100	"	"	"	"	"	"	
4,6-Dinitro-2-methylphenol	ND	250	"	"	"	"	"	"	
2,4-Dinitrophenol	ND	500	"	"	"	"	"	"	
2,4-Dinitrotoluene	ND	100	"	"	"	"	"	"	
2,6-Dinitrotoluene	ND	100	"	"	"	"	"	"	
Di-n-octyl phthalate	ND	200	"	"	"	"	"	"	
Fluorantbene	**164**	100	"	"	"	"	"	"	
Fluorene	ND	100	"	"	"	"	"	"	
Hexachlorobenzene	ND	100	"	"	"	"	"	"	
Hexachlorobutadiene	ND	100	"	"	"	"	"	"	

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Client Name: Kleinfelder, Inc.
Project Name: Lakeside River Park

EMA Log #: 0408282

Semivolatile Organic Compounds by EPA Method 8270C

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
KPH-6-10 (0408282-12) Soil Sampled: 08/26/04 15:00 Received: 08/26/04 16:30									
Hexachlorocyclopentadiene	ND	250	ug/kg	5	4090209	09/03/04	09/08/04	EPA 8270C	
Hexachloroethane	ND	100	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	150	"	"	"	"	"	"	
Isophorone	ND	100	"	"	"	"	"	"	QB-02
2-Methylnaphthalene	ND	100	"	"	"	"	"	"	
2-Methylphenol	ND	100	"	"	"	"	"	"	
4-Methylphenol (3-Methylphenol)	ND	200	"	"	"	"	"	"	
Naphthalene	ND	100	"	"	"	"	"	"	
2-Nitroaniline	ND	250	"	"	"	"	"	"	
3-Nitroaniline	ND	500	"	"	"	"	"	"	
4-Nitroaniline	ND	350	"	"	"	"	"	"	
Nitrobenzene	ND	100	"	"	"	"	"	"	
2-Nitrophenol	ND	100	"	"	"	"	"	"	
4-Nitrophenol	ND	350	"	"	"	"	"	"	
N-Nitrosodimethylamine	ND	100	"	"	"	"	"	"	
N-Nitrosodiphenylamine	ND	175	"	"	"	"	"	"	
N-Nitrosodi-n-propylamine	ND	150	"	"	"	"	"	"	
Pentachlorophenol	ND	200	"	"	"	"	"	"	
Phenanthrene	**137**	100	"	"	"	"	"	"	
Phenol	ND	150	"	"	"	"	"	"	
Pyrene	**171**	100	"	"	"	"	"	"	
Pyridine	ND	500	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	100	"	"	"	"	"	"	
2,4,5-Trichlorophenol	ND	150	"	"	"	"	"	"	
2,4,6-Trichlorophenol	ND	150	"	"	"	"	"	"	
Surrogate: 2-Fluorophenol		*51 %*	*25-121*		"	"	"	"	
Surrogate: Phenol-d6		*51 %*	*24-113*		"	"	"	"	
Surrogate: Nitrobenzene-d5		*31 %*	*23-120*		"	"	"	"	
Surrogate: 2-Fluorobiphenyl		*41 %*	*30-115*		"	"	"	"	
Surrogate: 2,4,6-Tribromophenol		*14 %*	*19-122*		"	"	"	"	*S-04*
Surrogate: Terphenyl-dl4		*52 %*	*18-137*		"	"	"	"	

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Client Name: Kleinfelder, Inc.
Project Name: Lakeside River Park

EMA Log #: 0408282

Semivolatile Organic Compounds by EPA Method 8270C

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
KPH-6-16 (0408282-13) Soil Sampled: 08/26/04 15:25 Received: 08/26/04 16:30									
Acenaphthene	ND	100	ug/kg	5	4090209	09/03/04	09/08/04	EPA 8270C	
Acenaphthylene	ND	100	"	"	"	"	"	"	
Anthracene	ND	100	"	"	"	"	"	"	
Benzidine	ND	750	"	"	"	"	"	"	
Benzo (a) anthracene	ND	100	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	100	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	100	"	"	"	"	"	"	
Benzo (g,h,i) perylene	ND	200	"	"	"	"	"	"	
Benzo (a) pyrene	ND	100	"	"	"	"	"	"	
Benzyl alcohol	ND	375	"	"	"	"	"	"	
Bis(2-chloroethoxy)methane	ND	100	"	"	"	"	"	"	
Bis(2-chloroethyl)ether	ND	125	"	"	"	"	"	"	
Bis(2-chloroisopropyl)ether	ND	125	"	"	"	"	"	"	
Bis(2-ethylhexyl)phthalate	ND	225	"	"	"	"	"	"	
4-Bromophenyl phenyl ether	ND	100	"	"	"	"	"	"	
Butyl benzyl phthalate	ND	200	"	"	"	"	"	"	
rbazole	ND	300	"	"	"	"	"	"	
Chloroaniline	ND	500	"	"	"	"	"	"	
4-Chloro-3-methylphenol	ND	100	"	"	"	"	"	"	
2-Chloronaphthalene	ND	100	"	"	"	"	"	"	
2-Chlorophenol	ND	100	"	"	"	"	"	"	
4-Chlorophenyl phenyl ether	ND	100	"	"	"	"	"	"	
Chrysene	**124**	100	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	200	"	"	"	"	"	"	
Dibenzofuran	ND	100	"	"	"	"	"	"	
Di-n-butyl phthalate	ND	200	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	100	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	100	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	100	"	"	"	"	"	"	
3,3'-Dichlorobenzidine	ND	750	"	"	"	"	"	"	
2,4-Dichlorophenol	ND	100	"	"	"	"	"	"	
Diethyl phthalate	ND	100	"	"	"	"	"	"	
2,4-Dimethylphenol	ND	400	"	"	"	"	"	"	
Dimethyl phthalate	ND	100	"	"	"	"	"	"	
4,6-Dinitro-2-methylphenol	ND	250	"	"	"	"	"	"	
2,4-Dinitrophenol	ND	500	"	"	"	"	"	"	
2,4-Dinitrotoluene	ND	100	"	"	"	"	"	"	
2,6-Dinitrotoluene	ND	100	"	"	"	"	"	"	
Di-n-octyl phthalate	ND	200	"	"	"	"	"	"	
Fluoranthene	**145**	100	"	"	"	"	"	"	
Fluorene	ND	100	"	"	"	"	"	"	
Hexachlorobenzene	ND	100	"	"	"	"	"	"	
Hexachlorobutadiene	ND	100	"	"	"	"	"	"	

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Client Name: Kleinfelder, Inc.
Project Name: Lakeside River Park

EMA Log #: 0408282

Semivolatile Organic Compounds by EPA Method 8270C

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
KPH-6-16 (0408282-13) Soil Sampled: 08/26/04 15:25 Received: 08/26/04 16:30									
Hexachlorocyclopentadiene	ND	250	ug/kg	5	4090209	09/03/04	09/08/04	EPA 8270C	
Hexachloroethane	ND	100	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	150	"	"	"	"	"	"	
Isophorone	ND	100	"	"	"	"	"	"	QB-02
2-Methylnaphthalene	ND	100	"	"	"	"	"	"	
2-Methylphenol	ND	100	"	"	"	"	"	"	
4-Methylphenol (3-Methylphenol)	ND	200	"	"	"	"	"	"	
Naphthalene	ND	100	"	"	"	"	"	"	
2-Nitroaniline	ND	250	"	"	"	"	"	"	
3-Nitroaniline	ND	500	"	"	"	"	"	"	
4-Nitroaniline	ND	350	"	"	"	"	"	"	
Nitrobenzene	ND	100	"	"	"	"	"	"	
2-Nitrophenol	ND	100	"	"	"	"	"	"	
4-Nitrophenol	ND	350	"	"	"	"	"	"	
N-Nitrosodimethylamine	ND	100	"	"	"	"	"	"	
N-Nitrosodiphenylamine	ND	175	"	"	"	"	"	"	
N-Nitrosodi-n-propylamine	ND	150	"	"	"	"	"	"	
Pentachlorophenol	ND	200	"	"	"	"	"	"	
Phenanthrene	**118**	100	"	"	"	"	"	"	
Phenol	ND	150	"	"	"	"	"	"	
Pyrene	**164**	100	"	"	"	"	"	"	
Pyridine	ND	500	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	100	"	"	"	"	"	"	
2,4,5-Trichlorophenol	ND	150	"	"	"	"	"	"	
2,4,6-Trichlorophenol	ND	150	"	"	"	"	"	"	
Surrogate: 2-Fluorophenol		*85 %*	*25-121*		"	"	"	"	
Surrogate: Phenol-d6		*89 %*	*24-113*		"	"	"	"	
Surrogate: Nitrobenzene-d5		*69 %*	*23-120*		"	"	"	"	
Surrogate: 2-Fluorobiphenyl		*79 %*	*30-115*		"	"	"	"	
Surrogate: 2,4,6-Tribromophenol		*45 %*	*19-122*		"	"	"	"	
Surrogate: Terphenyl-dl4		*102 %*	*18-137*		"	"	"	"	

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Client Name: Kleinfelder, Inc.
Project Name: Lakeside River Park

EMA Log #: 0408282

Conventional Chemistry Parameters by Standard/EPA Methods

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
KPH-1-11 (0408282-01) Soil	**Sampled: 08/26/04 08:40**	**Received: 08/26/04 16:30**							
TRPH	**1930**	20	mg/kg	2	4083113	08/31/04	08/31/04	EPA 418.1	
KPH-1-13 (0408282-02) Soil	**Sampled: 08/26/04 09:05**	**Received: 08/26/04 16:30**							
TRPH	**2580**	20	mg/kg	2	4083113	08/31/04	08/31/04	EPA 418.1	
KPH-1-15 (0408282-03) Soil	**Sampled: 08/26/04 09:20**	**Received: 08/26/04 16:30**							
TRPH	**258**	10	mg/kg	1	4083113	08/31/04	08/31/04	EPA 418.1	
KPH-2-13 (0408282-04) Soil	**Sampled: 08/26/04 10:10**	**Received: 08/26/04 16:30**							
TRPH	**888**	10	mg/kg	1	4083113	08/31/04	08/31/04	EPA 418.1	
KPH-2-16 (0408282-05) Soil	**Sampled: 08/26/04 10:45**	**Received: 08/26/04 16:30**							
TRPH	**919**	10	mg/kg	1	4083113	08/31/04	08/31/04	EPA 418.1	
KPH-3-8 (0408282-06) Soil	**Sampled: 08/26/04 11:20**	**Received: 08/26/04 16:30**							
TRPH	**2960**	40	mg/kg	4	4083113	08/31/04	08/31/04	EPA 418.1	
KPH-3-16 (0408282-07) Soil	**Sampled: 08/26/04 11:50**	**Received: 08/26/04 16:30**							
TRPH	**139**	10	mg/kg	1	4083113	08/31/04	08/31/04	EPA 418.1	
KPH-4-7 (0408282-08) Soil	**Sampled: 08/26/04 13:10**	**Received: 08/26/04 16:30**							
TRPH	**1850**	20	mg/kg	2	4083113	08/31/04	08/31/04	EPA 418.1	
KPH-4-12 (0408282-09) Soil	**Sampled: 08/26/04 13:25**	**Received: 08/26/04 16:30**							
TRPH	**164**	10	mg/kg	1	4083113	08/31/04	08/31/04	EPA 418.1	

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Client Name: Kleinfelder, Inc.
Project Name: Lakeside River Park

EMA Log #: 0408282

Conventional Chemistry Parameters by Standard/EPA Methods

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
KPH-4-12.5 (0408282-10) Soil	**Sampled: 08/26/04 13:30**		**Received: 08/26/04 16:30**						
TRPH	ND	10	mg/kg	1	4083113	08/31/04	08/31/04	EPA 418.1	
KPH-5-10 (0408282-11) Soil	**Sampled: 08/26/04 14:15**		**Received: 08/26/04 16:30**						
TRPH	**1050**	10	mg/kg	1	4083113	08/31/04	08/31/04	EPA 418.1	
KPH-6-10 (0408282-12) Soil	**Sampled: 08/26/04 15:00**		**Received: 08/26/04 16:30**						
TRPH	**3950**	40	mg/kg	4	4083113	08/31/04	08/31/04	EPA 418.1	
KPH-6-16 (0408282-13) Soil	**Sampled: 08/26/04 15:25**		**Received: 08/26/04 16:30**						
TRPH	**3270**	40	mg/kg	4	4083113	08/31/04	08/31/04	EPA 418.1	

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Client Name: Kleinfelder, Inc.
Project Name: Lakeside River Park

EMA Log #: 0408282

TPH by EPA 8015B

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
KPH-6-10 (0408282-12) Soil Sampled: 08/26/04 15:00 Received: 08/26/04 16:30									
Gasoline (C6-C10)	ND	10.0	mg/kg	1	4090125	09/01/04	09/02/04	EPA 8015 B	
Diesel (C10-C28)	ND	10.0	"	"	"	"	"	"	D-09, D-40
Extended Range HC (C28-C40)	**506**	10.0	"	"	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*101 %*	*75-129*		"	"	"	"	
KPH-6-16 (0408282-13) Soil Sampled: 08/26/04 15:25 Received: 08/26/04 16:30									
Gasoline (C6-C10)	ND	10.0	mg/kg	1	4090125	09/01/04	09/02/04	EPA 8015 B	
Diesel (C10-C28)	ND	10.0	"	"	"	"	"	"	D-40, D-09
Extended Range HC (C28-C40)	**819**	10.0	"	"	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*98 %*	*75-129*		"	"	"	"	

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Client Name: Kleinfelder, Inc.
Project Name: Lakeside River Park

EMA Log #: 0408282

Total Metals by EPA 6000/7000 Series Methods - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 4090206										
Blank (4090206-BLK1)				Prepared: 09/02/04 Analyzed: 09/07/04						
Antimony	ND	10.0	mg/kg							
Barium	ND	1.00	"							
Beryllium	ND	1.00	"							
Cadmium	ND	1.00	"							
Chromium	ND	1.00	"							
Cobalt	ND	1.00	"							
Copper	ND	1.00	"							
Lead	ND	10.0	"							
Molybdenum	ND	5.00	"							
Nickel	ND	1.00	"							
Vanadium	ND	1.00	"							
Zinc	ND	1.00	"							
LCS (4090206-BS1)				Prepared: 09/02/04 Analyzed: 09/07/04						
Antimony	520	10.0	mg/kg	500		104	75-125			
Barium	495	1.00	"	500		99	75-125			
Beryllium	102	1.00	"	100		102	75-125			
Cadmium	514	1.00	"	500		103	75-125			
Chromium	505	1.00	"	500		101	75-125			
Cobalt	494	1.00	"	500		99	75-125			
Copper	495	1.00	"	500		99	75-125			
Lead	520	10.0	"	500		104	75-125			
Molybdenum	517	5.00	"	500		103	75-125			
Nickel	504	1.00	"	500		101	75-125			
Vanadium	503	1.00	"	500		101	75-125			
Zinc	501	1.00	"	500		100	75-125			
LCS Dup (4090206-BSD1)				Prepared: 09/02/04 Analyzed: 09/07/04						
Antimony	518	10.0	mg/kg	500		104	75-125	0.4	20	
Barium	491	1.00	"	500		98	75-125	0.8	20	
Beryllium	104	1.00	"	100		104	75-125	2	20	
Cadmium	510	1.00	"	500		102	75-125	0.8	20	
Chromium	502	1.00	"	500		100	75-125	0.6	20	
Cobalt	488	1.00	"	500		98	75-125	1	20	
Copper	495	1.00	"	500		99	75-125	0	20	
Lead	512	10.0	"	500		102	75-125	2	20	
Molybdenum	510	5.00	"	500		102	75-125	1	20	
Nickel	501	1.00	"	500		100	75-125	0.6	20	

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Client Name: Kleinfelder, Inc.
Project Name: Lakeside River Park

EMA Log #: 0408282

Total Metals by EPA 6000/7000 Series Methods - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 4090206										
LCS Dup (4090206-BSD1)				Prepared: 09/02/04 Analyzed: 09/07/04						
Vanadium	503	1.00	mg/kg	500		101	75-125	0	20	
Zinc	497	1.00	"	500		99	75-125	0.8	20	
Duplicate (4090206-DUP1)		Source: 0408331-10		Prepared: 09/02/04 Analyzed: 09/07/04						
Antimony	ND	10.0	mg/kg		6.97			18	20	
Barium	82.5	1.00	"		84.4			2	20	
Beryllium	ND	1.00	"		ND				20	
Cadmium	1.27	1.00	"		1.34			5	20	
Chromium	14.0	1.00	"		15.0			7	20	
Cobalt	ND	1.00	"		0.50			47	20	QR-04
Copper	13.5	1.00	"		13.2			2	20	
Lead	53.9	10.0	"		49.2			9	20	
Molybdenum	ND	5.00	"		ND				20	
Nickel	11.0	1.00	"		11.2			2	20	
Vanadium	27.7	1.00	"		30.5			10	20	
Zinc	112	1.00	"		101			10	20	
Matrix Spike (4090206-MS1)		Source: 0408331-10		Prepared: 09/02/04 Analyzed: 09/07/04						
Antimony	252	10.0	mg/kg	455	6.97	54	75-125			QM-01
Barium	506	1.00	"	455	84.4	93	75-125			
Beryllium	89.9	1.00	"	90.9	ND	99	75-125			
Cadmium	445	1.00	"	455	1.34	98	75-125			
Chromium	446	1.00	"	455	15.0	95	75-125			
Cobalt	420	1.00	"	455	0.50	92	75-125			
Copper	436	1.00	"	455	13.2	93	75-125			
Lead	493	10.0	"	455	49.2	98	75-125			
Molybdenum	415	5.00	"	455	ND	91	75-125			
Nickel	441	1.00	"	455	11.2	94	75-125			
Vanadium	451	1.00	"	455	30.5	92	75-125			
Zinc	539	1.00	"	455	101	96	75-125			

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Client Name: Kleinfelder, Inc.
Project Name: Lakeside River Park

EMA Log #: 0408282

Total Metals by EPA 6000/7000 Series Methods - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 4090206										
Matrix Spike Dup (4090206-MSD1)		**Source: 0408331-10**		Prepared: 09/02/04 Analyzed: 09/07/04						
Antimony	239	10.0	mg/kg	455	6.97	51	75-125	5	20	QM-01
Barium	493	1.00	"	455	84.4	90	75-125	3	20	
Beryllium	87.4	1.00	"	90.9	ND	96	75-125	3	20	
Cadmium	435	1.00	"	455	1.34	95	75-125	2	20	
Chromium	439	1.00	"	455	15.0	93	75-125	2	20	
Cobalt	407	1.00	"	455	0.50	89	75-125	3	20	
Copper	427	1.00	"	455	13.2	91	75-125	2	20	
Lead	496	10.0	"	455	49.2	98	75-125	0.6	20	
Molybdenum	405	5.00	"	455	ND	89	75-125	2	20	
Nickel	428	1.00	"	455	11.2	92	75-125	3	20	
Vanadium	440	1.00	"	455	30.5	90	75-125	2	20	
Zinc	526	1.00	"	455	101	93	75-125	2	20	
Batch 4090304										
Blank (4090304-BLK1)				Prepared: 09/03/04 Analyzed: 09/07/04						
Arsenic	ND	0.500	mg/kg							
Selenium	ND	1.00	"							
Silver	ND	0.100	"							
Thallium	ND	0.500	"							
LCS (4090304-BS1)				Prepared: 09/03/04 Analyzed: 09/07/04						
Arsenic	10.2	0.500	mg/kg	10.0		102	75-125			
Selenium	9.18	1.00	"	10.0		92	75-125			
Silver	9.47	0.100	"	10.0		95	75-125			
Thallium	9.90	0.500	"	10.0		99	75-125			

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Client Name: Kleinfelder, Inc.
Project Name: Lakeside River Park

EMA Log #: 0408282

Total Metals by EPA 6000/7000 Series Methods - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 4090304										
LCS Dup (4090304-BSD1)				Prepared: 09/03/04 Analyzed: 09/07/04						
Arsenic	11.6	0.500	mg/kg	10.0		116	75-125	13	20	
Selenium	10.2	1.00	"	10.0		102	75-125	11	20	
Silver	10.9	0.100	"	10.0		109	75-125	14	20	
Thallium	11.3	0.500	"	10.0		113	75-125	13	20	
Duplicate (4090304-DUP1)		Source: 0408282-13		Prepared: 09/03/04 Analyzed: 09/07/04						
Arsenic	3.82	0.500	mg/kg		3.95			3	20	
Selenium	ND	1.00	"		ND				20	
Silver	ND	0.100	"		ND				20	
Thallium	ND	0.500	"		ND				20	
Matrix Spike (4090304-MS1)		Source: 0408282-13		Prepared: 09/03/04 Analyzed: 09/07/04						
Arsenic	11.5	0.500	mg/kg	8.62	3.95	88	75-125			
Selenium	7.32	1.00	"	8.62	ND	85	75-125			
Silver	8.34	0.100	"	8.62	ND	97	75-125			
Thallium	8.59	0.500	"	8.62	ND	100	75-125			
Matrix Spike Dup (4090304-MSD1)		Source: 0408282-13		Prepared: 09/03/04 Analyzed: 09/07/04						
Arsenic	12.7	0.500	mg/kg	8.62	3.95	102	75-125	10	20	
Selenium	7.71	1.00	"	8.62	ND	89	75-125	5	20	
Silver	8.38	0.100	"	8.62	ND	97	75-125	0.5	20	
Thallium	8.76	0.500	"	8.62	ND	102	75-125	2	20	
Batch 4090305										
Blank (4090305-BLK1)				Prepared & Analyzed: 09/03/04						
Mercury	ND	0.05	mg/kg							

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Client Name: Kleinfelder, Inc.
Project Name: Lakeside River Park

EMA Log #: 0408282

Total Metals by EPA 6000/7000 Series Methods - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 4090305										
LCS (4090305-BS1)				Prepared & Analyzed: 09/03/04						
Mercury	0.52	0.05	mg/kg	0.500		104	75-125			
LCS Dup (4090305-BSD1)				Prepared & Analyzed: 09/03/04						
Mercury	0.52	0.05	mg/kg	0.500		104	75-125	0	20	
Duplicate (4090305-DUP1)		Source: 0408282-13		Prepared & Analyzed: 09/03/04						
Mercury	0.03	0.02	mg/kg		0.04			29	20	QR-02
Matrix Spike (4090305-MS1)		Source: 0408282-13		Prepared & Analyzed: 09/03/04						
Mercury	0.20	0.02	mg/kg	0.167	0.04	96	75-125			
Matrix Spike Dup (4090305-MSD1)		Source: 0408282-13		Prepared & Analyzed: 09/03/04						
Mercury	0.20	0.02	mg/kg	0.167	0.04	96	75-125	0	20	

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Client Name: Kleinfelder, Inc.
Project Name: Lakeside River Park

EMA Log #: 0408282

Organochlorine Pesticides by EPA Method 8081A - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 4090208										
Blank (4090208-BLK1)				Prepared: 09/02/04 Analyzed: 09/08/04						
Aldrin	ND	2.00	ug/kg							
alpha-BHC	ND	2.00	"							
beta-BHC	ND	2.00	"							
gamma-BHC (Lindane)	ND	2.00	"							
delta-BHC	ND	2.00	"							
alpha-Chlordane	ND	5.00	"							
gamma-Chlordane	ND	5.00	"							
Chlordane (Total)	ND	5.00	"							
4,4'-DDD	ND	2.00	"							
4,4'-DDE	ND	2.00	"							
4,4'-DDT	ND	2.00	"							
Dieldrin	ND	2.00	"							
Endosulfan I	ND	2.00	"							
Endosulfan II	ND	2.00	"							
Endosulfan sulfate	ND	2.00	"							
Endrin	ND	2.00	"							
Endrin aldehyde	ND	2.00	"							
Endrin ketone	ND	2.00	"							
Heptachlor	ND	2.00	"							
Heptachlor epoxide	ND	2.00	"							
Methoxychlor	ND	5.00	"							
Toxaphene	ND	25.0	"							
Surrogate: TCMX	*15.7*		"	*16.7*		*94*	*26-146*			
LCS (4090208-BS1)				Prepared: 09/02/04 Analyzed: 09/07/04						
Aldrin	15.3	2.00	ug/kg	16.7		92	42-122			
gamma-BHC (Lindane)	15.4	2.00	"	16.7		92	32-127			
4,4'-DDT	20.1	2.00	"	16.7		120	25-160			
Dieldrin	16.3	2.00	"	16.7		98	36-146			
Endrin	22.4	2.00	"	16.7		134	30-147			
Heptachlor	16.5	2.00	"	16.7		99	34-111			
Surrogate: TCMX	*14.2*		"	*16.7*		*85*	*26-146*			

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Client Name: Kleinfelder, Inc.
Project Name: Lakeside River Park

EMA Log #: 0408282

Organochlorine Pesticides by EPA Method 8081A - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 4090208										
LCS Dup (4090208-BSD1)				Prepared: 09/02/04 Analyzed: 09/07/04						
Aldrin	16.2	2.00	ug/kg	16.7		97	42-122	6	30	
gamma-BHC (Lindane)	16.2	2.00	"	16.7		97	32-127	5	30	
4,4'-DDT	21.2	2.00	"	16.7		127	25-160	5	30	
Dieldrin	17.4	2.00	"	16.7		104	36-146	7	30	
Endrin	23.8	2.00	"	16.7		143	30-147	6	30	
Heptachlor	17.8	2.00	"	16.7		107	34-111	8	30	
Surrogate: TCMX	*15.2*		"	*16.7*		*91*	*26-146*			
Duplicate (4090208-DUP1)		**Source: 0408282-13**		Prepared: 09/02/04 Analyzed: 09/08/04						**R-06**
Aldrin	ND	20.0	ug/kg		ND				30	
alpha-BHC	ND	20.0	"		ND				30	
beta-BHC	ND	20.0	"		ND				30	
gamma-BHC (Lindane)	ND	20.0	"		ND				30	
delta-BHC	ND	20.0	"		ND				30	
alpha-Chlordane	ND	50.0	"		ND				30	
gamma-Chlordane	ND	50.0	"		ND				30	
Chlordane (Total)	ND	50.0	"		ND				30	
4,4'-DDD	ND	20.0	"		ND				30	
4,4'-DDE	ND	20.0	"		ND				30	
4,4'-DDT	ND	20.0	"		ND				30	
Dieldrin	ND	20.0	"		ND				30	
Endosulfan I	ND	20.0	"		ND				30	
Endosulfan II	ND	20.0	"		ND				30	
Endosulfan sulfate	ND	20.0	"		ND				30	
Endrin	ND	20.0	"		ND				30	
Endrin aldehyde	ND	20.0	"		ND				30	
Endrin ketone	ND	20.0	"		ND				30	
Heptachlor	ND	20.0	"		ND				30	
Heptachlor epoxide	ND	20.0	"		ND				30	
Methoxychlor	ND	50.0	"		ND				30	
Toxaphene	ND	250	"		ND				30	
Surrogate: TCMX	*10.8*		"	*16.7*		*65*	*26-146*			

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Client Name: Kleinfelder, Inc.
Project Name: Lakeside River Park

EMA Log #: 0408282

Organochlorine Pesticides by EPA Method 8081A - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 4090208										
Matrix Spike (4090208-MS1)		**Source: 0408282-12**		Prepared: 09/02/04		Analyzed: 09/08/04				**R-06**
Aldrin	ND	20.0	ug/kg	16.7	ND	95	42-122			
gamma-BHC (Lindane)	ND	20.0	"	16.7	ND	99	32-127			
4,4'-DDT	39.7	20.0	"	16.7	ND	238	25-160			QM-01
Dieldrin	ND	20.0	"	16.7	ND	110	36-146			
Endrin	20.5	20.0	"	16.7	ND	123	30-147			
Heptachlor	ND	20.0	"	16.7	ND	104	34-111			
Surrogate: TCMX	*10.0*		"	*16.7*		*60*	*26-146*			
Matrix Spike Dup (4090208-MSD1)		**Source: 0408282-12**		Prepared: 09/02/04		Analyzed: 09/08/04				**R-06**
Aldrin	ND	20.0	ug/kg	16.7	ND	102	42-122	7	30	
gamma-BHC (Lindane)	ND	20.0	"	16.7	ND	101	32-127	2	30	
4,4'-DDT	39.9	20.0	"	16.7	ND	239	25-160	0.5	30	QM-01
Dieldrin	ND	20.0	"	16.7	ND	111	36-146	1	30	
Endrin	23.0	20.0	"	16.7	ND	138	30-147	11	30	
Heptachlor	30.4	20.0	"	16.7	ND	182	34-111	55	30	QM-01
Surrogate: TCMX	*11.4*		"	*16.7*		*68*	*26-146*			

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Client Name: Kleinfelder, Inc.
Project Name: Lakeside River Park

EMA Log #: 0408282

Polychlorinated Biphenyls by EPA Method 8082 - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 4090208										
Blank (4090208-BLK1)				Prepared: 09/02/04 Analyzed: 09/08/04						
Aroclor 1016	ND	20.0	ug/kg							
Aroclor 1221	ND	20.0	"							
Aroclor 1232	ND	20.0	"							
Aroclor 1242	ND	20.0	"							
Aroclor 1248	ND	20.0	"							
Aroclor 1254	ND	20.0	"							
Aroclor 1260	ND	20.0	"							
Surrogate: TCMX	*15.7*		"	*16.7*		*94*	*26-146*			
LCS (4090208-BS2)				Prepared: 09/02/04 Analyzed: 09/08/04						
Aroclor 1260	177	20.0	ug/kg	167		106	8-127			
Surrogate: TCMX	*14.3*		"	*16.7*		*86*	*26-146*			
LCS Dup (4090208-BSD2)				Prepared: 09/02/04 Analyzed: 09/08/04						
Aroclor 1260	170	20.0	ug/kg	167		102	8-127	4	30	
Surrogate: TCMX	*14.6*		"	*16.7*		*87*	*26-146*			
Duplicate (4090208-DUP1)		Source: 0408282-13		Prepared: 09/02/04 Analyzed: 09/08/04						R-06
Aroclor 1016	ND	200	ug/kg		ND				30	
Aroclor 1221	ND	200	"		ND				30	
Aroclor 1232	ND	200	"		ND				30	
Aroclor 1242	ND	200	"		ND				30	
Aroclor 1248	ND	200	"		ND				30	
Aroclor 1254	ND	200	"		ND				30	
Aroclor 1260	ND	200	"		ND				30	
Surrogate: TCMX	*10.8*		"	*16.7*		*65*	*26-146*			
Matrix Spike (4090208-MS2)		Source: 0408282-13		Prepared: 09/02/04 Analyzed: 09/08/04						R-06
Aroclor 1260	ND	200	ug/kg	167	ND	92	8-127			
Surrogate: TCMX	*10.7*		"	*16.7*		*64*	*26-146*			

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ient Name: Kleinfelder, Inc.
Project Name: Lakeside River Park

EMA Log #: 0408282

Polychlorinated Biphenyls by EPA Method 8082 - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 4090208										
Matrix Spike Dup (4090208-MSD2)		**Source: 0408282-13**		Prepared: 09/02/04 Analyzed: 09/08/04						**R-06**
Aroclor 1260	ND	200	ug/kg	167	ND	99	8-127	8	30	
Surrogate: TCMX	*11.7*		*"*	*16.7*		*70*	*26-146*			

sults in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Client Name: Kleinfelder, Inc.
Project Name: Lakeside River Park

EMA Log #: 0408282

Volatile Organic Compounds by EPA Method 8260B - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 4090101										
Blank (4090101-BLK1)				Prepared & Analyzed: 09/01/04						
Acetone	ND	50.0	ug/kg							
Acetonitrile	ND	50.0	"							
Acrolein	ND	100	"							
Acrylonitrile	ND	25.0	"							
Allyl chloride	ND	5.00	"							
Benzene	ND	2.00	"							
Bromobenzene	ND	2.00	"							
Bromochloromethane	ND	2.00	"							
Bromodichloromethane	ND	2.00	"							
Bromoform	ND	2.00	"							
Bromomethane	ND	5.00	"							
2-Butanone	ND	50.0	"							
n-Butylbenzene	ND	2.00	"							
sec-Butylbenzene	ND	5.00	"							
tert-Butylbenzene	ND	5.00	"							
Carbon disulfide	ND	5.00	"							
Carbon tetrachloride	ND	5.00	"							
Chlorobenzene	ND	2.00	"							
Chlorodibromomethane	ND	2.00	"							
Chloroethane	ND	5.00	"							
2-Chloroethylvinyl ether	ND	5.00	"							
Chloroform	ND	2.00	"							
Chloromethane	ND	5.00	"							
2-Chlorotoluene	ND	5.00	"							
4-Chlorotoluene	ND	5.00	"							
1,2-Dibromo-3-chloropropane	ND	5.00	"							
1,2-Dibromoethane (EDB)	ND	2.00	"							
Dibromomethane	ND	2.00	"							
1,2-Dichlorobenzene	ND	2.00	"							
1,3-Dichlorobenzene	ND	2.00	"							
1,4-Dichlorobenzene	ND	2.00	"							
trans-1,4-Dichloro-2-butene	ND	5.00	"							
Dichlorodifluoromethane	ND	5.00	"							
1,1-Dichloroethane	ND	2.00	"							
1,2-Dichloroethane	ND	2.00	"							
1,1-Dichloroethene	ND	2.00	"							
cis-1,2-Dichloroethene	ND	2.00	"							
trans-1,2-Dichloroethene	ND	2.00	"							

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Client Name: Kleinfelder, Inc.
Project Name: Lakeside River Park

EMA Log #: 0408282

Volatile Organic Compounds by EPA Method 8260B - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 4090101										
Blank (4090101-BLK1)				Prepared & Analyzed: 09/01/04						
1,2-Dichloropropane	ND	2.00	ug/kg							
1,3-Dichloropropane	ND	2.00	"							
2,2-Dichloropropane	ND	5.00	"							
1,1-Dichloropropene	ND	5.00	"							
cis-1,3-Dichloropropene	ND	2.00	"							
trans-1,3-Dichloropropene	ND	2.00	"							
Diethyl ether	ND	5.00	"							
Ethylbenzene	ND	2.00	"							
Hexachlorobutadiene	ND	2.00	"							
Hexachloroethane	ND	2.00	"							
2-Hexanone	ND	10.0	"							
Iodomethane	ND	2.00	"							
Isopropylbenzene	ND	2.00	"							
Methylene chloride	ND	5.00	"							
Methyl tert-butyl ether	ND	2.00	"							
4-Methyl-2-pentanone	ND	25.0	"							
Naphthalene	ND	5.00	"							
n-Propylbenzene	ND	2.00	"							
Styrene	ND	2.00	"							
1,1,1,2-Tetrachloroethane	ND	2.00	"							
1,1,2,2-Tetrachloroethane	ND	5.00	"							
Tetrachloroethene	ND	2.00	"							
Toluene	ND	2.00	"							
1,2,3-Trichlorobenzene	ND	2.00	"							
1,2,4-Trichlorobenzene	ND	2.00	"							
1,1,1-Trichloroethane	ND	2.00	"							
1,1,2-Trichloroethane	ND	5.00	"							
Trichloroethene	ND	2.00	"							
Trichlorofluoromethane	ND	5.00	"							
1,2,3-Trichloropropane	ND	5.00	"							
1,1,2-Trichlorotrifluoroethane	ND	10.0	"							
1,2,4-Trimethylbenzene	ND	2.00	"							
1,3,5-Trimethylbenzene	ND	2.00	"							
Vinyl acetate	ND	10.0	"							
Vinyl chloride	ND	5.00	"							
m,p-Xylene	ND	5.00	"							
o-Xylene	ND	2.00	"							
Surrogate: Dibromofluoromethane	*133*		"	*125*		*106*	*61-141*			

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Client Name: Kleinfelder, Inc.
Project Name: Lakeside River Park

EMA Log #: 0408282

Volatile Organic Compounds by EPA Method 8260B - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 4090101										
Blank (4090101-BLK1)				Prepared & Analyzed: 09/01/04						
Surrogate: 4-Bromofluorobenzene	*128*		*ug/kg*	*125*		*102*	*70-124*			
Surrogate: Toluene-d8	*122*		"	*125*		*98*	*80-121*			
LCS (4090101-BS1)				Prepared & Analyzed: 09/01/04						
Benzene	123	2.00	ug/kg	125		98	76-116			
Chlorobenzene	120	2.00	"	125		96	82-106			
1,1-Dichloroethene	105	2.00	"	125		84	67-116			
Toluene	116	2.00	"	125		93	78-112			
Trichloroethene	118	2.00	"	125		94	79-108			
Surrogate: Dibromofluoromethane	*129*		"	*125*		*103*	*61-141*			
Surrogate: 4-Bromofluorobenzene	*129*		"	*125*		*103*	*70-124*			
Surrogate: Toluene-d8	*121*		"	*125*		*97*	*80-121*			
Duplicate (4090101-DUP1)		**Source: 0408316-05**		Prepared & Analyzed: 09/01/04						
Acetone	ND	50.0	ug/kg		ND				30	
Acetonitrile	ND	50.0	"		ND				30	
Acrolein	ND	100	"		ND				30	
Acrylonitrile	ND	25.0	"		ND				30	
Allyl chloride	ND	5.00	"		ND				30	
Benzene	ND	2.00	"		ND				30	
Bromobenzene	ND	2.00	"		ND				30	
Bromochloromethane	ND	2.00	"		ND				30	
Bromodichloromethane	ND	2.00	"		ND				30	
Bromoform	ND	2.00	"		ND				30	
Bromomethane	ND	5.00	"		ND				30	
2-Butanone	ND	50.0	"		ND				30	
n-Butylbenzene	ND	2.00	"		ND				30	
sec-Butylbenzene	ND	5.00	"		ND				30	
tert-Butylbenzene	ND	5.00	"		ND				30	
Carbon disulfide	ND	5.00	"		ND				30	
Carbon tetrachloride	ND	5.00	"		ND				30	
Chlorobenzene	ND	2.00	"		ND				30	
Chlorodibromomethane	ND	2.00	"		ND				30	
Chloroethane	ND	5.00	"		ND				30	
2-Chloroethylvinyl ether	ND	5.00	"		ND				30	
Chloroform	ND	2.00	"		ND				30	
Chloromethane	ND	5.00	"		ND				30	
2-Chlorotoluene	ND	5.00	"		ND				30	

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Client Name: Kleinfelder, Inc.
Project Name: Lakeside River Park

EMA Log #: 0408282

Volatile Organic Compounds by EPA Method 8260B - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 4090101										
Duplicate (4090101-DUP1)		**Source: 0408316-05**		Prepared & Analyzed: 09/01/04						
4-Chlorotoluene	ND	5.00	ug/kg		ND				30	
1,2-Dibromo-3-chloropropane	ND	5.00	"		ND				30	
1,2-Dibromoethane (EDB)	ND	2.00	"		ND				30	
Dibromomethane	ND	2.00	"		ND				30	
1,2-Dichlorobenzene	ND	2.00	"		ND				30	
1,3-Dichlorobenzene	ND	2.00	"		ND				30	
1,4-Dichlorobenzene	ND	2.00	"		ND				30	
trans-1,4-Dichloro-2-butene	ND	5.00	"		ND				30	
Dichlorodifluoromethane	ND	5.00	"		ND				30	
1,1-Dichloroethane	ND	2.00	"		ND				30	
1,2-Dichloroethane	ND	2.00	"		ND				30	
1,1-Dichloroethene	ND	2.00	"		ND				30	
cis-1,2-Dichloroethene	ND	2.00	"		ND				30	
trans-1,2-Dichloroethene	ND	2.00	"		ND				30	
1,2-Dichloropropane	ND	2.00	"		ND				30	
1,3-Dichloropropane	ND	2.00	"		ND				30	
2,2-Dichloropropane	ND	5.00	"		ND				30	
1,1-Dichloropropene	ND	5.00	"		ND				30	
cis-1,3-Dichloropropene	ND	2.00	"		ND				30	
trans-1,3-Dichloropropene	ND	2.00	"		ND				30	
Diethyl ether	ND	5.00	"		ND				30	
Ethylbenzene	ND	2.00	"		ND				30	
Hexachlorobutadiene	ND	2.00	"		ND				30	
Hexachloroethane	ND	2.00	"		ND				30	
2-Hexanone	ND	10.0	"		ND				30	
Iodomethane	ND	2.00	"		ND				30	
Isopropylbenzene	ND	2.00	"		ND				30	
Methylene chloride	ND	5.00	"		ND				30	
Methyl tert-butyl ether	ND	2.00	"		ND				30	
4-Methyl-2-pentanone	ND	25.0	"		ND				30	
Naphthalene	ND	5.00	"		ND				30	
n-Propylbenzene	ND	2.00	"		ND				30	
Styrene	ND	2.00	"		ND				30	
1,1,1,2-Tetrachloroethane	ND	2.00	"		ND				30	
1,1,2,2-Tetrachloroethane	ND	5.00	"		ND				30	
Tetrachloroethene	ND	2.00	"		ND				30	
Toluene	ND	2.00	"		ND				30	
1,2,3-Trichlorobenzene	ND	2.00	"		ND				30	

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Client Name: Kleinfelder, Inc.
Project Name: Lakeside River Park

EMA Log #: 0408282

Volatile Organic Compounds by EPA Method 8260B - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 4090101										
Duplicate (4090101-DUP1)		**Source: 0408316-05**		Prepared & Analyzed: 09/01/04						
1,2,4-Trichlorobenzene	ND	2.00	ug/kg		ND				30	
1,1,1-Trichloroethane	ND	2.00	"		ND				30	
1,1,2-Trichloroethane	ND	5.00	"		ND				30	
Trichloroethene	ND	2.00	"		ND				30	
Trichlorofluoromethane	ND	5.00	"		ND				30	
1,2,3-Trichloropropane	ND	5.00	"		ND				30	
1,1,2-Trichlorotrifluoroethane	ND	10.0	"		ND				30	
1,2,4-Trimethylbenzene	ND	2.00	"		ND				30	
1,3,5-Trimethylbenzene	ND	2.00	"		ND				30	
Vinyl acetate	ND	10.0	"		ND				30	
Vinyl chloride	ND	5.00	"		ND				30	
m,p-Xylene	ND	5.00	"		ND				30	
o-Xylene	ND	2.00	"		ND				30	
Surrogate: Dibromofluoromethane	*139*		"	*125*		*111*	*61-141*			
Surrogate: 4-Bromofluorobenzene	*120*		"	*125*		*96*	*70-124*			
Surrogate: Toluene-d8	*116*		"	*125*		*93*	*80-121*			
Matrix Spike (4090101-MS1)		**Source: 0408316-06**		Prepared & Analyzed: 09/01/04						
Benzene	133	2.00	ug/kg	125	ND	106	77-127			
Chlorobenzene	125	2.00	"	125	ND	100	84-114			
1,1-Dichloroethene	129	2.00	"	125	ND	103	61-129			
Toluene	124	2.00	"	125	ND	99	66-139			
Trichloroethene	130	2.00	"	125	ND	104	83-113			
Surrogate: Dibromofluoromethane	*139*		"	*125*		*111*	*61-141*			
Surrogate: 4-Bromofluorobenzene	*126*		"	*125*		*101*	*70-124*			
Surrogate: Toluene-d8	*122*		"	*125*		*98*	*80-121*			
Matrix Spike Dup (4090101-MSD1)		**Source: 0408316-06**		Prepared & Analyzed: 09/01/04						
Benzene	130	2.00	ug/kg	125	ND	104	77-127	2	30	
Chlorobenzene	128	2.00	"	125	ND	102	84-114	2	30	
1,1-Dichloroethene	111	2.00	"	125	ND	89	61-129	15	30	
Toluene	117	2.00	"	125	ND	94	66-139	6	30	
Trichloroethene	122	2.00	"	125	ND	98	83-113	6	30	
Surrogate: Dibromofluoromethane	*135*		"	*125*		*108*	*61-141*			
Surrogate: 4-Bromofluorobenzene	*120*		"	*125*		*96*	*70-124*			
Surrogate: Toluene-d8	*119*		"	*125*		*95*	*80-121*			

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Client Name: Kleinfelder, Inc.
Project Name: Lakeside River Park

EMA Log #: 0408282

Semivolatile Organic Compounds by EPA Method 8270C - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 4090209										
Blank (4090209-BLK1)				Prepared: 09/03/04 Analyzed: 09/07/04						
Acenaphthene	ND	20.0	ug/kg							
Acenaphthylene	ND	20.0	"							
Anthracene	ND	20.0	"							
Benzidine	ND	150	"							
Benzo (a) anthracene	ND	20.0	"							
Benzo (b) fluoranthene	ND	20.0	"							
Benzo (k) fluoranthene	ND	20.0	"							
Benzo (g,h,i) perylene	ND	40.0	"							
Benzo (a) pyrene	ND	20.0	"							
Benzyl alcohol	ND	75.0	"							
Bis(2-chloroethoxy)methane	ND	20.0	"							
Bis(2-chloroethyl)ether	ND	25.0	"							
Bis(2-chloroisopropyl)ether	ND	25.0	"							
Bis(2-ethylhexyl)phthalate	ND	45.0	"							
4-Bromophenyl phenyl ether	ND	20.0	"							
Butyl benzyl phthalate	ND	40.0	"							
Carbazole	ND	60.0	"							
4-Chloroaniline	ND	100	"							
4-Chloro-3-methylphenol	ND	20.0	"							
2-Chloronaphthalene	ND	20.0	"							
2-Chlorophenol	ND	20.0	"							
4-Chlorophenyl phenyl ether	ND	20.0	"							
Chrysene	ND	20.0	"							
Dibenz (a,h) anthracene	ND	40.0	"							
Dibenzofuran	ND	20.0	"							
Di-n-butyl phthalate	ND	40.0	"							
1,2-Dichlorobenzene	ND	20.0	"							
1,3-Dichlorobenzene	ND	20.0	"							
1,4-Dichlorobenzene	ND	20.0	"							
3,3'-Dichlorobenzidine	ND	150	"							
2,4-Dichlorophenol	ND	20.0	"							
Diethyl phthalate	ND	20.0	"							
2,4-Dimethylphenol	ND	80.0	"							
Dimethyl phthalate	ND	20.0	"							
4,6-Dinitro-2-methylphenol	ND	50.0	"							
2,4-Dinitrophenol	ND	100	"							
2,4-Dinitrotoluene	ND	20.0	"							
2,6-Dinitrotoluene	ND	20.0	"							

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Client Name: Kleinfelder, Inc.
Project Name: Lakeside River Park

EMA Log #: 0408282

Semivolatile Organic Compounds by EPA Method 8270C - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 4090209										
Blank (4090209-BLK1)				Prepared: 09/03/04 Analyzed: 09/07/04						
Di-n-octyl phthalate	ND	40.0	ug/kg							
Fluoranthene	ND	20.0	"							
Fluorene	ND	20.0	"							
Hexachlorobenzene	ND	20.0	"							
Hexachlorobutadiene	ND	20.0	"							
Hexachlorocyclopentadiene	ND	50.0	"							
Hexachloroethane	ND	20.0	"							
Indeno (1,2,3-cd) pyrene	ND	30.0	"							
Isophorone	42.6	20.0	"							B
2-Methylnaphthalene	ND	20.0	"							
2-Methylphenol	ND	20.0	"							
4-Methylphenol (3-Methylphenol)	ND	40.0	"							
Naphthalene	ND	20.0	"							
2-Nitroaniline	ND	50.0	"							
3-Nitroaniline	ND	100	"							
4-Nitroaniline	ND	70.0	"							
Nitrobenzene	ND	20.0	"							
2-Nitrophenol	ND	20.0	"							
4-Nitrophenol	ND	70.0	"							
N-Nitrosodimethylamine	ND	20.0	"							
N-Nitrosodiphenylamine	ND	35.0	"							
N-Nitrosodi-n-propylamine	ND	30.0	"							
Pentachlorophenol	ND	40.0	"							
Phenanthrene	ND	20.0	"							
Phenol	ND	30.0	"							
Pyrene	ND	20.0	"							
Pyridine	ND	100	"							
1,2,4-Trichlorobenzene	ND	20.0	"							
2,4,5-Trichlorophenol	ND	30.0	"							
2,4,6-Trichlorophenol	ND	30.0	"							
Surrogate: 2-Fluorophenol	*372*		"	*568*		*65*	*25-121*			
Surrogate: Phenol-d6	*407*		"	*568*		*72*	*24-113*			
Surrogate: Nitrobenzene-d5	*204*		"	*455*		*45*	*23-120*			
Surrogate: 2-Fluorobiphenyl	*217*		"	*455*		*48*	*30-115*			
Surrogate: 2,4,6-Tribromophenol	*147*		"	*568*		*26*	*19-122*			
Surrogate: Terphenyl-dl4	*184*		"	*455*		*40*	*18-137*			

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Client Name: Kleinfelder, Inc. **EMA Log #: 0408282**
Project Name: Lakeside River Park

Semivolatile Organic Compounds by EPA Method 8270C - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 4090209										
LCS (4090209-BS1)				Prepared: 09/03/04 Analyzed: 09/07/04						
Acenaphthene	356	20.0	ug/kg	568		63	50-135			
4-Chloro-3-methylphenol	264	20.0	"	568		46	34-142			
2-Chlorophenol	292	20.0	"	568		51	38-125			
Di-n-butyl phthalate	429	40.0	"	568		76	44-152			
1,4-Dichlorobenzene	349	20.0	"	568		61	48-125			
2,4-Dinitrotoluene	209	20.0	"	568		37	41-144			QL-03
4-Nitrophenol	156	70.0	"	568		27	10-155			
N-Nitrosodi-n-propylamine	439	30.0	"	568		77	28-156			
Pentachlorophenol	85.3	40.0	"	568		15	21-133			QL-03
Phenol	291	30.0	"	568		51	35-120			
Pyrene	331	20.0	"	568		58	40-152			
1,2,4-Trichlorobenzene	299	20.0	"	568		53	47-125			
Surrogate: 2-Fluorophenol	*311*		"	*568*		*55*	*25-121*			
Surrogate: Phenol-d6	*346*		"	*568*		*61*	*24-113*			
Surrogate: Nitrobenzene-d5	*194*		"	*455*		*43*	*23-120*			
Surrogate: 2-Fluorobiphenyl	*228*		"	*455*		*50*	*30-115*			
Surrogate: 2,4,6-Tribromophenol	*208*		"	*568*		*37*	*19-122*			
Surrogate: Terphenyl-dl4	*204*		"	*455*		*45*	*18-137*			
LCS Dup (4090209-BSD1)				Prepared: 09/03/04 Analyzed: 09/07/04						
Acenaphthene	297	20.0	ug/kg	568		52	50-135	18	30	
4-Chloro-3-methylphenol	207	20.0	"	568		36	34-142	24	30	
2-Chlorophenol	221	20.0	"	568		39	38-125	28	30	
Di-n-butyl phthalate	430	40.0	"	568		76	44-152	0.2	30	
1,4-Dichlorobenzene	272	20.0	"	568		48	48-125	25	30	
2,4-Dinitrotoluene	178	20.0	"	568		31	41-144	16	30	QL-03
4-Nitrophenol	167	70.0	"	568		29	10-155	7	30	
N-Nitrosodi-n-propylamine	396	30.0	"	568		70	28-156	10	30	
Pentachlorophenol	53.3	40.0	"	568		9	21-133	46	30	QL-03, QL-04
Phenol	250	30.0	"	568		44	35-120	15	30	
Pyrene	254	20.0	"	568		45	40-152	26	30	
1,2,4-Trichlorobenzene	231	20.0	"	568		41	47-125	26	30	QL-03
Surrogate: 2-Fluorophenol	*319*		"	*568*		*56*	*25-121*			
Surrogate: Phenol-d6	*289*		"	*568*		*51*	*24-113*			
Surrogate: Nitrobenzene-d5	*150*		"	*455*		*33*	*23-120*			
Surrogate: 2-Fluorobiphenyl	*176*		"	*455*		*39*	*30-115*			
Surrogate: 2,4,6-Tribromophenol	*139*		"	*568*		*24*	*19-122*			
Surrogate: Terphenyl-dl4	*161*		"	*455*		*35*	*18-137*			

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Client Name: Kleinfelder, Inc.
Project Name: Lakeside River Park

EMA Log #: 0408282

Semivolatile Organic Compounds by EPA Method 8270C - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 4090209										
Duplicate (4090209-DUP1)		**Source: 0409022-01**		Prepared: 09/03/04 Analyzed: 09/08/04						
Acenaphthene	ND	20.0	ug/kg		ND				30	
Acenaphthylene	ND	20.0	"		6.51				30	
Anthracene	ND	20.0	"		4.08			30	30	
Benzidine	ND	150	"		ND				30	
Benzo (a) anthracene	29.8	20.0	"		82.4			94	30	QR-02
Benzo (b) fluoranthene	47.6	20.0	"		107			77	30	QR-02
Benzo (k) fluoranthene	ND	20.0	"		20.1			8	30	
Benzo (g,h,i) perylene	82.2	40.0	"		115			33	30	QR-02
Benzo (a) pyrene	58.8	20.0	"		114			64	30	QR-02
Benzyl alcohol	ND	75.0	"		ND				30	
Bis(2-chloroethoxy)methane	ND	20.0	"		ND				30	
Bis(2-chloroethyl)ether	ND	25.0	"		ND				30	
Bis(2-chloroisopropyl)ether	ND	25.0	"		ND				30	
Bis(2-ethylhexyl)phthalate	ND	45.0	"		12.4				30	
4-Bromophenyl phenyl ether	ND	20.0	"		ND				30	
Butyl benzyl phthalate	ND	40.0	"		ND				30	
Carbazole	ND	60.0	"		ND				30	
4-Chloroaniline	ND	100	"		ND				30	
4-Chloro-3-methylphenol	ND	20.0	"		ND				30	
2-Chloronaphthalene	ND	20.0	"		ND				30	
2-Chlorophenol	ND	20.0	"		ND				30	
4-Chlorophenyl phenyl ether	ND	20.0	"		ND				30	
Chrysene	32.4	20.0	"		83.1			88	30	QR-02
Dibenz (a,h) anthracene	ND	40.0	"		ND				30	
Dibenzofuran	ND	20.0	"		ND				30	
Di-n-butyl phthalate	177	40.0	"		1350			154	30	QR-02
1,2-Dichlorobenzene	ND	20.0	"		ND				30	
1,3-Dichlorobenzene	ND	20.0	"		ND				30	
1,4-Dichlorobenzene	ND	20.0	"		ND				30	
3,3'-Dichlorobenzidine	ND	150	"		ND				30	
2,4-Dichlorophenol	ND	20.0	"		ND				30	
Diethyl phthalate	ND	20.0	"		ND				30	
2,4-Dimethylphenol	ND	80.0	"		ND				30	
Dimethyl phthalate	ND	20.0	"		ND				30	
4,6-Dinitro-2-methylphenol	ND	50.0	"		ND				30	
2,4-Dinitrophenol	ND	100	"		ND				30	
2,4-Dinitrotoluene	ND	20.0	"		ND				30	
2,6-Dinitrotoluene	ND	20.0	"		ND				30	

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Client Name: Kleinfelder, Inc.
Project Name: Lakeside River Park

EMA Log #: 0408282

Semivolatile Organic Compounds by EPA Method 8270C - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 4090209										
Duplicate (4090209-DUP1)		**Source: 0409022-01**		Prepared: 09/03/04 Analyzed: 09/08/04						
Di-n-octyl phthalate	ND	40.0	ug/kg		ND				30	
Fluoranthene	67.9	20.0	"		149			75	30	QR-02
Fluorene	ND	20.0	"		ND				30	
Hexachlorobenzene	ND	20.0	"		ND				30	
Hexachlorobutadiene	ND	20.0	"		ND				30	
Hexachlorocyclopentadiene	ND	50.0	"		ND				30	
Hexachloroethane	ND	20.0	"		ND				30	
Indeno (1,2,3-cd) pyrene	54.1	30.0	"		80.5			39	30	QR-02
Isophorone	ND	20.0	"		ND				30	QB-02
2-Methylnaphthalene	ND	20.0	"		ND				30	
2-Methylphenol	ND	20.0	"		ND				30	
4-Methylphenol (3-Methylphenol)	ND	40.0	"		ND				30	
Naphthalene	ND	20.0	"		ND				30	
2-Nitroaniline	ND	50.0	"		ND				30	
3-Nitroaniline	ND	100	"		ND				30	
4-Nitroaniline	ND	70.0	"		ND				30	
Nitrobenzene	ND	20.0	"		ND				30	
2-Nitrophenol	ND	20.0	"		ND				30	
4-Nitrophenol	ND	70.0	"		ND				30	
N-Nitrosodimethylamine	ND	20.0	"		ND				200	
N-Nitrosodiphenylamine	ND	35.0	"		ND				30	
N-Nitrosodi-n-propylamine	ND	30.0	"		ND				30	
Pentachlorophenol	ND	40.0	"		ND				30	
Phenanthrene	29.4	20.0	"		24.9			17	30	
Phenol	ND	30.0	"		ND				30	
Pyrene	77.6	20.0	"		179			79	30	QR-02
Pyridine	ND	100	"		ND				30	
1,2,4-Trichlorobenzene	ND	20.0	"		ND				30	
2,4,5-Trichlorophenol	ND	30.0	"		ND				30	
2,4,6-Trichlorophenol	ND	30.0	"		ND				30	
Surrogate: 2-Fluorophenol	*479*		"	*568*		*84*	*25-121*			
Surrogate: Phenol-d6	*501*		"	*568*		*88*	*24-113*			
Surrogate: Nitrobenzene-d5	*280*		"	*455*		*62*	*23-120*			
Surrogate: 2-Fluorobiphenyl	*292*		"	*455*		*64*	*30-115*			
Surrogate: 2,4,6-Tribromophenol	*223*		"	*568*		*39*	*19-122*			
Surrogate: Terphenyl-dl4	*360*		"	*455*		*79*	*18-137*			

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Client Name: Kleinfelder, Inc.
Project Name: Lakeside River Park

EMA Log #: 0408282

Semivolatile Organic Compounds by EPA Method 8270C - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 4090209										
Matrix Spike (4090209-MS1)		**Source: 0409022-01**		Prepared: 09/03/04		Analyzed: 09/08/04				
Acenaphthene	623	20.0	ug/kg	568	ND	110	46-140			
4-Chloro-3-methylphenol	463	20.0	"	568	ND	82	42-139			
2-Chlorophenol	437	20.0	"	568	ND	77	30-135			
Di-n-butyl phthalate	895	40.0	"	568	1350	NR	24-152			QM-08
1,4-Dichlorobenzene	268	20.0	"	568	ND	47	36-137			
2,4-Dinitrotoluene	442	20.0	"	568	ND	78	28-145			
4-Nitrophenol	428	70.0	"	568	ND	75	23-150			
N-Nitrosodi-n-propylamine	685	30.0	"	568	ND	121	31-161			
Pentachlorophenol	ND	40.0	"	568	ND	3	3-159			
Phenol	404	30.0	"	568	ND	71	31-138			
Pyrene	726	20.0	"	568	179	96	30-152			
1,2,4-Trichlorobenzene	329	20.0	"	568	ND	58	39-134			
Surrogate: 2-Fluorophenol	*467*		"	*568*		*82*	*25-121*			
Surrogate: Phenol-d6	*414*		"	*568*		*73*	*24-113*			
Surrogate: Nitrobenzene-d5	*301*		"	*455*		*66*	*23-120*			
Surrogate: 2-Fluorobiphenyl	*338*		"	*455*		*74*	*30-115*			
Surrogate: 2,4,6-Tribromophenol	*277*		"	*568*		*49*	*19-122*			
Surrogate: Terphenyl-dl4	*357*		"	*455*		*78*	*18-137*			
Matrix Spike Dup (4090209-MSD1)		**Source: 0409022-01**		Prepared: 09/03/04		Analyzed: 09/08/04				
Acenaphthene	521	20.0	ug/kg	568	ND	92	46-140	18	30	
4-Chloro-3-methylphenol	375	20.0	"	568	ND	66	42-139	21	30	
2-Chlorophenol	361	20.0	"	568	ND	64	30-135	19	30	
Di-n-butyl phthalate	739	40.0	"	568	1350	NR	24-152	19	30	QM-08
1,4-Dichlorobenzene	299	20.0	"	568	ND	53	36-137	11	30	
2,4-Dinitrotoluene	353	20.0	"	568	ND	62	28-145	22	30	
4-Nitrophenol	249	70.0	"	568	ND	44	23-150	53	30	QR-02
N-Nitrosodi-n-propylamine	580	30.0	"	568	ND	102	31-161	17	30	
Pentachlorophenol	ND	40.0	"	568	ND	3	3-159	9	30	
Phenol	348	30.0	"	568	ND	61	31-138	15	30	
Pyrene	552	20.0	"	568	179	66	30-152	27	30	
1,2,4-Trichlorobenzene	312	20.0	"	568	ND	55	39-134	5	30	
Surrogate: 2-Fluorophenol	*393*		"	*568*		*69*	*25-121*			
Surrogate: Phenol-d6	*351*		"	*568*		*62*	*24-113*			
Surrogate: Nitrobenzene-d5	*254*		"	*455*		*56*	*23-120*			
Surrogate: 2-Fluorobiphenyl	*293*		"	*455*		*64*	*30-115*			
Surrogate: 2,4,6-Tribromophenol	*190*		"	*568*		*33*	*19-122*			
Surrogate: Terphenyl-dl4	*281*		"	*455*		*62*	*18-137*			

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Client Name: Kleinfelder, Inc.
Project Name: Lakeside River Park

EMA Log #: 0408282

Conventional Chemistry Parameters by Standard/EPA Methods - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 4083113										
Blank (4083113-BLK1)				Prepared & Analyzed: 08/31/04						
TRPH	ND	10	mg/kg							
LCS (4083113-BS1)				Prepared & Analyzed: 08/31/04						
TRPH	43	10	mg/kg	56.4		76	75-125			
LCS Dup (4083113-BSD1)				Prepared & Analyzed: 08/31/04						
TRPH	44	10	mg/kg	56.4		78	75-125	2	20	
Duplicate (4083113-DUP1)		Source: 0408282-10		Prepared & Analyzed: 08/31/04						
TRPH	ND	10	mg/kg		ND				20	
Matrix Spike (4083113-MS1)		Source: 0408282-10		Prepared & Analyzed: 08/31/04						
TRPH	49	10	mg/kg	56.4	ND	87	75-125			
Matrix Spike Dup (4083113-MSD1)		Source: 0408282-10		Prepared & Analyzed: 08/31/04						
TRPH	46	10	mg/kg	56.4	ND	82	75-125	6	20	

Results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Client Name: Kleinfelder, Inc.
Project Name: Lakeside River Park

EMA Log #: 0408282

TPH by EPA 8015B - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 4090125										
Blank (4090125-BLK1)				Prepared: 09/01/04 Analyzed: 09/02/04						
Gasoline (C6-C10)	ND	10.0	mg/kg							
Diesel (C10-C28)	ND	10.0	"							
Extended Range HC (C28-C40)	ND	10.0	"							
Surrogate: 4-Bromofluorobenzene	*45.4*		"	*50.0*		*91*	*75-129*			
LCS (4090125-BS1)				Prepared: 09/01/04 Analyzed: 09/02/04						
Gasoline (C6-C10)	205	10.0	mg/kg	196		105	75-125			
Diesel (C10-C28)	419	10.0	"	504		83	75-125			
Surrogate: 4-Bromofluorobenzene	*47.8*		"	*50.0*		*96*	*75-129*			
LCS Dup (4090125-BSD1)				Prepared: 09/01/04 Analyzed: 09/02/04						
Gasoline (C6-C10)	224	10.0	mg/kg	196		114	75-125	9	30	
Diesel (C10-C28)	415	10.0	"	504		82	75-125	1	30	
Surrogate: 4-Bromofluorobenzene	*48.3*		"	*50.0*		*97*	*75-129*			
Duplicate (4090125-DUP1)		**Source: 0408282-13**		Prepared: 09/01/04 Analyzed: 09/02/04						
Gasoline (C6-C10)	ND	10.0	mg/kg		ND				30	
Diesel (C10-C28)	ND	10.0	"		ND				30	D-09, D-40
Extended Range HC (C28-C40)	557	10.0	"		819			38	30	QR-02
Surrogate: 4-Bromofluorobenzene	*50.9*		"	*50.0*		*102*	*75-129*			
Matrix Spike (4090125-MS1)		**Source: 0408313-08**		Prepared: 09/01/04 Analyzed: 09/02/04						
Gasoline (C6-C10)	278	10.0	mg/kg	196	ND	142	75-125			QM-05
Diesel (C10-C28)	648	10.0	"	504	ND	129	75-125			QM-01
Surrogate: 4-Bromofluorobenzene	*51.7*		"	*50.0*		*103*	*75-129*			
Matrix Spike Dup (4090125-MSD1)		**Source: 0408313-08**		Prepared: 09/01/04 Analyzed: 09/02/04						
Gasoline (C6-C10)	279	10.0	mg/kg	196	ND	142	75-125	0.4	30	QM-05
Diesel (C10-C28)	640	10.0	"	504	ND	127	75-125	1	30	QM-01
Surrogate: 4-Bromofluorobenzene	*51.2*		"	*50.0*		*102*	*75-129*			

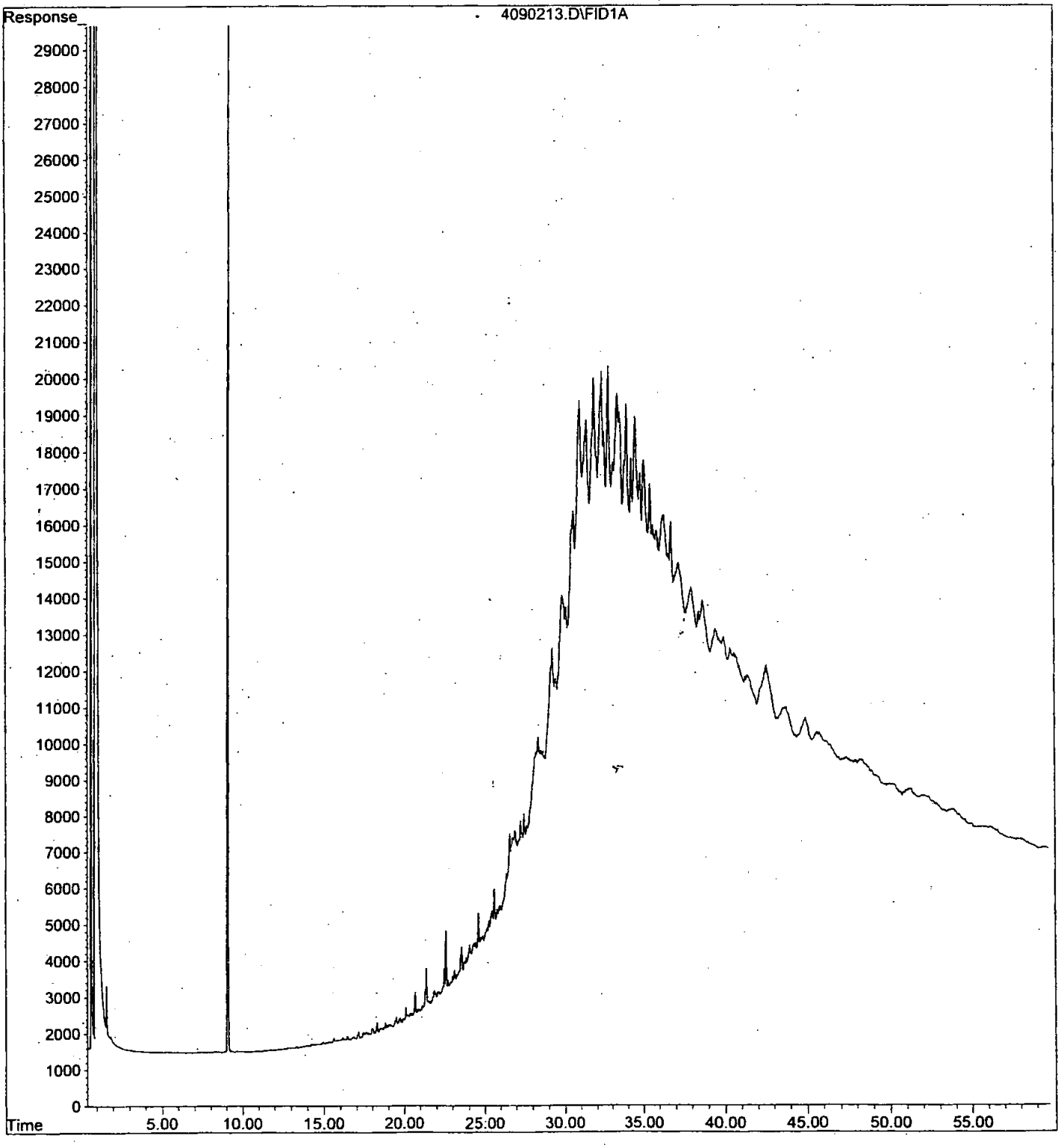
The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Notes and Definitions

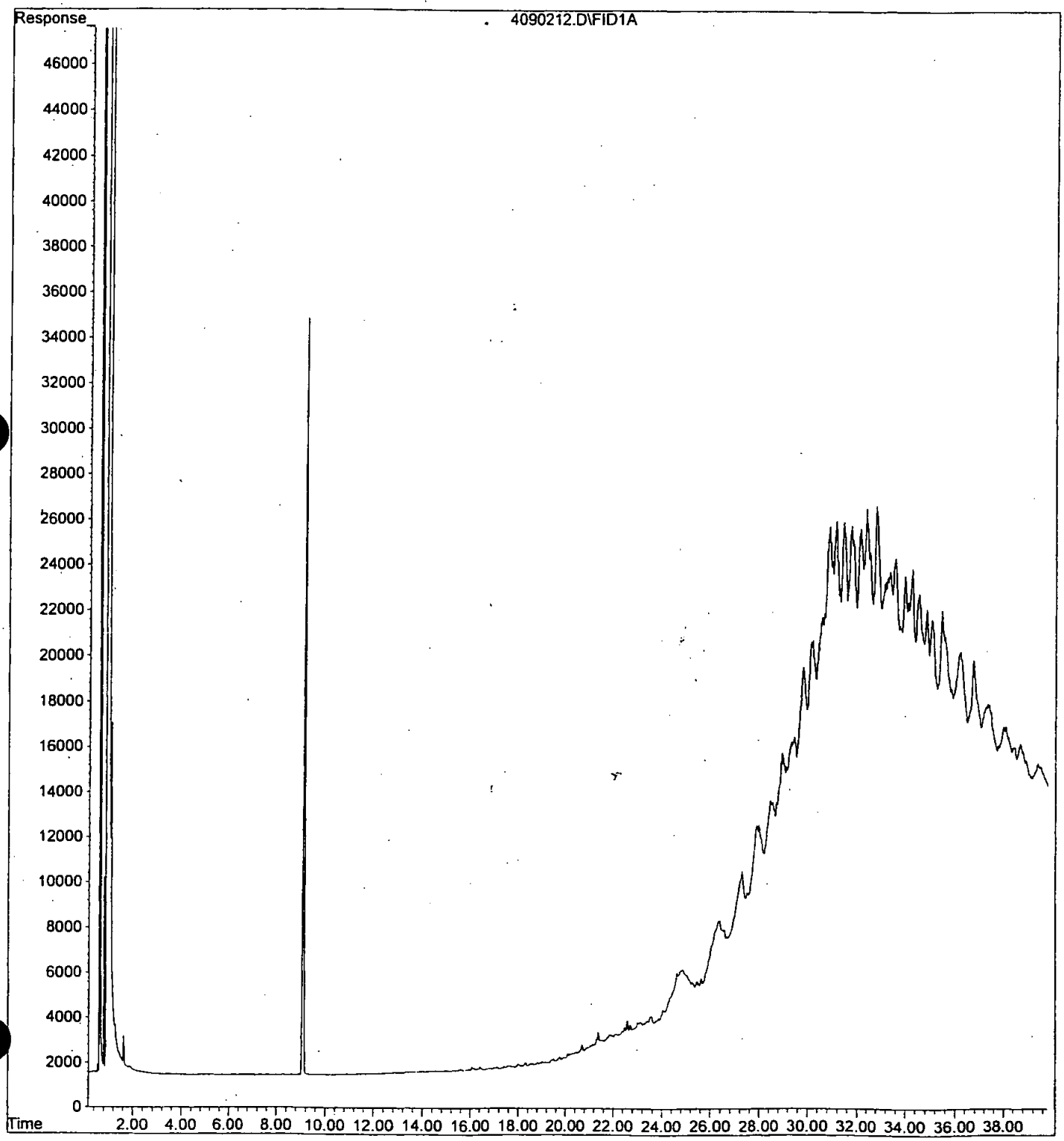
B	Analyte is found in the associated blank as well as in the sample.
D-09	Results in the diesel organics range are primarily due to overlap from a heavy oil range product.
D-40	Diesel Range Organics (DRO) present but do not match diesel fuel pattern.
QB-02	Analyte detected in associated method blank, however all samples in batch are non-detect for this analyte.
QL-03	The LCS recovery for this analyte was outside the QC criteria for this method.
QL-04	Due to typical low recoveries for this analyte, the RPD will often fall outside the acceptance limits.
QM-01	The spike recovery for this QC sample is outside of established control limits due to sample matrix interference.
QM-05	The spike recovery was outside acceptance limits for the MS and/or MSD due to matrix interference. The LCS and/or LCSD were within acceptance limits showing that the laboratory is in control and the data is acceptable.
QM-08	The spike recovery was outside of the QC limits due to noted non-homogeneity of the QC sample matrix.
QR-02	The RPD result exceeded the QC limits due to non-homogeneity of sample.
QR-04	The RPD between the sample and sample duplicate is not valid since both results are below the reporting limit for this analyte.
R-06	Sample dilution was necessary due to nature of the matrix.
S-04	The surrogate recovery for this sample is outside of established control limits due to a sample matrix effect.
ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not Reported
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference

sults in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

File : C:\HPCHEM\1\DATA\4090201.S\4090213.D
Operator :
Acquired : 2 Sep 20104 7:42 pm using AcqMethod ASTM.M
Instrument : TPH
Sample Name: 0408282-13
Misc Info :
Vial Number: 13



File : C:\HPCHEM\1\DATA\4090201.S\4090212.D
Operator :
Acquired : 2 Sep 20104 6:51 pm using AcqMethod ALICIA.M
Instrument : TPH
Sample Name: 0408282-12
Misc Info :
Vial Number: 12



CHAIN-OF-CUSTODY RECORD

EnviroMatrix Analytical, Inc.
4340 Viewridge Ave., Ste. A • San Diego, CA 92123 • Phone (858) 560-7717 • Fax (858) 560-7763

EMA LOG #: 0408282

EMA DATE/TIME STAMP

Client:

Address:

Attn: Phone:

Sampled by: Fax:

Billing Address:

Project: PO #:

REQUESTED ANALYSIS

EMA ID #	Client Sample ID	Sample Date	Sample Time	Sample Matrix	Container(s) #	Container(s) Type*	418.1 (TRPH)	Oil & Grease 413.1__ 413.2__ 1664__	TPH (8015B) Gas__ Diesel__	TPH-Extended 8015B (X) ASTM D2887__	602 / 8021 BTXE__ MTBE__	601 / 8021 (Purgeable Halocarbons)	608 / 8081 (Pesticides)	608 / 8082 (PCB's)	624 / 8260 (Volatile Organics)	625 / 8270 (Semi Volatile Organics)	TTLC Metals (CAC Title 22)	STLC Metals (CAC Title 22)	TCLP (RCRA) Metals__ Organics__	Cd Cr Cu Pb Ni Ag Zn	pH EC TSS TDS
1	KPH-1-11	8/26			1	G	X														
2	KPH 1-13	"	9 05	"	"	"	"														
3	KPH 1-15	"	9 30	"	"	"	"														
4	KPH - 15	"	10 10	"	"	"	"														
5	KPH - 16	"	10 35	"	"	"	"														
6	KPH 2 - 8	"	12 20	"	"	"	"														
7	KPH 2 - 16	"	11 50	"	"	"	"														
8	KPH 4 - 7	"	13 10	"	"	"	"														
9	KPH 4 - 12	"	13 35	"	"	"	"														
10	KPH 4 - 13	"	13 50	"	"	"	"														

*Container Types: B=Brass Tube; V=VOA; G=Glass; P=Plastic; O=Other (list)

	RELINQUISHED BY	DATE/TIME	RECEIVED BY
Tamper-Proof Seals Intact: Yes No N/A; Correct Containers: Yes No	Signature		Signature
Sample(s): Cold Ambient Warm; VOAs w/ZHS: Yes No N/A	Print		Print
All Samples Properly Preserved: Yes No N/A	Company: KH		Company:
Disposal: N/C (aqueous) EMA (@$5.00/sample) Return Hold	Signature		Signature
Turnaround Time: 24 hr 48 hr 3 day 4 day 5 day (Normal)	Print		Print
Comments:	Company:		Company:
	Signature		Signature
	Print		Print
	Company:		Company:

*EMA reserves the right to return samples that do not match our waste profile.

White - EMA Canary - Accounting Pink - Client (w/Report) Goldenrod - Client (Relinquish Samples)

CHAIN-OF-CUSTODY RECORD

EnviroMatrix Analytical, Inc.
4340 Viewridge Ave., Ste. A • San Diego, CA 92123 • Phone (858) 560-7717 • Fax (858) 560-7763

EMA LOG #:

EMA DATE/TIME STAMP

Client: [illegible] PAGE 2 of 2

Address:

Attn: Phone:

Sampled by: Fax:

Billing Address:

Project: PO #:

REQUESTED ANALYSIS

EMA ID #	Client Sample ID	Sample Date	Sample Time	Sample Matrix	Container(s) #	Container(s) Type*	418.1 (TRPH)	Oil & Grease 413.1__ 413.2__ 1664__	TPH (8015B) Gas__ Diesel__	TPH-Extended 8015B__ ASTM D2887__	602 / 8021 BTXE__ MTBE__	601 / 8021 (Purgeable Halocarbons)	608 / 8081 (Pesticides)	608 / 8082 (PCB's)	624 / 8260 (Volatile Organics)	625 / 8270 (Semi Volatile Organics)	TTLC Metals (CAC Title 22)	STLC Metals (CAC Title 22)	TCLP (RCRA) Metals__ Organics__	Cd Cr Cu Pb Ni Ag Zn	pH EC TSS TDS
1	EMA-5 - 10	8/26	1415	Soil	1	E	X														
2	EMA-6 - 10		1503		1		X														
3	EMA-6 - 16		1527		1		X														
4																					
5																					
6																					
7																					
8																					
9																					
10																					

*Container Types: B=Brass Tube; V=VOA; G=Glass: P=Plastic; O=Other (list)

Tamper-Proof Seals Intact: Yes No N/A | Correct Containers: Yes No

Sample(s): Cold Ambient Warm | VOAs w/ZHS: Yes No N/A

All Samples Properly Preserved: Yes No N/A

Disposal: N/C (aqueous) *EMA (@$5.00/sample) Return Hold

Turnaround Time: 24 hr 48 hr 3 day 4 day 5 day Normal

Comments:

RELINQUISHED BY	DATE/TIME	RECEIVED BY
Signature	8/26/04	Signature
Print	1430	Print
Company:		Company:
Signature		Signature
Print		Print
Company:		Company:
Signature		Signature
Print		Print
Company:		Company:

*EMA reserves the right to return samples that do not match our waste profile.

White - EMA Canary - Accounting Pink - Client (w/Report) Goldenrod - Client (Relinquish Samples)

James R. Dodson Consulting
12963 Creek Park Dr.
Poway CA 92064

July 21, 2005

James Clay
Project Manager
Darryl Fowler
Program Coordinator
Site Assessment and Mitigation Program
San Diego County Department of Environmental Health
1255 Imperial Ave., San Diego, CA 92101
P.O. Box 129261, San Diego, CA 92112-9261

Re: Lakeside's River Park Conservancy H39667-001
SWRCB Agreement Nos. 03-169-559-0 and 04-113-559-0
Acute and Chronic Toxicity Bioassay Plan for Fill Materials
Asbestos Testing Pan for Fill Materials

Dear Mr. Clay and Mr. Fowler:

Several requests for further information were made by the RWQCB and by County LEA during the June 17, 2005, meeting held at your offices concerning Lakeside Conservancy's plan to partially backfill two water-filled sand and gravel extraction pits with approximately 130,000 cubic yards of fill materials. These extraction pits would be partially filled in to create emergent freshwater marshes. In particular, Ms. Baczkowski requested that full acute and chronic toxicity bioassay tests be conducted for the fill materials in question. Ms. Baczkowski also requested information concerning the compatibility of the materials used to backfill the pits with benthic fauna. Kerry McNeill of County LEA requested that the fill materials be tested for asbestos hazards prior to their removal from the Project Site.

Lakeside Conservancy will acquire the information requested concerning the potential presence of asbestos and/or acute or chronic toxicity in the subject fill materials using the professional and expert services of Kleinfelder, Inc. Jacques Lord, of Kleinfelder, proposes to test for these parameters using the approach set forth in the enclosed Proposed Scope of Services (Proposal). As we have discussed, I forward the enclosed to you for review and approval before Lakeside Conservancy expends valuable resources in undertaking these expensive assessments.

Therefore, I respectfully request that you review the enclosed Proposal at your earliest convenience and advise me whether the approach meets with your approval.

If you have any questions, please feel free to call at your convenience. As needed, I can make a suitable representative of Kleinfelder available to respond to questions.

Sincerely,

James R. Dodson

JRD/jd

cc. Robin Rierdan, Lakeside Conservancy
cc. Jacques Lord, Kleinfelder

PROPOSED SCOPE OF SERVICES

REVISED OBJECTIVES

The objectives for the revised SSC #5 are to

- Further assess the inert onsite fill material for bulk and trace asbestos for the purpose of disposal options and on-site reuse options;
- Further assess the inert onsite material for acute and chronic invertebrate bioassays; and;
- Prepare a report and meeting materials to present findings.

PROPOSED SCOPE OF SERVICES

Based on the professional services performed to date, Kleinfelder has prepared the following scope of services, separated into individual tasks, to accomplish the desired SSC#5 objectives.

Task 1 – Project Plans Preparation

This task includes preparation of a work plan for review by the regulators including the Region 9 Water Quality Control Board and the San Diego County Department of Environmental Health. The work plan document will describe the technical approach and field-sampling program to be implemented for the project. All project personnel (Kleinfelder and subcontractors) will be expected to adhere to the requirements stipulated in the work plan. The Health and Safety Plan was prepared in 2003 for the first field work and is applicable to this SSC#5. The HASP is designed to comply with the requirements of the Occupational Safety and Health Administration (OSHA) hazardous waste operations and emergency response standard (29 CFR 1910.120). This SSC#5 will be considered the work plan. The existing HASP will be revised upon initiation of the project.

Task 2 –Soil Sampling Program

Kleinfelder proposes to use a hand auger to sample for bulk and trace asbestos over the top three feet of Area 3. 18 samples are proposed in Area 3. Six will be surface samples, six will be from approximately 1.5 feet deep, and six will be from a depth of approximately 3 feet.

Soil samples will be collected directly into a glass jar from the auger bucket. The auger bucket will be decontaminated at the beginning of each sampling event using a four-step decontamination procedure to minimize the risk of cross-contamination between locations. Decontamination shall consist of a scrub with Alconox® soap and tap water, two tap water rinses, and a final rinse with deionized water.

Samples will be submitted to an off-site laboratory (Forensic Analytical of Garden Grove, California) and tracked using chain-of-custody methodology. Soil samples will be collected in general accordance with the most recent County of San Diego Department of Environmental Health (DEH) Site Assessment/Mitigation Guidance manual (SAM Manual).

Soil samples to be used for the bioassay assessment will be selected from the soil samples collected in January 2005, and currently archived with the Enviro-matrix Laboratory of San Diego, California. Current holding time restrictions for the toxicity method EPA 600/4-85/013 stipulate the liquid extract holding time, but not the soil.

Task 4 – Analytical Laboratory Testing Program

The asbestos survey will include collecting bulk samples of the fill material, and sample analysis by Polarized Light Microscopy (PLM). Samples will be analyzed at a laboratory certified under the US EPA-National Voluntary Laboratory Accreditation Program (NVLAP) administered by the National Institute of Standards and Technology.

Collection of bulk soil samples will require hand augering. Kleinfelder is assuming 18 bulk samples from Area 3.

The San Diego Unified Air Pollution Control District (SDUAPCD) provides local enforcement of the asbestos National Emission Standards for Hazardous Air Pollutants (NESHAP) Regulations. The NESHAP regulations typically require those (building material) samples collected for asbestos analysis and analyzed by PLM which fall below the 1% asbestos threshold to be further analyzed by point counting methods. The purpose of point counting is to determine if a specific building material contains greater than or less than 1% asbestos. If a building material contains greater than 1% asbestos, then it is regulated under the local air district asbestos regulations. **Kleinfelder's budget includes a contingency for three analysis by point counting methods, since it is not required by SDUAPCD.** However, once we receive the analytical report from the laboratory, Kleinfelder will be able to evaluate if any samples should be recommended for analysis by point counting methods. If additional point count analysis is recommended beyond the three initial samples, the Client will be contacted for notification/authorization prior to proceeding.

There will also be six soil samples selected, one representing each trench, for acute and chronic bioassay analysis using both freshwater fish (*Pimephales promelas*) and invertebrates (*Ceriodaphnia dubia).* These samples will be composites of the three sampled intervals in each trench. The bioassay analysis will be used to assess the affect the fill soils might have on the creation of a broader shallow wetlands from the current excavated pond areas. The bioassays will be performed in accordance with method EPA 600/4-85/013.

HUFFMAN & CARPENTER, INC.

Wetland Regulatory and Hydrologic Consultants

500 Damonte Ranch Parkway, Suite 929, Reno, Nevada 89521 * (775) 828-1991 * Fax (775) 828-2302
Additional locations in Long Beach and Oakland, California

April 13, 2005

Mr. Bob Forsythe
Project Manager
Regulatory Planning Division
5201 Ruffin Road, Suite B
San Diego, CA 92123-1666

SUBJECT: LAKESIDE'S RIVER PARK CONSERVANCY FLOOD CONTROL, HABITAT RESTORATION, AND RECHARGE PROJECT, REVISED RECLAMATION PLAN AND RESPONSE DOCUMENTS

Dear Mr. Forsythe:

Enclosed are submittal documents as requested under correspondence dated March 17, 2005 for the Flood Control, Habitat Restoration, and Recharge Project. A check for the additional deposits will be attached under separate cover. Please refer to the table below, which provides detailed documentation of the Documents/Requirements for the FHR project being submitted herein.

INFORMATION/ DOCUMENT	NUMBER OF COPIES	LEAD REVIEW DEPT./SECTION
Volume 4A -Revised Reclamation Plan/Plot Plan	**16**	**Full Distribution**
Revised Project Description	**3**	**To Be Submitted**
Volume 4G -Revised Stormwater Management Plan	**2**	**Regulatory Resource (1) DPW (1)**
Drainage Study	**2**	**Regulatory Resource (1) DPW (1)**
Traffic Management Plan	**3**	**To Be Submitted**
Chemical Test Results	**3**	**Regulatory Planning (1) Regulatory Resource (2)**
Asphalt Location Exhibit	**2**	**Regulatory Resource (1) DPW (1)**
Volume 4E - Revised Revegetation Plan	**2**	**Special Handling**

This binder is titled Revised Reclamation Plan for the Flood Control, Habitat Restoration, and Recharge Project, San Diego County, California (sixteen copies)

It includes the following:

Appendix A: Correspondence Dated March 17, 2005
Appendix B: Lakeside's River Park Conservancy Responses
Appendix C: Reclamation Plan Text

Attachment 1: Figures

Attachment 2: Tables

Attachment 3: Representative Site Photographs

Attachment 4: Right of Entry Agreement

Attachment5: Correspondence with Regional Water Quality Control Board

Plot Plan (16 rolled plan sets)

If you have questions about the documents being submitted as a part of this package, please contact me at (775) 828-1991.

Sincerely,

Lori A. Carpenter, PWS, CPESC
President

cc: file
Ms. Robin Rierdan, LRPC
Sixteen copies of Volume 4A - Revised Reclamation Plan

APPENDIX A
County of San Diego Department and Land Use
Correspondence Dated March 17, 2005

GARY L. PRYOR
DIRECTOR

County of San Diego

DEPARTMENT OF PLANNING AND LAND USE

5201 RUFFIN ROAD, SUITE B, SAN DIEGO, CALIFORNIA 92123-1666
INFORMATION (858) 694-2960
TOLL FREE (800) 411-0017

SAN MARCOS OFFICE
338 VIA VERA CRUZ - SUITE 201
SAN MARCOS, CA 92069-2620
(760) 471-0730

EL CAJON OFFICE
200 EAST MAIN ST. - SIXTH FLOOR
EL CAJON, CA 92020-3912
(619) 441-4030

March 17, 2005

Robin Rierdan, Lakeside River Park Conservancy
117679 Waterhill Road
Lakeside, CA, 92040

ACCOUNT NUMBER: CP 04-0034149
CASE NUMBER: RP 04-005; PROJECT NAME: USDRIP FHR
PROJECT ADDRESS: North terminus of Winter Gardens Blvd.; APN 382-25032,35

Dear Ms. Rierdan:

The Department of Planning and Land Use (DPLU) has reviewed your application for a Reclamation Plan and is providing you with the attached package of information as a guide for further processing your application. This package consists of:

- Determination of Completeness pursuant to Section 65943 of the Government Code
- Determination of Completeness pursuant to the California Environmental Quality Act (CEQA)
- A MATRIX which summarizes all the information we are requesting;
- Attachments which are detailed and provide you with very specific information on our request(s);
- Preliminary conditions from the Department of Public Works
- An Environmental Cost Estimate
- Estimated Processing Schedule

PROJECT DESCRIPTION

The project consists of the restoration of the San Diego River in the Upper San Diego River Improvement Project area of Lakeside. The project includes a number of actions: remove waterway constrictions and improve flood control capacity for the river; significantly increase wetland, riparian and coastal sage scrub habitat areas and construct wetland cells near the Riverside Water District groundwater wells to reduce pollutants in the groundwater through phyto-remediation and other

mechanisms and near the Los Coches Creek outfall to reduce pollutants in the Los Coches Creek non-point source waters. Also proposed is the implementation of a maintenance program to ensure the survival and preservation of the habitat and wetland treatment values that are restored, enhanced or created during construction.

Approximately 222,300 cubic yards of fill sands would be excavated and removed from the site as part of the proposed project. The project would restore, enhance or create a substantial amount of habitat on the site with varying topography and then plant native, slope stabilizing and buffering vegetation to lessen erosion or landslide potential at the site. In addition, approximately 79,000 cubic yards of fill would be used within the USDRIP area for another Reclamation Plan and 115, 000 cubic yards would be used on site to fill two existing sand mining ponds to approximately 2.0 to 3.5 feet below the surface water. The total excavated fill would equal approximately 416,700 cubic yards.

The project would include creation of approximately 57 acres of additional wetlands in an area where approximately 22 acres of wetlands currently exist. Recreational and educational activities would be allowed only to the extent that they would be compatible with habitat and species conservation.

DETERMINATION OF COMPLETENESS PURSUANT TO SECTION 65943 OF THE GOVERNMENT CODE

DPLU has reviewed your application and has determined that it is complete pursuant to Section 65943 of the Government Code.

DETERMINATION OF COMPLETENESS PURSUANT TO THE CALIFORNIA ENVIRONMENTAL QUALITY ACT (CEQA)

PROJECT REQUIRES EXTENDED INITIAL STUDIES OR ADDITIONAL INFORMATION

The Department of Planning and Land Use has completed its review of your AEIS and determined it not to be "complete" as defined by the CEQA. At this time, additional information will be required to determine your project's potential impacts on the environment and to complete the CEQA Environmental Initial Study.

The County of San Diego's environmental review guidelines require that the requested environmental technical studies be prepared by a California Licensed professional (i.e., engineer, geologist) qualified to complete the study or a consultant from the County's List of Environmental Consultants. These reports will be reviewed for technical accuracy and to determine whether a Negative Declaration or Environmental Impact Report will be necessary for your project. Additional copies of the final technical report(s) will be required when your project's environmental documents are circulated for public review. The reasons for this determination and the information required are found on the following attachments.

APPEAL INFORMATION: If you disagree with any of the environmental processing requirements you may, in certain circumstances, be able to appeal some or all of the requirements to the appropriate hearing body pursuant to Section 6.3.3 or 7.2 of the San Diego County CEQA Guidelines. Such an appeal must be filed at the DPLU Zoning Counter, 5201 Ruffin Road, Suite B, San Diego, CA 92123 (Telephone: (858)565-5981) no later than 4:00 p.m. on the tenth calendar day after the date of this letter and must be accompanied by the appropriate appeal form. Appeal forms and other information are available at the DPLU Zoning Counter. If the tenth day falls on a weekend or County holiday, an appeal will be accepted until 4:00 p.m. the following day the County is open for business. No separate appeal fee is required but be aware that your deposit account will be charged for the staff time spent processing such an appeal (typically approximately 20 - 30 hours). Prior to filing an appeal you should, but are not required to, confirm with the project Environmental Analyst that the point(s) of your disagreement are in fact subject to appeal. Furthermore, discussing the points of the disagreement with staff often results in a clarification or compromise that may alleviate your concerns thereby eliminating the need for the appeal.

PROJECT ISSUE RESOLUTION PROCESS: If you have disagreements with the requirements within this letter you should contact the project staff to resolve those issues. Upon discussion with project staff, you may have these issues referred to the Project Issue Resolution process to provide you with an opportunity to quickly and inexpensively have issues considered by senior County management. Issues considered under this procedure can include disagreements with staff interpretations of codes or ordinances, requests for additional information or studies, or disagreements regarding project related processing requirements.

This process does not replace any other appeal mechanisms such as those for CEQA determinations or administrative appeals. Also note that the **ten-day** period to file the appeal described above does not change if you utilize the issue resolution procedure. Please contact me to learn more about this process, the limitations, or to request an application form.

ESTIMATED PROCESSING SCHEDULE: An estimated processing schedule is attached. Several assumptions were required to supply a schedule at this time and are listed at the bottom of the estimated schedule. If these assumptions prove to be incorrect, the schedule will be adjusted. The schedule also makes assumptions regarding County staff workload, submittal turnaround times by the applicant, and the number of iterations of submittals required for the applicant to obtain an adequate document. These assumptions are based on staff's experience with this type of case. **If reports are determined to be acceptable with less than three reviews or the applicant turnaround times shortened, the "standard" schedule can be reduced by as much as 50 percent in some cases.**

SUBMITTAL REQUIREMENTS: Unless other agreements have been made with County staff, you must submit all of the following items concurrently and by the submittal date listed below in order to make adequate progress and to minimize the time and costs in the processing of your application. The submittal must be made to the DPLU Zoning Counter at 5201 Ruffin Road, Suite B, San Diego, CA 92123-1666 and must include the following items:

a. **A COPY OF THIS LETTER**. The requested information will not be accepted unless accompanied by this letter.

b. The following information and/or document(s) with the requested number of copies as specified:

INFORMATION/DOCUMENT	NO. OF COPIES	LEAD REVIEW DEPT./SECTION
Revised Reclamation Plan	16	Full Distribution
Revised Project Description	3	Regulatory Planning (1), Regulatory Resource (1), DPW (1)
Revised Stormwater Management Plan	2	Regulatory Resource (1), DPW (1)
Drainage Study	2	Regulatory Resource (1), DPW (1)
Traffic Management Plan	3	Regulatory Resource (1), DPW (2)
Chemical Test Results	3	Regulatory Planning (1), Regulatory Resource (2),
Asphalt Location Exhibit	2	Regulatory Resource (1), DPW (1)

c. Deposits:

AGENCY	ACCOUNT NUMBER	DEPOSIT AMOUNT
DPLU-Planning	WN 7960	$3,650.00
DPLU-Environmental	WN 7960	$2,240.00
TOTAL ADDITIONAL DEPOSITS		$5,890.00

The above is an estimate of the additional deposits required to process the application through hearing/decision.

Be aware that Section 362 of Article XX of the San Diego County Administrative Code, Schedule B, 5 states that:

> *The Director of Planning and Land Use may discontinue permit processing and/or recommend denial of the said project based on non-payment of the estimated deposit.*

Several assumptions were required to supply the DPLU-Environmental cost estimate at this time in the process. If these assumptions prove to be incorrect, your cost estimate will be adjusted. These assumptions are listed at the bottom of the attached environmental cost estimate.

Should your application be approved, there will be additional processing costs in the future (e.g., Final Map processing costs, park fees, drainage fees, building permit fees). The above estimate includes only the costs to get your present application(s) to hearing/decision and does not include these additional processing costs.

The initial review of your project indicates that there will be an effect on native biological resources. Therefore, State law requires the payment of a fee to the California Department of Fish and Game for their review of the project environmental document (Fish and Game Code §711.4). If this fee is needed, it will be requested and collected at a later time during the process. Payment of the fee is required regardless of whether or not we consider the effect on native biological resources to be significant or clearly mitigated. The project analyst will remind you to pay this fee immediately prior to public review of the project environmental document.

SUBMITTAL DUE DATE: In order to maintain adequate progress in the processing of your project, the DPLU requires that the revisions/information/deposits requested in this letter be submitted by **July 12, 2005**. An extension of this date may be granted at the discretion of the Director of Planning and Land Use. To request an extension, submit a written request, signed and dated by the project applicant. The request must include the proposed new submittal date and a brief reasoning for the extension request. If the revised document(s) are not received, or an approved extension request is not granted by the Director by the above date, the Department may make a recommendation for denial of your project to the appropriate decision-making authority based upon inadequate progress pursuant to California Environmental Quality Act (CEQA) Guidelines Section 15109.

If you have any questions regarding this letter or other aspects of your project, please contact me at (858) 694-3856.

Sincerely,

Bob Forsythe, Project Manager
Regulatory Planning Division

RCF

cc: Lakeside Community Planning Group
Mary Allison, Chair, USDRIC, P.O. Box 1284, Lakeside, CA 92040
Bill Figge, CalTrans, M.S. 65
Ed Sinsay, Project Manager, Department of Public Works, M.S. O336
Doug Molby, P.E., Department of Planning and Land Use M.S. O650
Glenn Russell, Regional Planner, Department of Planning and Land Use, M.S. O650

Attachments

SCOPING LETTER MATRIX

	Item	Attachment
1.	Planning	A
2.	Stormwater	B
3.	Revegetation Plan	C
4.	Department of Public Works Conditions	D
5.	Reclamation Plan Review	E
6.	Estimated Processing Schedule	F
7.	DPLU-Environmental Cost Estimate	G
8.	Planning Group Comments	H
9.	USDRIC Comments	I

ATTACHMENT A

DEPARTMENT OF PLANNING AND LAND USE – LAND USE ISSUES

1. It is the Department's understanding that the project site was used as a construction debris landfill during the 1980s and 1990s. It is also the Department's understanding that during the course of doing trenching for soil appraisal, asphalt has been found on the site and that chemical tests are being performed to determine whether the asphalt is contaminated with hydrocarbons as well as to determine if the fill is contaminated. Please provide copies of all test results. These will be reviewed by the Department of Environmental Health.

2. Please revise the project description to include the excavation of asphalt and a description of whether the asphalt will be exported or remain on site. If it is to remain on site please describe potential uses and what steps will be taken to protect the river.

3. If the project includes removing the river constriction from the Hanson site, please revise the Reclamation Plan to show that work.

3. Please provide an exhibit showing the location of all known asphalt. Note the depth of the asphalt and show the asphalt's depth in relation to the river channel.

4. Please note that Reclamation Plans require financial assurance and will be included as conditions of approval. The estimated costs of reclamation shall be secured by financial assurance to assure compliance with the Reclamation Plan. The assurance shall be made payable to the Director of the Department of Planning and Land Use and the Califomia Department of Conservation and may take the form of surety bonds, irrevocable letters of credit, trust funds, or other forms of financial assurance adopted by the State Mining and Geology Board, which the County reasonably determines shall be readily available to pay for reclamation in accordance with the surface mining operation's approved Reclamation Plan.

5. Please note that the Reclamation Plan will be conditioned to require the dedication of a trail easement pursuant to the RiverWay Specific Plan.

6. If the extracted fill will be stockpiled on site, please identify the location of the stockpiles on the plot plan.

7. Please note that an amendment to the USDRIP River Plan must be approved prior to the commencement of any work in the river.

8. MSCP findings will be required for this project. If more information is needed, you will be notified.

ATTACHMENT B

DEPARTMENT OF PUBLIC WORKS – STORMWATER, GRADING AND DRAINAGE

A Preliminary Drainage Study is required for this project. Please use the latest County of San Diego Hydrology Manual found at the following website link: http://www.sdcounty.ca.gov/dpw/engineer/hydrologymanual.html

Include a discussion of the asphalt found on the site if it is to remain on the site, and what Best Management Practices will be used in connection with the asphalt.

A Traffic Management Plan is required for this project to assess the impact of truck traffic on local streets and intersections.

DPW staff has reviewed the Preliminary Grading Plan and the Storm Water Management Plan prepared by Chow Engineering, received December 17, 2004. Our comments are as follows:

Preliminary Grading Plan

1. Show assessors parcel numbers and property lines on which the work is performed.

2. Show a North Arrow and scale on all sheets.

3. List the name of the applicant/owner, address, and telephone number.

4. List the engineer's name, address, and telephone number.

5. Show project address or Assessors Parcel Number (APN).

6. Show approximate property lines of the site on which the work is performed.

7. Show any buildings or structures on the site where the work is to be performed, and any structures on adjacent land within fifteen feet (15') of the project and lable said structures.

8. Show any easements of greater than 20' width.

9. Show estimates of the amount of excavation, fill, import, and export and estimates for the square footage/acreage of disturbed area for each pad or Parcel.

10. Show location of any proposed drainage devices, stormwater protection facilities, walls, cribbing, dams, or other protective devices to be constructed in connection with proposed work.

11. Show clear differentiation between existing and proposed contours

12. Some proposed contours appear to be existing contours, please revise.

13. Include this note on the plans.

PRELIMINARY GRADING PLAN NOTE:

"This plan is provided to allow for full and adequate discretionary review of a proposed development project. The property owner acknowledges that acceptance or approval of this plan does not constitute an approval to perform any grading shown hereon, and agrees to obtain a valid grading permit before commencing such activity."

14. Show the direction of lot and street drainage and percent slopes on driveways.

15. Show proposed slope ratios, not greater than 1 ½: 1on cuts and 2:1 on fills.

16. Show 100 year flood lines of inundation for drainage basins over 25 acres.

17. There appear to be random contour index text shown that are solitary and are not related to topographic data.

18. The County of San Diego has a standard SWMP format that has been in use since March 2001. Please use the County of San Diego SWMP format. This format is on the Web in PDF or MSWord format at http://www.sdcounty.ca.gov/dpw/stormwater/management.htm.

19. Operations and Maintenance Program, Section 5: Visit: http://www.sdcounty.ca.gov/dpw/stormwater/maintenance.html and provide the appropriate maintenance mechanisms for the selected BMPs. Identify which category (i.e. first, second, third, etc.) and discuss "Mechanisms to assure maintenance" and "Funding. Please provide a summary of maintenance costs per responsible party (homeowner, or homeowners association) for each BMP and clearly indicate the cost basis (annual, or every third year, or other).

20. Show all proposed permanent BMPs on a plan or schematic (detention/retention basins, biofiltration swales). Provide 85th percentile (first flush) capacity calculations for proposed permanent BMPs.

21. Discuss post construction BMP's in terms of Site Design, Source Control, and Treatment Control BMPs. Refer to Section G.5 of the Stormwater Standards Manual.

22. Add a conclusion section. State that the combination of proposed construction and permanent BMP's will reduce, to the maximum extent practicable, the expected project pollutants and will not adversely impact the beneficial uses of the receiving waters.

if you have any questions regarding these comments, please contact Dorian Kunch at 858-694-3248

ATTACHMENT C

DEPARTMENT OF PLANNING AND LAND USE – REVEGETATION PLAN

The following corrections should be made on the plans submitted. Requested corrections should be highlighted by indicating on what sheets the modifications took place. Any items that are not corrected must have an explanation as to why the changes were not made.

Requirements are based on the *County of San Diego's Landscape Water Conservation Design Manual, County of San Diego's Grading Ordinance, and the County's Revegetation Plan Format, Content and Guidelines.*

1. Attachment 1, Figures 3 & 4 – please explain and delineate what the categories in the legend represent.
2. Attachment 1, Figure 6 – explain numbering.
3. Attachment 1, Figure 9 – the text indicates that both Areas 3 and 12 will be drip irrigated. This figure only shows one area – please label and revise map to include both areas.
4. Attachment 2, Table 3 – there is no identification of the region indicators or explanation of 'Plot' nos. Please provide.
5. Attachment 2, Table 4 – Construction Schedule only indicates landscaping on area – please include all areas of revegetation/enhancement.
6. Attachment 3 – Project Cost Estimate – please include the cost of container stock, hydroseed mix, cost of seed collection, willow cuttings, fertilizers, soil prep (mycorrhiza innoculatnt), irrigation components, soaking and painting of willow cuttings, labor to install planting, labor to weed and maintain the site, labor for irrigation (installation and removal), a 20% contingency for replacement planting, monitoring, and report preparation.

RP04-005 USDRIP FHR March 17, 2005

ATTACHMENT D

DEPARTMENT OF PUBLIC WORKS – PRELIMINARY CONDITIONS

Pending evaluation and approval of the project's Traffic Management Plan, Drainage Study, and revisions to the SWMP and Grading Plan, further improvements may be required or modified to mitigate for the traffic, drainage, environmental, and grading impacts caused by this project.

If you have any questions regarding these comments, please contact Dorian Kunch at 858-694-3248

ATTACHMENT D

DEPARTMENT OF PLANNING AND LAND USE – RECLAMATION PLAN REVIEW

Plancheck Correction List for RP 04-005

By: Doug Molby, P.E., Code Enforcement

Plan Set

1. The scale of the Location Map is meaningless because of the obvious stretching horizontally or compression vertically (aspect ratio has not been maintained). Scale should not be proportional (i.e., 1:100); specify 1"=100' or 1" = 200', as the case may be.
2. Show "project site" accurately on the vicinity map (the site is immediately adjacent to Hwy. 67 R.O.W., but the map indicates otherwise).
3. Name, address and telephone number of the following personnel:
    a. Property owner;
    b. Applicant;
4. Name, professional seal, signature, and telephone number of the following:
    a. Civil engineer;
    b. Soils engineer;
    c. Date plan(s) prepared;
    d. Latest date of plan revision(s).
5. Assessor's Parcel Number(s) and Legal description (APN).
6. Indicate zoning Land Use District classification and general plan designations of site and of the surrounding properties.
7. Bench mark: Show Location on plan and describe (if datum is assumed, so indicate). Correlate with County horizontal and vertical control points.
8. Thomas Bros./California coordinates.
9. Reclamation Plan number on every sheet.
10. Show and label location of all roads, sewage disposal systems (septic and/or sanitary), water mains, utility facilities, and water courses on the site and within 1000 feet from the site.
    a. Show and label (either directly or using a symbol legend) all existing and proposed structures, including but not limited to power poles, towers, fences, trash enclosures, signs, septic systems, curbs, driveways, parking areas, and sidewalks within the project area. Locate by distance in relation to other structures and property lines, and indicate existing structures that are to remain or be removed.
11. Submit "Right of Entry Agreement" duly signed by the owner/operator.
12. Show proper set back(s) from property lines for top-of-slopes (for minimum requirements see STD Drawing DS-11).

13. Identify property and easement lines. List easements, describing: purpose, name of easement holder, and given all appropriate dimensions.
14. Identify limits of permit on all sheets.
15. Show Q_{100} year floodway and floodplain.
16. Show, on plans, total amount of excavation and total amounts of export/import (cubic yards).
17. Show cut and fill ratios for all slopes.
18. Show locations of cut and placement of fill ("daylight" and limit lines).
19. Show all staging, work areas, and truck routes to, on, and from the site.
20. Identify the source of the topographic information including the date of such information.
21. Show the acreage of the site and the acreage designated for reclamation.
22. Show and describe the phases of the operation. It is strongly encouraged to "phase" the project.
23. Show property and safety fencing, existing and proposed (if there is any proposed).
24. Show location and identification of all survey monuments used to prepare the plans.
25. Show location of processing and storage areas.
26. Show the progression of stripping and excavating, including elevation and dates, or phases.
27. Show the groundwater level of the site on the cross-sections.
28. Show limits of intended grubbing and clearance.
29. Specify backfill materials (what may and may not be included, i.e., asphalt).
30. Note on plans: "Approval of these plans by the Director of Public Works does not authorize any work or grading to be carried out until the permit is approved by the Department of Planning and Land Use and all conditions have been met and approval to start the operation have been given by the Code Enforcement Engineer."
31. Note on Plans: "Notwithstanding the minimum standards set forth in the Grading Ordinance and not withstanding the approval of these grading plans, the permittee is responsible for the prevention of damage to the adjacent properties. There shall be no excavation so close to the property line so as to endanger any adjoining public street, sidewalk, alley, function of any sewage disposal system, or any other public or private property without taking the appropriate measures to prevent damage to same. The operator is responsible for the correction of non-dedicated improvements which damage adjacent properties. "
32. Note on Plans: "Excavation: _____Yds.3 Fill:_____Yds.3 Waste/Import:_____Yds.3"

Reclamation Plan Conditions (the following must be incorporated into the RP text)

1. Conditions 2 through 17, below, are intended to implement the minimum requirements of the State of Califomia Surface Mining and Reclamation Act of 1975 (SMARA), as well as local requirements. Should conflict arise between the provisions of these conditions and the minimum requirements of SMARA, the SMARA requirements shall take precedence.
2. No work shall be conducted pursuant to the Reclamation Plan, site plans, and specifications for the grading of the property until plans have been prepared, and/or approved, and signed by a registered civil engineer, and shall include all information required in County of San Diego Regulatory Ordinances Section 87.208(b) and any other information required by the Director of the Department of Planning and Land Use.
3. The Reclamation Plan shall, in addition to all other requirements, provide in designated phases for the progressive rehabilitation of the mining site land form so that, when reclamation is complete, it shall contain stable slopes, be readily adaptable for altemate land uses, and be free of derelict machinery, waste materials and scrap to the satisfaction of the Director of the Department of Planning and Land Use. The proposed mining site land form, to the extent reasonable and practical, shall be revegetated for soil stabilization, free of drainage problems, coordinated with present and anticipated future land use, and compatible with the topography and general environment of surrounding property.
4. Where any requirement of the reclamation plan conflicts with any requirement of an approved Major Use Permit, the Director of the Department of Planning and Land Use shall determine which requirement shall apply.
5. Pursuant to County of San Diego Regulatory Ordinances Section 87.707, no reclamation shall be conducted pursuant to an approved Reclamation Plan unless prior to commencement an Agreement [see attachment] has been entered into allowing the County to enter the property to correct any landscaping or irrigation system deficiencies, any unsafe condition, or breach of provisions of the approved Reclamation Plan.
6. The Agreement shall authorize the County or any person authorized by the County to enter the property at a mutually agreeable time and after having given the mining operator or permittee a minimum 24 hour notice to perform an annual inspection, as mandated by the State, or follow-up inspections as a result of the annual inspection. The Agreement shall also authorize the County or any person authorized by the County to enter the property at any reasonable times to investigate any suspected violation of any condition of the Reclamation Plan and/or for emergency abatement of hazardous conditions. Said Agreement shall be executed by the permittee, the owner of the property and by holders of any lien upon the property that could ripen into a fee. The permittee shall provide acceptable evidence of title showing all existing legal and equitable interest in the property. The Director of the Department of Planning and Land Use will execute

and accept the Agreement on behalf of the County of San Diego. The Agreement shall be recorded before any work is performed in use and reliance upon the Reclamation Plan.

7. The estimated costs of reclamation shall be secured by financial assurance, in an amount as specified below in Conditions 8 and 9, to assure compliance with the Reclamation Plan. The assurance shall be made payable to the Director of the Department of Planning and Land Use and the California Department of Conservation and may take the form of surety bonds, irrevocable letters of credit, trust funds, or other forms of financial assurance adopted by the State Mining and Geology Board, which the County reasonably determines shall be readily available to pay for reclamation in accordance with the surface mining operation's approved Reclamation Plan.
8. The financial assurance shall be in an amount equal to the estimated cost to reclaim, in accordance with the requirements of the approved Reclamation Plan, all disturbed, unreclaimed lands and all acreage expected to be disturbed in the forthcoming year. The operator or permittee shall provide an estimate of the cost of reclamation prepared by a state-registered civil engineer. All financial assurances shall be forwarded to the California Department of Conservation for review a minimum of 45 days prior to County approval. The County shall review and approve the financial assurance estimates if they are deemed sufficient. The estimate shall be submitted not later than 120 days after the granting of the Reclamation Plan and by July 1st of each year thereafter. If the operator or permittee does not submit this estimate by the required deadline, the County will calculate an estimate of assurance. The staff time spent calculating this estimate will be charged against the inspection deposit, required below in Condition 14. The financial assurance shall be provided to the County within 60 days of notification of the Director of the Department of Planning and Land Use's approval of the financial assurance amount.
9. The financial assurance amount shall be adjusted annually to account for new lands disturbed or expected to be disturbed in the forthcoming year by the reclamation of lands accomplished in accordance with the approved Reclamation Plan. In no event shall the amount of assurance required be construed as a limitation on the liability of the permittee.
10. The permittee and the surety executing such bond or person issuing such instrument of credit or making such cash deposit shall continue to be firmly bound under a continuing obligation for the payment of all necessary costs and expenses that may be incurred or expended by the County in causing any and all such work to be done. Financial assurances shall no longer be required of an operator or permittee, and shall be released, upon written notification by the County, which shall be forwarded to the operator and the State Department of Mining and Geology, that reclamation has been completed in accordance with the approved Reclamation Plan. In the case of a cash deposit, any unused portion thereof shall be refunded to the permittee.

11. The County shall be notified no less than 180 days prior to cancellation of any financial assurance. The County may seek the forfeiture of such financial assurance if new assurance is not posted at least 30 days prior to the expiration of the financial assurance.
12. If the site property is sold or ownership is transferred to another person or entity, the existing financial assurances shall remain in force and shall not be released by the County until new financial assurances are secured from the new owner and have been approved by the County.
13. The operator or permittee shall file a copy of the operation's annual report with the State pursuant to Public Resources Code Section 2207.
14. The operator or permittee shall fund an annual inspection deposit account with the Department of Planning and Land Use and the department of Public Works. The initial amount of the deposit shall be $3000.00, as established by the Board of Supervisors ($1000 allocated for use by the Department of Public Works' inspections and $2000 allocated for the Department of Planning and Land Use's inspections). Thereafter, the Director of the respective Department will determine the amount of the deposit based on the cost to inspect the surface mining operation. The Director of the Department of Planning and Land Use, or other assigned County agency (i.e., Revenue and Recovery), shall notify the mining operator of the amount of the required deposit. The amount of the deposit required shall not be construed as a limitation on the liability of the operator or permittee.
15. If, after inspecting the mining operation, the County determines that it does not comply with the Reclamation Plan, the County will notify the operator in writing of the non-compliance. The County shall give the operator a reasonable time, not to exceed 180 days, to comply. If at the end of this time the operation still does not comply with the Reclamation Plan, the County may require the mining operator to stop all or a part of the work. Failure to comply with the Reclamation Plan shall be considered a violation of the Zoning Ordinance and, in accordance with the County of San Diego Regulatory Ordinances Section 87.106, shall be deemed unlawful and a public nuisance. The County's finding of non-compliance with the Reclamation Plan may be appealed pursuant to Zoning Ordinance Sections 7200-7205.
16. If the reclamation operation or portion of the operation subject to these conditions is sold, assigned, conveyed, exchanged, or otherwise transferred, the successor in interest shall be bound by the provisions of the Reclamation Plan. Notification of such sale, assignment, conveyance, exchange, or transfer shall be provided to the Director of the Department of Planning and Land Use within 30 days of such.
17. Neither the issuance of a Reclamation Plan, nor the compliance with any provisions or condition thereof, shall relieve any person from any liability or responsibility resulting from grading operations.

Additionally, I was provided two binders with documents enclosed, labeled: *Volume 4A Reclamation Plan Application* and *Volume 4D Grading permit Application*. The issuance of a RP eliminates the need for a grading permit. Is the applicant clear as to

which permit they desire. The provided documents should make it clear: grading or reclamation; one or the other.

The RP permit application documentation should include the following:

1. A discussion of verifiable, site-specific standards for reclamation, including, but not limited to: performance standards for wildlife habitat; performance standards for regrading, slope stabilization, and recontouring; performance standards for backfilling; performance standards for revegetation; performance standards for drainage, waterways and erosion control; performance standards for stream and groundwater protection; and performance standards for tailings and mine waste management.
2. A brief discussion of why the reclamation accomplished by RP84-004 M1 was not considered adequate, relative to the above stated standards.
3. and a brief discussion of how this proposed project meets or exceeds these standards.

The RP document shall provide a narrative of the project, including a proposed timeline, with key milestones and objectives noted. Also included in this narrative, should be a description of the materials and equipment needed to accomplish each phase.

Although there are numerous aspects, "spokes," of this project (the varied support Volumes), the RP document is the "hub." All other plans (i.e., stormwater management plan, revegetation plan, etc.) stem from the RP and are to be referenced in the RP document.

That being said, the two volumes I was given to review were generally incomplete and lacking in necessary information. As such, additional comments will result from the applicant addressing the above noted deficiencies and subsequent review.

ESTIMATED PROCESSING SCHEDULE

Project Name: USDRIP FLR
Project Number: RP 04-005
Staff Completing Schedule: Bob Forsythe
Decision-Making Body: Planning Commission
Date Schedule Produced/Revised: 3/18/2005

TASK/ACTIVITY	Estimated Duration	Estimated Completion Date	Actual Completion Date
APPLICATION SUBMITTAL			12/17/2004
DPLU reviews application, determines costs and schedule.	30	1/17/2005	3/14/2005
Applicant Submits 1st Draft Extended Initial Studies*	120	7/12/2005	
DPLU Reviews 1st Draft Extended Initial Studies	30	8/11/2005	
Applicant Submits 2nd Draft Extended Initial Studies*	45	9/26/2005	
DPLU Reviews 2nd Draft Extended Initial Studies*	21	10/17/2005	
DPLU determines previous EIR adequate w/Addendum, completes EIR Addendum and Findings	14	10/31/2005	
Applicant submits Application Amendment form, F&G fees, copies of Extended Initial Studies	***14***	***11/14/2005***	
DPLU completes condition language, findings, mitigation monitoring plan.	21	11/21/2005	
DPLU completes final documents, dockets project and initial PROJECT HEARING/DECISION	30	12/21/2005	

Total Estimated Duration 53 weeks
12.2 months

Bolded tasks are under the control of applicant/consultant.
Italicized tasks are completed concurrently with other tasks.

Assumptions:

Project will be completed using an Addendum to a previous EIR and Extended Initial Studies will be required.
Public Comments and Hearing comments will not meet the findings that require that a Supplemental or Subsequent Environmental Impact Report be prepared.
Applicant will submit all required information in accordance with the estimated schedule.
The project will not be continued by the decision-making body nor appealed.
Any Department of Public Works or Department of Environmental Health issues will be resolved concurrently with the environmental process.

The Hearing/Decision date is subject to Decision-Making Body availability and schedule.
Dates which fall upon a holiday will have an actual completion date the first business day after such holiday.

SUMMARY ENVIRONMENTAL COST ESTIMATE AND DEPOSIT SCHEDULE

Project #: **RP 04-005**
Name: **USDRIP FHR**
Date: **03/18/05**
Estimator: **Bob Forsythe**

TASK	Staff Hours	Management Hours	Admin/Student Hours
AEIS Completeness/Initial Study	13.0	0.7	2.2
Extended Initial Studies	N/A	N/A	N/A
MSCP/BMO or HLP Findings	7.2	0.5	0.4
Negative Declaration	N/A	N/A	N/A
Environmental Impact Report	N/A	N/A	N/A
Addendum/Use of Previous CEQA Document	13.1	2.3	2.7
Board Policy I-119 Review	N/A	N/A	N/A
TOTAL LABOR HOURS	33.3	3.6	5.3
Charge Rates ($/hour)	$ 121.00	$ 157.00	$ 55.00
Subtotal - County Labor Costs*			$ 4,900
Fish and Game Fees**			N/A
TOTAL ESTIMATED COST (Environmental)			**$ 4,900**

DEPOSIT SCHEDULE

Environmental Deposits already paid	$ 2,660
Submit Immediately or Upon Next Submittal, as Appropriate	$ 2,240
Submit Immediately Prior to Public Review	N/A
Fish and Game Fees**	N/A
TOTAL DEPOSITS (Environmental)	**$ 4,900**

This is an estimate of County staff time and costs related to Environmental processing only.
Estimates do not include any of the applicant's consultant costs nor County special graphics charges.
* - Labor Cost Subtotal is rounded to the nearest $100.
** - Fish and Game fees are collected by the County on behalf of the California Dept. of Fish and Game immediately prior to public review.

GENERAL ASSUMPTIONS:

There will be no Extended Initial Studies required.
The project will be able to be completed relying on a previous Environmental Impact Report.
MSCP/BMO or HLP Findings are required .

There may be substantial changes in this estimate if any of the following occur:

- The above general assumptions prove incorrect;
- Applicant does not meet turnaround times;
- It takes more or less than three iterations to obtain an adequate EIR or Extended Study (if applicable);
- Previously unknown public controversy occurs;
- Recirculation of the ND or EIR for public review is required;
- Your project is appealed to a hearing body for any reason.

XIS Factor: N/A
MSCP/BMO/HLP Factor: 3
Project Factor: 3

LAKESIDE'S
RIVER PARK
CONSERVANCY

RECEIVED
2006 FEB 1 AM 9 44

11769 Waterhill Road, Lakeside CA 92040
Phone: 619/443-4770 Fax: 619/443-4740
www.lakesideriverpark.org
email: r2rierdan@cox.net

LETTER OF TRANSMITTAL

TO: James Clay
Environmental Health Specialist -
Department of Environmental Health
- Land and Water Quality Division
County of San Diego
PO Box 129261
San Diego CA 92112-9261

FROM: Robin Rierdan, Project Manager

DATE: Thursday, January 26, 2006

WE ARE SENDING YOU: Asbestos testing results on the Calmat site Area 3

TYPE	DATE	QTY.	DESCRIPTION
Paper copies	1/26/2006	1	Copies of the Asbestos Testing Results of the Lakeside River Park Restoration Project. This testing is a result of a meeting held at the RB9 with regard to the types of fill, which could be placed in the ponds. Kerry McNeil of County LEA requested the testing to ensure there was no asbestos on the site.

These are transmitted as checked below:

	Approved as submitted		For approval
	Approved as noted	X	For your use / files
	Returned for corrections		As requested
	For review and comment:		Other:

COPY TO: File: Asbestos testing

SIGNED: M Sawaya for Rs

IF ENCLOSURES ARE NOT AS NOTED, KINDLY NOTIFY US AT ONCE.

SULLIVAN

SBA 8(a) & Service Disabled Veteran Small Business

January 24, 2006

RECEIVED
06 FEB 1 AM 9 44
MAIL ROOM

Lakeside's Riverpark Conservancy
Attn: Ms. Robin Rierden
11769 Waterhill Road
Lakeside, California 92040

Soil Sampling Results for Asbestos

Dear Ms. Rierden and Conservancy Trustees,

Sullivan International Group, Inc (Sullivan) is pleased to present the results of the soil sampling for asbestos which was conducted at the Lakeside Riverpark Conservancy's property known as Area 1. A total of 18 surface soil samples were taken from locations distributed across the property (see attached figure for locations) and all samples tested negative for asbestos (for full analytical results please see Appendix A).

Field activities were conducted in November 2005 by the Project Manager, Jacques Lord, and the Project Geologist, John Jackson. A site walk was performed during which the Project Manager identified 18 soil sampling locations after which soil sampling was conducted by the Project Geologist. Soil samples were collected from the ground surface to a depth of 12 inches below ground surface at 18 locations within Area 1. Sampling locations where chosen to represent the material encompassed by former borings KB-3, KB-4, KB-5, KB-7, KB-9, and KB-6. Sample locations were selected to bias sampling to areas considered likely to contain recycled concrete based upon visual evidence such as the presence of concrete debris, differences in soil color, or differences in soil composition. Soil was collected using a stainless steel spoon and double-bagged in one quart Ziploc freezer bags. Sample locations were backfilled using the cuttings and a numbered orange marker flag was placed at the sample location for GPS longitude and latitude survey, conducted the following day. GPS data was used to generate the location map attached to this letter. The sampling tools were decontaminated using liquinox soap and DI water in between each sample location.

The samples were sealed into a Federal Express box along with a chain of custody, and mailed to Forensic Analysis laboratory in Hayward, California for bulk asbestos analysis using the polarized light microscopy (PLM) methodology (the chain of custody forms are included in Appendix A).

Based upon the laboratory results included in this report, there are no reportable amounts of asbestos-containing materials in the material studied. No further asbestos investigation is recommended for the assessed material. If you have any questions or comments about the sampling results please feel free to call me at (619) 398-3220.

Sincerely,

Jacques Lord, CEG

Project Manager

409 Camino Del Rio South, Suite 204 • San Diego, CA 92108
Phone (619) 260-1432 • Fax (619) 260-1421
www.onesullivan.com

N

150 0 150 300

Feet

⊗ Soil Sample Location

SA-2 — Sample Location ID
└ Soil Asbestos Sample

Color infrared digital orthophoto quater quadrangle obtained from California Spatial Information Library. http://gis.ca.gov

SULLIVAN

Area 1, Lakeside, California
Lakeside Riverpark Conservancy, Lakeside, California

FIGURE 1

SITE MAP

Results of Asbestos Sampling.

1-23-2008 V:\Projects\B202 -Lkside\Fig 1.mxd SULLIVAN SD D. Wise

Appendix A

Analytical Results & Chains of Custody
(Five Pages)

Forensic Analytical

Final Report

Bulk Asbestos Analysis

(EPA Method 600/R-93-116, Visual Area Estimation)

Sullivan International Group, Inc
Jacques Lord
409 Camino Del Rio South
Suite 100
San Diego, CA 92108

Client ID: A31223
Report Number: B079954
Date Received: 12/09/05
Date Analyzed: 12/27/05
Date Printed: 01/11/06
First Reported: 12/27/05

Job ID/Site: 05-367 - Lakeside River Conservancy Project , PO#B202-001-1

FASI Job ID: A31223-1

Date(s) Collected: 12/08/2005

Total Samples Submitted: 18
Total Samples Analyzed: 18

Sample ID	Lab Number	Asbestos Type	Percent in Layer	Asbestos Type	Percent in Layer	Asbestos Type	Percent in Layer
SA-1	10478332						
Layer: Brown Soil			ND				
Total Composite Values of Fibrous Components:		Asbestos (ND)					
SA-2	10478333						
Layer: Brown Soil			ND				
Total Composite Values of Fibrous Components:		Asbestos (ND)					
SA-3	10478334						
Layer: Brown Soil			ND				
Total Composite Values of Fibrous Components:		Asbestos (ND)					
SA-4	10478335						
Layer: Brown Soil			ND				
Total Composite Values of Fibrous Components:		Asbestos (ND)					
SA-5	10478336						
Layer: Brown Soil			ND				
Total Composite Values of Fibrous Components:		**Asbestos (ND)**					
SA-6	10478337						
Layer: Brown Soil			ND				
Total Composite Values of Fibrous Components:		Asbestos (ND)					
SA-7	10478338						
Layer: Brown Soil			ND				
Total Composite Values of Fibrous Components:		**Asbestos (ND)**					
SA-8	10478339						
Layer: Brown Soil			ND				
Total Composite Values of Fibrous Components:		Asbestos (ND)					

Forensic Analytical

Report Number: B079954
Client Name: Sullivan International Group, Inc **Date Printed:** 01/11/06

Sample ID	Lab Number	Asbestos Type	Percent in Layer	Asbestos Type	Percent in Layer	Asbestos Type	Percent in Layer
SA-9	10478340						
Layer: Brown Soil			ND				
Total Composite Values of Fibrous Components: **Asbestos (ND)**							
SA-10	10478341						
Layer: Brown Soil			ND				
Total Composite Values of Fibrous Components: **Asbestos (ND)**							
SA-11	10478342						
Layer: Brown Soil			ND				
Total Composite Values of Fibrous Components: **Asbestos (ND)**							
SA-12	10478343						
Layer: Brown Soil			ND				
Total Composite Values of Fibrous Components: **Asbestos (ND)**							
SA-13	10478344						
Layer: Brown Soil			ND				
Total Composite Values of Fibrous Components: **Asbestos (ND)**							
SA-14	10478345						
Layer: Brown Soil			ND				
Total Composite Values of Fibrous Components: **Asbestos (ND)**							
SA-15	10478346						
Layer: Brown Soil			ND				
Total Composite Values of Fibrous Components: **Asbestos (ND)**							
SA-16	10478347						
Layer: Brown Soil			ND				
Total Composite Values of Fibrous Components: **Asbestos (ND)**							
SA-17	10478348						
Layer: Brown Soil			ND				
Total Composite Values of Fibrous Components: **Asbestos (ND)**							
SA-18	10478349						
Layer: Brown Soil			ND				
Total Composite Values of Fibrous Components: **Asbestos (ND)**							

Forensic Analytical

Report Number: B079954
Client Name: Sullivan International Group, Inc **Date Printed:** 01/11/06

Sample ID	Lab Number	Asbestos Type	Percent in Layer	Asbestos Type	Percent in Layer	Asbestos Type	Percent in Layer

James Flores, Laboratory Supervisor, Hayward Laboratory

Note: Limit of Quantification ('LOQ') = 1%. 'Trace' denotes the presence of asbestos below the LOQ. 'ND' = 'None Detected'.

Analytical results and reports are generated by Forensic Analytical at the request of and for the exclusive use of the person or entity (client) named on such report. Results, reports or copies of same will not be released by Forensic Analytical to any third party without prior written request from client. This report applies only to the sample(s) tested. Supporting laboratory documentation is available upon request. This report must not be reproduced except in full, unless approved by Forensic Analytical. The client is solely responsible for the use and interpretation of test results and reports requested from Forensic Analytical. This report must not be used by the client to claim product endorsement by NVLAP or any other agency of the U.S. Government. Forensic Analytical is not able to assess the degree of hazard resulting from materials analyzed. Forensic Analytical reserves the right to dispose of all samples after a period of thirty (30) days, according to all state and federal guidelines, unless otherwise specified. All samples were received in acceptable condition unless otherwise noted.

3777 Depot Road, Suite 409, Hayward, California 94545-2761 Telephone: 510/887-8828 800/827-FASI Fax: 510/887-4218

A31223-1

Chain of Custody

DATE 12/8/05 PAGE 1 OF 2

REPORT TO:	Sullivan Environmental Group
COMPANY:	4919 Camino de la Siesta, Suite 207
ADDRESS:	San Diego, CA 92115
INVOICE TO: (If different from above)	Same as above
COMPANY:	
ADDRESS:	
CREDIT CARD #:	
NAME ON CARD:	EXP DATE:
TELEPHONE:	619 280-7432
FAX:	(619) 280-1921 Check if fax required (fee may apply) ☐

ANALYSIS REQUEST

CLIENT SAMPLE ID	Sample Date	MATRIX	BBC ID	3 Functional Groups - Enum + Diversity	Tube Lab	Lab Micro (PLM) 3 Day	TPC (Membrane Filtration) - SM9215 D	Anaerobic Plate Count	Heterotrophic Plate Count (Aerobic)	Yeasts & Molds	Pseudomonads	Lipid Degraders	Chitin Degraders	Cellulose Degraders	Proteolytic Bacteria	Pet HC Degraders + HPC	E. coli (CFU)	E. coli (PA)	E. coli (MPN 1-2/g or ml)	Salmonella Screen	Staphylococcus aureus	Compost Maturity	Compost Stability	Pythium/ PhytoNurse Screen	Phytonutrichopsis Screen	Pathogen Inhibition Assay w/ Pathogen	VAM (AMF) Root Colonization	VAM (AMF) Spore Count
SA-1	12/6/05	Soil		X	X																						
SA-2				X																							
SA-3				X																							
SA-4				X																							
SA-5				X																							
SA-6				X																							
SA-7				X																							
SA-8				X																							
SA-9				X																							
SA-10				X																							
SA-11				X																							
SA-12				X																							
SA-13				X																							

Project ID: 05-367

P.O. No.:

Comments: Lakeside River Restoration Project

Relinquished By	Date/Time	Received By	Date/Time
[signature]	12/6 16:30	[signature]	12/9 8:00 AM
Relinquished By	Date/Time	Received By	Date/Time
Relinquished By	Date/Time	Received By	Date/Time
Relinquished By	Date/Time	Received By	Date/Time

CLIENT: FILL OUT ONLY SHADED SECTIONS

Chain of Custody

DATE 12/8/05 PAGE 2 OF 2

REPORT TO:	Sullivan International group
COMPANY:	401 Camino del Rio South, Suite 301
ADDRESS:	San Diego, CA 92108
INVOICE TO: (If different from above)	Same as Above
COMPANY:	
ADDRESS:	
CREDIT CARD #:	
NAME ON CARD:	EXP DATE:
TELEPHONE:	(619) 260-1432
FAX:	(619) 260-1421

Check if fax required (fee may apply) ☐

ANALYSIS REQUEST

CLIENT SAMPLE ID	Sample Date	MATRIX	BRG ID
SA-13	12/8/05	Soil	
SA-14			
SA-15			
SA-16			
SA-17			
SA-18			

Project ID: 05-367	Relinquished By	Date/Time	Received By	Date/Time
P.O. No.:	Relinquished By	12/8/05 16:00	Received By	Date/Time
Comments: Lake Wilson Conservancy Project	Relinquished By	Date/Time	Received By	Date/Time
	Relinquished By	Date/Time	Received By	Date/Time

CLIENT: FILL OUT ONLY SHADED SECTIONS

FINAL REPORT OF UNDOCUMENTED FILL ASSESSMENT ACTIVITIES FUTURE LAKESIDE RIVERPARK HIGHWAY 67 AND WINTER GARDENS BOULEVARD LAKESIDE, CALIFORNIA

July 21, 2004

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A Report Prepared for:

Ms. Robin Rierdon
Lakeside Conservancy
11769 Waterhill Road
Lakeside, California 92040-2905

REPORT OF
UNDOCUMENTED FILL
ASSESSMENT ACTIVITIES
FUTURE LAKESIDE RIVERPARK
HIGHWAY 67 AND
WINTER GARDENS BOULEVARD
LAKESIDE, CALIFORNIA

Project No. 44102

Prepared by:

Melissa Valdovinos, EIT
Project Engineer

James R. Gingery, GE 2638
Project Engineer

Jacques P. Lord, CEG 2232
Environmental Department Manager

KLEINFELDER, INC.
5015 Shoreham Place
San Diego, California 92122
(858) 320-2000

July 21, 2004

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APPENDICES

Appendix A	Soil Boring Logs
Appendix B	Laboratory Reports and Chain-of-Custody Documents
Appendix C	Soil Boring Survey Data
Appendix D	Geotechnical Laboratory Test Results

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1.0 SITE INFORMATION

Name of Facility:	Future Lakeside Riverpark
Site Address:	Highway 67 & Winter Gardens Boulevard Lakeside, California 92040
Assessor's Parcel Number:	382-250-30 382-011-10 382-011-35
Property Owner:	Lakeside Conservancy
Contact Person:	Ms. Robin Rierdon Lakeside Conservancy 11769 Waterhill Road Lakeside, CA 92040-2905 (619) 443-4770
Consultant:	Kleinfelder, Inc. 5015 Shoreham Place San Diego, CA 92122 (858) 320-2000

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2.0 INTRODUCTION

Kleinfelder, Inc. (Kleinfelder) was contracted by the Lakeside Conservancy in a competitive bid process to perform an assessment of the undocumented fill at the three parcels (Site) located north of Highway 67 and Winter Gardens Boulevard in Lakeside, California. The assessment activities for the undocumented fill were conducted in general accordance with the *Proposal to Assess Undocumented Fill Areas*, dated April 1, 2004, prepared by Kleinfelder, Inc. Fieldwork was performed on May 17, 2004.

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3.0 BACKGROUND

The Site consists of three parcels that will be included in the proposed Lakeside Riverpark restoration project, located north of the intersection of Highway 67 and Winter Gardens Boulevard, in the Lakeside area of San Diego County, California (Figure 1). Adjacent properties include a golf course to the north, Channel Road to the east, a construction yard and Industry Road to the south, and undeveloped land to the west. The Site is an approximately 100-acre area formerly operated by the CalMat Company and/or Vulcan Materials for sand and gravel mining. Apparently mined areas of the Site were backfilled with both documented and undocumented fill materials, along with construction debris. Prior studies indicate that the fill averages 25 feet thick.

According to the Client, there is approximately 2 million cubic yards of undocumented fill material on the parcels owned by the Lakeside Conservancy. The Lakeside Conservancy would like to sell the fill material and have it removed from the parcels. Kleinfelder proposed an assessment program to provide fill documentation in order for the Lakeside Conservancy to have information for potential purchases of the fill.

On April 1, 2004, Kleinfelder submitted a proposal to perform an assessment of the undocumented fill with soil borings, and soil collected for analyses of Title 22 metals in general accordance with EPA Methods 6010B/7470 and total recoverable petroleum hydrocarbons (TRPH) in general accordance with EPA Method 418.1. Selected soil samples would be further analyzed for total petroleum hydrocarbons as gasoline and diesel (TPH-g and TPH-d) in general accordance with EPA Method 8015M, pesticides in general accordance with EPA Method 8081A, polychlorinated biphenyls (PCBs) in general accordance with EPA Method 8082, volatile organic compounds (VOCs) in general accordance EPA Method 8260B, and semi-volatile organic compounds (SVOCs) in general accordance with EPA Method 8270C. Additionally, soil samples would be collected for geotechnical analysis; sieve analysis to identify grain-size distribution and Atterberg limit tests to assess plasticity index and liquid limit.

On May 17, 2004, Kleinfelder mobilized to the site and advanced the soil borings and collected the soil samples for the analyses described above. This report presents the results, recommendations, and conclusions based on the activities described.

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4.0 FIELD INVESTIGATION

Using the map provided in the bid package, Kleinfelder applied the ELIPGRID program to calculate that 18 soil boring locations can be placed over the 100-acre Site with an approximate 400-foot triangular spacing. With 18 sampling locations there will be a 50% chance of hitting a 30-foot diameter area of "non-useable fill." The chances of missing a 30-foot diameter non-useable area go down as the number of sample locations goes up. Eighteen (18) locations were chosen as an effective balance between controlling cost and assessing the fill material. The depth of no more than 19.5 feet below the surface was chosen to avoid groundwater interference and County boring permit requirements. Even though groundwater is anticipated at 27 feet below grade, samples at 19.5 feet provide sufficient information to represent soils to 22.5 feet deep.

Kleinfelder advanced 18 soil borings to depths of five to 19.5 feet below ground surface (bgs) on May 17, 2004. The Site has been divided into three parcels. Figure 2 presents the three parcels on the Site and the approximate boring locations. Four borings (KB-15 through KB-19) were advanced in Parcel 1, three borings (KB-12 through KB-14) were advanced in Parcel 2, and eleven borings (KB-1 through KB11) were advanced in Parcel 3. Kleinfelder attempted to collect soil samples at approximately five-foot intervals in each boring. From the samples collected in each boring, two samples were typically submitted for geotechnical laboratory testing and one sample was submitted for environmental laboratory testing. However, due to conditions encountered in the field during drilling activities, this was not possible for every boring location. For refusals at a depth of 10 feet or less, the boring location was offset and attempted a second time. If refusal occurred again the boring was abandoned. Table 1 provides a summary of the samples collected for each boring location.

The borings were advanced using a truck-mounted drill rig with a hollow-stem auger. Soil samples were collected using a 2.5-inch outside diameter modified California drive sampler lined with brass sleeves. The sampler was generally driven 18 inches using a 140-pound hammer dropping a distance of 30 inches. Blow counts were recorded at 6-inch intervals.

Table 1
Soil Sampling Summary

Boring Number	Total Boring Depth (feet bgs)	Environmental Sample	First Geotechnical Sample	Second Geotechnical Sample
KB-1	19.5	KB-1@5'	KB-1@10'	KB-1@19'
KB-2	8	KB-2@5'	KB-2@5'	-
KB-3	19.5	KB-3@15'	KB-3@18'	-

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Table 1 (Continued)
Soil Sampling Summary

Boring Number	Total Boring Depth (feet bgs)	Environmental Sample	First Geotechnical Sample	Second Geotechnical Sample
KB-4	19.5	KB-4@10'	KB-4@5'	KB-4@15'
KB-5	19.5	KB-5@19'	KB-5@10'	KB-5@18'
KB-6	19.5	No recovery	No recovery	No recovery
KB-7	19.5	KB-7@10'	KB-7@5'	KB-7@15'
KB-8	12	KB-8@10'	KB-8@5'	No recovery
KB-9	19.5	KB-9@5'	KB-9@10'	KB-9@18'
KB-10	12	KB-10@5'	KB-10@10'	No recovery
KB-11	19.5	KB-11@15'	KB-11@10'	KB-11@18'
KB-12	18	KB-12@5'	KB-12@5'	KB-12@15'
KB-13	11	KB-13@5'	KB-13@10'	No recovery
KB-14	19.5	KB-14@10'	KB-14@5'	KB-14@15'
KB-15	15	KB-15@5'	KB-15@10'	No recovery
KB-16	11	No recovery	KB-16@5'	No recovery
KB-17	10	KB-17@5'	KB17@10'	No recovery
KB-18	5	No recovery	KB-18@5'	No recovery

bgs: below ground surface
No recovery : sample not collected; likely due to sampler being blocked by cobble or other solid object.

Environmental soil samples were submitted to EMAX Laboratories, Inc. in Torrance, California, a state-certified environmental chemistry laboratory, for analyses of Title 22 metals in general accordance with EPA Methods 6010B/7470 and TRPH in general accordance with EPA Method 418.1. Additionally, three soil samples with the highest detected TRPH concentrations reported were analyzed for TPH-g and TPH-d in general accordance with EPA Method 8015M, pesticides in general accordance with EPA Method 8081A, PCBs in general accordance with EPA Method 8082, VOCs in general accordance EPA Method 8260B, and SVOCs in general accordance with EPA Method 8270C.

Geotechnical soil samples submitted to the Kleinfelder materials testing laboratory in San Diego, California. Sieve analysis to identify grain-size distribution and Atterberg limit tests to assess plasticity index and liquid limit were performed.

Boring locations were surveyed in to the State 1982 Datum Plane using a high resolution Global Positioning System with accuracy to +/- 0.5 feet. Figure 2 presents the soil boring locations, designations, and survey data. Boring logs are included as Appendix A. Laboratory results and chain-of-custodies are included as Appendix B. Soil boring location survey data are included as Appendix C.

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5.0 INVESTIGATIVE RESULTS

5.1 SITE SUBSURFACE CONDITIONS

Soils encountered within the test borings consisted predominately of fill, however, alluvium was encountered in two of the 18 borings. Detailed descriptions of these materials are included in the boring logs (Appendix A), and generalized descriptions are provided below. Boring locations are shown on Figure 2. Groundwater was not encountered within the depths explored.

5.1.1 Fill

With the exception of Boring KB-1 and KB-14, fill was observed within all of the borings from the ground surface to the maximum depths explored of five to 19.5 feet below ground surface (bgs). Fill within Boring KB-1 and KB-14 extended from the ground surface to the top of an alluvium layer approximately 18 and 13 feet bgs, respectively. This material generally consisted of brown to very dark brown silty sand to poorly graded sand with gravel and occasional cobbles which varied from dry to damp at the deepest locations. Layers of gravel and cobbles, which sometimes resulted in auger refusal, were also observed within the borings. A layer of plastic silt (high clay content) with sand was observed in Boring KB-3 at a depth of approximately 18 feet bgs to the boring bottom at 19.5 feet bgs. Based on sampler penetration resistance, the insitu relative density of the fill generally ranged from loose to dense.

5.1.2 Alluvium

Alluvium was encountered from approximately 18 feet bgs to the bottom of the boring at 19.5 feet bgs in Boring KB-1, and from approximately 13 feet bgs to the bottom of the boring at 19 feet bgs in Boring KB-14. The alluvium consisted of well graded sand with gravel and silty sand that was medium dense and dry to wet at 19.5 feet in Area 2.

5.2 ENVIRONMENTAL LABORATORY TEST RESULTS

A total of 15 samples were collected and submitted for environmental analysis. Environmental samples were initially analyzed for Title 22 metals by EPA Methods 6010B/7470 and TRPH by EPA Method 418.1. The samples with the three highest reported concentrations of TRPH were further analyzed for TPH-g and TPH-d by EPA Method 8015 Modified, VOCs by EPA Method 8260B, SVOCs by EPA Method 8270C, pesticides by EPA Method 8081A, and PCBs by EPA Method 8082.

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Environmental samples were analyzed for Title 22 metals, which include: antimony, arsenic, barium, beryllium, cadmium, chromium, cobalt, copper, lead, mercury, molybdenum, nickel, selenium, silver, thallium, vanadium, and zinc. Table 2 summarizes the Title 22 metals analytical results.

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Table 2
Summary of Title 22 Metals Analytical Results
(mg/kg)

Boring	Sample Depth (ft bgs)	Area	Sb	As	Ba	Be	Cd	Cr	Co	Cu	Pb	Hg	Mo	Ni	Se	Ag	Th	V	Zi
KB-1	5'	3	<11.1	0.944J	113	0.199J	<1.11	20.8	7.63	16.5	1.96	<0.111	<5.54	6.86	<1.11	1.07J	<1.11	50	38.7
KB-2	5'	3	<11.9	3.44	60.3	0.27J	<1.19	10.5	5.01	15.6	10.9	<0.119	<5.97	5.17	<1.19	0.987J	<1.19	31	46.7
KB-3	15'	3	<11.4	0.87J	61.3	<1.14	<1.14	10.8	4.26	7.76	1.38	<0.114	<5.71	3.59	<1.14	0.836J	<1.14	27.6	21.5
KB-4	10'	3	<10.2	0.44J	42.5	<1.02	<1.02	7.16	2.94	8.67	0.65J	<0.102	<5.11	2.47	<1.02	<2.04	<1.02	20.3	1[illegible]
KB-5	19'	3	<11.7	<1.17	181	0.209J	<1.17	21.3	**9.14**	18.4	2.05	<0.117	<5.85	**8.12**	<1.17	0.823J	<1.17	47.8	38.8
KB-6	-	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
KB-7	10'	3	<10.2	<1.02	17.5	<1.02	<1.02	4.53	1.2J	6.65	0.42J	<0.102	<5.11	1.81J	<1.02	<2.04	<1.02	17.5	9.59
KB-8	10'	3	<10.9	1.3	64	<1.09	<1.09	9.25	4.41	10	8.24	<0.109	<5.46	5.17	<1.09	<2.19	<1.09	29	30.7
KB-9	5'	3	3.45J	2.04	202	0.217J	<1.27	**32.6**	12.5	22.3	3.99	<0.127	<6.33	12	<1.27	**1.84J**	<1.27	**80.1**	**68.4**
KB-10	5'	3	<10.4	0.478J	39.5	<1.04	<1.04	7.33	3.04	6.92	0.994J	<0.104	<5.2	2.88	<1.04	0.82J	<1.04	22.5	16
KB-11	15'	3	<10.3	<1.03	40.2	<1.03	<1.03	9.7	3.87	6.15	0.739J	<0.103	<5.14	3	<1.03	<2.06	<1.03	24.6	16.2
KB-12	5'	2	**3.92J**	4.47	83.5	0.229J	<1.1	10.8	4.97	**33.6**	11.8	<0.11	<5.52	6.52	<1.1	<2.21	<1.1	31.4	57.9
KB-13	5'	2	2.52J	4.71	**502**	**0.497J**	<1.18	22.6	4.1	8.51	5.37	<0.118	<5.89	7.46	<1.18	0.81J	<1.18	47	28.4
KB-14	10'	2	<11.5	3.42	78.2	0.236J	<1.15	10.6	6.91	11.2	8.51	<0.115	<5.73	4.32	<1.15	<2.29	<1.15	34.7	32.4
KB-15	5'	1	<11.7	7.85	108	0.352J	<1.17	10.3	5.03	8.74	13	<0.117	<5.85	4.51	<1.17	<2.34	<1.17	36.3	42.3
KB-16	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
KB-17	5'	1	<10.3	**7.91**	63.7	0.235J	<1.03	2.81	1.77J	5.7	4.42	<0.103	<5.17	7.33	**1.75**	<2.07	<1.03	12.8	30.6
KB-18	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

mg/kg: milligrams per kilogram
ft bgs: feet below ground surface
<: not detected above reporting limit
J: laboratory estimated concentration above method detection limit, but not above reporting limit
BOLD: maximum detected concentration

Sb: Antimony
As: Arsenic
Ba: Barium
Be: Beryllium
Cd: Cadmium
Cr: Chromium
Co: Cobalt
Cu: Copper
Pb: Lead
Hg: Mercury
Mo: Molybdenum
Ni: Nickel
Se: Selenium
Ag: Silver
Th: Thallium
V: Vanadium
Zi: Zinc

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Soil may be classified as hazardous if the soil concentration exceeds the total threshold limit concentration (TTLC) regulatory limits. Or, if the soil concentration is greater than 10 times (10x) the soluble threshold limit concentration (STLC), the soil may be classified as hazardous. However, the highest detected concentrations of metals reported are below the TTLC and 10 x STLC regulatory limits. The highest detected concentrations reported compared to the TTLC and 10 x STLC regulatory limits are presented in Table 3.

Table 3
Maximum Detected Metal Concentrations Versus
TTLC and STLC Regulatory Limits

Metal	Maximum Detected Concentration (mg/kg)	TTLC Regulatory Limit (mg/kg)	10 x STLC Regulatory Limit (mg/L)
Antimony	3.92 J	500	150
Arsenic	7.91	500	50
Barium	502	10,000	1,000
Beryllium	0.497 J	75	7.5
Cadmium	ND	100	10
Chromium	32.6	500	50
Cobalt	9.14	8,000	800
Copper	33.6	2,500	250
Lead	13	1,000	50
Mercury	ND	20	2
Molybdenum	ND	3,500	350
Nickel	8.12	2,000	200
Selenium	1.75	100	10
Silver	1.84 J	500	50
Thallium	ND	700	70
Vanadium	80.1	2,400	240
Zinc	68.4	5,000	2,500

TTLC: total threshold concentration limit
10 x STLC: ten times the soluble threshold limit concentration
mg/kg: milligrams per kilogram
mg/L: milligrams per liter
J: laboratory estimated concentration above method detection limit, but below reporting limit
ND: not detected in any samples collected

TRPH was detected in 9 of 15 samples with concentrations ranging from 7.1 milligrams per kilogram (mg/kg) to 24,000 mg/kg. The three highest reported concentrations of TRPH were from soil borings KB-8 (220 mg/kg), KB-12 (3,400 mg/kg), and KB-17 (24,000 mg/kg). Boring KB-8 is located in Area 3, boring KB-12 is located in Area 2, and boring KB-17 is located in Area 1. Table 4 summarizes the TRPH analytical results.

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Table 4
Summary of TRPH Analytical Results

Boring Number	Sample Name	Area	Sample Depth (feet bgs)	TRPH Concentration (mg/kg)
KB-1	KB-1@5'	3	5	<11.1
KB-2	KB-2@5'	3	5	93
KB-3	KB-3@15'	3	15	7.1 J
KB-4	KB-4@10'	3	10	<10.2
KB-5	KB-5@19'	3	19	<11.7
KB-6	-	3	-	-
KB-7	KB-7@10'	3	10	<10.2
KB-8	**KB-8@10'**	**3**	**10**	**220**
KB-9	KB-9@5'	3	5	<12.7
KB-10	KB-10@5'	3	5	8.6 J
KB-11	KB-11@15'	3	15	<10.3
KB-12	**KB-12@5'**	**2**	**5**	**3,400**
KB-13	KB-13@5'	2	5	190
KB-14	KB-14@10'	2	10	200
KB-15	KB-15@5'	1	5	86
KB-16	-	1	-	-
KB-17	**KB-17@5'**	**1**	**5**	**24,000**
KB-18	-	1	-	-

TRPH: total recoverable petroleum hydrocarbon
bgs: below ground surface
mg/kg: milligram per kilogram
<: not detected above reporting limit
-: no sample collected
J: laboratory estimated concentration above method detection limit, but less than reporting limit
BOLD: three highest reported concentrations

The samples with the three highest reported concentrations of TRPH were further analyzed for TPH-g and TPH-d, pesticides, PCBs, VOCs and SVOCs. Table 5 summarizes the results of the additional analyses.

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Table 5
Summary of Additional Analytical Results

EPA Analytical Test Method	Chemical Analysis	Constituent Detected	Sample Name		
			KB-8@10'	KB-12@5'	KB17@5'
EPA 418.1	TRPH	TRPH	**220 mg/kg**	**3,400 mg/kg**	**24,000 mg/kg**
EPA 8015M	TPH-d	TPH-d	**260 mg/kg**	**3,100 mg/kg**	**5,100 mg/kg**
	TPH-g	TPH-g	<1.1 mg/kg	<1.1 mg/kg	**14 mg/kg**
EPA 8081A	Pesticides	alpha-BHC	<11 ug/kg	**3.6 ug/kg J**	<31 ug/kg
		beta-BHC	<11 ug/kg	**5.4 ug/kg J**	<31 ug/kg
		gamma-BHC	<11 ug/kg	**7 ug/kg J**	<31 ug/kg
		alpha-Chlordane	**4.9 ug/kg J**	**8.4 ug/kg J**	<31 ug/kg
		gamma-Chlordane	**5.1 ug/kg J**	**8.9 ug/kg J**	**4.7 ug/kg J**
		4,4'-DDD	<22 ug/kg	**5.8 ug/kg J**	<62 ug/kg
		4,4'-DDE	<22 ug/kg	**13 ug/kg J**	<62 ug/kg
		4,4'-DDT	<22 ug/kg	**11 ug/kg J**	<62 ug/kg
		Dieldrin	<22 ug/kg	**3.6 ug/kg J**	<62 ug/kg
		Endrin Aldehyde	<22 ug/kg	**11 ug/kg J**	<62 ug/kg
		Endrin Ketone	<22 ug/kg	**16 ug/kg J**	<62 ug/kg
		Methoxychlor	<110 ug/kg	**28 ug/kg J**	<310 ug/kg
EPA 8082	PCBs	NA	ND	ND	ND
EPA 8260B	VOCs	Acetone	<22 ug/kg	<22 ug/kg	**6.6 ug/kg J**
EPA 8270C	SVOCs	NA	ND	ND	ND

TRPH: total recoverable petroleum hydrocarbon
TPH-d: total petroleum hydrocarbon as diesel
TPH-g: total petroleum hydrocarbon as gasoline
PCB: polychlorinated biphenyl
VOC: volatile organic compound
SVOC: semivolatile organic compound
BHC: benzenehexachloride
DDD: dichlorodiphenyldichloroethane
DDE: dichlorodiphenyldichloroethylene
DDT: dichlorodiphenyltrichloroethane

mg/kg: milligrams per kilogram
ug/kg: micrograms per kilogram
NA: not applicable, no constituents detected
ND: not detected, no constituents detected
<: not detected above reporting limit
BOLD: constituent detected
J: laboratory estimated concentration greater than method detection limit, but less than reporting limit

Based on these results, there were no detectable concentrations of PCBs or SVOCs, but there were detectable concentrations of TPH-d, TPH-g, pesticides, and VOCs. The detectable concentrations of pesticides and VOCs are all below the applicable EPA Region 9 residential preliminary remediation goals (rPRGs).

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5.3 GEOTECHNICAL LABORATORY TEST RESULTS

A total of 25 samples were collected and submitted for grain size distribution and Atterberg limits testing. A summary of all of the test results is presented in Table D1 in Appendix D. Atterberg limit test results are presented on Figures D1 through D3. A compilation of all of the grain size distribution curves is shown on Figure D4, along with the mean (average) and mean plus/minus 1.5 times the standard of deviation of all of the results. Grain size distribution curves for individual samples are shown on Figures D5 through D29. The results of the laboratory testing were used to aid in evaluating soil classifications in accordance with the Unified Soil Classification System (ASTM D 2487).

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6.0 CONCLUSIONS AND RECOMMENDATIONS

Based on the results of our subsurface investigation, geotechnical and environmental laboratory testing, and data analysis, we make following conclusions and recommendations.

- Kleinfelder applied the ELIPGRID program to calculate that 18 soil boring locations can be placed over the 120 acres that comprise the fill areas. Eighteen (18) locations were chosen as an effective balance between controlling cost and assessing the fill material. With 18 sampling locations there will be a 50% chance of hitting a 30-foot diameter area or layer of "non-useable fill."
- Soil may be classified as hazardous if the soil concentration for metals exceeds TTLC regulatory limits. Or, if the soil concentration is greater than 10x the soluble threshold limit concentration STLC, the soil may be classified as hazardous. The highest detected metal concentrations of metals reported are below the TTLC and 10 x STLC regulatory limits. Therefore, the risk of fill being designated hazardous due to metals is low.
- Based on laboratory results, there were no detectable concentrations of PCBs or SVOCs. There were detectable concentrations of TPH-d, TPH-g, pesticides, and VOCs. However, the detectable concentrations of pesticides and VOCs are below the EPA Region 9 rPRG values. Therefore, the risk of fill being designated hazardous due to organic compounds is low.
- Grain size distribution analyses and Atterberg limit tests were performed on select samples to aid in soil classification and to assess soil engineering properties. These results are presented in Appendix D. The geotechnical test results indicate that the soils are predominately granular, are relatively low in plasticity, and have a low potential for expansion upon wetting.
- From a geotechnical standpoint, it is our opinion that the material tested is generally suitable for a range of engineered fill applications. In Kleinfelder's experience, we have seen similar material used for the following typical applications:
  - Fill for embankments supporting roadways or buildings
  - Backfill for retaining walls
  - Backfill for utility trenches
  - Daily cover for landfills

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- The suitability of the material for a particular application or project should be determined by the party (or their consultant) that wishes to use the material, considering the boring logs, laboratory test results and report text descriptions/discussions presented herein. Depending upon the specific requirements of the proposed application or project, additional testing and/or evaluation of the material might be necessary.
- Based on observations within the boring performed for this study, isolated cobbles (material ranging in size from 3 to 12 inches in diameter) and beds of cobbles likely exist within the fill material at the site. The significant number of boring refusals is an indicator of cobble and/or concrete debris distrubution in the fill. Note that cobble-size materials are not shown on the grain size distribution tests since the they exceed the diameter of the sampler that was used. Cobbles exceeding 4 to 6 inches in diameter may need to be screened from material used as engineered fill, depending upon the requirements of the specific application.
- Without processing, the material tested does not meet gradation requirements for special construction materials such as aggregate base for roadways or sand/aggregate for Portland cement concrete as defined by the Caltrans Standard Specifications and the Greenbook Standard Specifications for Public Works Construction.

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7.0 LIMITATIONS

Kleinfelder has performed the services for this project in accordance with our contract with the Lakeside Conservancy and with the current practices in this geographic area for site assessment investigations. No guarantees are either expressed or implied. There is no investigation which is thorough enough to preclude the presence of materials at the site which presently, or in the future may be considered hazardous. Because regulatory evaluation criteria change, acceptable concentrations of contaminants present at the time of investigation may in the future become subject to different regulatory standards.

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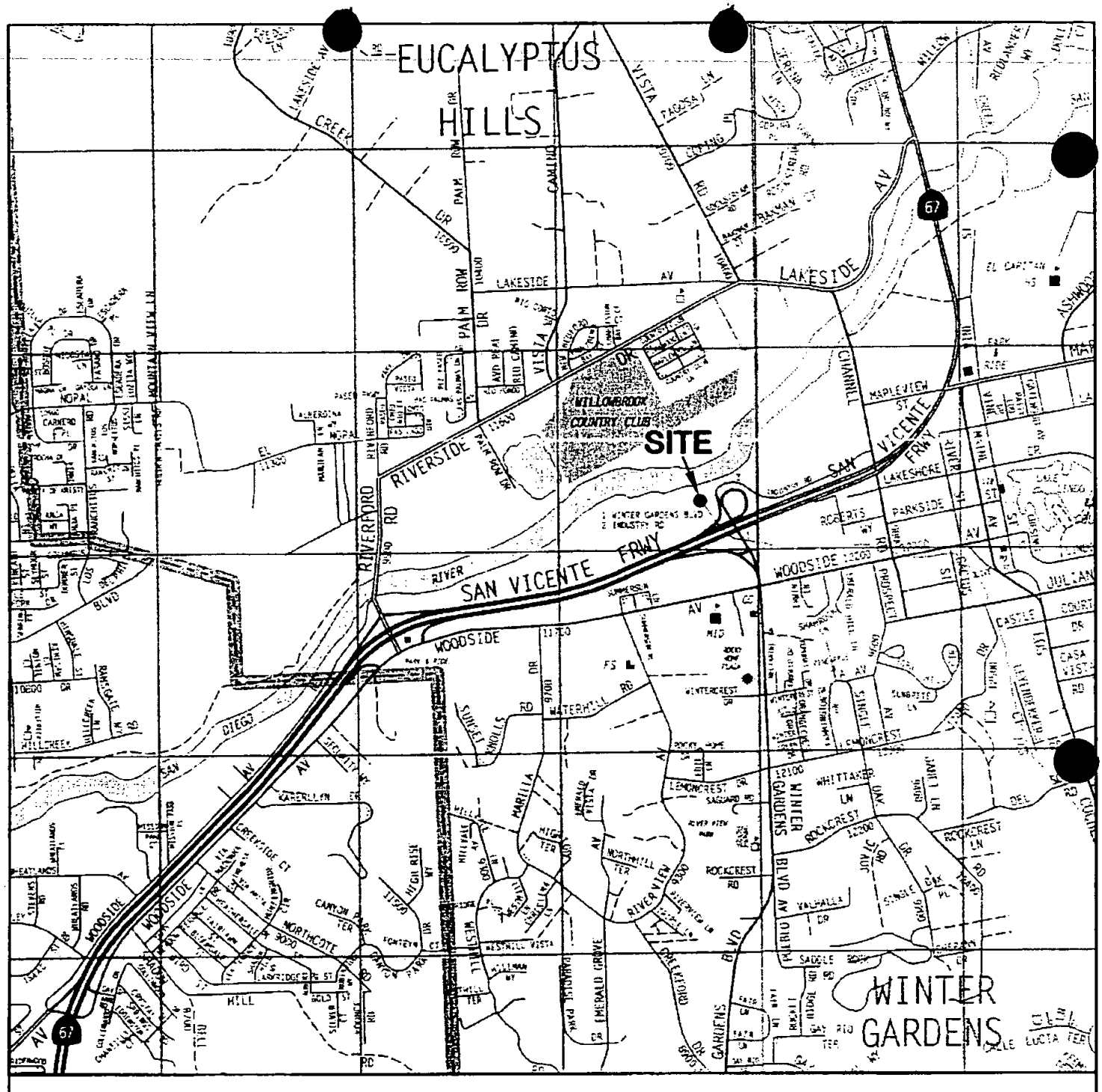
FIGURES



KLEINFELDER

5015 SHOREHAM PLACE
SAN DIEGO, CALIFORNIA 92122

CHECKED BY: MV	FN: 44102VIC
PROJECT NO. 44102	DATE: 07/2004

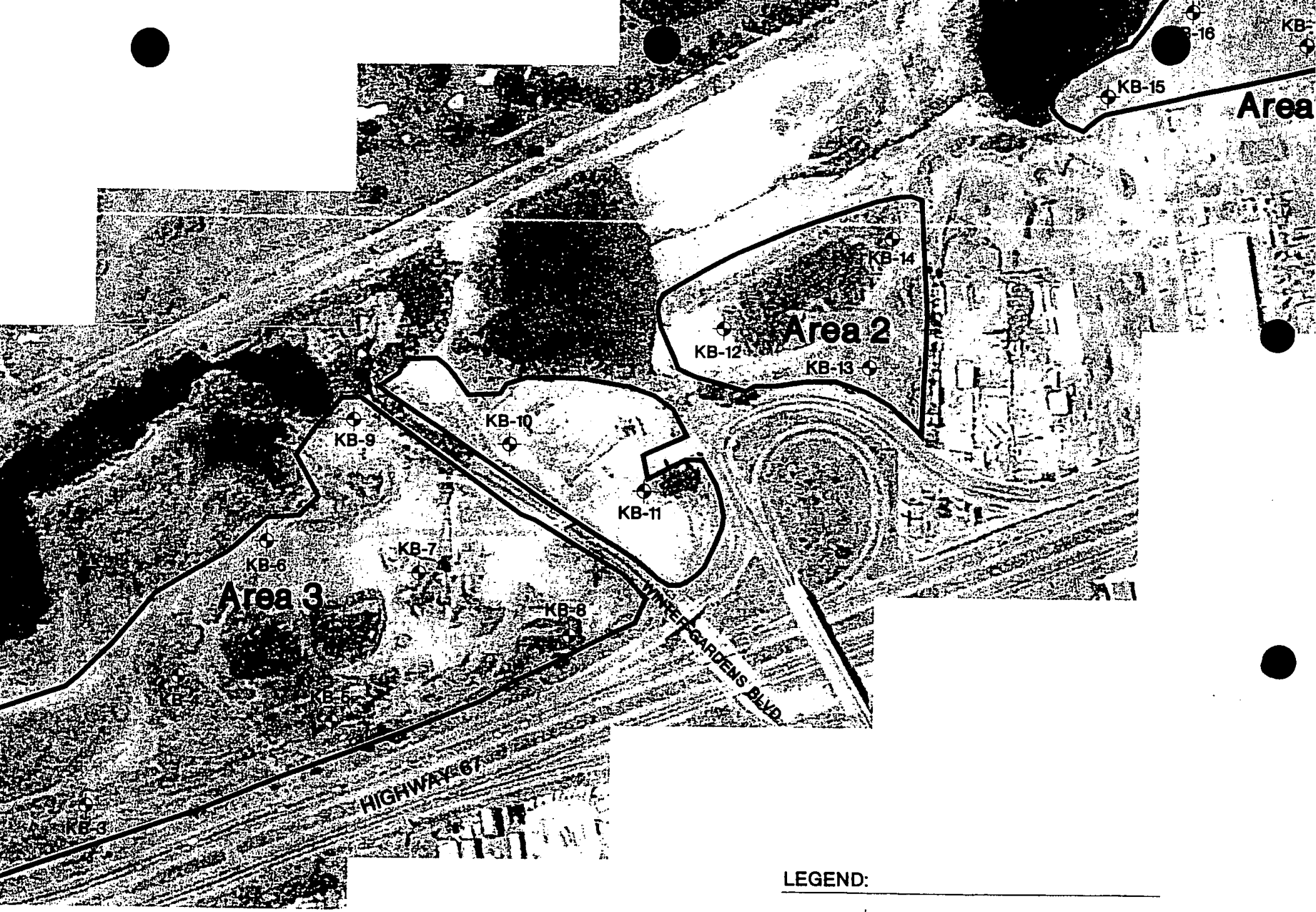
VICINITY MAP

LAKESIDE CONSERVANCY FILL

LAKESIDE, CALIFORNIA

FIGURE

1



LEGEND:

KB-18 ⊕ APPROXIMATE BORING LOCATIONS

FILL AREA

APPENDIX A

Soil Boring Logs

APPENDIX A
BORING LOG LEGEND AND LOG OF BORINGS

The geotechnical test boring program for the proposed project consisted of the excavation and logging of 18 hollow-stem auger borings. The borings were advanced to depths ranging from 5 to 19.5 feet below existing grades. Figure 2 presents the approximate locations of the borings.

The Logs of Borings are presented as Figures KB-1 through KB-18. A USCS chart and a Boring Log Legend are presented as Figures A1 and A2, respectively. The Logs of Borings describe the earth materials encountered, samples obtained, and show field and laboratory tests performed. The logs also show the general location, boring number, drilling date, and the names of the logger and drilling subcontractor. The borings were logged by an engineer using the Unified Soil Classification System. The boundaries between soil types shown on the logs are approximate because the transition between different soil layers may be gradual. Bulk and intact samples of representative earth materials were obtained from the borings.

Soil samples were obtained from the borings using a modified California sampler (2.5-inch outer diameter, 1.9-inch inner diameter) generally driven 18 inches into undisturbed soil using a 140-pound hammer dropped 30 inches. The soil sampled by the California sampler was retained in 6-inch long brass tubes for laboratory testing. Blow counts recorded at the end of three consecutive 6-inch intervals for each sample are shown on the logs. Please note that the blow counts shown on the Log of Borings have not been adjusted for the effects of overburden pressure, input driving energy, rod length, sampler correction, or boring diameter correction.

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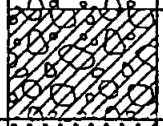
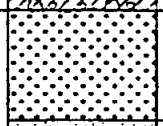
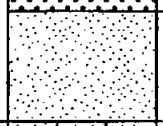
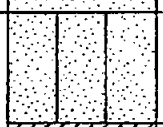
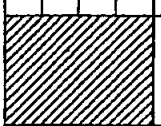
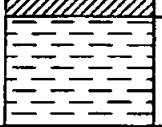
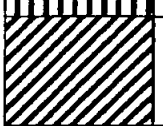
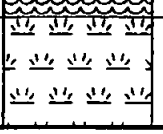
MAJOR DIVISIONS			SYMBOLS		TYPICAL DESCRIPTIONS
			GRAPH	LETTER	
COARSE GRAINED SOILS MORE THAN 50% OF MATERIAL IS LARGER THAN NO. 200 SIEVE SIZE	GRAVEL AND GRAVELLY SOILS MORE THAN 50% OF COARSE FRACTION RETAINED ON NO. 4 SIEVE	CLEAN GRAVELS (LITTLE OR NO FINES)		GW	WELL-GRADED GRAVELS, GRAVEL - SAND MIXTURES, LITTLE OR NO FINES
				GP	POORLY-GRADED GRAVELS, GRAVEL - SAND MIXTURES, LITTLE OR NO FINES
		GRAVELS WITH FINES (APPRECIABLE AMOUNT OF FINES)		GM	SILTY GRAVELS, GRAVEL - SAND - SILT MIXTURES
				GC	CLAYEY GRAVELS, GRAVEL - SAND - CLAY MIXTURES
	SAND AND SANDY SOILS MORE THAN 50% OF COARSE FRACTION PASSING ON NO. 4 SIEVE	CLEAN SANDS (LITTLE OR NO FINES)		SW	WELL-GRADED SANDS, GRAVELLY SANDS, LITTLE OR NO FINES
				SP	POORLY-GRADED SANDS, GRAVELLY SAND, LITTLE OR NO FINES
		SANDS WITH FINES (APPRECIABLE AMOUNT OF FINES)		SM	SILTY SANDS, SAND - SILT MIXTURES
				SC	CLAYEY SANDS, SAND - CLAY MIXTURES
FINE GRAINED SOILS MORE THAN 50% OF MATERIAL IS SMALLER THAN NO. 200 SIEVE SIZE	SILTS AND CLAYS	LIQUID LIMIT LESS THAN 50		ML	INORGANIC SILTS AND VERY FINE SANDS, ROCK FLOUR, SILTY OR CLAYEY FINE SANDS OR CLAYEY SILTS WITH SLIGHT PLASTICITY
				CL	INORGANIC CLAYS OF LOW TO MEDIUM PLASTICITY, GRAVELLY CLAYS, SANDY CLAYS, SILTY CLAYS, LEAN CLAYS
				OL	ORGANIC SILTS AND ORGANIC SILTY CLAYS OF LOW PLASTICITY
	SILTS AND CLAYS	LIQUID LIMIT GREATER THAN 50		MH	INORGANIC SILTS, MICACEOUS OR DIATOMACEOUS FINE SAND OR SILTY SOILS
				CH	INORGANIC CLAYS OF HIGH PLASTICITY
				OH	ORGANIC CLAYS OF MEDIUM TO HIGH PLASTICITY, ORGANIC SILTS
HIGHLY ORGANIC SOILS				PT	PEAT, HUMUS, SWAMP SOILS WITH HIGH ORGANIC CONTENTS

NOTE: DUAL SYMBOLS ARE USED TO INDICATE BORDERLINE SOIL CLASSIFICATIONS

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PROJECT NO. | DATE: 05/2004

SOIL CLASSIFICATION CHART

FIGURE
A1

LOG SYMBOLS:

BULK/BAG SAMPLE

MODIFIED CALIFORNIA SAMPLER
(2–1/2 inch outside diameter)

CALIFORNIA SAMPLER
(3 inch outside diameter)

STANDARD PENETRATION
SPLIT SPOON SAMPLER
(2 inch outside diameter)

NO SAMPLE RECOVERY

SHELBY TUBE

WATER LEVEL
(level after completion)

WATER LEVEL
(level where first encountered)

ABBREVIATIONS:

SA – (41%) SIEVE ANALYSIS (PERCENT PASSING #200 SIEVE)

WA – (38%) – ONE POINT GRAIN SIZE ANALYSIS (PERCENT PASSING #200 SIEVE)

PI – PLASTICITY INDEX

LL – LIQUID LIMIT

DS – DIRECT SHEAR TEST

'R' – R-VALUE TEST

CORR – CORROSIVITY TEST

EI – UBC EXPANSION INDEX

LC – LABORATORY COMPACTION TEST

M&D – MOISTURE & DENSITY

PP – POCKET PENETROMETER

GENERAL NOTES:

1. *Lines separating strata on the logs represent approximate boundaries only. Actual transitions may be gradual.*
2. *No warranty is provided as to the continuity of soil conditions between individual sample locations.*
3. *Logs represent general soil conditians observed at the point of exploration on the date indicated.*
4. *In general, Unified Soil Classificatian designations presented on the logs were evaluated by visual methods only. Therefore, actual designations (based on laboratory tests) may vary.*

CONSISTENCY CRITERIA BASED ON FIELD TESTS

RELATIVE DENSITY	SPT* (# blows/ft)	RELATIVE DENSITY (%)
Very Loose	<4	0 – 15
Loose	4 – 10	15 – 35
Medium Dense	10 – 30	35 – 65
Dense	30 – 50	65 – 85
Very Dense	>50	85 – 100

		TORVANE	POCKET** PENETROMETER
CONSISTENCY	SPT (# blows/ft)	UNDRAINED SHEAR STRENGTH (tsf)	UNCONFINED COMPRESSIVE STRENGTH
Very Soft	<2	<0.13	<0.25
Soft	2 – 4	0.13 – 0.25	0.25 – 0.5
Medium Stiff	4 – 8	0.25 – 0.5	0.5 – 1.0
Stiff	8 – 15	0.5 – 1.0	1.0 – 2.0
Very Stiff	15 – 30	1.0 – 2.0	2.0 – 4.0
Hard	>30	>2.0	>4

* NUMBER OF BLOWS OF 140 POUNDS HAMMER FALLING 30 INCHES TO DRIVE A 2 INCH O.D. (1 3/8 INCH I.D.) SPLIT BARREL SAMPLER (ASTM–1386 STANDARD PENETRATION TEST)

** UNCONFINED COMPRESSIVE STRENGTH IN TONS/SQ. FT. READ FROM POCKET PENETROMETER

MOISTURE CONTENT

DESCRIPTION	FIELD TEST
Dry	Absence of moisture, dusty, dry to the touch
Moist	Damp but no visible water
Wet	Visible free water, usually soil is below water table

CEMENTATION

DESCRIPTION	FIELD TEST
Weakly	Crumbles or breaks with handling or slight finger pressure
Moderately	Crumbles or breaks with considerable finger pressure
Strongly	Will not crumble or break with finger pressure

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KEY TO LOGS

FIGURE
A2

PROJECT NO.: 44102	LOG OF BORING KB-1	SHEET 1 of 1
DRILLING METHOD: Hollow Stem Auger	PROJECT NAME: LAKESIDE CONSERVANCY FILL	LOCATION: North of Winter Garden at Industry, Lakeside, California
DRILLING EQUIPMENT: CME-55	SAMPLING METHOD: CAL Mod Split Spoon	SURFACE ELEVATION: –
		TOTAL DEPTH OF BOREHOLE: 19

DATE		DRILLING COMPANY:	BOREHOLE DIAMETER:	GROUNDWATER DEPTH/*ELEV.* (ft)	MEASUREMENT DATE and TIME
STARTED:	05/17/2004	Jet Drilling	6" diameter	▼ na / *na*	
COMPLETED:	05/17/2004	SURFACE CONDITIONS: Dirt, compacted and graded		▽ na / *na*	
BACKFILLED:	N/A	LOGGED BY: W. Chiu	REVIEWED BY: J. Lord, CEG	▼ na / *na*	

#2232

Depth (ft)	SAMPLE Blow Counts (Blows/6")	SAMPLE Type	SAMPLE ID	TPHg, TPHd (mg/kg)	PID/OVA (ppm)	GRAPHIC LOG	DESCRIPTION AND CLASSIFICATION
							FILL:
							SILTY SAND (SM), dark brown (10YR 3/3), damp to moist, loose, fine to medium grained with trace gravel, 30% to 40% fines, no odor
5	7 10 7		KB-12.5'		0.0		@ 5' Same, medium dense
10	10 10 10				0.0		@ 10' Same as above, brown (10 YR 4/3), no odor
15	10 17 20				0.0		@ 15' Same as above, dense, fine sand, no odor
	5 8 12				0.0		**ALLUVIUM:**
20							@ 19' WELL GRADED SAND (SW), yellowish brown (10 YR 5/6), damp, medium dense, fine to coarse grained with trace gravel, <5% fines, no odor Bottom of boring 19.5 feet Boring backfilled with cuttings

NO WELL 44102LOG.GPJ 7/2/04

KLEINFELDER
5015 SHOREHAM PLACE
SAN DIEGO, CALIFORNIA 92122

THIS SUMMARY APPLIES ONLY AT THE LOCATION OF THIS BORING AND AT THE TIME OF DRILLING. SUBSURFACE CONDITIONS MAY DIFFER AT OTHER LOCATIONS AND MAY CHANGE AT THIS LOCATION WITH THE PASSAGE OF TIME. THE DATA PRESENTED IS A SIMPLIFICATION OF THE ACTUAL CONDITIONS ENCOUNTERED.

FIGURE
KB-1

PROJECT NO.: 44102	LOG OF BORING KB-2	SHEET 1 of 1

DRILLING METHOD: Hollow Stem Auger	PROJECT NAME: LAKESIDE CONSERVANCY FILL	LOCATION: North of Winter Garden at Industry, Lakeside, California	
DRILLING EQUIPMENT: CME-55	SAMPLING METHOD: CAL Mod Split Spoon	SURFACE ELEVATION: --	TOTAL DEPTH OF BOREHOLE: 8.0 ft

DATE				
STARTED: 05/17/2004	DRILLING COMPANY: Jet Drilling	BOREHOLE DIAMETER: 6" diameter	GROUNDWATER DEPTH/*ELEV.* (ft)	MEASUREMENT DATE and TIME
COMPLETED: 05/17/2004	SURFACE CONDITIONS: Dirt, compacted and graded		▼ na / *na*	
BACKFILLED: N/A	LOGGED BY: W. Chiu	REVIEWED BY: J. Lord, CEG	▽ na / *na*	
			▼ na / *na*	

#2232

Depth (ft)	SAMPLE: Blow Counts (Blows/6")	SAMPLE: Type	SAMPLE: ID	TPHg, TPHd (mg/kg)	PID/OVA (ppm)	GRAPHIC LOG	DESCRIPTION AND CLASSIFICATION
5	4 4 4		KB-2@5'		0.0		**FILL:** POORLY GRADED SAND with SILT (SP-SM), dark brown (10 YR 4/2), damp to moist, loose, fine to coarse sand with some gravel, 5% to 10% fines, no odor @ 3' cobble @ 8' refusal, move 5' offset and restart Refusal at 3' Bottom of boring 8 feet Boring backfilled with cuttings
10							
15							
20							

KLEINFELDER
5015 SHOREHAM PLACE
SAN DIEGO, CALIFORNIA 92122

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FIGURE
KB-2

NO WELL 44102LOG.GPJ 7/2/04

PROJECT NO.: 44102	LOG OF BORING KB-3	SHEET 1 of 1
DRILLING METHOD: Hollow Stem Auger	PROJECT NAME: LAKESIDE CONSERVANCY FILL	LOCATION: North of Winter Garden at Industry, Lakeside, California
DRILLING EQUIPMENT: CME-55	SAMPLING METHOD: CAL Mod Split Spoon	SURFACE ELEVATION: –
		TOTAL DEPTH OF BOREHOLE: 19

DATE					GROUNDWATER DEPTH/*ELEV.* (ft)	MEASUREMENT DATE and TIME
STARTED: 05/17/2004	DRILLING COMPANY: Jet Drilling	BOREHOLE DIAMETER: 6" diameter			▼ na / *na*	
COMPLETED: 05/17/2004	SURFACE CONDITIONS: Dirt, compacted and graded				▽ na / *na*	
BACKFILLED: N/A	LOGGED BY: W. Chiu	REVIEWED BY: J. Lord, CEG			▼ na / *na*	

#1232 9/7

Depth (ft)	SAMPLE Blow Counts (Blows/6")	SAMPLE Type	SAMPLE ID	TPHg, TPHd (mg/kg)	PID/OVA (ppm)	GRAPHIC LOG	DESCRIPTION AND CLASSIFICATION
							FILL:
							POORLY GRADED GRAVEL with SAND (GP), very dark brown (10 YR 2/2), loose, damp to moist, medium to coarse grained with >5% fines, no odor
5	13 4 10				0.0		
10	14 14 20				0.0		@ 10' SILTY SAND (SM), brown (10 YR 5/2), damp, medium dense, fine to medium grained, medium dense, >20% fines, no odor
15	9 9 17		KB-3@15'		0.0		@ 15' Same as above, decrease fines, increased sand, medium dense, <15% fines, no odor
	3 3 4				0.0		SILT with SAND (MH), brown (10 YR 5/2), damp, soft, no odor
20							Bottom of boring 19.5 feet Boring backfilled with cuttings

KLEINFELDER
5015 SHOREHAM PLACE
SAN DIEGO, CALIFORNIA 92122

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FIGURE
KB-3

NO WELL 44102LOG.GPJ 7/2/04

PROJECT NO.: 44102	LOG OF BORING KB-4	SHEET 1 of 1

DRILLING METHOD: Hollow Stem Auger	PROJECT NAME: LAKESIDE CONSERVANCY FILL	LOCATION: North of Winter Garden at Industry, Lakeside, California
DRILLING EQUIPMENT: CME-55	SAMPLING METHOD: CAL Mod Split Spoon	SURFACE ELEVATION: --

TOTAL DEPTH OF BOREHOLE: 19.5 ft

DATE				
STARTED: 05/17/2004	DRILLING COMPANY: Jet Drilling	BOREHOLE DIAMETER: 6" diameter	GROUNDWATER DEPTH/*ELEV.* (ft)	MEASUREMENT DATE and TIME
COMPLETED: 05/17/2004	SURFACE CONDITIONS: Dirt, compacted and graded		▼ na / *na*	
BACKFILLED: N/A	LOGGED BY: W. Chiu	REVIEWED BY: J. Lord, CEG	▽ na / *na*	
			▼ na / *na*	

MH #2232

Depth (ft)	SAMPLE Blow Counts (Blows/6")	SAMPLE Type	SAMPLE ID	TPHg, TPHd (mg/kg)	PID/OVA (ppm)	GRAPHIC LOG	DESCRIPTION AND CLASSIFICATION
							FILL:
							SILTY SAND with GRAVEL (SM), brown (10 YR 6/3), dry to damp, loose, fine to coarse grained with some gravel, 15% to 25%
5	31 21 24				0.0		@ 5' Same as above, dense
10	21 13 14		KB-4@10'		0.0		@ 10' Same as above, decrease gravel, increase sand, 15% to 25% fines, medium dense, no odor
15	4 27 17				0.0		@ 15' SILTY SAND (SM), (10 YR 4/6), damp to moist, dense, fine to medium grained with some lenses of fines, trace gravel, no odor
	13 11 17				0.0		@ 19 Same as above, medium dense
20							Bottom of boring 19.5 feet Boring backfilled with cuttings

GPJ 7/2/04

NO WELL 44

KLEINFELDER

5015 SHOREHAM PLACE
SAN DIEGO, CALIFORNIA 92122

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FIGURE

KB-4

PROJECT NO.: 44102	LOG OF BORING KB-5	SHEET 1 of 1

DRILLING METHOD: Hollow Stem Auger	PROJECT NAME: LAKESIDE CONSERVANCY FILL	LOCATION: North of Winter Garden at Industry, Lakeside, California
DRILLING EQUIPMENT: CME-55	SAMPLING METHOD: CAL Mod Split Spoon	SURFACE ELEVATION: –

TOTAL DEPTH OF BOREHOLE: 19

DATE					
STARTED: 05/17/2004	DRILLING COMPANY: Jet Drilling	BOREHOLE DIAMETER: 6" diameter	GROUNDWATER DEPTH/*ELEV.* (ft)	MEASUREMENT DATE and TIME
COMPLETED: 05/17/2004	SURFACE CONDITIONS: Dirt, compacted and graded		▼ na / *na*	
BACKFILLED: N/A	LOGGED BY: W. Chiu	REVIEWED BY: J. Lord, CEG	▽ na / *na*	
			▼ na / *na*	

#2232

Depth (ft)	SAMPLE Blow Counts (Blows/6")	SAMPLE Type	SAMPLE ID	TPHg, TPHd (mg/kg)	PID/OVA (ppm)	GRAPHIC LOG	DESCRIPTION AND CLASSIFICATION
							FILL:
							POORLY GRADED SAND with GRAVEL (SP), brown (10 YR 5/2), dry to damp, loose, fine to coarse grained sand with gravel and cobbles, <5% fines, some wood and roots, no odor
							@ 3' Gravel and cobbles?
5	12 19 32				0.0		@ 5' Same as above, dense
							@ 8' Gravel and cobbles?
10	5 9 12				0.0		@ 10' SILTY SAND (SM), dark brown (10 YR 2/2), damp to moist, medium dense, fine to coarse grained, 10% to 20% fines, no odor
15	8 8 8				0.0		@ 15' Same as above, no odor
	2 6 8		KB-5@19'		0.0		@ 19' Same as above, fine to medium grained, 40% to 50% fines, some iron oxide nodules, no odor
20							Bottom of boring 19.5 feet Boring backfilled with cuttings

NO WELL 44102LOG.GPJ 7/2/04

KLEINFELDER
5015 SHOREHAM PLACE
SAN DIEGO, CALIFORNIA 92122

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FIGURE
KB-5

PROJECT NO.: 44102	LOG OF BORING KB-6	SHEET 1 of 1

DRILLING METHOD: Hollow Stem Auger	PROJECT NAME: LAKESIDE CONSERVANCY FILL	LOCATION: North of Winter Garden at Industry, Lakeside, California
DRILLING EQUIPMENT: CME-55	SAMPLING METHOD: CAL Mod Split Spoon	SURFACE ELEVATION: –

TOTAL DEPTH OF BOREHOLE: 19.5 ft

DATE				
STARTED: 05/17/2004	DRILLING COMPANY: Jet Drilling	BOREHOLE DIAMETER: 6" diameter	GROUNDWATER DEPTH/*ELEV.* (ft)	MEASUREMENT DATE and TIME
COMPLETED: 05/17/2004	SURFACE CONDITIONS: Dirt, compacted and graded		▼ na / *na*	
BACKFILLED: N/A	LOGGED BY: W. Chiu	REVIEWED BY: J. Lord, CEG	▽ na / *na*	
			▼ na / *na*	

#2032 GPJ

Depth (ft)	SAMPLE Blow Counts (Blows/6")	SAMPLE Type	SAMPLE ID	TPHg, TPHd (mg/kg)	PID/OVA (ppm)	GRAPHIC LOG	DESCRIPTION AND CLASSIFICATION
							FILL:
							SILTY SAND (SM) with gravel, dark brown (10 YR 3/2), damp to moist, fine to medium grained sand with gravel and cobbles, loose, >15% fines, no odor
							@ 3' Gravel and cobbles?
5	24 11 14				0.0		@ 5' Same as above, medium dense
10	4 12 12				N/A		@ 10' No recovery
							@ 13' Gravel and cobbles?
15	10 8 7				0.0		@ 15' Same as above, too little recovery for sample, gravel and cobbles?
	1 1 3				N/A		@ 19' No recovery, same as above (cuttings at 19')
20							Bottom of boring 19.5 feet Boring backfilled with cuttings

NO WELL 4410x.GPJ 7/2/04

KLEINFELDER
5015 SHOREHAM PLACE
SAN DIEGO, CALIFORNIA 92122

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FIGURE
KB-6

PROJECT NO.: 44102	LOG OF BORING KB-7	SHEET 1 of 1

DRILLING METHOD: Hollow Stem Auger	PROJECT NAME: LAKESIDE CONSERVANCY FILL	LOCATION: North of Winter Garden at Industry, Lakeside, California
DRILLING EQUIPMENT: CME-55	SAMPLING METHOD: CAL Mod Split Spoon	SURFACE ELEVATION: –

TOTAL DEPTH OF BOREHOLE: 19

DATE				
STARTED: 05/17/2004	DRILLING COMPANY: Jet Drilling	BOREHOLE DIAMETER: 6" diameter	GROUNDWATER DEPTH/*ELEV.* (ft)	MEASUREMENT DATE and TIME
COMPLETED: 05/17/2004	SURFACE CONDITIONS: Dirt, compacted and graded		▼ na / *na*	
BACKFILLED: N/A	LOGGED BY: W. Chiu	REVIEWED BY: J. Lord, CEG	▽ na / *na*	
			▼ na / *na*	

Depth (ft)	SAMPLE: Blow Counts (Blows/6")	SAMPLE: Type	SAMPLE: ID	TPHg, TPHd (mg/kg)	PID/OVA (ppm)	GRAPHIC LOG	DESCRIPTION AND CLASSIFICATION
							FILL:
							SILTY SAND (SM), dark brown (10 YR 2/1), dry to damp, loose, fine to medium sand with trace gravel, >15% fines, no odor
5	5 7 9				0.0		SILTY SAND (SM), brown (10 YR 4/6), dry to damp, medium dense, fine to medium sand, 20%-30% fines, no odor
10	15 11 9		KB-7@10'		0.0		@ 10' Same as above, coarse sand, no odor
15	6 8 9				0.0		No recovery but likely same as above
	11 13 19				0.0		No recovery but likely same as above
20							Bottom of boring 19.5 feet Boring backfilled with cuttings

NO WELL 44102LOG.GPJ 7/2/04

KLEINFELDER
5015 SHOREHAM PLACE
SAN DIEGO, CALIFORNIA 92122

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FIGURE
KB-7

PROJECT NO.: 44102	LOG OF BORING KB-8	SHEET 1 of 1

DRILLING METHOD: Hollow Stem Auger	PROJECT NAME: LAKESIDE CONSERVANCY FILL	LOCATION: North of Winter Garden at Industry, Lakeside, California	
DRILLING EQUIPMENT: CME-55	SAMPLING METHOD: CAL Mod Split Spoon	SURFACE ELEVATION: --	TOTAL DEPTH OF BOREHOLE: 12.0 ft

DATE				
STARTED: 05/17/2004	DRILLING COMPANY: Jet Drilling	BOREHOLE DIAMETER: 6" diameter	GROUNDWATER DEPTH/*ELEV.* (ft)	MEASUREMENT DATE and TIME
COMPLETED: 05/17/2004	SURFACE CONDITIONS: Dirt		▼ na / *na*	
BACKFILLED: N/A	LOGGED BY: W. Chiu	REVIEWED BY: J. Lord, CEG	▽ na / *na*	
			▼ na / *na*	

#2232 JL

Depth (ft)	SAMPLE Blow Counts (Blows/6")	SAMPLE Type	SAMPLE ID	TPHg, TPHd (mg/kg)	PID/OVA (ppm)	GRAPHIC LOG	DESCRIPTION AND CLASSIFICATION
							FILL:
							SILTY SAND (SM), dark brown (10 YR 2/1), damp, fine to coarse grained with some gravel and cobbles, 30% to 40%
5	50/1"				0.0		@ 5' rock/cobble, break through with auger
10	10 7 7		KB-8@10'		0.0		@ 10' Same as above, decreased fines, medium dense
							Refusal at 12 feet Bottom of boring 12 feet Boring backfilled with cuttings
15							
20							

KLEINFELDER
5015 SHOREHAM PLACE
SAN DIEGO, CALIFORNIA 92122

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FIGURE
KB-8

NO WELL 4410...GPJ 7/2/04

PROJECT NO.: 44102	LOG OF BORING KB-9		SHEET 1 of 1
DRILLING METHOD: Hollow Stem Auger	PROJECT NAME: LAKESIDE CONSERVANCY FILL	LOCATION: North of Winter Garden at Industry, Lakeside, California	
DRILLING EQUIPMENT: CME-55	SAMPLING METHOD: CAL Mod Split Spoon	SURFACE ELEVATION: --	TOTAL DEPTH OF BOREHOLE: 19

DATE					
STARTED: 05/17/2004	DRILLING COMPANY: Jet Drilling	BOREHOLE DIAMETER: 6" diameter	GROUNDWATER DEPTH/*ELEV.* (ft)	MEASUREMENT DATE and TIME
COMPLETED: 05/17/2004	SURFACE CONDITIONS: Dirt, compacted and graded		▼ na / *na*	
BACKFILLED: N/A	LOGGED BY: W. Chiu	REVIEWED BY: J. Lord, CEG	▽ na / *na*	
			▼ na / *na*	

#2232 PF

Depth (ft)	SAMPLE Blow Counts (Blows/6")	SAMPLE Type	SAMPLE ID	TPHg, TPHd (mg/kg)	PID/OVA (ppm)	GRAPHIC LOG	DESCRIPTION AND CLASSIFICATION
							FILL:
							SILTY SAND (SM), dark brown (10 YR 3/3), damp to moist, loose, fine to medium grained, 20% to 30% fines, no odor
5	7 10 9		KB-9@5'		0.0		@ 5' Same as above, medium dense
10	30 34 20				0.0		@ 10' Same as above, dense, 30% to 40% fines, no odor
15	12 31 40				0.0		@ 15' Same as above, 20% to 30% fines, fine to medium grained sand, dense, no odor
	15 15 15				0.0		@ 19' Same as above, loose to medium dense
20							Bottom of boring 19.5 feet Boring backfilled with cuttings

NO WELL 44102LOG.GPJ 7/2/04

KLEINFELDER
5015 SHOREHAM PLACE
SAN DIEGO, CALIFORNIA 92122

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FIGURE
KB-9

PROJECT NO.: 44102	LOG OF BORING KB-10	SHEET 1 of 1

DRILLING METHOD: Hollow Stem Auger	PROJECT NAME: LAKESIDE CONSERVANCY FILL	LOCATION: North of Winter Garden at Industry, Lakeside, California	
DRILLING EQUIPMENT: CME-55	SAMPLING METHOD: CAL Mod Split Spoon	SURFACE ELEVATION: –	TOTAL DEPTH OF BOREHOLE: 12.0 ft

DATE					
STARTED: 05/17/2004	DRILLING COMPANY: Jet Drilling	BOREHOLE DIAMETER: 6" diameter	GROUNDWATER DEPTH/*ELEV.* (ft)	MEASUREMENT DATE and TIME
COMPLETED: 05/17/2004	SURFACE CONDITIONS: Dirt		▼ na / *na*	
BACKFILLED: N/A	LOGGED BY: W. Chiu	REVIEWED BY: J. Lord, CEG	▽ na / *na*	
			▼ na / *na*	

#2232

Depth (ft)	SAMPLE Blow Counts (Blows/6")	SAMPLE Type	SAMPLE ID	TPHg, TPHd (mg/kg)	PID/OVA (ppm)	GRAPHIC LOG	DESCRIPTION AND CLASSIFICATION
							FILL:
							SILTY SAND (SM), brown (10 YR 4/3), dry to damp, loose, fine to coarse grained sand with some gravel, 20% to 30% fines, no odor
5	6 6 5		KB-10@5'		0.0		@ 5' Same as above
10	3 7 50/2"				0.0		@ 10' Same as above, damp to moist, some silt lenses, no odor
							Refusal at 12 feet Bottom of boring 12 feet Boring backfilled with cuttings
15							
20							

GPJ 7/2/04

NO WELL 44

KLEINFELDER
5015 SHOREHAM PLACE
SAN DIEGO, CALIFORNIA 92122

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FIGURE
KB-10

PROJECT NO.: 44102	LOG OF BORING KB-11	SHEET 1 of 1
DRILLING METHOD: Hollow Stem Auger	PROJECT NAME: LAKESIDE CONSERVANCY FILL	LOCATION: North of Winter Garden at Industry, Lakeside, California
DRILLING EQUIPMENT: CME-55	SAMPLING METHOD: CAL Mod Split Spoon	SURFACE ELEVATION: –
		TOTAL DEPTH OF BOREHOLE: 19.5

DATE					
STARTED: 05/17/2004	DRILLING COMPANY: Jet Drilling	BOREHOLE DIAMETER: 6" diameter	GROUNDWATER DEPTH/ELEV. (ft)	MEASUREMENT DATE and TIME
COMPLETED: 05/17/2004	SURFACE CONDITIONS: Dirt		▼ na / *na*	
BACKFILLED: N/A	LOGGED BY: W. Chiu	REVIEWED BY: J. Lord, CEG	▽ na / *na*	
			▼ na / *na*	

#J #2232

Depth (ft)	SAMPLE Blow Counts (Blows/6")	SAMPLE Type	SAMPLE ID	TPHg, TPHd (mg/kg)	PID/OVA (ppm)	GRAPHIC LOG	DESCRIPTION AND CLASSIFICATION
							FILL:
							SILTY SAND (SM), brown (10 YR 5/3), dry to damp, very loose to loose, very fine to medium grained sand, <15% fines, no odor
5	5 3 5				0.0		@ 5' SILTY SAND (SM), brownish gray (10 YR 6/2), dry to damp, loose, fine to coarse grained sand, 20% to 40% fines
10	9 11 12				0.0		@ 10' Same as above, some fine gravel, medium dense, no odor
15	5 8 8		KB-11@15'		0.0		@ 15' Same as above, no gravel, decrease in fines, medium dense, fine to medium grained sand, damp to moist, no odor
	7 8 7				0.0		@ 19' Same as above, moist, no odor, fine to coarse grained sand
20							Bottom of boring 19.5 feet Boring backfilled with cuttings

KLEINFELDER
5015 SHOREHAM PLACE
SAN DIEGO, CALIFORNIA 92122

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FIGURE
KB-11

NO WELL 44102LOG.GPJ 7/2/04

PROJECT NO.: 44102	LOG OF BORING KB-12	SHEET 1 of 1
DRILLING METHOD: Hollow Stem Auger	PROJECT NAME: LAKESIDE CONSERVANCY FILL	LOCATION: North of Winter Garden at Industry, Lakeside, California
DRILLING EQUIPMENT: CME-55	SAMPLING METHOD: CAL Mod Split Spoon	SURFACE ELEVATION: –
		TOTAL DEPTH OF BOREHOLE: 18.0 ft

DATE				
STARTED: 05/17/2004	DRILLING COMPANY: Jet Drilling	BOREHOLE DIAMETER: 6" diameter	GROUNDWATER DEPTH/*ELEV.* (ft)	MEASUREMENT DATE and TIME
COMPLETED: 05/17/2004	SURFACE CONDITIONS: Dirt overgrown with weeds		▼ na / *na*	
BACKFILLED: N/A	LOGGED BY: W. Chiu	REVIEWED BY: J. Lord, CEG	▽ na / *na*	
			▼ na / *na*	

Qpj #2232

Depth (ft)	SAMPLE Blow Counts (Blows/6")	SAMPLE Type	SAMPLE ID	TPHg, TPHd (mg/kg)	PID/OVA (ppm)	GRAPHIC LOG	DESCRIPTION AND CLASSIFICATION
							FILL:
							SILTY SAND (SM), dark brown (10 YR 3/4), damp, loose to medium dense, fine to medium grained with gravel, 15% to 40% fines
5	14 50/4"	■	KB-12@5'		0.0		@ 6' Same as above, increase gravel and cobbles (asphalt?), medium dense to dense, no odor
10	50/5"				N/A		@ 10' No recovery
15	12 8 7				N/A		@ 15' No recovery, same as above (cuttings)
							@ 18' No recovery, sampling rod could not clear augers Bottom of boring 18 feet Boring backfilled with cuttings
20							

KLEINFELDER
5015 SHOREHAM PLACE
SAN DIEGO, CALIFORNIA 92122

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FIGURE
KB-12

NO WELL 4410 GPJ 7/2/04

PROJECT NO.: 44102	LOG OF BORING KB-13	SHEET 1 of 1
DRILLING METHOD: Hollow Stem Auger	PROJECT NAME: LAKESIDE CONSERVANCY FILL	LOCATION: North of Winter Garden at Industry, Lakeside, California
DRILLING EQUIPMENT: CME-55	SAMPLING METHOD: CAL Mod Split Spoon	SURFACE ELEVATION: –

TOTAL DEPTH OF BOREHOLE: 11.0

DATE				
STARTED: 05/17/2004	DRILLING COMPANY: Jet Drilling	BOREHOLE DIAMETER: 6" diameter	GROUNDWATER DEPTH/*ELEV.* (ft)	MEASUREMENT DATE and TIME
COMPLETED: 05/17/2004	SURFACE CONDITIONS: Dirt overgrown with weeds		▼ na / *na*	
BACKFILLED: N/A	LOGGED BY: W. Chiu	REVIEWED BY: J. Lord, CEG	▽ na / *na*	
			▼ na / *na*	

#2232 QM

Depth (ft)	SAMPLE Blow Counts (Blows/6")	SAMPLE Type	SAMPLE ID	TPHg, TPHd (mg/kg)	PID/OVA (ppm)	GRAPHIC LOG	DESCRIPTION AND CLASSIFICATION
							FILL:
							SILTY GRAVEL (GM), dark gray (10 YR 3/1), damp, medium dense to dense, fine to medium sand, <15% fines, no odor
							@ 3' Gravelly
5	12 19 32		KB-13@5'		0.0		SILTY SAND (SM), dark gray (10 YR 3/1), damp, dense, fine to coarse sand, 20% to 30% fines, no odor
10	50/4"				0.0		@ 10' Same as above
							Refusal at 11 feet Bottom of boring 11 feet Boring backfilled with cuttings
15							
20							

NO WELL 44102LOG.GPJ 7/2/04

KLEINFELDER
5015 SHOREHAM PLACE
SAN DIEGO, CALIFORNIA 92122

THIS SUMMARY APPLIES ONLY AT THE LOCATION OF THIS BORING AND AT THE TIME OF DRILLING. SUBSURFACE CONDITIONS MAY DIFFER AT OTHER LOCATIONS AND MAY CHANGE AT THIS LOCATION WITH THE PASSAGE OF TIME. THE DATA PRESENTED IS A SIMPLIFICATION OF THE ACTUAL CONDITIONS ENCOUNTERED.

FIGURE
KB-13

PROJECT NO.: 44102	LOG OF BORING KB-14	SHEET 1 of 1
DRILLING METHOD: Hollow Stem Auger	PROJECT NAME: LAKESIDE CONSERVANCY FILL	LOCATION: North of Winter Garden at Industry, Lakeside, California
DRILLING EQUIPMENT: CME-55	SAMPLING METHOD: CAL Mod Split Spoon	SURFACE ELEVATION: –
		TOTAL DEPTH OF BOREHOLE: 19.5 ft

DATE					
STARTED: 05/17/2004	DRILLING COMPANY: Jet Drilling	BOREHOLE DIAMETER: 6" diameter	GROUNDWATER DEPTH/*ELEV.* (ft)	MEASUREMENT DATE and TIME
COMPLETED: 05/17/2004	SURFACE CONDITIONS: Dirt		▼ na / *na*	
BACKFILLED: N/A	LOGGED BY: W. Chiu	REVIEWED BY: J. Lord, CEG	▽ na / *na*	
			▼ na / *na*	

#1232

Depth (ft)	SAMPLE Blow Counts (Blows/6")	SAMPLE Type	SAMPLE ID	TPHg, TPHd (mg/kg)	PID/OVA (ppm)	GRAPHIC LOG	DESCRIPTION AND CLASSIFICATION
							FILL:
							SILTY SAND (SM), dark brown (10 YR 3/3), dry to damp, loose to medium dense, fine to coarse grained sand with some gravel, 20% to 40% fines, no odor
5	24 13 10				0.0		@ 5' Same as above, medium dense
10	5 18 17		KB-14@10'		0.0		@ 10' Same as above with some cobbles, no odor
15	5 11 11				0.0		**ALLUVIUM:**
							@ 15' SILTY SAND (SM), olive (5 Y 3/2), moist to wet, medium dense, fine to medium sand, 10% to 20% fines, no odor
	3 3 4				0.0		@ 19' Same as above, loose
20							Bottom of boring 19.5 feet Boring backfilled with cuttings

KLEINFELDER
5015 SHOREHAM PLACE
SAN DIEGO, CALIFORNIA 92122

THIS SUMMARY APPLIES ONLY AT THE LOCATION OF THIS BORING AND AT THE TIME OF DRILLING. SUBSURFACE CONDITIONS MAY DIFFER AT OTHER LOCATIONS AND MAY CHANGE AT THIS LOCATION WITH THE PASSAGE OF TIME. THE DATA PRESENTED IS A SIMPLIFICATION OF THE ACTUAL CONDITIONS ENCOUNTERED.

FIGURE
KB-14

NO WELL 44102.GPJ 7/2/04

PROJECT NO.: 44102	LOG OF BORING KB-15	SHEET 1 of 1
DRILLING METHOD: Hollow Stem Auger	PROJECT NAME: LAKESIDE CONSERVANCY FILL	LOCATION: West of Channel at Mapleview, Lakeside, California
DRILLING EQUIPMENT: CME-55	SAMPLING METHOD: CAL Mod Split Spoon	SURFACE ELEVATION: --
DATE STARTED: 05/17/2004	DRILLING COMPANY: Jet Drilling	BOREHOLE DIAMETER: 6" diameter
DATE COMPLETED: 05/17/2004	SURFACE CONDITIONS: Dirt with construction debris	GROUNDWATER DEPTH/ELEV. (ft): ▼ na / na; ▽ na / na; ↧ na / na
DATE BACKFILLED: N/A	LOGGED BY: W. Chiu	REVIEWED BY: J. Lord, CEG

#22529

Depth (ft)	SAMPLE Blow Counts (Blows/6")	SAMPLE Type	SAMPLE ID	TPHg, TPHd (mg/kg)	PID/OVA (ppm)	GRAPHIC LOG	DESCRIPTION AND CLASSIFICATION
0							**FILL:** SILTY GRAVEL (GM), dark brown (10 YR 3/2), damp, loose, fine sand with some cobble, <20% fines, no odor
5	1 4 8		KB-15@5'		0.0		@ 5' Same as above
10	50/5"				0.0		SILTY SAND (SM), dark brown (10 YR 3/2), damp, dense, fine to coarse sand, 29% fines, some gravel and cobbles, no odor
15	50/5"				N/A		@ 15' No recovery, same as above (cuttings) Refusal at 15 feet Bottom of boring 15 feet Boring backfilled with cuttings
20							

NO WELL 44102LOG.GPJ 7/2/04

KLEINFELDER
5015 SHOREHAM PLACE
SAN DIEGO, CALIFORNIA 92122

THIS SUMMARY APPLIES ONLY AT THE LOCATION OF THIS BORING AND AT THE TIME OF DRILLING. SUBSURFACE CONDITIONS MAY DIFFER AT OTHER LOCATIONS AND MAY CHANGE AT THIS LOCATION WITH THE PASSAGE OF TIME. THE DATA PRESENTED IS A SIMPLIFICATION OF THE ACTUAL CONDITIONS ENCOUNTERED.

FIGURE
KB-15

PROJECT NO.: 44102	LOG OF BORING KB-16	SHEET 1 of 1
DRILLING METHOD: Hollow Stem Auger	PROJECT NAME: LAKESIDE CONSERVANCY FILL	LOCATION: West of Channel at Mapleview, Lakeside, California
DRILLING EQUIPMENT: CME-55	SAMPLING METHOD: CAL Mod Split Spoon	SURFACE ELEVATION: --
		TOTAL DEPTH OF BOREHOLE: 11.0 ft

DATE					
STARTED: 05/17/2004	DRILLING COMPANY: Jet Drilling	BOREHOLE DIAMETER: 6" diameter	GROUNDWATER DEPTH/*ELEV.* (ft)	MEASUREMENT DATE and TIME
COMPLETED: 05/17/2004	SURFACE CONDITIONS: Dirt with construction debris		▼ na / *na*	
BACKFILLED: N/A	LOGGED BY: W. Chiu	REVIEWED BY: J. Lord, CEG	▽ na / *na*	
			▼ na / *na*	

QA/C #2232

Depth (ft)	SAMPLE: Blow Counts (Blows/6")	SAMPLE: Type	SAMPLE: ID	TPHg, TPHd (mg/kg)	PID/OVA (ppm)	GRAPHIC LOG	DESCRIPTION AND CLASSIFICATION
					0.0		**FILL:** SILTY SAND (SM), dark brown (10 YR 3/2), dry to damp, medium dense to dense, with probable cobbles, fine to coarse sand, some gravel, 10% to 20% fines, no odor (cuttings)
5	50/3"				N/A		@ 5' No recovery, same as above (cuttings)
10	50/3"				N/A		@ 10' No recovery, same as above (cuttings)
							Refusal at 11 feet Bottom of boring 11 feet Boring backfilled with cuttings
15							
20							

NO WELL 44 GPJ 7/2/04

KLEINFELDER
5015 SHOREHAM PLACE
SAN DIEGO, CALIFORNIA 92122

THIS SUMMARY APPLIES ONLY AT THE LOCATION OF THIS BORING AND AT THE TIME OF DRILLING. SUBSURFACE CONDITIONS MAY DIFFER AT OTHER LOCATIONS AND MAY CHANGE AT THIS LOCATION WITH THE PASSAGE OF TIME. THE DATA PRESENTED IS A SIMPLIFICATION OF THE ACTUAL CONDITIONS ENCOUNTERED.

FIGURE
KB-16

PROJECT NO.: 44102	LOG OF BORING KB-17	SHEET 1 of 1
DRILLING METHOD: Hollow Stem Auger	PROJECT NAME: LAKESIDE CONSERVANCY FILL	LOCATION: West of Channel at Mapleview, Lakeside, California
DRILLING EQUIPMENT: CME-55	SAMPLING METHOD: CAL Mod Split Spoon	SURFACE ELEVATION: –
		TOTAL DEPTH OF BOREHOLE: 10

DATE					
STARTED: 05/17/2004	DRILLING COMPANY: Jet Drilling	BOREHOLE DIAMETER: 6" diameter	GROUNDWATER DEPTH/*ELEV.* (ft)	MEASUREMENT DATE and TIME
COMPLETED: 05/17/2004	SURFACE CONDITIONS: Dirt with construction debris		▼ na / *na*	
BACKFILLED: N/A	LOGGED BY: W. Chiu	REVIEWED BY: J. Lord, CEG	▽ na / *na*	
			▼ na / *na*	

#2232

Depth (ft)	SAMPLE Blow Counts (Blows/6")	SAMPLE Type	SAMPLE ID	TPHg, TPHd (mg/kg)	PID/OVA (ppm)	GRAPHIC LOG	DESCRIPTION AND CLASSIFICATION
							FILL:
							SILTY SAND (SM), dark brown (10 YR 2/2), damp, medium dense to dense, fine to coarse sand with some gravel, 10% to 25% fines, no odor
5	12 31 42		KB-17@5'		0.0		@ 5' Same as above
10	50/6"						@ 10' Same as above, increased gravel, no odor Refusal at 10 feet Bottom of boring 10 feet Boring backfilled with cuttings
15							
20							

NO WELL 44102LOG.GPJ 7/2/04

KLEINFELDER
5015 SHOREHAM PLACE
SAN DIEGO, CALIFORNIA 92122

THIS SUMMARY APPLIES ONLY AT THE LOCATION OF THIS BORING AND AT THE TIME OF DRILLING. SUBSURFACE CONDITIONS MAY DIFFER AT OTHER LOCATIONS AND MAY CHANGE AT THIS LOCATION WITH THE PASSAGE OF TIME. THE DATA PRESENTED IS A SIMPLIFICATION OF THE ACTUAL CONDITIONS ENCOUNTERED.

FIGURE
KB-17

PROJECT NO.: 44102	LOG OF BORING KB-18	SHEET 1 of 1
DRILLING METHOD: Hollow Stem Auger	PROJECT NAME: LAKESIDE CONSERVANCY FILL	LOCATION: West of Channel at Mapleview, Lakeside, California
DRILLING EQUIPMENT: CME-55	SAMPLING METHOD: CAL Mod Split Spoon	SURFACE ELEVATION: –
		TOTAL DEPTH OF BOREHOLE: 5.0 ft

DATE				
STARTED: 05/17/2004	DRILLING COMPANY: Jet Drilling	BOREHOLE DIAMETER: 6" diameter	GROUNDWATER DEPTH/*ELEV.* (ft)	MEASUREMENT DATE and TIME
COMPLETED: 05/17/2004	SURFACE CONDITIONS: Dirt with construction debris		▼ na / *na*	
BACKFILLED: N/A	LOGGED BY: W. Chiu	REVIEWED BY: J. Lord, CEG	▽ na / *na*	
			▼ na / *na*	

GPJ #2232

Depth (ft)	SAMPLE: Blow Counts (Blows/6")	SAMPLE: Type	SAMPLE: ID	TPHg, TPHd (mg/kg)	PID/OVA (ppm)	GRAPHIC LOG	DESCRIPTION AND CLASSIFICATION
0					0.0		**FILL:** SILTY SAND with GRAVEL (SM), dark gray (10 YR 3/1), damp, fine to coarse grained sand with probable cobbles, 10% to 25% fines, no odor
5							@ 5' cobbles No recovery, sampler could not clear auger Refusal at 5 feet Bottom of boring 5 feet Boring backfilled with cuttings
10							
15							
20							

NO WELL 44 GPJ 7/2/04

KLEINFELDER
5015 SHOREHAM PLACE
SAN DIEGO, CALIFORNIA 92122

THIS SUMMARY APPLIES ONLY AT THE LOCATION OF THIS BORING AND AT THE TIME OF DRILLING. SUBSURFACE CONDITIONS MAY DIFFER AT OTHER LOCATIONS AND MAY CHANGE AT THIS LOCATION WITH THE PASSAGE OF TIME. THE DATA PRESENTED IS A SIMPLIFICATION OF THE ACTUAL CONDITIONS ENCOUNTERED.

FIGURE
KB-18

APPENDIX B

Laboratory Reports and Chain-Of-Custody Documents

TABLE OF CONTENTS

CLIENT: KLEINFELDER

PROJECT: LAKESIDE CONSERVANCY FILL

SDG: 04E159A

SECTION		PAGE
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GC/MS-VOA	SW 5030B/8260B	2000 – 2011
GC/MS-SVOA	SW 3550B/8270C	3000 – 3009
GC-VOA	METHOD 5030B/M8015	4000 – 4006
GC-SVOA	METHOD 3550B/M8015 SW3550B/8081A SW3550B/8082	5000 – 5009 5010 – 5019 5020 – 5029
HPLC	**	6000 –
METALS	**	7000 –
WET	**	8000 –
OTHERS	**	9000 –

** - Not Requested

EMAX
LABORATORIES, INC.
1835 W. 205th Street
Torrance, CA 90501
Tel: (310) 618-8889
Fax: (310) 618-0818

Date: 06-10-2004
EMAX Batch No.: 04E159A

Attn: Jacques Lord

Kleinfelder
5015 Shoreham Place
San Diego CA 92122

Subject: Laboratory Report
Project: Lakeside Conservancy Fill

Enclosed is the Laboratory report for samples received on 05/19/04. The data reported include :

Sample ID	Control #	Col Date	Matrix	Analysis
KB-8@10'	E159-07	05/17/04	SOIL	TPH DIESEL
				TPH GASOLINE
				POLYCHLORINATED BIPHENYLS (PCBS)
				PESTICIDES ORGANOCHLORINE
				SEMIVOLATILE ORGANICS BY GCMS
				VOLATILE ORGANICS BY GC/MS
KB-12@5'	E159-11	05/17/04	SOIL	TPH DIESEL
				TPH GASOLINE
				POLYCHLORINATED BIPHENYLS (PCBS)
				PESTICIDES ORGANOCHLORINE
				SEMIVOLATILE ORGANICS BY GCMS
				VOLATILE ORGANICS BY GC/MS
KB-17@5'	E159-15	05/17/04	SOIL	TPH DIESEL
				TPH GASOLINE
				POLYCHLORINATED BIPHENYLS (PCBS)
				PESTICIDES ORGANOCHLORINE
				SEMIVOLATILE ORGANICS BY GCMS
				VOLATILE ORGANICS BY GC/MS

The results are summarized on the following pages.

Please feel free to call if you have any questions concerning these results.

Sincerely yours,

Kam Y. Pang, Ph.D.
Laboratory Director

CHANGE ORDER FORM

SDG 04E159A TAT 14 days Project Code KL_0401_

Requested by Jenny Date Requested 5/25/04 Due Date 6/8/04

Analytical Requirements				
AXO	EMAX Control Number	Sample Prep. Methods	Analytical Methods	Special Instructions
A	E159-07	3550B	8015M	Diesel
	E159-11	5030B	8015M	Gasoline
	~~E159-12~~ cancel per client JT 5/26/04	3550B	8082	PCBs
	~~E159-13~~ Cancel per client JT 5/26/04	3550B	8081A	Pesticides
	E159-15	3550B	8270C	Semivolatiles
		5030B	8260C	Volatiles

A-additional
X-cancelled
O-others (specify)

OPENED ADDITIONAL FOLDERS FOR: 8015-D; 8015-B; PCB; 3 PESTIC. 8270; 8260 ANALYSIS.

1001

05.25.04.

CHAIN OF CUSTODY

EMAX LABORATORIES, INC.
1835 W. 205th Street, Torrance, CA 90501
Tel #: (310) 618-8889 Fax #: (310) 618-0818
Email: info@emaxlabs.com

PO NUMBER: 44102 PW1
SAMPLE STORAGE: N/A B3
EMAX CONTROL NO. *: 04E159
PROJECT CODE: N/A

CLIENT: KLEINFELDER
PROJECT: LAKESIDE CONSERVANCY FILL (Project No. 44102)
COORDINATOR: JACQUES LORD
TEL: 858 320 2206 FAX: 858 320 2001 EMAIL: jlord@kleinfelder.com
SEND REPORT TO: JACQUES LORD
COMPANY: KLEINFELDER
ADDRESS: 5015 SHOREHAM PLACE
SAN DIEGO, CA 92122
EMAX PM:

MATRIX CODE	PRESERVATIVE CODE
DW= Drinking Water	IC=Ice
GW=Ground Water	HC=HCl
WW=Waste Water	HN=HNO3
SD=Solid Waste SL=Sludge	SH=NaOH
SS=Soil/Sediment	ST=Na2S2O3
WI=Wipes PR=Pure Products	ZA=Zinc Acetate
AR=Air	HS=H_2SO_4
Oil	

ANALYSIS REQUIRED: Total 22 Metals (6010B/7470) | TRPH (418.1)* | TPHd & TPHk (8015M)* | VOCs - Full Scan (8260B)* | SVOCs - Full Scan (8270C)* | Pesticides (8081A)* | PCBs (8082)*

TAT:
- ☐ Rush _____ hrs.
- ☐ Rush _____ days
- ☒ 7 days TRPH
- ☐ 14 days
- ☐ 21 days
- ☒ 30 days OTHERS
- ☐ _____ days
- ☐

LAB	SAMPLE ID: CLIENT	SAMPLING: LOCATION	DATE	TIME	CONTAINER: NO.	SIZE	TYPE	MATRIX CODE	QC	PRESERVATIVE CODE: IC	IC
1	KB-1@5'		5/17/04		2	2"x3"	BRASS SLEEVE	SS		X	X
2	KB-2@5'										
3	KB-3@15'										
4	KB-4@10'										
5	KB-5@19'										
6	~~KB-6~~ PW1										
7	KB-7@10'										
8	KB-8@10'										
9	KB-10@5'										

COMMENTS:
* IF TRPH IS DETECTED ANALYZE SAMPLE FOR:
- TPHd & TPHk
- VOCs
- SVOCs
- PESTICIDES
- PCBs

Instructions: SEND RESULTS TO JACQUES LORD

Cooler #	Temp. (°C)
1	3.5

Sample #s:

SAMPLER

RELINQUISHED BY	Date	Time	COURIER/AIRBILL: RECEIVED BY
[signature]	5/18/04	12:00	UPS
	5/19/04	1000	[signature]

NOTICE: Turn-around-time (TAT) for samples shall not begin until all discrepancies have been resolved. For samples received and discrepancies resolved after 1500 hrs, TAT shall start at 0800 hrs the next business day. The client is responsible for all cost associated with sample disposal. Samples shall be disposed of as soon as practical (but not prior to fifteen (15) calendar days) after issuance of analytical report unless a different sample disposal schedule is pre-arranged with EMAX. Disposal fee for samples defined by CA Title 22 as non-hazardous shall be $5.00 per sample. EMAX will return hazardous samples to the client at the client's expense unless directed in writing otherwise.

GRAPHICS EXPRESS (800) 300-4505

CHAIN OF CUSTODY

EMAX LABORATORIES, INC.
1835 W. 205th Street, Torrance, CA 90501
Tel #: (310) 618-8889 Fax #: (310) 618-0818
Email: info@emaxlabs.com

PO NUMBER: 44102 PWI
SAMPLE STORAGE: B3
EMAX CONTROL NO.*: 044159
PROJECT CODE:

CLIENT: KLEINFELDER
PROJECT: LAKESIDE CONSERVANCY FILL (PROJECT No. 44102)
COORDINATOR: JACQUES LORD
TEL: 858 320 2206 FAX: 858 320 2001 EMAIL: jlord@kleinfelder.com
SEND REPORT TO: JACQUES LORD
COMPANY: KLEINFELDER
ADDRESS: 5015 SHOREHAM PLACE
SAN DIEGO, CA 92122
EMAX PM:

MATRIX CODE: DW=Drinking Water; GW=Ground Water; WW=Waste Water; SD=Solid Waste SL=Sludge; SS=Soil/Sediment; WP=Wipes PP=Pure Products; AR=Air; O=
PRESERVATIVE CODE: IC=Ice; HC=HCl; HN=HNO3; SH=NaOH; ST=Na2S2O3; ZA=Zinc Acetate; HS=H2SO4

ANALYSIS REQUIRED: Title 22 Metals (6010B/7470); TRPH (418.1)*; TPHg & TPHd (8015M)*; VOCs - Full Scan (8260B)*; SVOCs - Full Scan (8270C)*; Pesticides (8081A)*; PCBs (8082)*

TAT:
- ☐ Rush _____ hrs.
- ☐ Rush _____ days
- ☒ 7 days TRPH
- ☐ 14 days
- ☐ 21 days
- ☒ 30 days OTHERS
- ☐ _____ days
- ☐

LAB	SAMPLE ID CLIENT	SAMPLING LOCATION	SAMPLING DATE	SAMPLING TIME	CONTAINER NO.	CONTAINER SIZE	CONTAINER TYPE	MATRIX CODE	QC	PRESERVATIVE CODE IC	PRESERVATIVE CODE HC	COMMENTS
10 • 1	KB-11@15'		5/17/04		2	2"x5"	BRASS SLEEVE	SS		X	X	* TRPH is DETECTED
11 • 2	KB-12@5'											ANALYZE SAMPLE FOR:
12 • 3	KB-13@5'											· TPHg & TPHd
13 • 4	KB-14@10'											· VOCs
14 • 5	KB-15@5'											· SVOCs
15 • 6	KB-17@5'		↓		↓	↓	↓	↓		↓	↓	· PESTICIDES
• 7												· PCBs
• 8												
• 9												
• 0												

Instructions

Cooler #	Temp. (°C)	Sample #s

SAMPLER

RELINQUISHED BY	Date	Time	RECEIVED BY
[signature]	5/18/04	12:00	UPS
	5-19-04	1000	[signature]

COURIER/AIRBILL

NOTICE: Turn-around-time (TAT) for samples shall not begin until all discrepancies have been resolved. For samples received and discrepancies resolved after 1500 hrs. TAT shall start at 0800 hrs the next business day. The client is responsible for all cost associated with sample disposal. Samples shall be disposed of as soon as practical (but not prior to fifteen (15) calendar days) after issuance of analytical report unless a different sample disposal schedule is pre-arranged with EMAX. Disposal fee for samples defined by CA Title 22 as non-hazardous shall be $5.00 per sample. EMAX will return hazardous samples to the client at the client's expense unless directed in writing otherwise.

GRAPHICS EXPRESS (800) 280-4455

1 of 3

REPORTING CONVENTIONS

DATA QUALIFIERS:

Lab Qualifier	AFCEE Qualifier	Description
J	F	Indicates that the analyte is positively identified and the result is less than RL but greater than MDL.
N		Indicates presumptive evidence of a compound.
B	B	Indicates that the analyte is found in the associated method blank as well as in the sample at above QC level.
E	J	Indicates that the result is above the maximum calibration range.
*	*	Out of QC limit.

Note: The above qualifiers are used to flag the results unless the project requires a different set of qualification criteria.

ACRONYMS AND ABBREVIATIONS:

CRDL	Contract Required Detection Limit
RL	Reporting Limit
MRL	Method Reporting Limit
PQL	Practical Quantitation Limit
MDL	Method Detection Limit
DO	Diluted out

DATES

The date and time information for leaching and preparation reflect the beginning date and time of the procedure unless the method, protocol, or project specifically requires otherwise.

LABORATORY REPORT FOR

KLEINFELDER

LAKESIDE CONSERVANCY FILL

SW 5030B/8260B
VOLATILE ORGANICS BY GC/MS

SDG#: 04E159A

2000

CASE NARRATIVE

CLIENT: KLEINFELDER

PROJECT: LAKESIDE CONSERVANCY FILL

SDG: 04E159A

SW 5030B/8260B
VOLATILE ORGANICS BY GC/MS

Three (3) soil samples were received on 05/19/04 for Volatile Organic analysis by Method 5030B/8260B in accordance with USEPA SW846, 3RD ed.

1. Holding Time

   Analytical holding time was met.

2. Tuning and Calibration

   Tuning and calibration were carried out at 12-hour interval. All QC requirements were met.

3. Method Blank

   Method blanks were free of contamination at the reporting limit.

4. Surrogate Recovery

   Recoveries were within QC limit.

5. Lab Control Sample/Lab Control Sample Duplicate

   Recoveries were within QC limit.

6. Matrix Spike/Matrix Spike Duplicate

   No MS/MSD sample was designated in this SDG.

7. Sample Analysis

   Samples were analyzed according to the prescribed QC procedures. All criteria were met.

   The internal standards in E159-15 had low recoveries, sample was reanalyzed and the third IS was still out of QC. Only the reanalysis was reported.

LAB CHRONICLE
VOLATILE ORGANICS BY [redacted]S

Client : KLEINFELDER
Project : LAKESIDE CONSERVANCY FILL

SDG NO. : 04E159A
Instrument ID : T-006

SOIL

Client Sample ID	Laboratory Sample ID	Dilution Factor	% Moist	Analysis Datetime	Extraction DateTime	Sample Data FN	Calibration Data FN	Prep. Batch	Notes
MBLK1S	V006E15Q	1	NA	05/27/0408:59	05/27/0408:59	REW318	REW259	V006E15	Method Blank
LCS1S	V006E15L	1	NA	05/27/0407:03	05/27/0407:03	REW315	REW259	V006E15	Lab Control Sample (LCS)
LCD1S	V006E15C	1	NA	05/27/0407:42	05/27/0407:42	REW316	REW259	V006E15	LCS Duplicate
KB-8@10'	E159-07	1	8.5	05/27/0409:38	05/27/0409:38	REW319	REW259	V006E15	Field Sample
KB-12@5'	E159-11	1	9.4	05/27/0410:16	05/27/0410:16	REW320	REW259	V006E15	Field Sample
MBLK2S	V006E18Q	1	NA	05/29/0400:37	05/29/0400:37	REW359	REW259	V006E18	Method Blank
LCS2S	V006E18L	1	NA	05/28/0422:41	05/28/0422:41	REW356	REW259	V006E18	Lab Control Sample (LCS)
LCD2S	V006E18C	1	NA	05/28/0423:20	05/28/0423:20	REW357	REW259	V006E18	LCS Duplicate
KB-17@5'	E159-15R	1	3.3	05/29/0403:10	05/29/0403:10	REW363	REW259	V006E18	Field Sample

FN - Filename
% Moist - Percent Moisture

2002

SAMPLE RESULTS

© 2003

SW 5030B/8260B
VOLATILE ORGANICS BY GC/MS

Client : KLEINFELDER	Date Collected: 05/17/04
Project : LAKESIDE CONSERVANCY FILL	Date Received: 05/19/04
Batch No. : 04E159A	Date Extracted: 05/27/04 09:38
Sample ID: KB-B@10'	Date Analyzed: 05/27/04 09:38
Lab Samp ID: E159-07	Dilution Factor: 1
Lab File ID: REW319	Matrix : SOIL
Ext Btch ID: V006E15	% Moisture : 8.5
Calib. Ref.: REW259	Instrument ID : T-006

PARAMETERS	RESULTS (ug/kg)	RL (ug/kg)	MDL (ug/kg)
1,1,1-TRICHLOROETHANE	ND	5.5	2.2
1,1,2,2-TETRACHLOROETHANE	ND	5.5	2.2
1,1,2-TRICHLOROETHANE	ND	5.5	2.2
1,1-DICHLOROETHANE	ND	5.5	2.2
1,1-DICHLOROETHENE	ND	5.5	2.2
1,2-DICHLOROETHANE	ND	5.5	2.2
1,2-DICHLOROPROPANE	ND	5.5	2.2
2-BUTANONE	ND	22	5.5
2-HEXANONE	ND	22	5.5
4-METHYL-2-PENTANONE	ND	22	5.5
ACETONE	ND	22	5.5
BENZENE	ND	5.5	2.2
BROMODICHLOROMETHANE	ND	5.5	2.2
BROMOFORM	ND	5.5	2.2
BROMOMETHANE	ND	11	3.3
CARBON DISULFIDE	ND	5.5	2.2
CARBON TETRACHLORIDE	ND	5.5	2.2
CHLOROBENZENE	ND	5.5	2.2
CHLOROETHANE	ND	11	3.3
CHLOROFORM	ND	5.5	2.2
CHLOROMETHANE	ND	11	5.5
CIS-1,2-DICHLOROETHENE	ND	5.5	2.2
CIS-1,3-DICHLOROPROPENE	ND	5.5	2.2
DI[redacted]OCHLOROMETHANE	ND	5.5	2.2
E[redacted]ENZENE	ND	5.5	2.2
M/P[redacted]LENES	ND	11	3.3
MTBE	ND	5.5	2.2
METHYLENE CHLORIDE	ND	5.5	2.2
O-XYLENE	ND	5.5	2.2
STYRENE	ND	5.5	2.2
TETRACHLOROETHENE	ND	5.5	2.2
TOLUENE	ND	5.5	2.2
TRANS-1,2-DICHLOROETHENE	ND	5.5	2.2
TRANS-1,3-DICHLOROPROPENE	ND	5.5	2.2
TRICHLOROETHENE	ND	5.5	2.2
VINYL CHLORIDE	ND	5.5	2.2

SURROGATE PARAMETERS	% RECOVERY	QC LIMIT
1,2-DICHLOROETHANE-D4	103	54-154
4-BROMOFLUOROBENZENE	93	63-143
TOLUENE-D8	94	63-143

SW 50308/8260B
VOLATILE ORGANICS BY GC/MS

Client	: KLEINFELDER	Date Collected:	05/17/04
Project	: LAKESIDE CONSERVANCY FILL	Date Received:	05/19/04
Batch No.	: 04E159A	Date Extracted:	05/27/04 10:16
Sample ID:	KB-1205'	Date Analyzed:	05/27/04 10:16
Lab Samp ID:	E159-11	Dilution Factor:	1
Lab File ID:	REW320	Matrix :	SOIL
Ext Btch ID:	V006E15	% Moisture :	9.4
Calib. Ref.:	REW259	Instrument ID :	T-006

PARAMETERS	RESULTS (ug/kg)	RL (ug/kg)	MDL (ug/kg)
1,1,1-TRICHLOROETHANE	ND	5.5	2.2
1,1,2,2-TETRACHLOROETHANE	ND	5.5	2.2
1,1,2-TRICHLOROETHANE	ND	5.5	2.2
1,1-DICHLOROETHANE	ND	5.5	2.2
1,1-DICHLOROETHENE	ND	5.5	2.2
1,2-DICHLOROETHANE	ND	5.5	2.2
1,2-DICHLOROPROPANE	ND	5.5	2.2
2-BUTANONE	ND	22	5.5
2-HEXANONE	ND	22	5.5
4-METHYL-2-PENTANONE	ND	22	5.5
ACETONE	ND	22	5.5
BENZENE	ND	5.5	2.2
BROMODICHLOROMETHANE	ND	5.5	2.2
BROMOFORM	ND	5.5	2.2
BROMOMETHANE	ND	11	3.3
CARBON DISULFIDE	ND	5.5	2.2
CARBON TETRACHLORIDE	ND	5.5	2.2
CHLOROBENZENE	ND	5.5	2.2
CHLOROETHANE	ND	11	3.3
CHLOROFORM	ND	5.5	2.2
CHLOROMETHANE	ND	11	5.5
CIS-1,2-DICHLOROETHENE	ND	5.5	2.2
CIS-1,3-DICHLOROPROPENE	ND	5.5	2.2
DIBROMOCHLOROMETHANE	ND	5.5	2.2
ETHYLBENZENE	ND	5.5	2.2
M/P-XYLENES	ND	11	3.3
MTBE	ND	5.5	2.2
METHYLENE CHLORIDE	ND	5.5	2.2
O-XYLENE	ND	5.5	2.2
STYRENE	ND	5.5	2.2
TETRACHLOROETHENE	ND	5.5	2.2
TOLUENE	ND	5.5	2.2
TRANS-1,2-DICHLOROETHENE	ND	5.5	2.2
TRANS-1,3-DICHLOROPROPENE	ND	5.5	2.2
TRICHLOROETHENE	ND	5.5	2.2
VINYL CHLORIDE	ND	5.5	2.2

SURROGATE PARAMETERS	% RECOVERY	QC LIMIT
1,2-DICHLOROETHANE-D4	111	54-154
4-BROMOFLUOROBENZENE	107	63-143
TOLUENE-D8	91	63-143

U 2005

SW 5030B/8260B
VOLATILE ORGANICS BY GC/MS

Client	: KLEINFELDER	Date Collected:	05/17/04
Project	: LAKESIDE CONSERVANCY FILL	Date Received:	05/19/04
Batch No.	: 04E159A	Date Extracted:	05/29/04 03:10
Sample ID:	KB-17@5'	Date Analyzed:	05/29/04 03:10
Lab Samp ID:	E159-15R	Dilution Factor:	1
Lab File ID:	REW363	Matrix :	SOIL
Ext Btch ID:	VOO6E18	% Moisture :	3.3
Calib. Ref.:	REW259	Instrument ID :	T-006

PARAMETERS	RESULTS (ug/kg)	RL (ug/kg)	MDL (ug/kg)
1,1,1-TRICHLOROETHANE	ND	5.2	2.1
1,1,2,2-TETRACHLOROETHANE	ND	5.2	2.1
1,1,2-TRICHLOROETHANE	ND	5.2	2.1
1,1-DICHLOROETHANE	ND	5.2	2.1
1,1-DICHLOROETHENE	ND	5.2	2.1
1,2-DICHLOROETHANE	ND	5.2	2.1
1,2-DICHLOROPROPANE	ND	5.2	2.1
2-BUTANONE	ND	21	5.2
2-HEXANONE	ND	21	5.2
4-METHYL-2-PENTANONE	ND	21	5.2
ACETONE	6.6J	21	5.2
BENZENE	ND	5.2	2.1
BROMODICHLOROMETHANE	ND	5.2	2.1
BROMOFORM	ND	5.2	2.1
BROMOMETHANE	ND	10	3.1
CARBON DISULFIDE	ND	5.2	2.1
CARBON TETRACHLORIDE	ND	5.2	2.1
CHLOROBENZENE	ND	5.2	2.1
CHLOROETHANE	ND	10	3.1
CHLORDFORM	ND	5.2	2.1
CHLOROMETHANE	ND	10	5.2
CIS-1,2-DICHLOROETHENE	ND	5.2	2.1
CIS-1,3-DICHLOROPROPENE	ND	5.2	2.1
DI[redacted]CHLOROMETHANE	ND	5.2	2.1
ET[redacted]NZENE	ND	5.2	2.1
M/P[redacted]LENES	ND	10	3.1
MTBE	ND	5.2	2.1
METHYLENE CHLORIDE	ND	5.2	2.1
O-XYLENE	ND	5.2	2.1
STYRENE	ND	5.2	2.1
TETRACHLOROETHENE	ND	5.2	2.1
TOLUENE	ND	5.2	2.1
TRANS-1,2-DICHLOROETHENE	ND	5.2	2.1
TRANS-1,3-DICHLOROPROPENE	ND	5.2	2.1
TRICHLOROETHENE	ND	5.2	2.1
VINYL CHLORIDE	ND	5.2	2.1

SURROGATE PARAMETERS	% RECOVERY	QC LIMIT
1,2-DICHLOROETHANE-D4	116	54-154
4-BROMOFLUOROBENZENE	115	63-143
TOLUENE-D8	100	63-143

2006

SW 50308/82608
VOLATILE ORGANICS BY GC/MS

Client	: KLEINFELDER	Date Collected:	NA
Project	: LAKESIDE CONSERVANCY FILL	Date Received:	05/27/04
Batch No.	: 04E159A	Date Extracted:	05/27/04 08:59
Sample ID:	MBLK1S	Date Analyzed:	05/27/04 08:59
Lab Samp ID:	V006E15Q	Dilution Factor:	1
Lab File ID:	REW318	Matrix :	SOIL
Ext Btch ID:	V006E15	% Moisture :	NA
Calib. Ref.:	REW259	Instrument ID :	T-006

PARAMETERS	RESULTS (ug/kg)	RL (ug/kg)	MDL (ug/kg)
1,1,1-TRICHLOROETHANE	ND	5	2
1,1,2,2-TETRACHLOROETHANE	ND	5	2
1,1,2-TRICHLOROETHANE	ND	5	2
1,1-DICHLOROETHANE	ND	5	2
1,1-DICHLOROETHENE	ND	5	2
1,2-DICHLOROETHANE	ND	5	2
1,2-DICHLOROPROPANE	ND	5	2
2-BUTANONE	ND	20	5
2-HEXANONE	ND	20	5
4-METHYL-2-PENTANONE	ND	20	5
ACETONE	ND	20	5
BENZENE	ND	5	2
BROMODICHLOROMETHANE	ND	5	2
BROMOFORM	ND	5	2
BROMOMETHANE	ND	10	3
CARBON DISULFIDE	ND	5	2
CARBON TETRACHLORIDE	ND	5	2
CHLOROBENZENE	ND	5	2
CHLOROETHANE	ND	10	3
CHLOROFORM	ND	5	2
CHLOROMETHANE	ND	10	5
CIS-1,2-DICHLOROETHENE	ND	5	2
CIS-1,3-DICHLOROPROPENE	ND	5	2
DI[redacted]OCHLOROMETHANE	ND	5	2
E[redacted]NZENE	ND	5	2
M/P [redacted]YLENES	ND	10	3
MTBE	ND	5	2
METHYLENE CHLORIDE	ND	5	2
O-XYLENE	ND	5	2
STYRENE	ND	5	2
TETRACHLOROETHENE	ND	5	2
TOLUENE	ND	5	2
TRANS-1,2-DICHLOROETHENE	ND	5	2
TRANS-1,3-DICHLOROPROPENE	ND	5	2
TRICHLOROETHENE	ND	5	2
VINYL CHLORIDE	ND	5	2

SURROGATE PARAMETERS	% RECOVERY	QC LIMIT
1,2-DICHLDROETHANE-D4	102	54-154
4-BROMOFLUOROBENZENE	89	63-143
TOLUENE-D8	88	63-143

2008

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: KLEINFELDER
PROJECT: LAKESIDE CONSERVANCY FILL
BATCH NO.: 04E159A
METHOD: SW 5030B/8260B

MATRIX:	SOIL			% MOISTURE:	NA
DILUTION FACTOR:	1	1	1		
SAMPLE ID:	MBLK1S				
LAB SAMP ID:	V006E15Q	V006E15L	V006E15C		
LAB FILE ID:	REW318	REW315	REW316		
DATE EXTRACTED:	05/27/0408:59	05/27/0407:03	05/27/0407:42	DATE COLLECTED:	NA
DATE ANALYZED:	05/27/0408:59	05/27/0407:03	05/27/0407:42	DATE RECEIVED:	05/27/04
PREP. BATCH:	V006E15	V006E15	V006E15		
CALIB. REF:	REW259	REW259	REW259		

ACCESSION:

PARAMETER	BLNK RSLT (ug/kg)	SPIKE AMT (ug/kg)	BS RSLT (ug/kg)	BS % REC	SPIKE AMT (ug/kg)	BSD RSLT (ug/kg)	BSD % REC	RPD (%)	QC LIMIT (%)	MAX RPD (%)
1,1-Dichloroethene	ND	20	17.8	89	20	17.3	87	3	60-140	50
Benzene	ND	20	20.3	102	20	18.1	91	11	70-130	50
Chlorobenzene	ND	20	19.7	99	20	18.2	91	8	70-130	50
Toluene	ND	20	19.7	99	20	17.8	89	10	70-130	50
Trichloroethene	ND	20	20.1	101	20	17.8	89	12	70-130	50

SURROGATE PARAMETER	SPIKE AMT (ug/kg)	BS RSLT (ug/kg)	BS % REC	SPIKE AMT (ug/kg)	BSD RSLT (ug/kg)	BSD % REC	QC LIMIT (%)
1,2-Dichloroethane-d4	50	50.2	100	50	49	98	60-140
4-Bromofluorobenzene	50	47.1	94	50	42.9	86	70-130
Toluene-d8	50	45.5	91	50	44.4	89	70-130

2009

SW 5030B/8260B
VOLATILE ORGANICS BY GC/MS

[redacted]	: KLEINFELDER	Date Collected:	NA
P[redacted]t	: LAKESIDE CONSERVANCY FILL	Date Received:	05/29/04
Batch No.	: 04E159A	Date Extracted:	05/29/04 00:37
Sample ID	: MBLK2S	Date Analyzed:	05/29/04 00:37
Lab Samp ID	: V006E18Q	Dilution Factor:	1
Lab File ID	: REW359	Matrix	: SOIL
Ext Btch ID	: V006E18	% Moisture	: NA
Calib. Ref.	: REW259	Instrument ID	: T-006

PARAMETERS	RESULTS (ug/kg)	RL (ug/kg)	MDL (ug/kg)
1,1,1-TRICHLOROETHANE	ND	5	2
1,1,2,2-TETRACHLOROETHANE	ND	5	2
1,1,2-TRICHLOROETHANE	ND	5	2
1,1-DICHLOROETHANE	ND	5	2
1,1-DICHLOROETHENE	ND	5	2
1,2-DICHLOROETHANE	ND	5	2
1,2-DICHLOROPROPANE	ND	5	2
2-BUTANONE	ND	20	5
2-HEXANONE	ND	20	5
4-METHYL-2-PENTANONE	ND	20	5
ACETONE	ND	20	5
BENZENE	ND	5	2
BROMODICHLOROMETHANE	ND	5	2
BROMOFORM	ND	5	2
BROMOMETHANE	ND	10	3
CARBON DISULFIDE	ND	5	2
CARBON TETRACHLORIDE	ND	5	2
CHLOROBENZENE	ND	5	2
CHLOROETHANE	ND	10	3
CHLOROFORM	ND	5	2
CHLOROMETHANE	ND	10	5
CIS-1,2-DICHLOROETHENE	ND	5	2
CIS-1,3-DICHLOROPROPENE	ND	5	2
DIBROMOCHLOROMETHANE	ND	5	2
ETHYLBENZENE	ND	5	2
M/P-XYLENES	ND	10	3
MTBE	ND	5	2
METHYLENE CHLORIDE	ND	5	2
O-XYLENE	ND	5	2
STYRENE	ND	5	2
TETRACHLOROETHENE	ND	5	2
TOLUENE	ND	5	2
TRANS-1,2-DICHLOROETHENE	ND	5	2
TRANS-1,3-DICHLOROPROPENE	ND	5	2
TRICHLOROETHENE	ND	5	2
VINYL CHLORIDE	ND	5	2

SURROGATE PARAMETERS	% RECOVERY	QC LIMIT
1,2-DICHLOROETHANE-D4	104	54-154
4-BROMOFLUOROBENZENE	93	63-143
TOLUENE-D8	88	63-143

2010

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: KLEINFELDER
PROJECT: LAKESIDE CONSERVANCY FILL
BATCH NO.: 04E159A
METHOD: SW 5030B/8260B

MATRIX:	SOIL			% MOISTURE:	NA
DILUTION FACTOR:	1	1	1		
SAMPLE ID:	MBLK2S				
LAB SAMP ID:	V006E18Q	V006E18L	V006E18C		
LAB FILE ID:	REW359	REW356	REW357		
DATE EXTRACTED:	05/29/0400:37	05/28/0422:41	05/28/0423:20	DATE COLLECTED:	NA
DATE ANALYZED:	05/29/0400:37	05/28/0422:41	05/28/0423:20	DATE RECEIVED:	05/28/04
PREP. BATCH:	V006E18	V006E18	V006E18		
CALIB. REF:	REW259	REW259	REW259		

ACCESSION:

PARAMETER	BLNK RSLT (ug/kg)	SPIKE AMT (ug/kg)	BS RSLT (ug/kg)	BS % REC	SPIKE AMT (ug/kg)	BSD RSLT (ug/kg)	BSD % REC	RPD (%)	QC LIMIT (%)	MAX RPD (%)
1,1-Dichloroethene	ND	20	17.8	89	20	19.1	95	7	60-140	50
Benzene	ND	20	17.9	89	20	19.6	98	9	70-130	50
Chlorobenzene	ND	20	18.6	93	20	19.5	98	5	70-130	50
Toluene	ND	20	17.9	90	20	19.5	98	9	70-130	50
Trichloroethene	ND	20	18.4	92	20	19.6	98	6	70-130	50

SURROGATE PARAMETER	SPIKE AMT (ug/kg)	BS RSLT (ug/kg)	BS % REC	SPIKE AMT (ug/kg)	BSD RSLT (ug/kg)	BSD % REC	QC LIMIT (%)
1,2-Dichloroethane-d4	50	52.9	106	50	50.4	101	60-140
4-Bromofluorobenzene	50	46.9	94	50	44.8	90	70-130
Toluene-d8	50	45	90	50	46.1	92	70-130

LABORATORY REPORT FOR

KLEINFELDER

LAKESIDE CONSERVANCY FILL

SW 3550B/8270C
SEMI VOLATILE ORGANICS BY GC/MS

SDG#: 04E159A

3000

CASE NARRATIVE

CLIENT: KLEINFELDER

PROJECT: LAKESIDE CONSERVANCY FILL

SDG: 04E159A

SW 3550B/8270C
SEMI VOLATILE ORGANICS BY GC/MS

Three (3) soil samples were received on 05/19/04 for Semi Volatile Organic analysis by Method 3550B/8270C in accordance with USEPA SW846, 3rd ed.

1. Holding Time

   Analytical holding time was met.

2. Tuning and Calibration

   Tuning and calibration were carried out at 12-hour interval. All QC requirements were met.

3. Method Blank

   Method blank was free of contamination at the reporting limit.

4. Surrogate Recovery

   Recoveries were within QC limit.

5. Lab Control Sample/Lab Control Sample Duplicate

   Recoveries were within QC limit.

6. Matrix Spike/Matrix Spike Duplicate

   No MS/MSD sample was designated in this SDG.

7. Sample Analysis

   Samples were analyzed according to the prescribed QC procedures. All criteria were met.

   Extracts were cleaned up by GPC prior to analysis.

LAB CHRONICLE
SEMI VOLATILE ORGANICS BY GC/MS

Client : KLEINFELDER
Project : LAKESIDE CONSERVANCY FILL

SDG NO. : 04E159A
Instrument ID : T-041

SOIL

Client Sample ID	Laboratory Sample ID	Dilution Factor	% Moist	Analysis DateTime	Extraction DateTime	Sample Data FN	Calibration Data FN	Prep. Batch	Notes
MBLK1S	SVE031SB	1	NA	05/28/0416:24	05/27/0414:45	REH147	RDH021	SVE031S	Method Blank
LCS1S	SVE031SL	1	NA	05/28/0416:58	05/27/0414:45	REH148	RDH021	SVE031S	Lab Control Sample (LCS)
LCD1S	SVE031SC	1	NA	05/28/0417:33	05/27/0414:45	REH149	RDH021	SVE031S	LCS Duplicate
KB-8@10'	E159-07	2	8.5	06/01/0420:28	05/27/0414:45	RFH011	RDH021	SVE031S	Field Sample
KB-12@5'	E159-11	2	9.4	06/01/0421:02	05/27/0414:45	RFH012	RDH021	SVE031S	Field Sample
KB-17@5'	E159-15	2	3.3	06/01/0421:37	05/27/0414:45	RFH013	RDH021	SVE031S	Field Sample

FN - Filename
% Moist - Percent Moisture

2003

SAMPLE RESULTS

SW 3550B/8270C
SEMI VOLATILE ORGANICS BY GC/MS

Client : KLEINFELDER	Date Collected: 05/17/04
Project : LAKESIDE CONSERVANCY FILL	Date Received: 05/19/04
Lab Proj. : 04E159A	Date Extracted: 05/27/04 14:45
Sample ID: KB-8@10'	Date Analyzed: 06/01/04 20:28
Lab Samp ID: E159-07	Dilution Factor: 2
Lab File ID: RFH011	Matrix : SOIL
Ext Btch ID: SVE031S	% Moisture : 8.5
Calib. Ref.: RDH021	Instrument ID : T-041

PARAMETERS	RESULTS (ug/kg)	RL (ug/kg)	MDL (ug/kg)
1,2,4-TRICHLOROBENZENE	ND	720	370
1,2-DICHLOROBENZENE	ND	720	370
1,3-DICHLOROBENZENE	ND	720	370
1,4-DICHLOROBENZENE	ND	720	370
2,4,5-TRICHLOROPHENOL	ND	720	370
2,4,6-TRICHLOROPHENOL	ND	720	370
2,4-DICHLOROPHENOL	ND	720	370
2,4-DIMETHYLPHENOL	ND	720	370
2,4-DINITROPHENOL	ND	1400	370
2,4-DINITROTOLUENE	ND	720	370
2,6-DINITROTOLUENE	ND	720	370
2-CHLORONAPHTHALENE	ND	720	370
2-CHLOROPHENOL	ND	720	370
2-METHYLNAPHTHALENE	ND	720	370
2-METHYLPHENOL	ND	720	370
2-NITROANILINE	ND	1400	370
2-NITROPHENOL	ND	720	370
3,3'-DICHLOROBENZIDINE	ND	1400	370
3-NITROANILINE	ND	1400	370
4,6-DINITRO-2-METHYLPHENOL	ND	1400	370
4-BROMOPHENYL-PHENYL ETHER	ND	720	370
4-CHLORO-3-METHYLPHENOL	ND	720	370
4-CHLOROANILINE	ND	720	370
4-CHLOROPHENYL-PHENYL ETHER	ND	720	370
4-METHYLPHENOL (1)	ND	720	370
4-NITROANILINE	ND	720	370
4-NITROPHENOL	ND	1400	370
ACENAPHTHENE	ND	720	370
ACENAPHTHYLENE	ND	720	370
ANTHRACENE	ND	720	370
BENZO(A)ANTHRACENE	ND	720	370
BENZO(A)PYRENE	ND	720	370
BENZO(B)FLUORANTHENE	ND	720	370
BENZO(K)FLUORANTHENE	ND	720	370
BENZO(G,H,I)PERYLENE	ND	720	370
BIS(2-CHLOROETHOXY)METHANE	ND	720	370
BIS(2-CHLOROETHYL)ETHER	ND	720	370
BIS(2-CHLOROISOPROPYL)ETHER	ND	720	370
BIS(2-ETHYLHEXYL)PHTHALATE	ND	720	370
BUTYLBENZYLPHTHALATE	ND	720	370
CHRYSENE	ND	720	370
DI-N-BUTYLPHTHALATE	ND	720	370
DI-N-OCTYLPHTHALATE	ND	720	370
DIBENZO(A,H)ANTHRACENE	ND	720	370
DIBENZOFURAN	ND	720	370
DIETHYLPHTHALATE	ND	720	370
DIMETHYLPHTHALATE	ND	720	370
FLUORANTHENE	ND	720	370
FLUORENE	ND	720	370
HEXACHLOROBENZENE	ND	720	370
HEXACHLOROBUTADIENE	ND	720	370
HEXACHLOROCYCLOPENTADIENE	ND	720	370
HEXACHLOROETHANE	ND	720	370
INDENO(1,2,3-CD)PYRENE	ND	720	370
ISOPHORONE	ND	720	370
N-NITROSO-DI-N-PROPYLAMINE	ND	720	370
N-NITROSODIPHENYLAMINE (2)	ND	720	370
NAPHTHALENE	ND	720	370
NITROBENZENE	ND	720	370
PENTACHLOROPHENOL	ND	1400	370
PHENANTHRENE	ND	720	370
PHENOL	ND	720	370
PYRENE	ND	720	370

SURROGATE PARAMETERS	% RECOVERY	QC LIMIT
2,4,6-TRIBROMOPHENOL	65	36-143
2-FLUOROBIPHENYL	51	36-143
2-FLUOROPHENOL	44	36-143
NITROBENZENE-D5	54	36-143
PHENOL-D5	54	36-143
TERPHENYL-D14	67	45-143

RL: Reporting Limit
(1): Cannot be separated from 3-Methylphenol
(2): Cannot be separated from Diphenylamine

SW 3550B/8270C
SEMI VOLATILE ORGANICS BY GC/MS

Client	: KLEINFELDER	Date Collected:	05/17/04
Project	: LAKESIDE CONSERVANCY FILL	Date Received:	05/19/04
Batch No.	: 04E159A	Date Extracted:	05/27/04 14:45
Sample ID:	KB-12@5'	Date Analyzed:	06/01/04 21:02
Lab Samp ID:	E159-11	Dilution Factor:	2
Lab File ID:	RFH012	Matrix :	SOIL
Ext Btch ID:	SVE031S	% Moisture :	9.4
Calib. Ref.:	RDH021	Instrument ID :	T-041

PARAMETERS	RESULTS (ug/kg)	RL (ug/kg)	MDL (ug/kg)
1,2,4-TRICHLOROBENZENE	ND	730	370
1,2-DICHLOROBENZENE	ND	730	370
1,3-DICHLOROBENZENE	ND	730	370
1,4-DICHLOROBENZENE	ND	730	370
2,4,5-TRICHLOROPHENOL	ND	730	370
2,4,6-TRICHLOROPHENOL	ND	730	370
2,4-DICHLOROPHENOL	ND	730	370
2,4-DIMETHYLPHENOL	ND	730	370
2,4-DINITROPHENOL	ND	1500	370
2,4-DINITROTOLUENE	ND	730	370
2,6-DINITROTOLUENE	ND	730	370
2-CHLORONAPHTHALENE	ND	730	370
2-CHLOROPHENOL	ND	730	370
2-METHYLNAPHTHALENE	ND	730	370
2-METHYLPHENOL	ND	730	370
2-NITROANILINE	ND	1500	370
2-NITROPHENOL	ND	730	370
3,3'-DICHLOROBENZIDINE	ND	1500	370
3-NITROANILINE	ND	1500	370
4,6-DINITRO-2-METHYLPHENOL	ND	1500	370
4-BROMOPHENYL-PHENYL ETHER	ND	730	370
4-CHLORO-3-METHYLPHENOL	ND	730	370
4-CHLOROANILINE	ND	730	370
4-CHLOROPHENYL-PHENYL ETHER	ND	730	370
4-METHYLPHENOL (1)	ND	730	370
4-NITROANILINE	ND	730	370
4-NITROPHENOL	ND	1500	370
ACENAPHTHENE	ND	730	370
ACENAPHTHYLENE	ND	730	370
ANTHRACENE	ND	730	370
BENZO(A)ANTHRACENE	ND	730	370
BENZO(A)PYRENE	ND	730	370
BENZO(B)FLUORANTHENE	ND	730	370
BENZO(K)FLUORANTHENE	ND	730	370
BENZO(G,H,I)PERYLENE	ND	730	370
BIS(2-CHLOROETHOXY)METHANE	ND	730	370
BIS(2-CHLOROETHYL)ETHER	ND	730	370
BIS(2-CHLOROISOPROPYL)ETHER	ND	730	370
BIS(2-ETHYLHEXYL)PHTHALATE	ND	730	370
BUTYLBENZYLPHTHALATE	ND	730	370
CHRYSENE	ND	730	370
DI-N-BUTYLPHTHALATE	ND	730	370
DI-N-OCTYLPHTHALATE	ND	730	370
DIBENZO(A,H)ANTHRACENE	ND	730	370
DIBENZOFURAN	ND	730	370
DIETHYLPHTHALATE	ND	730	370
DIMETHYLPHTHALATE	ND	730	370
FLUORANTHENE	ND	730	370
FLUORENE	ND	730	370
HEXACHLOROBENZENE	ND	730	370
HEXACHLOROBUTADIENE	ND	730	370
HEXACHLOROCYCLOPENTADIENE	ND	730	370
HEXACHLOROETHANE	ND	730	380
INDENO(1,2,3-CD)PYRENE	ND	730	370
ISOPHORONE	ND	730	370
N-NITROSO-DI-N-PROPYLAMINE	ND	730	370
N-NITROSODIPHENYLAMINE (2)	ND	730	370
NAPHTHALENE	ND	730	370
NITROBENZENE	ND	730	370
PENTACHLOROPHENOL	ND	1500	370
PHENANTHRENE	ND	730	370
PHENOL	ND	730	370
PYRENE	ND	730	370

SURROGATE PARAMETERS	% RECOVERY	QC LIMIT
2,4,6-TRIBROMOPHENOL	86	36-143
2-FLUOROBIPHENYL	73	36-143
2-FLUOROPHENOL	67	36-143
NITROBENZENE-D5	79	36-143
PHENOL-D5	79	36-143
TERPHENYL-D14	98	45-143

RL: Reporting Limit
(1): Cannot be separated from 3-Methylphenol
(2): Cannot be separated from Diphenylamine

SW 3550B/8270C
SEMI VOLATILE ORGANICS BY GC/MS

Client	: KLEINFELDER	Date Collected:	05/17/04
Project	: LAKESIDE CONSERVANCY FILL	Date Received:	05/19/04
Job No.	: 04E159A	Date Extracted:	05/27/04 14:45
Sample ID	: KB-17@5'	Date Analyzed:	06/01/04 21:37
Lab Samp ID	: E159-15	Dilution Factor:	2
Lab File ID	: RFH013	Matrix	: SOIL
Ext Btch ID	: SVE031S	% Moisture	: 3.3
Calib. Ref.	: RDH021	Instrument ID	: T-041

PARAMETERS	RESULTS (ug/kg)	RL (ug/kg)	MDL (ug/kg)
1,2,4-TRICHLOROBENZENE	ND	680	350
1,2-DICHLOROBENZENE	ND	680	350
1,3-DICHLOROBENZENE	ND	680	350
1,4-DICHLOROBENZENE	ND	680	350
2,4,5-TRICHLOROPHENOL	ND	680	350
2,4,6-TRICHLOROPHENOL	ND	680	350
2,4-DICHLOROPHENOL	ND	680	350
2,4-DIMETHYLPHENOL	ND	680	350
2,4-DINITROPHENOL	ND	1400	350
2,4-DINITROTOLUENE	ND	680	350
2,6-DINITROTOLUENE	ND	680	350
2-CHLORONAPHTHALENE	ND	680	350
2-CHLOROPHENOL	ND	680	350
2-METHYLNAPHTHALENE	ND	680	350
2-METHYLPHENOL	ND	680	350
2-NITROANILINE	ND	1400	350
2-NITROPHENOL	ND	680	350
3,3'-DICHLOROBENZIDINE	ND	1400	350
3-NITROANILINE	ND	1400	350
4,6-DINITRO-2-METHYLPHENOL	ND	1400	350
4-BROMOPHENYL-PHENYL ETHER	ND	680	350
4-CHLORO-3-METHYLPHENOL	ND	680	350
4-CHLOROANILINE	ND	680	350
4-CHLOROPHENYL-PHENYL ETHER	ND	680	350
4-METHYLPHENOL (1)	ND	680	350
4-NITROANILINE	ND	680	350
4-NITROPHENOL	ND	1400	350
ACENAPHTHENE	ND	680	350
ACENAPHTHYLENE	ND	680	350
ANTHRACENE	ND	680	350
BENZO(A)ANTHRACENE	ND	680	350
BENZO(A)PYRENE	ND	680	350
BENZO(B)FLUORANTHENE	ND	680	350
BENZO(K)FLUORANTHENE	ND	680	350
BENZO(G,H,I)PERYLENE	ND	680	350
BIS(2-CHLOROETHOXY)METHANE	ND	680	350
BIS(2-CHLOROETHYL)ETHER	ND	680	350
BIS(2-CHLOROISOPROPYL)ETHER	ND	680	350
BIS(2-ETHYLHEXYL)PHTHALATE	ND	680	350
BUTYLBENZYLPHTHALATE	ND	680	350
CHRYSENE	ND	680	350
DI-N-BUTYLPHTHALATE	ND	680	350
DI-N-OCTYLPHTHALATE	ND	680	350
DIBENZO(A,H)ANTHRACENE	ND	680	350
DIBENZOFURAN	ND	680	350
DIETHYLPHTHALATE	ND	680	350
DIMETHYLPHTHALATE	ND	680	350
FLUORANTHENE	ND	680	350
FLUORENE	ND	680	350
HEXACHLOROBENZENE	ND	680	350
HEXACHLOROBUTADIENE	ND	680	350
HEXACHLOROCYCLOPENTADIENE	ND	680	350
HEXACHLOROETHANE	ND	680	350
INDENO(1,2,3-CD)PYRENE	ND	680	350
ISOPHORONE	ND	680	350
N-NITROSO-DI-N-PROPYLAMINE	ND	680	350
N-NITROSODIPHENYLAMINE (2)	ND	680	350
NAPHTHALENE	ND	680	350
NITROBENZENE	ND	680	350
PENTACHLOROPHENOL	ND	1400	350
PHENANTHRENE	ND	680	350
PHENOL	ND	680	350
PYRENE	ND	680	350

SURROGATE PARAMETERS	% RECOVERY	QC LIMIT
2,4,6-TRIBROMOPHENOL	77	36-143
2-FLUOROBIPHENYL	83	36-143
2-FLUOROPHENOL	69	36-143
NITROBENZENE-D5	85	36-143
PHENOL-D5	82	36-143
TERPHENYL-D14	100	45-143

RL: Reporting Limit
(1): Cannot be separated from 3-Methylphenol
(2): Cannot be separated from Diphenylamine

SW 3550B/8270C
SEMI VOLATILE ORGANICS BY GC/MS

lient	: KLEINFELDER	Date Collected:	NA
ro	: LAKESIDE CONSERVANCY FILL	Date Received:	05/27/04
sa	: 04E159A	Date Extracted:	05/27/04 14:45
Sam ID	: MBLK1S	Date Analyzed:	05/28/04 16:24
ab Samp ID	: SVE031SB	Dilution Factor:	1
ab File ID	: REH147	Matrix	: SOIL
xt Btch ID	: SVE031S	% Moisture	: NA
alib. Ref.	: RDH021	Instrument ID	: T-041

ARAMETERS	RESULTS (ug/kg)	RL (ug/kg)	MDL (ug/kg)
,2,4-TRICHLOROBENZENE	ND	330	170
,2-DICHLOROBENZENE	ND	330	170
,3-DICHLOROBENZENE	ND	330	170
,4-DICHLOROBENZENE	ND	330	170
,4,5-TRICHLOROPHENOL	ND	330	170
,4,6-TRICHLOROPHENOL	ND	330	170
,4-DICHLOROPHENOL	ND	330	170
,4-DIMETHYLPHENOL	ND	330	170
,4-DINITROPHENOL	ND	660	170
,4-DINITROTOLUENE	ND	330	170
,6-DINITROTOLUENE	ND	330	170
-CHLORONAPHTHALENE	ND	330	170
-CHLOROPHENOL	ND	330	170
-METHYLNAPHTHALENE	ND	330	170
-METHYLPHENOL	ND	330	170
-NITROANILINE	ND	660	170
-NITROPHENOL	ND	330	170
,3'-DICHLOROBENZIDINE	ND	660	170
-NITROANILINE	ND	660	170
,6-DINITRO-2-METHYLPHENOL	ND	660	170
-BROMOPHENYL-PHENYL ETHER	ND	330	170
-CHLORO-3-METHYLPHENOL	ND	330	170
-CHLOROANILINE	ND	330	170
-CHLOROPHENYL-PHENYL ETHER	ND	330	170
-METHYLPHENOL (1)	ND	330	170
-NITROANILINE	ND	330	170
-NITROPHENOL	ND	660	170
ACENAPHTHENE	ND	330	170
ACENAPHTHYLENE	ND	330	170
NTHRACENE	ND	330	170
ENZO(A)ANTHRACENE	ND	330	170
ENZO(A)PYRENE	ND	330	170
ENZO(B)FLUORANTHENE	ND	330	170
BENZO(K)FLUORANTHENE	ND	330	170
BEN H,I)PERYLENE	ND	330	170
IS LOROETHOXY)METHANE	ND	330	170
IS HLOROETHYL)ETHER	ND	330	170
IS(2-CHLOROISOPROPYL)ETHER	ND	330	170
IS(2-ETHYLHEXYL)PHTHALATE	ND	330	170
BUTYLBENZYLPHTHALATE	ND	330	170
CHRYSENE	ND	330	170
I-N-BUTYLPHTHALATE	ND	330	170
I-N-OCTYLPHTHALATE	ND	330	170
IBENZO(A,H)ANTHRACENE	ND	330	170
IBENZOFURAN	ND	330	170
DIETHYLPHTHALATE	ND	330	170
DIMETHYLPHTHALATE	ND	330	170
FLUORANTHENE	ND	330	170
LUORENE	ND	330	170
EXACHLOROBENZENE	ND	330	170
EXACHLOROBUTADIENE	ND	330	170
HEXACHLOROCYCLOPENTADIENE	ND	330	170
HEXACHLOROETHANE	ND	330	170
NDENO(1,2,3-CD)PYRENE	ND	330	170
SOPHORONE	ND	330	170
-NITROSO-DI-N-PROPYLAMINE	ND	330	170
-NITROSODIPHENYLAMINE (2)	ND	330	170
NAPHTHALENE	ND	330	170
NITROBENZENE	ND	660	170
PENTACHLOROPHENOL	ND	330	170
HENANTHRENE	ND	330	170
HENOL	ND	330	170
YRENE	ND		

SURROGATE PARAMETERS	% RECOVERY	QC LIMIT
,4,6-TRIBROMOPHENOL	72	36-143
-FLUOROBIPHENYL	60	36-143
-FLUOROPHENOL	62	36-143
NITROBENZENE-D5	72	36-143
PHENOL-D5	69	36-143
TERPHENYL-D14	73	45-143

L: Reporting Limit
1): Cannot be separated from 3-Methylphenol
(2): Cannot be separated from Diphenylamine

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: KLEINFELDER
PROJECT: LAKESIDE CONSERVANCY FILL
BATCH NO.: 04E159A
METHOD: SW 3550B/8270C

MATRIX:	SOIL			% MOISTURE:	NA
DILUTION FACTOR:	1	1	1		
SAMPLE ID:	MBLK1S				
LAB SAMP ID:	SVE031SB	SVE031SL	SVE031SC		
LAB FILE ID:	REH147	REH148	REH149		
DATE EXTRACTED:	05/27/0414:45	05/27/0414:45	05/27/0414:45	DATE COLLECTED:	NA
DATE ANALYZED:	05/28/0416:24	05/28/0416:58	05/28/0417:33	DATE RECEIVED:	05/27/04
REP. BATCH:	SVE031S	SVE031S	SVE031S		
CALIB. REF:	RDH021	RDH021	RDH021		

ACCESSION:

PARAMETER	BLNK RSLT (ug/kg)	SPIKE AMT (ug/kg)	BS RSLT (ug/kg)	BS % REC	SPIKE AMT (ug/kg)	BSD RSLT (ug/kg)	BSD % REC	RPD (%)	QC LIMIT (%)	MAX RPD (%)
,2,4-Trichlorobenzene	ND	2670	2000	75	2670	1780	67	11	40-130	50
1,4-Dichlorobenzene	ND	2670	1930	72	2670	1780	67	9	30-130	50
2,4-Dinitrotoluene	ND	2670	2670	100	2670	2270	85	16	40-130	50
2-Chlorophenol	ND	2670	2100	79	2670	1920	72	9	40-130	50
-Chloro-3-Methylphenol	ND	2670	2420	91	2670	2150	81	12	40-130	50
-Nitrophenol	ND	2670	1820	68	2670	1520	57	18	25-130	50
cenaphthene	ND	2670	2120	79	2670	1930	72	9	40-130	50
n-Nitroso-di-n-propylamine	ND	2670	2870	108	2670	2630	99	9	40-130	50
Pentachlorophenol	ND	2670	2050	77	2670	1780	67	14	30-130	50
Phenol	ND	2670	2070	78	2670	1900	71	8	40-130	50
yrene	ND	2670	2220	83	2670	1960	74	13	40-130	50

SURROGATE PARAMETER	SPIKE AMT (ug/kg)	BS RSLT (ug/kg)	BS % REC	SPIKE AMT (ug/kg)	BSD RSLT (ug/kg)	BSD % REC	QC LIMIT (%)
,4,6-Tribromophenol	5000	4260	85	5000	4190	84	40-130
-Fluorobiphenyl	3330	2270	68	3330	2380	72	40-130
2-Fluorophenol	5000	3450	69	5000	3750	75	40-130
Nitrobenzene-d5	3330	2720	82	3330	2910	88	40-130
Phenol-d5	5000	3770	75	5000	3970	79	40-130
erphenyl-d14	3330	2620	79	3330	2600	78	50-130

LABORATORY REPORT FOR

KLEINFELDER

LAKESIDE CONSERVANCY FILL

METHOD 5030B/M8015
TOTAL PETROLEUM HYDROCARBONS
BY PURGE AND TRAP

SDG#: 04E159A

4000

CASE NARRATIVE

CLIENT: KLEINFELDER

PROJECT: LAKESIDE CONSERVANCY FILL

SDG: 04E159A

METHOD 5030B/M8015
TOTAL PETROLEUM HYDROCARBONS BY PURGE AND TRAP

Three (3) soil samples were received on 05/19/04 for Total Petroleum Hydrocarbons by Purge and Trap analysis by Method 5030B/M8015 in accordance with SW846, 3rd edition.

1. **Holding Time**

   Analytical holding time was met.

2. **Calibration**

   Initial calibration was seven points. %RSD was within 20%. Continuing calibrations were carried out every 12 hours and at the end of the analysis sequence. All recoveries were within 85-115%.

3. **Method Blank**

   Method blank was free of contamination at the reporting limit.

4. **Surrogate Recovery**

   All recoveries were within QC limits.

5. **Lab Control Sample/Lab Control Sample Duplicate**

   All recoveries were within QC limits.

6. **Matrix Spike/Matrix Spike Duplicate**

   No sample was spiked.

7. **Sample Analysis**

   Sample was analyzed according to the prescribed QC procedures. All criteria were met. Results were quantified as Gasoline, in full range. Sample E159-15 displayed heavier hydrocarbons.

LAB CHRONICLE
TOTAL PETROLEUM HYDROCARBONS BY PURGE AND TRA

Client : KLEINFELDER
Project : LAKESIDE CONSERVANCY FILL
SDG NO. : 04E159A
Instrument ID : GCT039

SOIL

Client Sample ID	Laboratory Sample ID	Dilution Factor	% Moist	Analysis DateTime	Extraction DateTime	Sample Data FN	Calibration Data FN	Prep. Batch	Notes
MBLK1S	VM39E338	1	NA	05/26/0416:48	05/26/0416:48	EE26003A	EE26002A	VM39E33	Method Blank
LCS1S	VM39E33L	1	NA	05/26/0417:23	05/26/0417:23	EE26004A	EE26002A	VM39E33	Lab Control Sample (LCS)
LCD1S	VM39E33C	1	NA	05/26/0417:57	05/26/0417:57	EE26005A	EE26002A	VM39E33	LCS Duplicate
KB-8@10'	E159-07	1	8.5	05/27/0411:29	05/27/0411:29	EE26019A	EE26018A	VM39E33	Field Sample
KB-12@5'	E159-11	1	9.4	05/27/0412:04	05/27/0412:04	EE26020A	EE26018A	VM39E33	Field Sample
KB-17@5'	E159-15	1	3.3	05/27/0412:38	05/27/0412:38	EE26021A	EE26018A	VM39E33	Field Sample

FN - Filename
% Moist - Percent Moisture

4002

SAMPLE RESULTS

METHOD 5[illegible]8015
TOTAL PETROLEUM HYDROCARBONS BY PURGE AND TRAP

Client : KLEINFELDER
Project : LAKESIDE CONSERVANCY FILL
Batch No. : 04E159A

Matrix : SOIL
Instrument ID : GCT039

SAMPLE ID	EMAX SAMPLE ID	RESULTS (mg/kg)	SURR (%)	DLF	MOIST	RL (mg/kg)	MDL (mg/kg)	Analysis DATETIME	Extraction DATETIME	LFID	CAL REF	PREP BATCH	Collection DATETIME	Received DATETIME
MBLK1S	VM39E33B	ND	82	1	NA	1	.5	05/26/0416:48	05/26/0416:48	EE26003A	EE26002A	VM39E33	NA	05/26/04
LCS1S	VM39E33L	25.4	93	1	NA	1	.5	05/26/0417:23	05/26/0417:23	EE26004A	EE26002A	VM39E33	NA	05/26/04
LCD1S	VM39E33C	25.2	110	1	NA	1	.5	05/26/0417:57	05/26/0417:57	EE26005A	EE26002A	VM39E33	NA	05/26/04
KB-8@10'	E159-07	ND	78	1	8.5	1.1	.55	05/27/0411:29	05/27/0411:29	EE26019A	EE26018A	VM39E33	05/17/04	05/19/04
KB-12@5'	E159-11	ND	79	1	9.4	1.1	.55	05/27/0412:04	05/27/0412:04	EE26020A	EE26018A	VM39E33	05/17/04	05/19/04
KB-17@5'	E159-15	14	76	1	3.3	1	.52	05/27/0412:38	05/27/0412:38	EE26021A	EE26018A	VM39E33	05/17/04	05/19/04

RL : Reporting Limit

4004

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: KLEINFELDER
PROJECT: LAKESIDE CONSERVANCY FILL
BATCH NO.: 04E159A
METHOD: METHOD 5030B/M8015

MATRIX: SOIL % MOISTURE: NA
DILUTION FACTOR: 1 1 1
SAMPLE ID: MBLK1S
LAB SAMP ID: VM39E33B VM39E33L VM39E33C
LAB FILE ID: EE26003A EE26004A EE26005A
DATE EXTRACTED: 05/26/0416:48 05/26/0417:23 05/26/0417:57 DATE COLLECTED: NA
DATE ANALYZED: 05/26/0416:48 05/26/0417:23 05/26/0417:57 DATE RECEIVED: 05/26/04
REP. BATCH: VM39E33 VM39E33 VM39E33
CALIB. REF: EE26002A EE26002A EE26002A

ACCESSION:

PARAMETER	BLNK RSLT (mg/kg)	SPIKE AMT (mg/kg)	BS RSLT (mg/kg)	BS % REC	SPIKE AMT (mg/kg)	BSD RSLT (mg/kg)	BSD % REC	RPD (%)	QC LIMIT (%)	MAX RPD (%)
asoline	ND	25	25.4	102	25	25.2	101	1	70-140	50

SURROGATE PARAMETER	SPIKE AMT (mg/kg)	BS RSLT (mg/kg)	BS % REC	SPIKE AMT (mg/kg)	BSD RSLT (mg/kg)	BSD % REC	QC LIMIT (%)
romofluorobenzene	2	1.86	93	2	2.2	110	70-150

LABORATORY REPORT FOR

KLEINFELDER

LAKESIDE CONSERVANCY FILL

METHOD 3550B/M8015
TOTAL PETROLEUM HYDROCARBONS BY EXTRACTION

SDG#: 04E159A

5000

CASE NARRATIVE

CLIENT: KLEINFELDER

PROJECT: LAKESIDE CONSERVANCY FILL

SDG: 04E159A

METHOD 3550B/M8015
TOTAL PETROLEUM HYDROCARBONS BY EXTRACTION

Three (3) soil samples were received on 05/19/04 for Total Petroleum Hydrocarbons by Extraction analysis by Method 3550B/M8015 in accordance with SW846 3RD Edition.

1. **Holding Time**

   Analytical holding time was met. Extraction was performed and completed on 05/27/04.

2. **Calibration**

   Initial calibration was seven points for Diesel. %RSDs were within 20%. Continuing calibrations were carried out at 12-hour intervals and all recoveries were within 85-115%.

3. **Method Blank**

   Method blank was free of contamination at the reporting limit.

4. **Surrogate Recovery**

   Recoveries in samples E159-11 and -15 could not be evaluated due to dilution. All other recoveries were within QC limits.

5. **Lab Control Sample/Lab Control Sample Duplicate**

   All recoveries were within QC limits.

6. **Matrix Spike/Matrix Spike Duplicate**

   No sample was spiked.

7. **Sample Analysis**

   Samples were analyzed according to the prescribed QC procedures. All criteria were met. Quantitation was done as a full pattern using Diesel(TOTAL) calibration factor. All samples displayed heavier hydrocarbon patterns. Samples could only be analyzed at a dilution due to dark coloration of the sample extract.

LAB CHRONICLE
TOTAL PETROLEUM HYDROCARBONS BY EXTRACTION

Client : KLEINFELDER
Project : LAKESIDE CONSERVANCY FILL
SDG NO. : 04E159A
Instrument ID : GCT043

SOIL

Client Sample ID	Laboratory Sample ID	Dilution Factor	% Moist	Analysis DateTime	Extraction DateTime	Sample Data FN	Calibration Data FN	Prep. Batch	Notes
MBLK1S	DSE026SB	1	NA	05/27/0417:47	05/27/0411:15	DE27013A	DE27011A	DSE026S	Method Blank
LCS1S	DSE026SL	1	NA	05/27/0418:26	05/27/0411:15	DE27014A	DE27011A	DSE026S	Lab Control Sample (LCS)
LCD1S	DSE026SC	1	NA	05/27/0419:05	05/27/0411:15	DE27015A	DE27011A	DSE026S	LCS Duplicate
KB-8@10'	E159-07J	2	8.5	05/28/0411:48	05/27/0411:15	DE28004A	DE28003A	DSE026S	Diluted Sample
KB-12@5'	E159-11I	50	9.4	05/27/0422:18	05/27/0411:15	DE27020A	DE27011A	DSE026S	Diluted Sample
KB-17@5'	E159-15T	100	3.3	05/27/0421:00	05/27/0411:15	DE27018A	DE27011A	DSE026S	Diluted Sample

FN - Filename
% Moist - Percent Moisture

5002

SAMPLE RESULTS

METHOD 3550B/M8015
TOTAL PETROLEUM HYDROCARBONS BY EXTRACTION

Client	: KLEINFELDER	Date Collected:	05/17/04
Project	: LAKESIDE CONSERVANCY FILL	Date Received:	05/19/04
Batch No.	: 04E159A	Date Extracted:	05/27/04 11:15
Sample ID	: KB-8@10'	Date Analyzed:	05/28/04 11:48
Lab Samp ID	: E159-07J	Dilution Factor:	2
Lab File ID	: DE28004A	Matrix	: SOIL
Ext Btch ID	: DSE026S	% Moisture	: 8.5
Calib. Ref.	: DE28003A	Instrument ID	: GCT043

PARAMETERS	RESULTS (mg/kg)	RL (mg/kg)	MDL (mg/kg)
DIESEL	260	22	11

SURROGATE PARAMETERS	% RECOVERY	QC LIMIT
BROMOBENZENE	106	54-165
HEXACOSANE	107	54-176

RL : Reporting Limit
SURR1 : Bromobenzene
SURR2 : Hexacosane

METHOD 3550B/M8015
TOTAL PETROLEUM HYDROCARBONS BY EXTRACTION

[redacted]	: KLEINFELDER	Date Collected:	05/17/04
Pr[redacted]t	: LAKESIDE CONSERVANCY FILL	Date Received:	05/19/04
Batch No.	: 04E159A	Date Extracted:	05/27/04 11:15
Sample ID	: KB-12@5'	Date Analyzed:	05/27/04 22:18
Lab Samp ID	: E159-111	Dilution Factor:	50
Lab File ID	: DE27020A	Matrix :	SOIL
Ext Btch ID	: DSE026S	% Moisture :	9.4
Calib. Ref.	: DE27011A	Instrument ID :	GCT043

PARAMETERS	RESULTS (mg/kg)	RL (mg/kg)	MDL (mg/kg)
DIESEL	3100	550	280

SURROGATE PARAMETERS	% RECOVERY	QC LIMIT
BROMOBENZENE	DO	54-165
HEXACOSANE	DO	54-176

RL : Reporting Limit
SURR1 : Bromobenzene
SURR2 : Hexacosane
DO : Diluted out

METHOD 3550B/M8015
TOTAL PETROLEUM HYDROCARBONS BY EXTRACTION

Client	: KLEINFELDER	Date Collected:	05/17/04
Project	: LAKESIDE CONSERVANCY FILL	Date Received:	05/19/04
Batch No.	: 04E159A	Date Extracted:	05/27/04 11:15
Sample ID	: KB-17@5'	Date Analyzed:	05/27/04 21:00
Lab Samp ID	: E159-15T	Dilution Factor:	100
Lab File ID	: DE27018A	Matrix :	SOIL
Ext Btch ID	: DSE026S	% Moisture :	3.3
Calib. Ref.	: DE27011A	Instrument ID :	GCT043

PARAMETERS	RESULTS (mg/kg)	RL (mg/kg)	MDL (mg/kg)
DIESEL	5100	1000	520

SURROGATE PARAMETERS	% RECOVERY	QC LIMIT
BROMOBENZENE	DO	54-165
HEXACOSANE	DO	54-176

RL : Reporting Limit
SURR1 : Bromobenzene
SURR2 : Hexacosane
DO : Diluted out

5006

QC SUMMARIES

METHOD 3550B/M8015
TOTAL PETROLEUM HYDROCARBONS BY EXTRACTION

Client	: KLEINFELDER	Date Collected:	NA
Project	: LAKESIDE CONSERVANCY FILL	Date Received:	05/27/04
Batch No.	: 04E159A	Date Extracted:	05/27/04 11:15
Sample ID	: MBLK1S	Date Analyzed:	05/27/04 17:47
Lab Samp ID	: DSE026SB	Dilution Factor:	1
Lab File ID	: DE27013A	Matrix :	SOIL
Ext Btch ID	: DSE026S	% Moisture :	NA
Calib. Ref.	: DE27011A	Instrument ID :	GCT043

PARAMETERS	RESULTS (mg/kg)	RL (mg/kg)	MDL (mg/kg)
DIESEL	ND	10	5

SURROGATE PARAMETERS	% RECOVERY	QC LIMIT
BROMOBENZENE	101	54-165
HEXACOSANE	98	54-176

RL : Reporting Limit
SURR1 : Bromobenzene
SURR2 : Hexacosane

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: KLEINFELDER
PROJECT: LAKESIDE CONSERVANCY FILL
BATCH NO.: 04E159A
METHOD: METHOD 3550B/M8015

MATRIX:	SOIL			% MOISTURE:	NA
DILUTION FACTOR:	1	1	1		
SAMPLE ID:	MBLK1S				
LAB SAMP ID:	DSE026SB	DSE026SL	DSE026SC		
LAB FILE ID:	DE27013A	DE27014A	DE27015A		
DATE EXTRACTED:	05/27/0411:15	05/27/0411:15	05/27/0411:15	DATE COLLECTED:	NA
DATE ANALYZED:	05/27/0417:47	05/27/0418:26	05/27/0419:05	DATE RECEIVED:	05/27/04
PREP. BATCH:	DSE026S	DSE026S	DSE026S		
CALIB. REF:	DE27011A	DE27011A	DE27011A		

ACCESSION:

PARAMETER	BLNK RSLT (mg/kg)	SPIKE AMT (mg/kg)	BS RSLT (mg/kg)	BS % REC	SPIKE AMT (mg/kg)	BSD RSLT (mg/kg)	BSD % REC	RPD (%)	QC LIMIT (%)	MAX RPD (%)
Diesel	ND	500	501	100	500	483	97	4	60-150	50

SURROGATE PARAMETER	SPIKE AMT (mg/kg)	BS RSLT (mg/kg)	BS % REC	SPIKE AMT (mg/kg)	BSD RSLT (mg/kg)	BSD % REC	QC LIMIT (%)
Bromobenzene	100	110	110	100	117	117	60-150
Hexacosane	25	23.9	96	25	25.8	103	60-160

LABORATORY REPORT FOR

KLEINFELDER

LAKESIDE CONSERVANCY FILL

SW3550B/8081A
PESTICIDES

SDG#: 04E159A

5010

CASE NARRATIVE

CLIENT: KLEINFELDER

PROJECT: LAKESIDE CONSERVANCY FILL

SDG: 04E159A

SW3550B/8081A
PESTICIDES

Three (3) soil samples were received on 05/19/04 for Pesticides analysis by Method 3550B/8081A in accordance with "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", SW846, 3rd ed.

1. Holding Time

   Analytical holding time was met.

2. Instrument Performance and Calibration

   Initial calibration was at five-point for Pesticides, all RSDs were within 20%. All continue calibrations were analyzed at 12-hour interval and mean recoveries were within 85-115%. Endrin and DDT breakdown were within QC limits.

3. Method Blank

   Method blank was free of contamination at the reporting limit.

4. Surrogate Recovery

   Recoveries were within QC limit.

5. Lab Control Sample/Lab Control Sample Duplicate

   All recoveries were within QC limits.

6. Matrix Spike/Matrix Spike Duplicate

   No MS/MSD sample was designated in this SDG.

7. Sample Analysis

   Samples were analyzed according to the prescribed QC procedures. All criteria were met.

   Extracts were diluted prior to analysis due to high TPH content. Results were reported from column A and B was for confirmation.

LAB CHRONICLE
PESTICIDES

Client : KLEINFELDER
Project : LAKESIDE CONSERVANCY FILL

SDG NO. : 04E159A
Instrument ID : GCT008

SOIL

Client Sample ID	Laboratory Sample ID	Dilution Factor	% Moist	Analysis DateTime	Extraction DateTime	Sample Data FN	Calibration Data FN	Prep. Batch	Notes
MBLK1S	CPE025SB	1	NA	05/28/0405:10	05/27/0413:40	SE26085A	SE26076A	CPE025S	Method Blank
LCS1S	CPE025SL	1	NA	05/28/0405:36	05/27/0413:40	SE26086A	SE26076A	CPE025S	Lab Control Sample (LCS)
LCD1S	CPE025SC	1	NA	05/28/0406:01	05/27/0413:40	SE26087A	SE26076A	CPE025S	LCS Duplicate
KB-8@10'	E159-07	5	8.5	05/28/0409:48	05/27/0413:40	SE26096A	SE26076A	CPE025S	Field Sample
KB-12@5'	E159-11	5	9.4	05/28/0410:13	05/27/0413:40	SE26097A	SE26076A	CPE025S	Field Sample
KB-17@5'	E159-15	15	3.3	05/28/0410:39	05/27/0413:40	SE26098A	SE26076A	CPE025S	Field Sample

FN - Filename
% Moist - Percent Moisture

SAMPLE RESULTS

SW3550B/8081A
PESTICIDES

Client : KLEINFELDER	Date Collected: 05/17/04
Project : LAKESIDE CONSERVANCY FILL	Date Received: 05/19/04
Batch No. : 04E159A	Date Extracted: 05/27/04 13:40
Sample ID: KB-@10'	Date Analyzed: 05/28/04 09:48
Lab Samp ID: E159-07	Dilution Factor: 5
Lab File ID: SE26096A	Matrix : SOIL
Ext Btch ID: CPE025S	% Moisture : 8.5
Calib. Ref.: SE26076A	Instrument ID : GCT008

PARAMETERS	RESULTS (ug/kg)	RL (ug/kg)	MDL (ug/kg)
ALPHA-BHC	(ND) | ND	11	1.1 | 1.1
GAMMA-BHC (LINDANE)	(ND) | ND	11	1.1 | 1.1
BETA-BHC	(ND) | ND	11	1.1 | 1.1
HEPTACHLOR	(ND) | ND	11	5.5 | 5.5
DELTA-BHC	(ND) | ND	11	1.1 | 1.1
ALDRIN	(ND) | ND	11	2.7 | 2.7
HEPTACHLOR EPOXIDE	(ND) | 2.4J	11	1.1 | 1.1
GAMMA-CHLORDANE	(12) | 5.1J	11	1.1 | 1.1
ALPHA-CHLORDANE	(11) | 4.9J	11	1.1 | 1.1
ENDOSULFAN I	(ND) | ND	11	5.5 | 5.5
4,4'-DDE	(ND) | ND	22	5.5 | 5.5
DIELDRIN	(ND) | ND	22	2.7 | 2.7
ENDRIN	(ND) | ND	22	5.5 | 5.5
4,4'-DDD	(ND) | ND	22	5.5 | 5.5
ENDOSULFAN II	(ND) | ND	22	2.7 | 2.7
4,4'-DDT	(ND) | ND	22	5.5 | 5.5
ENDRIN ALDEHYDE	(ND) | ND	22	2.7 | 2.7
ENDOSULFAN SULFATE	(ND) | ND	22	2.7 | 2.7
ENDRIN KETONE	(ND) | ND	22	5.5 | 5.5
METHOXYCHLOR	(ND) | ND	110	22 | 22
TOXAPHENE	(ND) | ND	550	44 | 44

SURROGATE PARAMETERS	% RECOVERY	QC LIMIT
TETRACHLORO-M-XYLENE	(104) | 99	45-143
DECACHLOROBIPHENYL	(66) | 54	45-165

RL : Reporting limit
Left of | is related to first column ; Right of | related to second column
Final result indicated by ( )

SW3550B/8081A
PESTICIDES

Cl[redacted]	: KLEINFELDER	Date Collected:	05/17/04
Project	: LAKESIDE CONSERVANCY FILL	Date Received:	05/19/04
atch No.	: 04E159A	Date Extracted:	05/27/04 13:40
ample ID	: KB-12@5'	Date Analyzed:	05/28/04 10:13
Lab Samp ID	: E159-11	Dilution Factor:	5
ab File ID	: SE26097A	Matrix :	SOIL
xt Btch ID	: CPE025S	% Moisture :	9.4
alib. Ref.:	SE26076A	Instrument ID :	GCT008

ARAMETERS	RESULTS (ug/kg)	RL (ug/kg)	MDL (ug/kg)
LPHA-BHC	(13)|3.6J	11	1.1|1.1
AMMA-BHC (LINDANE)	(ND)|7J	11	1.1|1.1
ETA-BHC	5.4J|(ND)	11	1.1|1.1
HEPTACHLOR	(ND)|ND	11	5.5|5.5
ELTA-BHC	(ND)|ND	11	1.1|1.1
LDRIN	(ND)|ND	11	2.8|2.8
EPTACHLOR EPOXIDE	(ND)|ND	11	1.1|1.1
GAMMA-CHLORDANE	(14)|8.9J	11	1.1|1.1
LPHA-CHLORDANE	(21)|8.4J	11	1.1|1.1
NDOSULFAN I	(ND)|ND	11	5.5|5.5
,4'-DDE	(10J)|13J	22	5.5|5.5
DIELDRIN	(ND)|3.6J	22	2.8|2.8
NDRIN	(ND)|ND	22	5.5|5.5
,4'-DDD	5.8J|(ND)	22	5.5|5.5
NDOSULFAN II	(ND)|ND	22	2.8|2.8
4,4'-DDT	(6.4J)|11J	22	5.5|5.5
[redacted]LDEHYDE	11J|(ND)	22	2.8|2.8
[redacted]FAN SULFATE	(ND)|ND	22	2.8|2.8
NDRIN KETONE	16J|(ND)	22	5.5|5.5
METHOXYCHLOR	(ND)|28J	110	22|22
OXAPHENE	(ND)|ND	550	44|44

SURROGATE PARAMETERS	% RECOVERY	QC LIMIT
ETRACHLORO-M-XYLENE	(111)|97	45-143
ECACHLOROBIPHENYL	(59)|51	45-165

RL : Reporting limit
eft of | is related to first column ; Right of | related to second column
inal result indicated by ( )

SW3550B/8081A
PESTICIDES

Client : KLEINFELDER	Date Collected: 05/17/04
Project : LAKESIDE CONSERVANCY FILL	Date Received: 05/19/04
atch No. : 04E159A	Date Extracted: 05/27/04 13:40
ample ID: KB-17@5'	Date Analyzed: 05/28/04 10:39
Lab Samp ID: E159-15	Dilution Factor: 15
ab File ID: SE26098A	Matrix : SOIL
xt Btch ID: CPE025S	% Moisture : 3.3
alib. Ref.: SE26076A	Instrument ID : GCT008

ARAMETERS	RESULTS (ug/kg)	RL (ug/kg)	MDL (ug/kg)
LPHA-BHC	(ND) | ND	31	3.1 | 3.1
AMMA-BHC (LINDANE)	(ND) | ND	31	3.1 | 3.1
ETA-BHC	(ND) | ND	31	3.1 | 3.1
EPTACHLOR	(ND) | ND	31	16 | 16
ELTA-BHC	(ND) | ND	31	3.1 | 3.1
LDRIN	(ND) | ND	31	7.8 | 7.8
EPTACHLOR EPOXIDE	(ND) | ND	31	3.1 | 3.1
GAMMA-CHLORDANE	4.7J | (ND)	31	3.1 | 3.1
LPHA-CHLORDANE	(ND) | ND	31	3.1 | 3.1
NDOSULFAN I	(ND) | ND	31	16 | 16
,4'-DDE	(ND) | ND	62	16 | 16
IELDRIN	(ND) | ND	62	7.8 | 7.8
NDRIN	(ND) | ND	62	16 | 16
,4'-DDD	(ND) | ND	62	16 | 16
NDOSULFAN II	(ND) | ND	62	7.8 | 7.8
4,4'-DDT	(ND) | ND	62	16 | 16
NDRIN ALDEHYDE	(ND) | ND	62	7.8 | 7.8
NDOSULFAN SULFATE	(ND) | ND	62	7.8 | 7.8
NDRIN KETONE	(ND) | ND	62	16 | 16
METHOXYCHLOR	(ND) | ND	310	62 | 62
OXAPHENE	(ND) | ND	1600	120 | 120

SURROGATE PARAMETERS	% RECOVERY	QC LIMIT
ETRACHLORO-M-XYLENE	(97) | 102	45-143
ECACHLOROBIPHENYL	(93) | 46	45-165

RL : Reporting limit
eft of | is related to first column ; Right of | related to second column
inal result indicated by ( )

QC SUMMARIES

SW3550B/8081A
PESTICIDES

Client : KLEINFELDER	Date Collected: NA
Project : LAKESIDE CONSERVANCY FILL	Date Received: 05/27/04
atch No. : 04E159A	Date Extracted: 05/27/04 13:40
ample ID: MBLK1S	Date Analyzed: 05/28/04 05:10
Lab Samp ID: CPE025SB	Dilution Factor: 1
Lab File ID: SE26085A	Matrix : SOIL
xt Btch ID: CPE025S	% Moisture : NA
alib. Ref.: SE26076A	Instrument ID : GCT008

ARAMETERS	RESULTS (ug/kg)	RL (ug/kg)	MDL (ug/kg)
LPHA-BHC	(ND) | ND	2	.2 | .2
AMMA-BHC (LINDANE)	(ND) | ND	2	.2 | .2
ETA-BHC	(ND) | ND	2	.2 | .2
HEPTACHLOR	(ND) | ND	2	1 | 1
ELTA-BHC	(ND) | ND	2	.2 | .2
LDRIN	(ND) | ND	2	.5 | .5
EPTACHLOR EPOXIDE	(ND) | ND	2	.2 | .2
GAMMA-CHLORDANE	(ND) | ND	2	.2 | .2
LPHA-CHLORDANE	(ND) | ND	2	.2 | .2
NDOSULFAN I	(ND) | ND	2	1 | 1
,4'-DDE	(ND) | ND	4	1 | 1
DIELDRIN	(ND) | ND	4	.5 | .5
NDRIN	(ND) | ND	4	1 | 1
,4'-DDD	(ND) | ND	4	1 | 1
NDOSULFAN II	(ND) | ND	4	.5 | .5
4,4'-DDT	(ND) | ND	4	1 | 1
NDRIN ALDEHYDE	(ND) | ND	4	.5 | .5
NDOSULFAN SULFATE	(ND) | ND	4	.5 | .5
NDRIN KETONE	(ND) | ND	4	1 | 1
METHOXYCHLOR	(ND) | ND	20	4 | 4
OXAPHENE	(ND) | ND	100	8 | 8

SURROGATE PARAMETERS	% RECOVERY	QC LIMIT
ETRACHLORO-M-XYLENE	(97) | 90	45-143
ECACHLOROBIPHENYL	(63) | 56	45-165

RL : Reporting limit
eft of | is related to first column ; Right of | related to second column
inal result indicated by ( ).

EMAX QUALITY CONTROL D
LCS/LCD ANALYSIS

CLIENT: KLEINFELDER
PROJECT: LAKESIDE CONSERVANCY FILL
BATCH NO.: 04E159A
METHOD: SW3550B/8081A

MATRIX: SOIL % MOISTURE: NA
DILUTION FACTOR: 1 1 1
SAMPLE ID: MBLK1S
LAB SAMP ID: CPE025SB CPE025SL CPE025SC
LAB FILE ID: SE26085A SE26086A SE26087A
DATE EXTRACTED: 05/27/0413:40 05/27/0413:40 05/27/0413:40 DATE COLLECTED: NA
DATE ANALYZED: 05/28/0405:10 05/28/0405:36 05/28/0406:01 DATE RECEIVED: 05/27/04
PREP. BATCH: CPE025S CPE025S CPE025S
CALIB. REF: SE26076A SE26076A SE26076A

ACCESSION:

PARAMETER	BLNK RSLT (ug/kg)	SPIKE AMT (ug/kg)	BS RSLT (ug/kg)	BS % REC	SPIKE AMT (ug/kg)	BSD RSLT (ug/kg)	BSD % REC	RPD (%)	QC LIMIT (%)	MAX RPD (%)
gamma-BHC (Lindane)	(ND) | ND	6.67	(5.5) | 5.39	(82) | 81	6.67	(6.06) | 5.98	(91) | 90	(10) | 10	60-130	50
Heptachlor	(ND) | ND	6.67	(4.78) | 4.87	(72) | 73	6.67	(5.23) | 5.3	(78) | 79	(9) | 8	50-150	50
Aldrin	(ND) | ND	6.67	(5.41) | 5.65	(81) | 85	6.67	(5.79) | 5.82	(87) | 87	(7) | 3	60-140	50
Dieldrin	(ND) | ND	13.3	(12.2) | 11.8	(92) | 89	13.3	(13.7) | 13.3	(103) | 100	(12) | 12	70-130	50
Endrin	(ND) | ND	13.3	(12.7) | 12.2	(95) | 92	13.3	(14.2) | 13.6	(107) | 102	(11) | 11	60-140	50
4,4'-DDT	(ND) | ND	13.3	(11.8) | 11.3	(89) | 85	13.3	(13.5) | 12.9	(101) | 97	(13) | 13	40-160	50

SURROGATE PARAMETER	SPIKE AMT (ug/kg)	BS RSLT (ug/kg)	BS % REC	SPIKE AMT (ug/kg)	BSD RSLT (ug/kg)	BSD % REC	QC LIMIT (%)
Tetrachloro-m-xylene	13.3	(12.8) | 12	(96) | 90	13.3	(12.4) | 11.6	(93) | 87	50-130
Decachlorobiphenyl	13.3	(8.33) | 7.16	(62) | 54	13.3	(8.51) | 6.97	(64) | 52	50-150

5019

LABORATORY REPORT FOR

KLEINFELDER

LAKESIDE CONSERVANCY FILL

SW3550B/8082
PCBs

SDG#: 04E159A

5020

CASE NARRATIVE

CLIENT: **KLEINFELDER**

PROJECT: **LAKESIDE CONSERVANCY FILL**

SDG: **04E159A**

SW3550B/8082
PCBs

Three (3) soil samples were received on 05/19/04 for PCBs analysis by Method 3550B/8082 in accordance with "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", SW846, 3rd ed.

1. Holding Time

   Analytical holding time was met.

2. Instrument Performance and Calibration

   Initial calibration was five-point for PCB-1016 and PCB-1260, all RSDs were within 20%. All continue calibrations were analyzed at 12 hour interval and all recoveries were within 85-115%.

3. Method Blank

   Method blank was free of contamination at the reporting limit.

4. Surrogate Recovery

   Recoveries were within QC limit.

5. Lab Control Sample/Lab Control Sample Duplicate

   All recoveries were within QC limits.

6. Matrix Spike/Matrix Spike Duplicate

   No MS/MSD sample was designated in this SDG.

7. Sample Analysis

   Samples were analyzed according to the prescribed QC procedures. All criteria were met.

   Extracts were clean up by acid and further diluted 5x prior to analysis due to high TPH content.

LAB CHRONICLE
PCBs

Client : KLEINFELDER
Project : LAKESIDE CONSERVANCY FILL

SDG NO. : 04E159A
Instrument ID : GCT008

SOIL

Client Sample ID	Laboratory Sample ID	Dilution Factor	% Moist	Analysis DateTime	Extraction DateTime	Sample Data FN	Calibration Data FN	Prep. Batch	Notes
MBLK1S	CPE025SB	1	NA	05/28/0405:10	05/27/0413:40	SE26085A	SE26079A	CPE025S	Method Blank
LCS1S	60E025SL	1	NA	05/28/0406:26	05/27/0413:40	SE26088A	SE26079A	CPE025S	Lab Control Sample (LCS)
LCD1S	60E025SC	1	NA	05/28/0406:51	05/27/0413:40	SE26089A	SE26079A	CPE025S	LCS Duplicate
KB-8@10'	E159-07	5	8.5	05/28/0407:17	05/27/0413:40	SE26090A	SE26079A	CPE025S	Field Sample
KB-12@5'	E159-11	5	9.4	05/28/0407:42	05/27/0413:40	SE26091A	SE26079A	CPE025S	Field Sample
KB-17@5'	E159-15	5	3.3	05/28/0408:07	05/27/0413:40	SE26092A	SE26079A	CPE025S	Field Sample

FN - Filename
% Moist - Percent Moisture

5022

SAMPLE RESULTS

SW3550B/8082
PCBs

Client	: KLEINFELDER	Date Collected:	05/17/04
Project	: LAKESIDE CONSERVANCY FILL	Date Received:	05/19/04
Batch No.	: 04E159A	Date Extracted:	05/27/04 13:40
Sample ID:	KB-8@10'	Date Analyzed:	05/28/04 07:17
Lab Samp ID:	E159-07	Dilution Factor:	5
Lab File ID:	SE26090A	Matrix :	SOIL
Ext Btch ID:	CPE025S	% Moisture :	8.5
Calib. Ref.:	SE26079A	Instrument ID :	GCT008

PARAMETERS	RESULTS (ug/kg)	RL (ug/kg)	MDL (ug/kg)
PCB-1016	(ND) | ND	270	91 | 91
PCB-1221	(ND) | ND	270	91 | 91
PCB-1232	(ND) | ND	270	91 | 91
PCB-1242	(ND) | ND	270	91 | 91
PCB-1248	(ND) | ND	270	91 | 91
PCB-1254	(ND) | ND	270	91 | 91
PCB-1260	(ND) | ND	270	91 | 91

SURROGATE PARAMETERS	% RECOVERY	QC LIMIT
TETRACHLORO-M-XYLENE	(95) | 140	45-154
DECACHLOROBIPHENYL	(70) | 62	45-154

RL: Reporting Limit
Left of | is related to first column ; Right of | related to second column
Final result indicated by ( )
* Out side of QC Limit

SW3550B/8082
PCBs

C[redacted]	: KLEINFELDER	Date Collected:	05/17/04
Project	: LAKESIDE CONSERVANCY FILL	Date Received:	05/19/04
Batch No.	: 04E159A	Date Extracted:	05/27/04 13:40
Sample ID	: KB-12@5'	Date Analyzed:	05/28/04 07:42
Lab Samp ID	: E159-11	Dilution Factor:	5
Lab File ID	: SE26091A	Matrix :	SOIL
Ext Btch ID	: CPE025S	% Moisture :	9.4
Calib. Ref.	: SE26079A	Instrument ID :	GCT008

PARAMETERS	RESULTS (ug/kg)	RL (ug/kg)	MDL (ug/kg)
PCB-1016	(ND)|ND	280	92|92
PCB-1221	(ND)|ND	280	92|92
PCB-1232	(ND)|ND	280	92|92
PCB-1242	(ND)|ND	280	92|92
PCB-1248	(ND)|ND	280	92|92
PCB-1254	(ND)|ND	280	92|92
PCB-1260	(ND)|ND	280	92|92

SURROGATE PARAMETERS	% RECOVERY	QC LIMIT
TETRACHLORO-M-XYLENE	(94)|91	45-154
DECACHLOROBIPHENYL	(65)|59	45-154

RL: Reporting Limit
Left of | is related to first column ; Right of | related to second column
Final result indicated by ( )
[redacted] side of QC Limit

SW3550B/8082
PCBs

Client	: KLEINFELDER	Date Collected:	05/17/04
Project	: LAKESIDE CONSERVANCY FILL	Date Received:	05/19/04
Batch No.	: 04E159A	Date Extracted:	05/27/04 13:40
Sample ID	: KB-17@5'	Date Analyzed:	05/28/04 08:07
Lab Samp ID	: E159-15	Dilution Factor:	5
Lab File ID	: SE26092A	Matrix :	SOIL
Ext Btch ID	: CPE025S	% Moisture :	3.3
Calib. Ref.	: SE26079A	Instrument ID :	GCT008

PARAMETERS	RESULTS (ug/kg)	RL (ug/kg)	MDL (ug/kg)
PCB-1016	(ND) | ND	260	86 | 86
PCB-1221	(ND) | ND	260	86 | 86
PCB-1232	(ND) | ND	260	86 | 86
PCB-1242	(ND) | ND	260	86 | 86
PCB-1248	(ND) | ND	260	86 | 86
PCB-1254	(ND) | ND	260	86 | 86
PCB-1260	(ND) | ND	260	86 | 86

SURROGATE PARAMETERS	% RECOVERY	QC LIMIT
TETRACHLORO-M-XYLENE	(99) | 97	45-154
DECACHLOROBIPHENYL	(67) | 61	45-154

RL: Reporting Limit
Left of | is related to first column ; Right of | related to second column
Final result indicated by ( )
* Out side of QC Limit

QC SUMMARIES

SW3550B/8082
PCBs

Client	: KLEINFELDER	Date Collected:	NA
Project	: LAKESIDE CONSERVANCY FILL	Date Received:	05/27/04
Batch No.	: 04E159A	Date Extracted:	05/27/04 13:40
Sample ID:	MBLK1S	Date Analyzed:	05/28/04 05:10
Lab Samp ID:	CPE025SB	Dilution Factor:	1
Lab File ID:	SE26085A	Matrix :	SOIL
Ext Btch ID:	CPE025S	% Moisture :	NA
Calib. Ref.:	SE26079A	Instrument ID :	GCT008

PARAMETERS	RESULTS (ug/kg)	RL (ug/kg)	MDL (ug/kg)
PCB-1016	(ND) | ND	50	17 | 17
PCB-1221	(ND) | ND	50	17 | 17
PCB-1232	(ND) | ND	50	17 | 17
PCB-1242	(ND) | ND	50	17 | 17
PCB-1248	(ND) | ND	50	17 | 17
PCB-1254	(ND) | ND	50	17 | 17
PCB-1260	(ND) | ND	50	17 | 17

SURROGATE PARAMETERS	% RECOVERY	QC LIMIT
TETRACHLORO-M-XYLENE	(89) | 84	45-154
DECACHLORDBIPHENYL	(68) | 68	45-154

RL: Reporting Limit
Left of | is related to first column ; Right of | related to second column
Final result indicated by ( )
* Out side of QC Limit

EMAX QUALITY CONTROL D
LCS/LCD ANALYSIS

CLIENT: KLEINFELDER
PROJECT: LAKESIDE CONSERVANCY FILL
BATCH NO.: 04E159A
METHOD: SW3550B/8082

MATRIX: SOIL % MOISTURE: NA

DILUTION FACTOR:	1	1	1		
SAMPLE ID:	MBLK1S				
LAB SAMP ID:	CPE025SB	60E025SL	60E025SC		
LAB FILE ID:	SE26085A	SE26088A	SE26089A		
DATE EXTRACTED:	05/27/0413:40	05/27/0413:40	05/27/0413:40	DATE COLLECTED:	NA
DATE ANALYZED:	05/28/0405:10	05/28/0406:26	05/28/0406:51	DATE RECEIVED:	05/27/04
PREP. BATCH:	CPE025S	CPE025S	CPE025S		
CALIB. REF:	SE26079A	SE26079A	SE26079A		

ACCESSION:

PARAMETER	BLNK RSLT (ug/kg)	SPIKE AMT (ug/kg)	BS RSLT (ug/kg)	BS % REC	SPIKE AMT (ug/kg)	BSD RSLT (ug/kg)	BSD % REC	RPD (%)	QC LIMIT (%)	MAX RPD (%)
PCB-1016	(ND) | ND	167	(165) | 150	(99) | 90	167	(170) | 154	(102) | 92	(3) | 3	50-130	50
PCB-1260	(ND) | ND	167	(199) | 186	(119) | 112	167	(201) | 188	(121) | 113	(1) | 1	60-150	50

SURROGATE PARAMETER	SPIKE AMT (ug/kg)	BS RSLT (ug/kg)	BS % REC	SPIKE AMT (ug/kg)	BSD RSLT (ug/kg)	BSD % REC	QC LIMIT (%)
Tetrachloro-m-xylene	13.3	(13) | 12	(97) | 90	13.3	(12.8) | 11.9	(96) | 90	50-140
Decachlorobiphenyl	13.3	(10) | 8.54	(75) | 64	13.3	(9.97) | 8.53	(75) | 64	50-140

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CLIENT: KLEINFELDER

PROJECT: LAKESIDE CONSERVANCY FILL

SDG: 04E159

SECTION		PAGE
Cover Letter, COC/Sample Receipt Form		1000 – 1006
GC/MS-VOA	**	2000 –
GC/MS-SVOA	**	3000 –
GC-VOA	**	4000 –
GC-SVOA	METHOD 418.1	5000 – 5004
HPLC	**	6000 –
METALS	METHOD 3050B/6010B METHOD 7471A	7000 – 7043 7044 – 7050
WET	**	8000 –
OTHERS	**	9000 –

** - Not Requested

EMAX
LABORATORIES, INC.
1835 W. 205th Street
Torrance, CA 90501
Tel: (310) 618-8889
Fax: (310) 618-0818

Date: 06-14-2004
EMAX Batch No.: 04E159

Attn: Jacques Lord

Kleinfelder
5015 Shoreham Place
San Diego CA 92122

Subject: Laboratory Report
Project: Lakeside Conservancy Fill

Enclosed is the Laboratory report for samples received on 05/19/04. The data reported include :

Sample ID	Control #	Col Date	Matrix	Analysis
KB-1@5'	E159-01	05/17/04	SOIL	METALS BY ICP
				MERCURY
				TPH RECOVERABLE
KB-2@5'	E159-02	05/17/04	SOIL	METALS BY ICP
				MERCURY
				TPH RECOVERABLE
KB-3@15'	E159-03	05/17/04	SOIL	METALS BY ICP
				MERCURY
				TPH RECOVERABLE
KB-4@10'	E159-04	05/17/04	SOIL	METALS BY ICP
				MERCURY
				TPH RECOVERABLE
KB-5@19'	E159-05	05/17/04	SOIL	METALS BY ICP
				MERCURY
				TPH RECOVERABLE
KB-7@10'	E159-06	05/17/04	SOIL	METALS BY ICP
				MERCURY
				TPH RECOVERABLE
KB-8@10'	E159-07	05/17/04	SOIL	METALS BY ICP

Sample ID	Control #	Col Date	Matrix	Analysis
				MERCURY
				TPH RECOVERABLE
KB-9@5'	E159-08	05/17/04	SOIL	METALS BY ICP
				MERCURY
				TPH RECOVERABLE
KB-10@5'	E159-09	05/17/04	SOIL	METALS BY ICP
				MERCURY
				TPH RECOVERABLE
KB-11@15'	E159-10	05/17/04	SOIL	METALS BY ICP
				MERCURY
				TPH RECOVERABLE
KB-12@5'	E159-11	05/17/04	SOIL	METALS BY ICP
				MERCURY
				TPH RECOVERABLE
KB-13@5'	E159-12	05/17/04	SOIL	METALS BY ICP
				MERCURY
				TPH RECOVERABLE
KB-14@10'	E159-13	05/17/04	SOIL	METALS BY ICP
				MERCURY
				TPH RECOVERABLE
KB-15@5'	E159-14	05/17/04	SOIL	METALS BY ICP
				MERCURY
				TPH RECOVERABLE
KB-17@5'	E159-15	05/17/04	SOIL	METALS BY ICP
				MERCURY
				TPH RECOVERABLE

The results are summarized on the following pages.

Please feel free to call if you have any questions concerning these results.

Sincerely yours,

Kam Y. Pang, Ph.D.
Laboratory Director

EMAX LABORATORIES, INC. 1835 W. 205th Street, Torrance, CA 90501 Tel: (310) 618-8889 Fax: (310) 618-0818

CHAIN OF CUSTODY

EMAX LABORATORIES, INC.
1835 W. 205th Street, Torrance, CA 90501
Tel #: (310) 618-8889 Fax #: (310) 618-0818
Email: info@emaxlabs.com

PO NUMBER: 44102 PW1
SAMPLE STORAGE: N/A B3
EMAX CONTROL NO. *: 04E159
PROJECT CODE: N/A

CLIENT: KLEINFELDER
PROJECT: LAKESIDE CONSERVANCY FILL (Project No. 44102)
COORDINATOR: JACQUES LORD
TEL: 858 320 2206 FAX: 858 320 2001 EMAIL: jlord@kleinfelder.com
SEND REPORT TO: JACQUES LORD
COMPANY: KLEINFELDER
ADDRESS: 5015 SHOREHAM PLACE
SAN DIEGO, CA 92122
EMAX PM:

MATRIX CODE: DW=Drinking Water; GW=Ground Water; WW=Waste Water; SD=Solid Waste SL=Sludge; SS=Soil/Sediment; WP=Wipes PP=Pure Products; AR=Air; Oil
PRESERVATIVE CODE: IC=Ice; HC=HCl; HN=HNO3; SH=NaOH; ST=Na2S2O3; ZA=Zinc Acetate; HS=H2SO4

ANALYSIS REQUIRED: Title 22 Metals (6020B/7470); TRPH (418.1)*; TPHd & TPHk (8015M)*; VOCs - Full Scan (8260B)*; SVOCs - Full Scan (8270C)*; Pesticides (8081A)*; PCBs (8082)*

TAT:
- ☐ Rush _____ hrs.
- ☐ Rush _____ days
- ☒ 7 days TRPH
- ☐ 14 days
- ☐ 21 days
- ☒ 30 days OTHERS
- ☐ _____ days
- ☐

LAB	SAMPLE ID CLIENT	SAMPLING LOCATION	SAMPLING DATE	SAMPLING TIME	CONTAINER NO.	CONTAINER SIZE	CONTAINER TYPE	MATRIX CODE	QC	PRESERVATIVE CODE	COMMENTS
1	KB-1@5'		5/17/04		2	2"x3"	BRASS SLEEVE	SS		IC, IC	* IF TRPH IS DETECTED ANALYZE SAMPLE FOR:
2	KB-2@5'										• TPHd & TPHk
3	KB-3@15'										• VOCs
4	KB-4@10'										• SVOCs
5	KB-5@10'										• PESTICIDES
6	~~KB-6~~ PW1										• PCBs
6	KB-7@10'										
7	KB-8@10'										
8	KB-9@5'										
9	KB-10@5'										

Instructions: SEND RESULTS TO JACQUES LORD

Cooler #	Temp. (°C)	Sample #s
1	3.5	

SAMPLER

RELINQUISHED BY	Date	Time	RECEIVED BY
	5/18/04	12:00	UPS
	5/19/04	1000	

COURIER/AIRBILL

NOTICE: Turn-around-time (TAT) for samples shall not begin until all discrepancies have been resolved. For samples received and discrepancies resolved after 1500 hrs, TAT shall start at 0800 hrs the next business day. The client is responsible for all cost associated with sample disposal. Samples shall be disposed of as soon as practical (but not prior to fifteen (15) calendar days) after issuance of analytical report unless a different sample disposal schedule is pre-arranged with EMAX. Disposal fee for samples defined by CA Title 22 as non-hazardous shall be $5.00 per sample. EMAX will return hazardous samples to the client at the client's expense unless directed in writing otherwise.

GRAPHICS EXPRESS (626) 330-8585

1 OF 2

CHAIN OF CUSTODY

EMAX LABORATORIES, INC.
1835 W. 205th Street, Torrance, CA 90501
Tel #: (310) 618-8889 Fax #: (310) 618-0818
Email: info@emaxlabs.com

PO NUMBER: 44102 FW1
SAMPLE STORAGE: B3
EMAX CONTROL NO. * 04E159
PROJECT CODE:

CLIENT: KLEINFELDER
PROJECT: LAKESIDE CONSERVANCY FILL (PROJECT No. 44102)
COORDINATOR: JACQUES LORD
TEL: 858 320 2206 FAX: 858 320 2001 EMAIL: jlord@kleinfelder.com
SEND REPORT TO: JACQUES LORD
COMPANY: KLEINFELDER
ADDRESS: 5015 SHOREHAM PLACE
SAN DIEGO, CA 92122
EMAX PM:

MATRIX CODE		PRESERVATIVE CODE	
DW= Drinking Water		IC=Ice	
GW=Ground Water		HC=HCl	
WW=Waste Water		HN=HNO3	
SD=Solid Waste SL=Sludge		SH=NaOH	
SS=Soil/Sediment		ST=Na2S2O3	
WP=Wipes PP=Pure Products		ZA=Zinc Acetate	
AR=Air		HS=H_2SO_4	
O=			

ANALYSIS REQUIRED: Title 22 Metals (6010B/7470) | TPHd (418.1)* | TPHg & TPHd (8015M)* | VOCs - Full Scan (8260B)* | SVOCs - Full Scan (8270C)* | Pesticides (8081A)* | PCBs (8082)*

TAT:
- ☐ Rush _____ hrs.
- ☐ Rush _____ days
- ☒ 7 days TRPH
- ☐ 14 days
- ☐ 21 days
- ☒ 30 days OTHERS
- ☐ _____ days
- ☐

LAB	SAMPLE ID: CLIENT	SAMPLING: LOCATION	DATE	TIME	CONTAINER: NO.	SIZE	TYPE	MATRIX CODE	QC	PRESERVATIVE CODE: IC	IC	COMMENTS
10 * 1	KB-11@15'		5/17/04		2	2"x3"	BRASS SLEEVE	SS		X	X	* TRPH IS DETECTED
11 * 2	KB-12@5'		↓		↓	↓	↓	↓		↓	↓	ANALYZE SAMPLE FOR:
12 * 3	KB-13@5'											• TPHg & TPHd
13 * 4	KB-14@10'											• VOCs
14 * 5	KB-15@5'											• SVOCs
15 * 6	KB-17@5'		↓		↓	↓	↓	↓		↓	↓	• PESTICIDES
* 7												• PCBs
* 8												
* 9												
* 0												

Instructions

Cooler #	Temp. (°C)	Sample #s

SAMPLER

RELINQUISHED BY	Date	Time	COURIER/AIRBILL: RECEIVED BY
[signature]	5/18/04	12:00	UPS
	5-19-04	1000	[signature]

NOTICE: Turn-around-time (TAT) for samples shall not begin until all discrepancies have been resolved. For samples received and discrepancies resolved after 1500 hrs, TAT shall start at 0800 hrs the next business day. The client is responsible for all cost associated with sample disposal. Samples shall be disposed of as soon as practical (but not prior to fifteen (15) calendar days) after issuance of analytical report unless a different sample disposal schedule is pre-arranged with EMAX. Disposal fee for samples defined by CA Title 22 as non-hazardous shall be $5.00 per sample. EMAX will return hazardous samples to the client at the client's expense unless directed in writing otherwise.

GRAPHICS EXPRESS (626) 330-8835

1003

SAMPLE RECEIPT FORM 1

Type of Delivery	Delivered By/Airbill	ECN	04 E159
☐ EMAX Courier		Recepient	J - LUNA
☐ Client Delivery		Date	5-19-04
☒ Third Party UPS	1Z 5RB V690 1916 4371 4	Time	1000

COC Inspection

☒ Client Name	☐ Sampler Name	* ☒ Sampling Date/Time/Location
☒ Address	☐ Courier Signature/Dat	☒ Analysis Required
☒ Client PM/FC	☒ TAT	☒ Matrix
☒ Tel #/Fax #	☒ Sample ID	☐ Preservative (if any)
Safety Issues ☒ None	☐ High Concentrations expected	☐ Superfund Site Samples
Comments: ☐ Rad Screening Required		

* NO COLLECTION TIME

Packaging Inspection

Container	☒ Cooler	☐ Box	☐	☐
Condition	☒ Custody Seal	☒ Intact	☐ Damaged	☐
Packaging	☒ Bubble Pack	☐ Styrofoam	☒ Sufficient	☒ plastic bag
Temperatures	☒ Cooler 1 3.5°C	☑ Cooler 2 ____	☐ Cooler 3 ____	☐ Cooler 4 ____
	☐ Cooler 5 ____	☐ Cooler 6 ____	☐ Cooler 7 ____	☐ Cooler 8 ____
	☐ Cooler 9 ____	☐ Cooler 10 ____	☐ Cooler 11 ____	☐ Cooler 12 ____

Comments:

LSCID	Client ID	Discrepancy	Corrective Action
E159-01		COLLECTION TIME ON LABEL	Login using time indicated on the sample label.
THRU 15		READS:	
		0815, 0855, 0920, 0950,	
		1150, 1215, 1355, 1240,	
		1420, 1450, 1530, 1615,	
		1700, 1800, 1915	

LSCID : Lab Sample Container ID

REVIEWS

Sample Labeling [signature] Date 5-19-04

SRF [signature] Date 5/18/04

PM [signature] Date 5/19/04

UPS CampusShip: View/Print Label

1. **Print the label(s):** Select Print from the File menu in this browser window to pri labels displayed below.

2. **Fold the printed label at the dotted line.** Place the label in a UPS Shipping Po you do not have a pouch, affix the folded label using clear plastic shipping tape ov entire label.

3. **GETTING YOUR SHIPMENT TO UPS**
   Customers without a Daily Pickup
   - Schedule a same day or future day Pickup to have a UPS driver pickup all of Internet Shipping packages.
   - Hand the package to any UPS driver in your area.
   - Take your package to The UPS Store™, Customer Center or Authorized Ship Outlet.
   - Drop off your Air Shipments including Worldwide Express SM at one of our 50,000 UPS Drop-Off locations.

   Customers with a Daily Pickup
   - Your driver will pickup your shipment(s) as usual.

Time Collected_____ Sample No._____

FOLD HERE

WAYNE CHIU
858-320-2000
SAN DIEGO OPERATIONS
5015 SHOREHAM PLACE
SAN DIEGO CA 92122

56 LBS 1 OF 1

SHIP TO:
JIM CARTER
310-618-8889
E MAX LABORATORIES INC
1835 W. 205TH STREET
TORRANCE CA 90501-1510

CA 908 9-70

UPS NEXT DAY AIR 1

TRACKING #: 1Z 5R8 V69 01 9164 3714

BILLING: P/P

Project No./Task: 44102.PW1

04E159
5-19-04
1000

CS 6.1.10.0 WWEL60 27.0A 01/2004

TM

1005

REPORTING CONVENTIONS

DATA QUALIFIERS:

Lab Qualifier	AFCEE Qualifier	Description
J	F	Indicates that the analyte is positively identified and the result is less than RL but greater than MDL.
N		Indicates presumptive evidence of a compound.
B	B	Indicates that the analyte is found in the associated method blank as well as in the sample at above QC level.
E	J	Indicates that the result is above the maximum calibration range.
*	*	Out of QC limit.

Note: The above qualifiers are used to flag the results unless the project requires a different set of qualification criteria.

ACRONYMS AND ABBREVIATIONS:

CRDL	Contract Required Detection Limit
RL	Reporting Limit
MRL	Method Reporting Limit
PQL	Practical Quantitation Limit
MDL	Method Detection Limit
DO	Diluted out

DATES

The date and time information for leaching and preparation reflect the beginning date and time of the procedure unless the method, protocol, or project specifically requires otherwise.

LABORATORY REPORT FOR

KLEINFELDER

LAKESIDE CONSERVANCY FILL

METHOD 418.1
TOTAL RECOVERABLE PETROLEUM HYDROCARBONS

SDG#: 04E159

5000

CASE NARRATIVE

CLIENT: KLEINFELDER

PROJECT: LAKESIDE CONSERVANCY FILL

SDG: 04E159

METHOD 418.1
TOTAL RECOVERABLE PETROLEUM HYDROCARBONS

Fifteen (15) soil samples were received on 05/19/04 for Total Recoverable Petroleum Hydrocarbons analysis by Method 418.1 in accordance with "Methods for Chemical Analysis of Water and Wastewater", EPA 600/4-79-020 (1983).

1. Holding Time

   Analysis met holding time criteria.

2. Method Blank

   Method blank was free of contamination at the reporting limit.

3. Lab Control Sample/Lab Control Sample Duplicate

   Lab control results were within QC limit.

4. Matrix Spike/Matrix Spike Duplicate

   Sample E159-04 was spiked. Recoveries were within QC limit.

5. Sample Analysis

   Samples were analyzed according to the prescribed QC procedures. All criteria were met.

METHOD 418.1
TOTAL RECOVERABLE PETROLEUM HYDROCARBONS

Client : KLEINFELDER
Project : LAKESIDE CONSERVANCY FILL
Batch No. : 04E159

Matrix : SOIL
Instrument ID : I61

SAMPLE ID	EMAX SAMPLE ID	RESULTS (mg/kg)	DLF	MOIST	RL (mg/kg)	MDL (mg/kg)	Analysis DATETIME	Extraction DATETIME	LFID	CAL REF	PREP BATCH	Collection DATETIME	Received DATETIME
MBLK1S	TRE002SB	ND	1	NA	10	5	05/20/0412:10	05/19/0417:00	TRE002S-03	TRE002S-02	TRE002S	NA	05/19/04
LCS1S	TRE002SL	155	1	NA	10	5	05/20/0412:15	05/19/0417:00	TRE002S-04	TRE002S-02	TRE002S	NA	05/19/04
LCD1S	TRE002SC	153	1	NA	10	5	05/20/0412:20	05/19/0417:00	TRE002S-05	TRE002S-02	TRE002S	NA	05/19/04
KB-1@5'	E159-01	ND	1	9.7	11.1	5.54	05/20/0412:30	05/19/0417:00	TRE002S-07	TRE002S-02	TRE002S	05/17/04	05/19/04
KB-2@5'	E159-02	93	1	16.2	11.9	5.97	05/20/0412:35	05/19/0417:00	TRE002S-08	TRE002S-02	TRE002S	05/17/04	05/19/04
KB-3@15'	E159-03	7.1J	1	12.4	11.4	5.71	05/20/0412:40	05/19/0417:00	TRE002S-09	TRE002S-02	TRE002S	05/17/04	05/19/04
KB-4@10'	E159-04	ND	1	2.1	10.2	5.11	05/20/0412:45	05/19/0417:00	TRE002S-10	TRE002S-02	TRE002S	05/17/04	05/19/04
KB-4@10'MS	E159-04M	153	1	2.1	10.2	5.11	05/20/0412:50	05/19/0417:00	TRE002S-11	TRE002S-02	TRE002S	05/17/04	05/19/04
KB-4@10'MSD	E159-04S	158	1	2.1	10.2	5.11	05/20/0412:55	05/19/0417:00	TRE002S-12	TRE002S-02	TRE002S	05/17/04	05/19/04
KB-5@19'	E159-05	ND	1	14.5	11.7	5.85	05/20/0413:10	05/19/0417:00	TRE002S-15	TRE002S-14	TRE002S	05/17/04	05/19/04
KB-7@10'	E159-06	ND	1	2.2	10.2	5.11	05/20/0413:15	05/19/0417:00	TRE002S-16	TRE002S-14	TRE002S	05/17/04	05/19/04
KB-8@10'	E159-07	220	1	8.5	10.9	5.46	05/20/0413:20	05/19/0417:00	TRE002S-17	TRE002S-14	TRE002S	05/17/04	05/19/04
KB-9@5'	E159-08	ND	1	21.0	12.7	6.33	05/20/0413:25	05/19/0417:00	TRE002S-18	TRE002S-14	TRE002S	05/17/04	05/19/04
KB-10@5'	E159-09	8.6J	1	3.8	10.4	5.2	05/20/0413:30	05/19/0417:00	TRE002S-19	TRE002S-14	TRE002S	05/17/04	05/19/04
KB-11@15'	E159-10	ND	1	2.8	10.3	5.14	05/20/0413:35	05/19/0417:00	TRE002S-20	TRE002S-14	TRE002S	05/17/04	05/19/04
KB-12@5'	E159-11	3400	100	9.4	1100	552	05/20/0413:40	05/19/0417:00	TRE002S-21	TRE002S-14	TRE002S	05/17/04	05/19/04
KB-13@5'	E159-12	190	1	15.1	11.8	5.89	05/20/0413:45	05/19/0417:00	TRE002S-22	TRE002S-14	TRE002S	05/17/04	05/19/04
KB-14@10'	E159-13	200	1	12.8	11.5	5.73	05/20/0413:50	05/19/0417:00	TRE002S-23	TRE002S-14	TRE002S	05/17/04	05/19/04
KB-15@5'	E159-14	86	1	14.5	11.7	5.85	05/20/0413:55	05/19/0417:00	TRE002S-24	TRE002S-14	TRE002S	05/17/04	05/19/04
KB-17@5'	E159-15	24000	100	3.3	1030	517	05/20/0414:10	05/19/0417:00	TRE002S-27	TRE002S-26	TRE002S	05/17/04	05/19/04

2005

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: KLEINFELDER
PROJECT: LAKESIDE CONSERVANCY FILL
METHOD: METHOD 418.1
MATRIX: SOIL
% MOISTURE: NA

BATCH NO.: 04E159
SAMPLE ID: LCS1S/LCD1S
CONTROL NO.: TRE002SL/C

DATE RECEIVED: 05/19/04
DATE EXTRACTED: 05/19/04 17:00
DATE ANALYZED: 05/20/04 12:15/12:20

ACCESSION:

PARAMETER	BLNK RSLT (mg/kg)	SPIKE AMT (mg/kg)	BS RSLT (mg/kg)	BS % REC	SPIKE AMT (mg/kg)	BSD RSLT (mg/kg)	BSD % REC	RPD %	QC LIMIT %	RPD LIMIT %
TRPH	ND	150	155	103	150	153	102	1	80-120	20

5003

EMAX QUALITY CONTROL DATA
MS/MSD ANALYSIS

CLIENT: KLEINFELDER
PROJECT: LAKESIDE CONSERVANCY FILL
METHOD: METHOD 418.1
MATRIX: SOIL
% MOISTURE: 2.1

BATCH NO.: 04E159
SAMPLE ID: KB-4@10'MS/MSD
CONTROL NO.: E159-04M/S

DATE RECEIVED: 05/19/04
DATE EXTRACTED: 05/19/04 17:00
DATE ANALYZED: 05/20/04 12:50/12:55

ACCESSION:

PARAMETER	SMPL RSLT (mg/kg)	SPIKE AMT (mg/kg)	MS RSLT (mg/kg)	MS % REC	SPIKE AMT (mg/kg)	MSD RSLT (mg/kg)	MSD % REC	RPD %	QC LIMIT %	RPD LIMIT %
TRPH	ND	153	153	100	153	158	103	3	75-125	20

5004

LABORATORY REPORT FOR

KLEINFELDER

LAKESIDE CONSERVANCY FILL

METALS / MERCURY

SDG#: 04E159

7000

CASE NARRATIVE

CLIENT: KLEINFELDER

PROJECT: LAKESIDE CONSERVANCY FILL

SDG: 04E159

METHOD 3050B/6010B
METALS BY ICP

Fifteen (15) soil samples were received on 05/19/04 for Metals analysis by Method 3050B/6010B in accordance with "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", SW846, 3rd edition.

1. Holding Time

   Analysis met holding time criteria.

2. Method Blank

   Method blank was free of contamination at the reporting limit.

3. Lab Control Sample/Lab Control Sample Duplicate

   Lab control results were within QC limit.

4. Serial Dilution / Post-Analytical Spike

   Sample E159-01 was analyzed for serial dilution and post-analytical spike. All QC requirements were met.

5. Matrix Spike/Matrix Spike Duplicate

   Sample E159-01 was spiked. All recoveries were within QC limit except Antimony in both MS/MSD was out of the limit.

6. Sample Analysis

   Samples were analyzed according to the prescribed QC procedures. All criteria were met except as aforementioned.

LAB CHRONICLE
METALS BY ICP

Client : KLEINFELDER
Project : LAKESIDE CONSERVANCY FILL

SDG NO. : 04E159
Instrument ID : T-107

SOIL

Client Sample ID	Laboratory Sample ID	Dilution Factor	% Moist	Analysis DateTime	Extraction DateTime	Sample Data FN	Calibration Data FN	Prep. Batch	Notes
MBLK1S	IPE048SB	1	NA	06/03/0403:18	05/20/0408:35	I07F009010	I07F009008	IPE048S	Method Blank
LCS1S	IPE048SL	1	NA	06/03/0403:22	05/20/0408:35	I07F009011	I07F009008	IPE048S	Lab Control Sample (LCS)
LCD1S	IPE048SC	1	NA	06/03/0403:27	05/20/0408:35	I07F009012	I07F009008	IPE048S	LCS Duplicate
KB-1@5'AS	E159-01A	1	9.7	06/03/0403:31	05/20/0408:35	I07F009013	I07F009008	IPE048S	Analytical Spike Sample
KB-1@5'MS	E159-01M	1	9.7	06/03/0403:35	05/20/0408:35	I07F009014	I07F009008	IPE048S	Matrix Spike Sample (MS)
KB-1@5'MSD	E159-01S	1	9.7	06/03/0403:39	05/20/0408:35	I07F009015	I07F009008	IPE048S	MS Duplicate (MSD)
KB-1@5'	E159-01	1	9.7	06/03/0403:45	05/20/0408:35	I07F009016	I07F009008	IPE048S	Field Sample
KB-1@5'DL	E159-01T	5	9.7	06/03/0403:50	05/20/0408:35	I07F009017	I07F009008	IPE048S	Diluted Sample
KB-2@5'	E159-02	1	16.2	06/03/0403:54	05/20/0408:35	I07F009018	I07F009008	IPE048S	Field Sample
KB-3@15'	E159-03	1	12.4	06/03/0403:58	05/20/0408:35	I07F009019	I07F009008	IPE048S	Field Sample
KB-4@10'	E159-04	1	2.1	06/03/0404:11	05/20/0408:35	I07F009022	I07F009020	IPE048S	Field Sample
KB-5@19'	E159-05	1	14.5	06/03/0404:15	05/20/0408:35	I07F009023	I07F009020	IPE048S	Field Sample
KB-7@10'	E159-06	1	2.2	06/03/0404:19	05/20/0408:35	I07F009024	I07F009020	IPE048S	Field Sample
KB-8@10'	E159-07	1	8.5	06/03/0404:24	05/20/0408:35	I07F009025	I07F009020	IPE048S	Field Sample
KB-9@5'	E159-08	1	21.0	06/03/0404:28	05/20/0408:35	I07F009026	I07F009020	IPE048S	Field Sample
KB-10@5'	E159-09	1	3.8	06/03/0404:32	05/20/0408:35	I07F009027	I07F009020	IPE048S	Field Sample
KB-11@15'	E159-10	1	2.8	06/03/0404:36	05/20/0408:35	I07F009028	I07F009020	IPE048S	Field Sample
KB-12@5'	E159-11	1	9.4	06/03/0404:41	05/20/0408:35	I07F009029	I07F009020	IPE048S	Field Sample
KB-13@5'	E159-12	1	15.1	06/03/0404:45	05/20/0408:35	I07F009030	I07F009020	IPE048S	Field Sample
KB-14@10'	E159-13	1	12.8	06/03/0404:49	05/20/0408:35	I07F009031	I07F009020	IPE048S	Field Sample
KB-15@5'	E159-14	1	14.5	06/03/0412:52	05/20/0408:35	I07F011031	I07F011021	IPE048S	Field Sample
KB-17@5'	E159-15	1	3.3	06/03/0412:57	05/20/0408:35	I07F011032	I07F011021	IPE048S	Field Sample

FN - Filename
% Moist - Percent Moisture

2007

LAB CHRONICLE
METALS BY TRACE ICP

Client : KLEINFELDER
Project : LAKESIDE CONSERVANCY FILL

SDG NO. : 04E159
Instrument ID : T-I31

SOIL

Client Sample ID	Laboratory Sample ID	Dilution Factor	% Moist	Analysis DateTime	Extraction DateTime	Sample Data FN	Calibration Data FN	Prep. Batch	Notes
MBLK1S	IPE048SB	1	NA	06/02/0405:11	05/20/0408:35	I31F007010	I31F007008	IPE048S	Method Blank
LCS1S	IPE048SL	1	NA	06/02/0405:16	05/20/0408:35	I31F007011	I31F007008	IPE048S	Lab Control Sample (LCS)
LCD1S	IPE048SC	1	NA	06/02/0405:22	05/20/0408:35	I31F007012	I31F007008	IPE048S	LCS Duplicate
KB-1@5'AS	E159-01A	1	9.7	06/02/0405:27	05/20/0408:35	I31F007013	I31F007008	IPE048S	Analytical Spike Sample
KB-1@5'MS	E159-01M	1	9.7	06/02/0405:32	05/20/0408:35	I31F007014	I31F007008	IPE048S	Matrix Spike Sample (MS)
KB-1@5'MSD	E159-01S	1	9.7	06/02/0405:38	05/20/0408:35	I31F007015	I31F007008	IPE048S	MS Duplicate (MSD)
KB-1@5'	E159-01	1	9.7	06/02/0405:45	05/20/0408:35	I31F007016	I31F007008	IPE048S	Field Sample
KB-1@5'DL	E159-01T	5	9.7	06/02/0405:51	05/20/0408:35	I31F007017	I31F007008	IPE048S	Diluted Sample
KB-2@5'	E159-02	1	16.2	06/02/0405:56	05/20/0408:35	I31F007018	I31F007008	IPE048S	Field Sample
KB-3@15'	E159-03	1	12.4	06/02/0406:02	05/20/0408:35	I31F007019	I31F007008	IPE048S	Field Sample
KB-4@10'	E159-04	1	2.1	06/02/0406:22	05/20/0408:35	I31F007022	I31F007020	IPE048S	Field Sample
KB-5@19'	E159-05	1	14.5	06/02/0406:28	05/20/0408:35	I31F007023	I31F007020	IPE048S	Field Sample
KB-7@10'	E159-06	1	2.2	06/02/0406:33	05/20/0408:35	I31F007024	I31F007020	IPE048S	Field Sample
KB-8@10'	E159-07	1	8.5	06/02/0406:39	05/20/0408:35	I31F007025	I31F007020	IPE048S	Field Sample
KB-9@5'	E159-08	1	21.0	06/02/0406:44	05/20/0408:35	I31F007026	I31F007020	IPE048S	Field Sample
KB-10@5'	E159-09	1	3.8	06/02/0406:49	05/20/0408:35	I31F007027	I31F007020	IPE048S	Field Sample
KB-11@15'	E159-10	1	2.8	06/02/0406:55	05/20/0408:35	I31F007028	I31F007020	IPE048S	Field Sample
KB-12@5'	E159-11	1	9.4	06/02/0407:00	05/20/0408:35	I31F007029	I31F007020	IPE048S	Field Sample
KB-13@5'	E159-12	1	15.1	06/02/0407:06	05/20/0408:35	I31F007030	I31F007020	IPE048S	Field Sample
KB-14@10'	E159-13	1	12.8	06/02/0407:11	05/20/0408:35	I31F007031	I31F007020	IPE048S	Field Sample
KB-15@5'	E159-14	1	14.5	06/02/0407:34	05/20/0408:35	I31F007034	I31F007032	IPE048S	Field Sample
KB-17@5'	E159-15	1	3.3	06/02/0407:39	05/20/0408:35	I31F007035	I31F007032	IPE048S	Field Sample

FN - Filename
% Moist - Percent Moisture

7003

METHOD 3050B/6010B
METALS BY ICP

C[redacted]	: KLEINFELDER	Date Collected:	05/17/04
P[redacted]	: LAKESIDE CONSERVANCY FILL	Date Received:	05/19/04
SDG NO.	: 04E159	Date Extracted:	05/20/04 08:35
Sample ID:	K8-1@5'	Date Analyzed:	06/03/04 03:45
Lab Samp ID:	E159-01	Dilution Factor:	1
Lab File ID:	I07F009016	Matrix :	SOIL
Ext Btch ID:	IPE048S	% Moisture :	9.7
Calib. Ref.:	I07F009008	Instrument ID :	EMAXTI07

PARAMETERS	RESULTS (mg/kg)	RL (mg/kg)	MDL (mg/kg)
Antimony	ND	11.1	2.21
Barium	113	1.11	.166
Beryllium	.199J	1.11	.166
Cadmium	ND	1.11	.554
Chromium	20.8	2.21	.664
Cobalt	7.63	2.21	.831
Copper	16.5	2.21	.554
Molybdenum	ND	5.54	.831
Nickel	6.86	2.21	.609
Silver	1.09J	2.21	.698
Vanadium	50	2.21	.554
Zinc	38.7	1.11	.332

METHOD 3050B/6010B
METALS BY TRACE ICP

Client	: KLEINFELDER	Date Collected:	05/17/04
Project	: LAKESIDE CONSERVANCY FILL	Date Received:	05/19/04
SDG NO.	: 04E159	Date Extracted:	05/20/04 08:35
Sample ID:	KB-105'	Date Analyzed:	06/02/04 05:45
Lab Samp ID:	E159-01	Dilution Factor:	1
Lab File ID:	I31F007016	Matrix :	SOIL
Ext Btch ID:	IPE048S	% Moisture :	9.7
Calib. Ref.:	I31F007008	Instrument ID :	EMAXTI31

PARAMETERS	RESULTS (mg/kg)	RL (mg/kg)	MDL (mg/kg)
Arsenic	.944J	1.11	.443
Lead	1.96	1.11	.221
Selenium	ND	1.11	.554
Thallium	ND	1.11	.554

METHOD 3050B/6010B
METALS BY ICP

C[redacted]	: KLEINFELDER	Date Collected:	05/17/04
P[redacted]t	: LAKESIDE CONSERVANCY FILL	Date Received:	05/19/04
SDG NO.	: 04E159	Date Extracted:	05/20/04 08:35
Sample ID:	KB-205'	Date Analyzed:	06/03/04 03:54
Lab Samp ID:	E159-02	Dilution Factor:	1
Lab File ID:	I07F009018	Matrix :	SOIL
Ext Btch ID:	IPE048S	% Moisture :	16.2
Calib. Ref.:	I07F009008	Instrument ID :	EMAXTI07

PARAMETERS	RESULTS (mg/kg)	RL (mg/kg)	MDL (mg/kg)
Antimony	ND	11.9	2.39
Barium	60.3	1.19	.179
Beryllium	.27J	1.19	.179
Cadmium	ND	1.19	.597
Chromium	10.5	2.39	.716
Cobalt	5.01	2.39	.895
Copper	15.6	2.39	.597
Molybdenum	ND	5.97	.895
Nickel	5.17	2.39	.656
Silver	.987J	2.39	.752
Vanadium	31	2.39	.597
Zinc	46.7	1.19	.358

METHOD 3050B/6010B
METALS BY TRACE ICP

Client	: KLEINFELDER	Date Collected:	05/17/04
Project	: LAKESIDE CONSERVANCY FILL	Date Received:	05/19/04
SDG NO.	: 04E159	Date Extracted:	05/20/04 08:35
Sample ID	: KB-2@5'	Date Analyzed:	06/02/04 05:56
Lab Samp ID	: E159-02	Dilution Factor:	1
Lab File ID	: I31F007018	Matrix :	SOIL
Ext Btch ID	: IPE048S	% Moisture :	16.2
Calib. Ref.	: I31F007008	Instrument ID :	EMAXTI31

PARAMETERS	RESULTS (mg/kg)	RL (mg/kg)	MDL (mg/kg)
Arsenic	3.44	1.19	.477
Lead	10.9	1.19	.239
Selenium	ND	1.19	.597
Thallium	ND	1.19	.597

7007

METHOD 3050B/6010B
METALS BY ICP

Client	: KLEINFELDER	Date Collected:	05/17/04
Project	: LAKESIDE CONSERVANCY FILL	Date Received:	05/19/04
SDG NO.	: 04E159	Date Extracted:	05/20/04 08:35
Sample ID:	KB-3@15'	Date Analyzed:	06/03/04 03:58
Lab Samp ID:	E159-03	Dilution Factor:	1
Lab File ID:	I07F009019	Matrix :	SOIL
Ext Btch ID:	IPE048S	% Moisture :	12.4
Calib. Ref.:	I07F0D9008	Instrument ID :	EMAXTI07

PARAMETERS	RESULTS (mg/kg)	RL (mg/kg)	MDL (mg/kg)
Antimony	ND	11.4	2.28
Barium	61.3	1.14	.171
Beryllium	ND	1.14	.171
Cadmium	ND	1.14	.571
Chromium	10.8	2.28	.685
Cobalt	4.26	2.28	.856
Copper	7.76	2.28	.571
Molybdenum	ND	5.71	.856
Nickel	3.59	2.28	.628
Silver	.836J	2.28	.719
Vanadium	27.6	2.28	.571
Zinc	21.5	1.14	.342

METHOD 3050B/6010B
METALS BY TRACE ICP

Client	: KLEINFELDER	Date Collected:	05/17/04
Project	: LAKESIDE CONSERVANCY FILL	Date Received:	05/19/04
SDG NO.	: 04E159	Date Extracted:	05/20/04 08:35
Sample ID	: KB-3@15'	Date Analyzed:	06/02/04 06:02
Lab Samp ID	: E159-03	Dilution Factor:	1
Lab File ID	: I31F007019	Matrix :	SOIL
Ext Btch ID	: IPE048S	% Moisture :	12.4
Calib. Ref.	: I31F0D7008	Instrument ID :	EMAXTI31

PARAMETERS	RESULTS (mg/kg)	RL (mg/kg)	MDL (mg/kg)
Arsenic	.87J	1.14	.457
Lead	1.38	1.14	.228
Selenium	ND	1.14	.571
Thallium	ND	1.14	.571

METHOD 3050B/6010B
METALS BY ICP

[redacted]	: KLEINFELDER	Date Collected:	05/17/04
Pr[redacted]t	: LAKESIDE CONSERVANCY FILL	Date Received:	05/19/04
TDG NO.	: 04E159	Date Extracted:	05/20/04 08:35
ample ID:	KB-4@10'	Date Analyzed:	06/03/04 04:11
ab Samp ID:	E159-04	Dilution Factor:	1
Lab File ID:	I07F009022	Matrix :	SOIL
Ext Btch ID:	IPE048S	% Moisture :	2.1
alib. Ref.:	I07F009020	Instrument ID :	EMAXTI07

ARAMETERS	RESULTS (mg/kg)	RL (mg/kg)	MDL (mg/kg)
ntimony	ND	10.2	2.04
Barium	42.5	1.02	.153
eryllium	ND	1.02	.153
admium	ND	1.02	.511
hromium	7.16	2.04	.613
Cobalt	2.94	2.04	.766
Copper	8.67	2.04	.511
olybdenum	ND	5.11	.766
ickel	2.47	2.04	.562
Silver	ND	2.04	.644
Vanadium	20.3	2.04	.511
inc	16.8	1.02	.306

METHOD 30508/6010B
METALS BY TRACE ICP

Client	: KLEINFELDER	Date Collected:	05/17/04
Project	: LAKESIDE CONSERVANCY FILL	Date Received:	05/19/04
SDG NO.	: 04E159	Date Extracted:	05/20/04 08:35
Sample ID	: K8-4@10'	Date Analyzed:	06/02/04 06:22
Lab Samp ID	: E159-04	Dilution Factor:	1
Lab File ID	: I31F007022	Matrix :	SOIL
Ext Btch ID	: IPE048S	% Moisture :	2.1
Calib. Ref.	: I31F007020	Instrument ID :	EMAXTI31

PARAMETERS	RESULTS (mg/kg)	RL (mg/kg)	MDL (mg/kg)
Arsenic	.44J	1.02	.409
Lead	.65J	1.02	.204
Selenium	ND	1.02	.511
Thallium	ND	1.02	.511

METHOD 3050B/6010B
METALS BY ICP

[redacted]	: KLEINFELDER	Date Collected:	05/17/04
P[redacted]	: LAKESIDE CONSERVANCY FILL	Date Received:	05/19/04
SDG NO.	: 04E159	Date Extracted:	05/20/04 08:35
ample ID:	KB-5@19'	Date Analyzed:	06/03/04 04:15
ab Samp ID:	E159-05	Dilution Factor:	1
Lab File ID:	I07F009023	Matrix :	SOIL
Ext Btch ID:	IPE048S	% Moisture :	14.5
alib. Ref.:	I07F009020	Instrument ID :	EMAXTI07

ARAMETERS	RESULTS (mg/kg)	RL (mg/kg)	MDL (mg/kg)
ntimony	ND	11.7	2.34
Barium	181	1.17	.175
eryllium	.209J	1.17	.175
admium	ND	1.17	.585
hromium	21.3	2.34	.702
Cobalt	9.14	2.34	.877
Copper	18.4	2.34	.585
olybdenum	ND	5.85	.877
ickel	8.12	2.34	.643
ilver	.823J	2.34	.737
Vanadium	47.8	2.34	.585
inc	38.8	1.17	.351

METHOD 3050B/6010B
METALS BY TRACE ICP

lient	: KLEINFELDER	Date Collected:	05/17/04
Project	: LAKESIDE CONSERVANCY FILL	Date Received:	05/19/04
SDG NO.	: 04E159	Date Extracted:	05/20/04 08:35
ample ID	: KB-5@19'	Date Analyzed:	06/02/04 06:28
ab Samp ID	: E159-05	Dilution Factor:	1
Lab File ID	: I31F007023	Matrix :	SOIL
Ext Btch ID	: IPE048S	% Moisture :	14.5
alib. Ref.	: I31F007020	Instrument ID :	EMAXTI31

PARAMETERS	RESULTS (mg/kg)	RL (mg/kg)	MDL (mg/kg)
rsenic	ND	1.17	.468
Lead	2.05	1.17	.234
Selenium	ND	1.17	.585
hallium	ND	1.17	.585

METHOD 3050B/6010B
METALS BY ICP

[redacted]	: KLEINFELDER	Date Collected:	05/17/04
Pr[redacted]	: LAKESIDE CONSERVANCY FILL	Date Received:	05/19/04
SDG NO.	: 04E159	Date Extracted:	05/20/04 08:35
Sample ID:	KB-7@10'	Date Analyzed:	06/03/04 04:19
Lab Samp ID:	E159-06	Dilution Factor:	1
Lab File ID:	I07F009024	Matrix :	SOIL
Ext Btch ID:	IPE048S	% Moisture :	2.2
Calib. Ref.:	I07F009020	Instrument ID :	EMAXTI07

PARAMETERS	RESULTS (mg/kg)	RL (mg/kg)	MDL (mg/kg)
Antimony	ND	10.2	2.04
Barium	17.5	1.02	.153
Beryllium	ND	1.02	.153
Cadmium	ND	1.02	.511
Chromium	4.53	2.04	.613
Cobalt	1.2J	2.04	.767
Copper	6.65	2.04	.511
Molybdenum	ND	5.11	.767
Nickel	1.81J	2.04	.562
Silver	ND	2.04	.644
Vanadium	17.5	2.04	.511
Zinc	9.59	1.02	.307

METHOD 3050B/6010B
METALS BY TRACE ICP

Client	: KLEINFELDER	Date Collected:	05/17/04
Project	: LAKESIDE CONSERVANCY FILL	Date Received:	05/19/04
SDG NO.	: 04E159	Date Extracted:	05/20/04 08:35
Sample ID:	KB-7@10'	Date Analyzed:	06/02/04 06:33
Lab Samp ID:	E159-06	Dilution Factor:	1
Lab File ID:	I31F007024	Matrix :	SOIL
Ext Btch ID:	IPE048S	% Moisture :	2.2
Calib. Ref.:	I31F007020	Instrument ID :	EMAXTI31

PARAMETERS	RESULTS (mg/kg)	RL (mg/kg)	MDL (mg/kg)
Arsenic	ND	1.02	.409
Lead	.42J	1.02	.204
Selenium	ND	1.02	.511
Thallium	ND	1.02	.511

METHOD 3050B/6010B
METALS BY ICP

C[illegible]	: KLEINFELDER	Date Collected:	05/17/04
P[illegible]	: LAKESIDE CONSERVANCY FILL	Date Received:	05/19/04
SDG NO.	: 04E159	Date Extracted:	05/20/04 08:35
Sample ID:	KB-8@10'	Date Analyzed:	06/03/04 04:24
Lab Samp ID:	E159-07	Dilution Factor:	1
Lab File ID:	I07F009025	Matrix :	SOIL
Ext Btch ID:	IPE048S	% Moisture :	8.5
Calib. Ref.:	I07F009020	Instrument ID :	EMAXTI07

PARAMETERS	RESULTS (mg/kg)	RL (mg/kg)	MDL (mg/kg)
Antimony	ND	10.9	2.19
Barium	64	1.09	.164
Beryllium	ND	1.09	.164
Cadmium	ND	1.09	.546
Chromium	9.25	2.19	.656
Cobalt	4.41	2.19	.82
Copper	10	2.19	.546
Molybdenum	ND	5.46	.82
Nickel	5.17	2.19	.601
Silver	ND	2.19	.689
Vanadium	29	2.19	.546
Zinc	30.7	1.09	.328

METHOD 3050B/6010B
METALS BY TRACE ICP

Client	: KLEINFELDER	Date Collected:	05/17/04
Project	: LAKESIDE CONSERVANCY FILL	Date Received:	05/19/04
SDG NO.	: 04E159	Date Extracted:	05/20/04 08:35
Sample ID:	K8-8@10'	Date Analyzed:	06/02/04 06:39
Lab Samp ID:	E159-07	Dilution Factor:	1
Lab File ID:	I31F007025	Matrix :	SOIL
Ext Btch ID:	IPE048S	% Moisture :	8.5
Calib. Ref.:	I31F007020	Instrument ID :	EMAXTI31

PARAMETERS	RESULTS (mg/kg)	RL (mg/kg)	MDL (mg/kg)
Arsenic	1.3	1.09	.437
Lead	8.24	1.09	.219
Selenium	ND	1.09	.546
Thallium	ND	1.09	.546

METHOD 3050B/6010B
METALS BY ICP

C[redacted]	: KLEINFELDER	Date Collected:	05/17/04
P[redacted]t	: LAKESIDE CONSERVANCY FILL	Date Received:	05/19/04
SDG NO.	: 04E159	Date Extracted:	05/20/04 08:35
Sample ID:	KB-905'	Date Analyzed:	06/03/04 04:28
Lab Samp ID:	E159-08	Dilution Factor:	1
Lab File ID:	I07F009026	Matrix :	SOIL
Ext Btch ID:	IPE048S	% Moisture :	21.0
Calib. Ref.:	I07F009020	Instrument ID :	EMAXTI07

PARAMETERS	RESULTS (mg/kg)	RL (mg/kg)	MDL (mg/kg)
Antimony	3.45J	12.7	2.53
Barium	202	1.27	.19
Beryllium	.217J	1.27	.19
Cadmium	ND	1.27	.633
Chromium	32.6	2.53	.759
Cobalt	12.5	2.53	.949
Copper	22.3	2.53	.633
Molybdenum	ND	6.33	.949
Nickel	12	2.53	.696
Silver	1.84J	2.53	.797
Vanadium	80.1	2.53	.633
Zinc	68.4	1.27	.38

METHOD 3050B/6010B
METALS BY TRACE ICP

Client	: KLEINFELDER	Date Collected:	05/17/04
Project	: LAKESIDE CONSERVANCY FILL	Date Received:	05/19/04
SDG NO.	: 04E159	Date Extracted:	05/20/04 08:35
Sample ID:	KB-905'	Date Analyzed:	06/02/04 06:44
Lab Samp ID:	E159-08	Dilution Factor:	1
Lab File ID:	I31F007026	Matrix :	SOIL
Ext Btch ID:	IPE048S	% Moisture :	21.0
Calib. Ref.:	I31F007020	Instrument ID :	EMAXTI31

PARAMETERS	RESULTS (mg/kg)	RL (mg/kg)	MDL (mg/kg)
Arsenic	2.04	1.27	.506
Lead	3.99	1.27	.253
Selenium	ND	1.27	.633
Thallium	ND	1.27	.633

METHOD 3050B/6010B
METALS BY ICP

Cl[redacted]	: KLEINFELDER	Date Collected:	05/17/04
P[redacted]	: LAKESIDE CONSERVANCY FILL	Date Received:	05/19/04
SDG NO.	: 04E159	Date Extracted:	05/20/04 08:35
Sample ID:	KB-1085'	Date Analyzed:	06/03/04 04:32
Lab Samp ID:	E159-09	Dilution Factor:	1
Lab File ID:	I07F009027	Matrix :	SOIL
Ext Btch ID:	IPE048S	% Moisture :	3.8
Calib. Ref.:	I07F009020	Instrument ID :	EMAXTI07

PARAMETERS	RESULTS (mg/kg)	RL (mg/kg)	MDL (mg/kg)
Antimony	ND	10.4	2.08
Barium	39.5	1.04	.156
Beryllium	ND	1.04	.156
Cadmium	ND	1.04	.52
Chromium	7.33	2.08	.624
Cobalt	3.04	2.08	.78
Copper	6.92	2.08	.52
Molybdenum	ND	5.2	.78
Nickel	2.88	2.08	.572
Silver	.82J	2.08	.655
Vanadium	22.5	2.08	.52
Zinc	16	1.04	.312

METHOD 3050B/6010B
METALS BY TRACE ICP

Client	: KLEINFELDER	Date Collected:	05/17/04
Project	: LAKESIDE CONSERVANCY FILL	Date Received:	05/19/04
SDG NO.	: 04E159	Date Extracted:	05/20/04 08:35
Sample ID	: KB-10@5'	Date Analyzed:	06/02/04 06:49
Lab Samp ID	: E159-09	Dilution Factor:	1
Lab File ID	: I31F007027	Matrix :	SOIL
Ext Btch ID	: IPE048S	% Moisture :	3.8
Calib. Ref.	: I31F007020	Instrument ID :	EMAXTI31

PARAMETERS	RESULTS (mg/kg)	RL (mg/kg)	MDL (mg/kg)
Arsenic	.478J	1.04	.416
Lead	.994J	1.04	.208
Selenium	ND	1.04	.52
Thallium	ND	1.04	.52

METHOD 3050B/6010B
METALS BY ICP

Cli[illegible]	: KLEINFELDER	Date Collected:	05/17/04
Pr[illegible]	: LAKESIDE CONSERVANCY FILL	Date Received:	05/19/04
SDG No.	: 04E159	Date Extracted:	05/20/04 08:35
ample ID:	KB-11@15'	Date Analyzed:	06/03/04 04:36
ab Samp ID:	E159-10	Dilution Factor:	1
Lab File ID:	I07F009028	Matrix :	SOIL
Ext Btch ID:	IPE048S	% Moisture :	2.8
alib. Ref.:	I07F009020	Instrument ID :	EMAXT107

ARAMETERS	RESULTS (mg/kg)	RL (mg/kg)	MDL (mg/kg)
ntimony	ND	10.3	2.06
Barium	40.2	1.03	.154
eryllium	ND	1.03	.154
admium	ND	1.03	.514
hromium	9.7	2.06	.617
Cobalt	3.87	2.06	.772
Copper	6.15	2.06	.514
olybdenum	ND	5.14	.772
ickel	3	2.06	.566
Silver	ND	2.06	.648
Vanadium	24.6	2.06	.514
inc	16.2	1.03	.309

METHOD 3050B/6010B
METALS BY TRACE ICP

lient	: KLEINFELDER	Date Collected:	05/17/04
Project	: LAKESIDE CONSERVANCY FILL	Date Received:	05/19/04
SDG NO.	: 04E159	Date Extracted:	05/20/04 08:35
ample ID:	KB-11@15'	Date Analyzed:	06/02/04 06:55
ab Samp ID:	E159-10	Dilution Factor:	1
Lab File ID:	I31F007028	Matrix :	SOIL
Ext Btch ID:	IPE048S	% Moisture :	2.8
alib. Ref.:	I31F007020	Instrument ID :	EMAXTI31

PARAMETERS	RESULTS (mg/kg)	RL (mg/kg)	MDL (mg/kg)
rsenic	ND	1.03	.412
Lead	.739J	1.03	.206
Selenium	ND	1.03	.514
hallium	ND	1.03	.514

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METHOD 3050B/6010B
METALS BY ICP

[redacted]	: KLEINFELDER	Date Collected:	05/17/04
[redacted]	: LAKESIDE CONSERVANCY FILL	Date Received:	05/19/04
SDG NO.	: 04E159	Date Extracted:	05/20/04 08:35
Sample ID:	KB-12@5'	Date Analyzed:	06/03/04 04:41
Lab Samp ID:	E159-11	Dilution Factor:	1
Lab File ID:	I07F009029	Matrix :	SOIL
Ext Btch ID:	IPE048S	% Moisture :	9.4
Calib. Ref.:	I07F009020	Instrument ID :	EMAXTI07

PARAMETERS	RESULTS (mg/kg)	RL (mg/kg)	MDL (mg/kg)
Antimony	3.92J	11	2.21
Barium	83.5	1.1	.166
Beryllium	.229J	1.1	.166
Cadmium	ND	1.1	.552
Chromium	10.8	2.21	.662
Cobalt	4.97	2.21	.828
Copper	33.6	2.21	.552
Molybdenum	ND	5.52	.828
Nickel	6.52	2.21	.607
Silver	ND	2.21	.695
Vanadium	31.4	2.21	.552
Zinc	57.9	1.1	.331

METHOD 3050B/6010B
METALS BY TRACE ICP

Client	: KLEINFELDER	Date Collected:	05/17/04
Project	: LAKESIDE CONSERVANCY FILL	Date Received:	05/19/04
SDG NO.	: 04E159	Date Extracted:	05/20/04 08:35
Sample ID	: KB-12@5'	Date Analyzed:	06/02/04 07:00
Lab Samp ID	: E159-11	Dilution Factor:	1
Lab File ID	: I31F007029	Matrix :	SOIL
Ext Btch ID	: IPE048S	% Moisture :	9.4
Calib. Ref.	: I31F007020	Instrument ID :	EMAXTI31

PARAMETERS	RESULTS (mg/kg)	RL (mg/kg)	MDL (mg/kg)
Arsenic	4.47	1.1	.442
Lead	11.8	1.1	.221
Selenium	ND	1.1	.552
Thallium	ND	1.1	.552

METHOD 3050B/6010B
METALS BY ICP

Client	: KLEINFELDER	Date Collected:	05/17/04
Project	: LAKESIDE CONSERVANCY FILL	Date Received:	05/19/04
SDG NO.	: 04E159	Date Extracted:	05/20/04 08:35
Sample ID	: KB-13@5'	Date Analyzed:	06/03/04 04:45
Lab Samp ID	: E159-12	Dilution Factor:	1
Lab File ID	: I07F009030	Matrix :	SOIL
Ext Btch ID	: IPE048S	% Moisture :	15.1
Calib. Ref.	: I07F009020	Instrument ID :	EMAXTI07

PARAMETERS	RESULTS (mg/kg)	RL (mg/kg)	MDL (mg/kg)
Antimony	2.52J	11.8	2.36
Barium	502	1.18	.177
Beryllium	.497J	1.18	.177
Cadmium	ND	1.18	.589
Chromium	22.6	2.36	.707
Cobalt	4.1	2.36	.883
Copper	8.51	2.36	.589
Molybdenum	ND	5.89	.883
Nickel	7.46	2.36	.648
Silver	.81J	2.36	.742
Vanadium	47	2.36	.589
Zinc	28.4	1.18	.353

METHOD 3050B/6010B
METALS BY TRACE ICP

Client	: KLEINFELDER	Date Collected:	05/17/04
Project	: LAKESIDE CONSERVANCY FILL	Date Received:	05/19/04
SDG NO.	: 04E159	Date Extracted:	05/20/04 08:35
Sample ID	: KB-13@5'	Date Analyzed:	06/02/04 07:06
Lab Samp ID	: E159-12	Dilution Factor:	1
Lab File ID	: I31F007030	Matrix :	SOIL
Ext Btch ID	: IPE048S	% Moisture :	15.1
Calib. Ref.	: I31F007020	Instrument ID :	EMAXTI31

PARAMETERS	RESULTS (mg/kg)	RL (mg/kg)	MDL (mg/kg)
Arsenic	4.71	1.18	.471
Lead	5.37	1.18	.236
Selenium	ND	1.18	.589
Thallium	ND	1.18	.589

METHOD 3050B/6010B
METALS BY ICP

[redacted]	: KLEINFELDER	Date Collected:	05/17/04
P[redacted]	: LAKESIDE CONSERVANCY FILL	Date Received:	05/19/04
SDG NO.	: 04E159	Date Extracted:	05/20/04 08:35
Sample ID:	KB-14@10'	Date Analyzed:	06/03/04 04:49
Lab Samp ID:	E159-13	Dilution Factor:	1
Lab File ID:	I07F009031	Matrix :	SOIL
Ext Btch ID:	IPE048S	% Moisture :	12.8
Calib. Ref.:	I07F009020	Instrument ID :	EMAXTI07

PARAMETERS	RESULTS (mg/kg)	RL (mg/kg)	MDL (mg/kg)
Antimony	ND	11.5	2.29
Barium	78.2	1.15	.172
Beryllium	.236J	1.15	.172
Cadmium	ND	1.15	.573
Chromium	10.6	2.29	.688
Cobalt	6.91	2.29	.86
Copper	11.2	2.29	.573
Molybdenum	ND	5.73	.86
Nickel	4.32	2.29	.631
Silver	ND	2.29	.722
Vanadium	34.7	2.29	.573
Zinc	32.4	1.15	.344

METHOD 3050B/6010B
METALS BY TRACE ICP

Client	: KLEINFELDER	Date Collected:	05/17/04
Project	: LAKESIDE CONSERVANCY FILL	Date Received:	05/19/04
SDG NO.	: 04E159	Date Extracted:	05/20/04 08:35
Sample ID:	KB-14@10'	Date Analyzed:	06/02/04 07:11
Lab Samp ID:	E159-13	Dilution Factor:	1
Lab File ID:	I31F007031	Matrix :	SOIL
Ext Btch ID:	IPE048S	% Moisture :	12.8
Calib. Ref.:	I31F007020	Instrument ID :	EMAXTI31

PARAMETERS	RESULTS (mg/kg)	RL (mg/kg)	MDL (mg/kg)
Arsenic	3.42	1.15	.459
Lead	8.51	1.15	.229
Selenium	ND	1.15	.573
Thallium	ND	1.15	.573

METHOD 3050B/6010B
METALS BY ICP

C[redacted]	: KLEINFELDER	Date Collected:	05/17/04
P[redacted]	: LAKESIDE CONSERVANCY FILL	Date Received:	05/19/04
SDG NO.	: 04E159	Date Extracted:	05/20/04 08:35
Sample ID:	KB-15@5'	Date Analyzed:	06/03/04 12:52
Lab Samp ID:	E159-14	Dilution Factor:	1
Lab File ID:	I07F011031	Matrix :	SOIL
Ext Btch ID:	IPE048S	% Moisture :	14.5
Calib. Ref.:	I07F011021	Instrument ID :	EMAXTI07

PARAMETERS	RESULTS (mg/kg)	RL (mg/kg)	MDL (mg/kg)
Antimony	ND	11.7	2.34
Barium	108	1.17	.175
Beryllium	.352J	1.17	.175
Cadmium	ND	1.17	.585
Chromium	10.3	2.34	.702
Cobalt	5.03	2.34	.877
Copper	8.74	2.34	.585
Molybdenum	ND	5.85	.877
Nickel	4.51	2.34	.643
Silver	ND	2.34	.737
Vanadium	36.3	2.34	.585
Zinc	42.3	1.17	.351

METHOD 3050B/6010B
METALS BY TRACE ICP

Client	: KLEINFELDER	Date Collected:	05/17/04
Project	: LAKESIDE CONSERVANCY FILL	Date Received:	05/19/04
SDG NO.	: 04E159	Date Extracted:	05/20/04 08:35
Sample ID:	KB-15@5'	Date Analyzed:	06/02/04 07:34
Lab Samp ID:	E159-14	Dilution Factor:	1
Lab File ID:	I31F007034	Matrix :	SOIL
Ext Btch ID:	IPE048S	% Moisture :	14.5
Calib. Ref.:	I31F007032	Instrument ID :	EMAXTI31

PARAMETERS	RESULTS (mg/kg)	RL (mg/kg)	MDL (mg/kg)
Arsenic	7.85	1.17	.468
Lead	13	1.17	.234
Selenium	ND	1.17	.585
Thallium	ND	1.17	.585

METHOD 3050B/6010B
METALS BY ICP

[redacted]	: KLEINFELDER	Date Collected:	05/17/04
Project	: LAKESIDE CONSERVANCY FILL	Date Received:	05/19/04
SDG NO.	: 04E159	Date Extracted:	05/20/04 08:35
Sample ID:	KB-17@5'	Date Analyzed:	06/03/04 12:57
Lab Samp ID:	E159-15	Dilution Factor:	1
Lab File ID:	I07F011032	Matrix :	SOIL
Ext Btch ID:	IPE048S	% Moisture :	3.3
Calib. Ref.:	I07F011021	Instrument ID :	EMAXTI07

PARAMETERS	RESULTS (mg/kg)	RL (mg/kg)	MDL (mg/kg)
Antimony	ND	10.3	2.07
Barium	63.7	1.03	.155
Beryllium	.235J	1.03	.155
Cadmium	ND	1.03	.517
Chromium	2.81	2.07	.62
Cobalt	1.77J	2.07	.776
Copper	5.7	2.07	.517
Molybdenum	ND	5.17	.776
Nickel	7.33	2.07	.569
Silver	ND	2.07	.651
Vanadium	12.8	2.07	.517
Zinc	30.6	1.03	.31

METHOD 3050B/6010B
METALS BY TRACE ICP

lient	: KLEINFELDER	Date Collected:	05/17/04
Project	: LAKESIDE CONSERVANCY FILL	Date Received:	05/19/04
SDG NO.	: 04E159	Date Extracted:	05/20/04 08:35
ample ID	: KB-17@5'	Date Analyzed:	06/02/04 07:39
ab Samp ID	: E159-15	Dilution Factor:	1
Lab File ID	: I31F007035	Matrix :	SOIL
Ext Btch ID	: IPE048S	% Moisture :	3.3
alib. Ref.	: I31F007032	Instrument ID :	EMAXTI31

PARAMETERS	RESULTS (mg/kg)	RL (mg/kg)	MDL (mg/kg)
rsenic	7.91	1.03	.414
Lead	4.42	1.03	.207
Selenium	1.75	1.03	.517
hallium	ND	1.03	.517

METHOD 3050B/6010B
METALS BY ICP

[redacted]	: KLEINFELDER	Date Collected:	NA
[redacted]	: LAKESIDE CONSERVANCY FILL	Date Received:	05/20/04
SDG NO.	: 04E159	Date Extracted:	05/20/04 08:35
Sample ID:	MBLK1S	Date Analyzed:	06/03/04 03:18
Lab Samp ID:	IPE048SB	Dilution Factor:	1
Lab File ID:	I07F009010	Matrix :	SOIL
Ext Btch ID:	IPE048S	% Moisture :	NA
Calib. Ref.:	I07F009008	Instrument ID :	EMAXTI07

PARAMETERS	RESULTS (mg/kg)	RL (mg/kg)	MDL (mg/kg)
Antimony	ND	10	2
Barium	ND	1	.15
Beryllium	ND	1	.15
Cadmium	ND	1	.5
Chromium	ND	2	.6
Cobalt	ND	2	.75
Copper	ND	2	.5
Molybdenum	ND	5	.75
Nickel	ND	2	.55
Silver	ND	2	.63
Vanadium	ND	2	.5
Zinc	ND	1	.3

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: KLEINFELDER
PROJECT: LAKESIDE CONSERVANCY FILL
SDG NO.: 04E159
METHOD: METHOD 3050B/6010B

MATRIX:	SOIL			% MOISTURE:	NA
DILTN FACTR:	1	1	I		
SAMPLE ID:	MBLK1S				
CONTROL NO.:	IPE048SB	IPE048SL	IPE048SC		
LAB FILE ID:	I07F009010	I07F009011	I07F009012		
DATIME EXTRCTD:	05/20/0408:35	05/20/0408:35	05/20/0408:35	DATE COLLECTED:	NA
DATIME ANALYZD:	06/03/0403:18	06/03/0403:22	06/03/0403:27	DATE RECEIVED:	05/20/04
PREP. BATCH:	IPE048S	IPE048S	IPE048S		
CALIB. REF:	I07F009008	I07F009008	I07F009008		

ACCESSION:

PARAMETER	BLNK RSLT mg/kg	SPIKE AMT mg/kg	BS RSLT mg/kg	BS % REC	SPIKE AMT mg/kg	BSD RSLT mg/kg	BSD % REC	RPD %	QC LIMIT %	MAX RPD %
Antimony	ND	500	422	84	500	420	84	0	80-120	20
Barium	ND	100	86.6	87	100	86.4	86	0	80-120	20
Beryllium	ND	100	91.3	91	100	91.2	91	0	80-120	20
Cadmium	ND	100	88.8	89	100	88.6	89	0	80-120	20
Chromium	ND	100	90.6	91	100	90.3	90	0	80-120	20
Cobalt	ND	100	84.9	85	100	85.2	85	0	80-120	20
Copper	ND	100	85.8	86	100	85.9	86	0	80-120	20
Molybdenum	ND	100	88.3	88	100	87.9	88	0	80-120	20
Nickel	ND	100	86.9	87	100	86.7	87	0	80-120	20
Silver	ND	100	88.4	88	100	88.4	88	0	80-120	20
Vanadium	ND	100	90.9	91	100	91.1	91	0	80-120	20
Zinc	ND	100	89	89	100	88.9	89	0	80-120	20

METHOD 3050B/6010B
METALS BY TRACE ICP

[redacted]	: KLEINFELDER	Date Collected:	NA
Project	: LAKESIDE CONSERVANCY FILL	Date Received:	05/20/04
SDG NO.	: 04E159	Date Extracted:	05/20/04 08:35
Sample ID:	MBLK1S	Date Analyzed:	06/02/04 05:11
Lab Samp ID:	IPE048S8	Dilution Factor:	1
Lab File ID:	I31F007D10	Matrix :	SOIL
Ext Btch ID:	IPE048S	% Moisture :	NA
Calib. Ref.:	I31F007D08	Instrument ID :	EMAXTI31

PARAMETERS	RESULTS (mg/kg)	RL (mg/kg)	MDL (mg/kg)
Arsenic	ND	1	.4
Lead	ND	1	.2
Selenium	ND	1	.5
Thallium	ND	1	.5

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: KLEINFELDER
PROJECT: LAKESIDE CONSERVANCY FILL
SDG NO.: 04E159
METHOD: METHOD 3050B/6010B

MATRIX:	SOIL			% MOISTURE:	NA
DILTN FACTR:	1	1	1		
SAMPLE ID:	MBLK1S				
CONTROL NO.:	IPE048SB	IPE048SL	IPE048SC		
LAB FILE ID:	I31F007010	I31F007011	I31F007012		
DATIME EXTRCTD:	05/20/0408:35	05/20/0408:35	05/20/0408:35	DATE COLLECTED:	NA
DATIME ANALYZD:	06/02/0405:11	06/02/0405:16	06/02/0405:22	DATE RECEIVED:	05/20/04
PREP. BATCH:	IPE048S	IPE048S	IPE048S		
CALIB. REF:	I31F007008	I31F007008	I31F007008		

ACCESSION:

PARAMETER	BLNK RSLT mg/kg	SPIKE AMT mg/kg	BS RSLT mg/kg	BS % REC	SPIKE AMT mg/kg	BSD RSLT mg/kg	BSD % REC	RPD %	QC LIMIT %	MAX RPD %
Arsenic	ND	100	89.6	90	100	90.2	90	1	80-120	20
Lead	ND	100	88.6	89	100	89.6	90	1	80-120	20
Selenium	ND	100	83.9	84	100	84.3	84	0	80-120	20
Thallium	ND	100	88.9	89	100	89.6	90	1	80-120	20

EMAX QUALITY CONTROL DATA
MS/MSD ANALYSIS

CLIENT: KLEINFELDER
PROJECT: LAKESIDE CONSERVANCY FILL
PROJ. NO.: 04E159
METHOD: METHOD 3050B/6010B

MATRIX: SOIL % MOISTURE: 9.7

DILTN FACTR:	1	1	1		
SAMPLE ID:	KB-1@5'				
CONTROL NO.:	E159-01	E159-01M	E159-01S		
LAB FILE ID:	I07F009016	I07F009014	I07F009015		
DATIME EXTRCTD:	05/20/0408:35	05/20/0408:35	05/20/0408:35	DATE COLLECTED:	05/17/04
DATIME ANALYZD:	06/03/0403:45	06/03/0403:35	06/03/0403:39	DATE RECEIVED:	05/19/04
PREP. BATCH:	IPE048S	IPE048S	IPE048S		
CALIB. REF:	I07F009008	I07F009008	I07F009008		

ACCESSION:

PARAMETER	SMPL RSLT mg/kg	SPIKE AMT mg/kg	MS RSLT mg/kg	MS % REC	SPIKE AMT mg/kg	MSD RSLT mg/kg	MSD % REC	RPD %	QC LIMIT %	MAX RPD %
Antimony	ND	554	246	44*	554	241	44*	2	75-125	20
Barium	113	111	207	84	111	206	83	1	75-125	20
Beryllium	.199J	111	98.4	89	111	97.5	88	1	75-125	20
Cadmium	ND	111	95.7	86	111	95.6	86	0	75-125	20
Chromium	20.8	111	117	87	111	117	87	0	75-125	20
Cobalt	7.63	111	97.1	81	111	96.9	81	0	75-125	20
Copper	16.5	111	110	85	111	110	85	0	75-125	20
Molybdenum	ND	111	89.2	81	111	88.7	80	0	75-125	20
Nickel	6.86	111	99.3	83	111	98.1	82	1	75-125	20
Silver	1.09J	111	96.9	86	111	96.8	86	0	75-125	20
Vanadium	50	111	146	86	111	145	86	0	75-125	20
Zinc	38.7	111	135	87	111	134	86	1	75-125	20

EMAX QUALITY CONTROL DATA
MS/MSD ANALYSIS

CLIENT: KLEINFELDER
PROJECT: LAKESIDE CONSERVANCY FILL
SDG NO.: 04E159
METHOD: METHOD 3050B/6010B

MATRIX:	SOIL			% MOISTURE:	9.7
DILTN FACTR:	1	1	1		
SAMPLE ID:	KB-1@5'				
CONTROL NO.:	E159-01	E159-01M	E159-01S		
LAB FILE ID:	I31F007016	I31F007014	I31F007015		
DATIME EXTRCTD:	05/20/0408:35	05/20/0408:35	05/20/0408:35	DATE COLLECTED:	05/17/04
DATIME ANALYZD:	06/02/0405:45	06/02/0405:32	06/02/0405:38	DATE RECEIVED:	05/19/04
PREP. BATCH:	IPE048S	IPE048S	IPE048S		
CALIB. REF:	I31F007008	I31F007008	I31F007008		

ACCESSION:

PARAMETER	SMPL RSLT mg/kg	SPIKE AMT mg/kg	MS RSLT mg/kg	MS % REC	SPIKE AMT mg/kg	MSD RSLT mg/kg	MSD % REC	RPD %	QC LIMIT %	MAX RPD %
Arsenic	.944J	111	93.7	84	111	93.4	83	0	75-125	20
Lead	1.96	111	94.3	83	111	93.7	83	1	75-125	20
Selenium	ND	111	87	79	111	85.8	77	1	75-125	20
Thallium	ND	111	91.1	82	111	90.8	82	0	75-125	20

EMAX QUALITY CONTROL DATA
SERIAL DILUTION ANALYSIS

CLIENT: KLEINFELDER
PROJECT: LAKESIDE CONSERVANCY FILL
BATCH NO.: 04E159
METHOD: METHOD 3050B/6010B

MATRIX:	SOIL		% MOISTURE:	9.7
DILUTION FACTOR:	1	5		
SAMPLE ID:	KB-1@5'	KB-1@5'DL		
EMAX SAMP ID:	E159-01	E159-01T		
LAB FILE ID:	I07F009016	I07F009017		
DATE EXTRACTED:	05/20/0408:35	05/20/0408:35	DATE COLLECTED:	05/17/04
DATE ANALYZED:	06/03/0403:45	06/03/0403:50	DATE RECEIVED:	05/19/04
PREP. BATCH:	IPE048S	IPE048S		
CALIB. REF:	I07F009008	I07F009008		

ACCESSION:

PARAMETER	SMPL RSLT (mg/kg)	SERIAL DIL RSLT (mg/kg)	DIF RSLT %	QC LIMIT (%)
Antimony	ND	ND	0	10
Barium	113	110	3	10
Beryllium	.199J	ND	NA	10
Cadmium	ND	ND	0	10
Chromium	20.8	21.5	4	10
Cobalt	7.63	8.25J	NA	10
Copper	16.5	18.2	11*	10
Molybdenum	ND	ND	0	10
Nickel	6.86	8.48J	NA	10
Silver	1.09J	ND	NA	10
Vanadium	50	51.1	2	10
Zinc	38.7	40.7	5	10

EMAX QUALITY CONTROL DATA
SERIAL DILUTION ANALYSIS

CLIENT: KLEINFELDER
PROJECT: LAKESIDE CONSERVANCY FILL
BATCH NO.: 04E159
METHOD: METHOD 3050B/6010B

MATRIX:	SOIL		% MOISTURE:	9.7
DILUTION FACTOR:	1	5		
SAMPLE ID:	KB-1@5'	KB-1@5'DL		
EMAX SAMP ID:	E159-01	E159-01T		
LAB FILE ID:	I31F007016	I31F007017		
DATE EXTRACTED:	05/20/0408:35	05/20/0408:35	DATE COLLECTED:	05/17/04
DATE ANALYZED:	06/02/0405:45	06/02/0405:51	DATE RECEIVED:	05/19/04
PREP. BATCH:	IPE048S	IPE048S		
CALIB. REF:	I31F007008	I31F007008		

ACCESSION:

PARAMETER	SMPL RSLT (mg/kg)	SERIAL DIL RSLT (mg/kg)	DIF. RSLT %	QC LIMIT (%)
Arsenic	.944J	2.3J	NA	10
Lead	1.96	2.12J	NA	10
Selenium	ND	ND	0	10
Thallium	ND	ND	0	10

EMAX QUALITY CONTROL DATA
ANALYTICAL SPIKE ANALYSIS

CLIENT: KLEINFELDER
PROJECT: LAKESIDE CONSERVANCY FILL
S[redacted]: 04E159
M[redacted]: METHOD 30508/60108

MATRIX:	SOIL		% MOISTURE:	9.7
DILTN FACTR:	1	1		
SAMPLE ID:	KB-1@5'			
CONTROL NO.:	E159-01	E159-01A		
LAB FILE ID:	I07F009016	I07F009013		
DATIME EXTRCTD:	05/20/0408:35	05/20/0408:35	DATE COLLECTED:	05/17/04
DATIME ANALYZD:	06/03/0403:45	06/03/0403:31	DATE RECEIVED:	05/19/04
PREP. BATCH:	IPE048S	IPE048S		
CALIB. REF:	I07F009008	I07F009008		

ACCESSION:

PARAMETER	SMPL RSLT (mg/kg)	SPIKE AMT (mg/kg)	AS RSLT (mg/kg)	AS % REC	QC LIMIT (%)
Antimony	ND	554	466	84	75-125
Barium	113	111	205	83	75-125
Beryllium	.199J	111	101	91	75-125
Cadmium	ND	111	99.3	90	75-125
Chromium	20.8	111	121	90	75-125
Cobalt	7.63	111	101	84	75-125
Copper	16.5	111	112	86	75-125
Molybdenum	ND	111	96.8	87	75-125
Nickel	6.86	111	102	86	75-125
Silver	1.09J	111	99.7	89	75-125
Vanadium	50	111	148	89	75-125
Zinc	38.7	111	135	87	75-125

EMAX QUALITY CONTROL DATA
ANALYTICAL SPIKE ANALYSIS

CLIENT:	KLEINFELDER	
PROJECT:	LAKESIDE CONSERVANCY FILL	
SDG NO.:	04E159	
METHOD:	METHOD 3050B/6010B	

MATRIX:	SOIL		% MOISTURE:	9.7
DILTN FACTR:	1	1		
SAMPLE ID:	KB-1@5'			
CONTROL NO.:	E159-01	E159-01A		
LAB FILE ID:	I31F007016	I31F007013		
DATIME EXTRCTD:	05/20/0408:35	05/20/0408:35	DATE COLLECTED:	05/17/04
DATIME ANALYZD:	06/02/0405:45	06/02/0405:27	DATE RECEIVED:	05/19/04
PREP. BATCH:	IPE048S	IPE048S		
CALIB. REF:	I31F007008	I31F007008		

ACCESSION:

PARAMETER	SMPL RSLT (mg/kg)	SPIKE AMT (mg/kg)	AS RSLT (mg/kg)	AS % REC	QC LIMIT (%)
Arsenic	.944J	111	99.6	89	75-125
Lead	1.96	111	98	87	75-125
Selenium	ND	111	92.3	83	75-125
Thallium	ND	111	95.4	86	75-125

CASE NARRATIVE

CLIENT: KLEINFELDER

PROJECT: LAKESIDE CONSERVANCY FILL

SDG: 04E159

METHOD 7471A
MERCURY BY COLD VAPOR

Fifteen (15) soil samples were received on 05/19/04 for Mercury analysis by Method 7471A in accordance with "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", SW846, 3rd edition.

1. Holding Time

   Analysis met holding time criteria.

2. Method Blank

   Method blank was free of contamination at the reporting limit.

3. Lab Control Sample/Lab Control Sample Duplicate

   Lab control results were within QC limit.

4. Serial Dilution / Post-Analytical Spike

   Sample E159-01 was analyzed for serial dilution and post-analytical spike. All QC requirements were met.

5. Matrix Spike/Matrix Spike Duplicate

   Sample E159-09 was spiked. All recoveries were within QC limit.

6. Sample Analysis

   Samples were analyzed according to the prescribed QC procedures. All criteria were met.

LAB CHRONICLE
MERCURY BY COLD VAPOR

Client : KLEINFELDER
Project : LAKESIDE CONSERVANCY FILL

SDG NO. : 04E159
Instrument ID : TI047

SOIL

Client Sample ID	Laboratory Sample ID	Dilution Factor	% Moist	Analysis DateTime	Extraction DateTime	Sample Data FN	Calibration Data FN	Prep. Batch	Notes
MBLK1S	HGF002SB	1	NA	06/02/0410:25	06/01/0417:30	M47F002010	M47F002008	HGF002S	Method Blank
LCS1S	HGF002SL	1	NA	06/02/0410:27	06/01/0417:30	M47F002011	M47F002008	HGF002S	Lab Control Sample (LCS)
LCD1S	HGF002SC	1	NA	06/02/0410:30	06/01/0417:30	M47F002012	M47F002008	HGF002S	LCS Duplicate
KB-1@5'AS	E159-01A	1	9.7	06/02/0410:32	06/01/0417:30	M47F002013	M47F002008	HGF002S	Analytical Spike Sample
KB-1@5'	E159-01	1	9.7	06/02/0410:34	06/01/0417:30	M47F002014	M47F002008	HGF002S	Field Sample
KB-1@5'DL	E159-01T	5	9.7	06/02/0410:36	06/01/0417:30	M47F002015	M47F002008	HGF002S	Diluted Sample
KB-2@5'	E159-02	1	16.2	06/02/0410:38	06/01/0417:30	M47F002016	M47F002008	HGF002S	Field Sample
KB-3@15'	E159-03	1	12.4	06/02/0410:41	06/01/0417:30	M47F002017	M47F002008	HGF002S	Field Sample
KB-4@10'	E159-04	1	2.1	06/02/0410:43	06/01/0417:30	M47F002018	M47F002008	HGF002S	Field Sample
KB-5@19'	E159-05	1	14.5	06/02/0410:45	06/01/0417:30	M47F002019	M47F002008	HGF002S	Field Sample
KB-7@10'	E159-06	1	2.2	06/02/0410:51	06/01/0417:30	M47F002022	M47F002020	HGF002S	Field Sample
KB-8@10'	E159-07	1	8.5	06/02/0410:53	06/01/0417:30	M47F002023	M47F002020	HGF002S	Field Sample
KB-9@5'	E159-08	1	21.0	06/02/0410:56	06/01/0417:30	M47F002024	M47F002020	HGF002S	Field Sample
KB-10@5'	E159-09	1	3.8	06/02/0410:58	06/01/0417:30	M47F002025	M47F002020	HGF002S	Field Sample
KB-10@5'MS	E159-09M	1	3.8	06/02/0411:00	06/01/0417:30	M47F002026	M47F002020	HGF002S	Matrix Spike Sample (MS)
KB-10@5'MSD	E159-09S	1	3.8	06/02/0411:02	06/01/0417:30	M47F002027	M47F002020	HGF002S	MS Ouplicate (MSD)
KB-11@15'	E159-10	1	2.8	06/02/0411:04	06/01/0417:30	M47F002028	M47F002020	HGF002S	Field Sample
KB-12@5'	E159-11	1	9.4	06/02/0411:06	06/01/0417:30	M47F002029	M47F002020	HGF002S	Field Sample
KB-13@5'	E159-12	1	15.1	06/02/0411:09	06/01/0417:30	M47F002030	M47F002020	HGF002S	Field Sample
KB-14@10'	E159-13	1	12.8	06/02/0411:11	06/01/0417:30	M47F002031	M47F002020	HGF002S	Field Sample
KB-15@5'	E159-14	1	14.5	06/02/0411:17	06/01/0417:30	M47F002034	M47F002032	HGF002S	Field Sample
KB-17@5'	E159-15	1	3.3	06/02/0411:20	06/01/0417:30	M47F002035	M47F002032	HGF002S	Field Sample

FN - Filename
% Moist - Percent Moisture

METHOD
MERCURY BY COLD VAPOR

Client : KLEINFELDER
Project : LAKESIDE CONSERVANCY FILL
Batch No. : 04E159

Matrix : SOIL
Instrument ID : TI047

SAMPLE ID	EMAX SAMPLE ID	RESULTS (mg/kg)	DLF	MOIST	RL (mg/kg)	MDL (mg/kg)	Analysis DATETIME	Extraction DATETIME	LFID	CAL REF	PREP BATCH	Collection DATETIME	Received DATETIME
MBLK1S	HGF002SB	ND	1	NA	.1	.033	06/02/0410:25	06/01/0417:30	M47F002010	M47F002008	HGF002S	NA	06/01/04
LCS1S	HGF002SL	.872	1	NA	.1	.033	06/02/0410:27	06/01/0417:30	M47F002011	M47F002008	HGF002S	NA	06/01/04
LCD1S	HGF002SC	.875	1	NA	.1	.033	06/02/0410:30	06/01/0417:30	M47F002012	M47F002008	HGF002S	NA	06/01/04
KB-1@5'AS	E159-01A	.397	1	9.7	.111	.0365	06/02/0410:32	06/01/0417:30	M47F002013	M47F002008	HGF002S	05/17/04	05/19/04
KB-1@5'	E159-01	ND	1	9.7	.111	.0365	06/02/0410:34	06/01/0417:30	M47F002014	M47F002008	HGF002S	05/17/04	05/19/04
KB-1@5'DL	E159-01T	ND	5	9.7	.554	.183	06/02/0410:36	06/01/0417:30	M47F002015	M47F002008	HGF002S	05/17/04	05/19/04
KB-2@5'	E159-02	ND	1	16.2	.119	.0394	06/02/0410:38	06/01/0417:30	M47F002016	M47F002008	HGF002S	05/17/04	05/19/04
KB-3@15'	E159-03	ND	1	12.4	.114	.0377	06/02/0410:41	06/01/0417:30	M47F002017	M47F002008	HGF002S	05/17/04	05/19/04
KB-4@10'	E159-04	ND	1	2.1	.102	.0337	06/02/0410:43	06/01/0417:30	M47F002018	M47F002008	HGF002S	05/17/04	05/19/04
KB-5@19'	E159-05	ND	1	14.5	.117	.0386	06/02/0410:45	06/01/0417:30	M47F002019	M47F002008	HGF002S	05/17/04	05/19/04
KB-7@10'	E159-06	ND	1	2.2	.102	.0337	06/02/0410:51	06/01/0417:30	M47F002022	M47F002020	HGF002S	05/17/04	05/19/04
KB-8@10'	E159-07	ND	1	8.5	.109	.0361	06/02/0410:53	06/01/0417:30	M47F002023	M47F002020	HGF002S	05/17/04	05/19/04
KB-9@5'	E159-08	ND	1	21.0	.127	.0418	06/02/0410:56	06/01/0417:30	M47F002024	M47F002020	HGF002S	05/17/04	05/19/04
KB-10@5'	E159-09	ND	1	3.8	.104	.0343	06/02/0410:58	06/01/0417:30	M47F002025	M47F002020	HGF002S	05/17/04	05/19/04
KB-10@5'MS	E159-09M	.88	1	3.8	.104	.0343	06/02/0411:00	06/01/0417:30	M47F002026	M47F002020	HGF002S	05/17/04	05/19/04
KB-10@5'MSD	E159-09S	.892	1	3.8	.104	.0343	06/02/0411:02	06/01/0417:30	M47F002027	M47F002020	HGF002S	05/17/04	05/19/04
KB-11@15'	E159-10	ND	1	2.8	.103	.034	06/02/0411:04	06/01/0417:30	M47F002028	M47F002020	HGF002S	05/17/04	05/19/04
KB-12@5'	E159-11	ND	1	9.4	.11	.0364	06/02/0411:06	06/01/0417:30	M47F002029	M47F002020	HGF002S	05/17/04	05/19/04
KB-13@5'	E159-12	ND	1	15.1	.118	.0389	06/02/0411:09	06/01/0417:30	M47F002030	M47F002020	HGF002S	05/17/04	05/19/04
KB-14@10'	E159-13	ND	1	12.8	.115	.0378	06/02/0411:11	06/01/0417:30	M47F002031	M47F002020	HGF002S	05/17/04	05/19/04
KB-15@5'	E159-14	ND	1	14.5	.117	.0386	06/02/0411:17	06/01/0417:30	M47F002034	M47F002032	HGF002S	05/17/04	05/19/04
KB-17@5'	E159-15	ND	1	3.3	.103	.0341	06/02/0411:20	06/01/0417:30	M47F002035	M47F002032	HGF002S	05/17/04	05/19/04

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: KLEINFELDER
PROJECT: LAKESIDE CONSERVANCY FILL
SDG NO.: 04E159
METHOD: METHOD 7471A

MATRIX:	SOIL			% MOISTURE:	NA
DILTN FACTR:	1	1	1		
SAMPLE ID:	KB-17@5'				
CONTROL NO.:	HGF002SB	HGF002SL	HGF002SC		
LAB FILE ID:	M47F002010	M47F002011	M47F002012		
DATIME EXTRCTD:	06/01/0417:30	06/01/0417:30	06/01/0417:30	DATE COLLECTED:	05/17/04
DATIME ANALYZD:	06/02/0411:20	06/02/0411:20	06/02/0411:20	DATE RECEIVED:	05/19/04
PREP. BATCH:	HGF002S	HGF002S	HGF002S		
CALIB. REF:	M47F002032	M47F002032	M47F002032		

ACCESSION:

PARAMETER	BLNK RSLT mg/kg	SPIKE AMT mg/kg	BS RSLT mg/kg	BS % REC	SPIKE AMT mg/kg	BSD RSLT mg/kg	BSD % REC	RPD %	QC LIMIT %	MAX RPD %
Mercury	ND	.833	.872	105	.833	.875	105	0	80-120	20

7047

EMAX QUALITY CONTROL DATA
MS/MSD ANALYSIS

CLIENT: KLEINFELDER
PROJECT: LAKESIDE CONSERVANCY FILL
SDG NO.: 04E159
METHOD: METHOD 7471A

MATRIX:	SOIL			% MOISTURE:	3.8
DILTN FACTR:	1	1	1		
SAMPLE ID:	KB-17@5'				
CONTROL NO.:	E159-09	E159-09M	E159-09S		
LAB FILE ID:	M47F002025	M47F002026	M47F002027		
DATIME EXTRCTD:	06/01/0417:30	06/01/0417:30	06/01/0417:30	DATE COLLECTED:	05/17/04
DATIME ANALYZD:	06/02/0411:20	06/02/0411:20	06/02/0411:20	DATE RECEIVED:	05/19/04
PREP. BATCH:	HGF002S	HGF002S	HGF002S		
CALIB. REF:	M47F002032	M47F002032	M47F002032		

ACCESSION:

PARAMETER	SMPL RSLT mg/kg	SPIKE AMT mg/kg	MS RSLT mg/kg	MS % REC	SPIKE AMT mg/kg	MSD RSLT mg/kg	MSD % REC	RPD %	QC LIMIT %	MAX RPD %
Mercury	ND	.866	.88	102	.866	.892	103	0	75-125	20

7048

EMAX QUALITY CONTROL DATA
SERIAL DILUTION ANALYSIS

CLIENT: KLEINFELDER
PROJECT: LAKESIDE CONSERVANCY FILL
BATCH NO.: 04E159
METHOD: METHOD 7471A

MATRIX: SOIL % MOISTURE: 9.7

DILUTION FACTOR:	1	5		
SAMPLE ID:	KB-1@5'	KB-1@5'DL		
EMAX SAMP ID:	E159-01	E159-01T		
LAB FILE ID:	M47F002014	M47F002015		
DATE EXTRACTED:	06/01/0417:30	06/01/0417:30	DATE COLLECTED:	05/17/04
DATE ANALYZED:	06/02/0410:34	06/02/0410:36	DATE RECEIVED:	05/19/04
PREP. BATCH:	HGF002S	HGF002S		
CALIB. REF:	M47F002008	M47F002008		

ACCESSION:

PARAMETER	SMPL RSLT (mg/kg)	SERIAL DIL RSLT (mg/kg)	DIF RSLT %	QC LIMIT (%)
Mercury	ND	ND	0	10

7049

EMAX QUALITY CONTROL DATA
ANALYTICAL SPIKE ANALYSIS

CLIENT: KLEINFELDER
PROJECT: LAKESIDE CONSERVANCY FILL
SDG NO.: 04E159
METHOD: METHOD 7471A

MATRIX: SOIL % MOISTURE: 9.7
DILTN FACTR: 1 1
SAMPLE ID: KB-17@5'
CONTROL NO.: E159-01 E159-01A
LAB FILE ID: M47F002014 M47F002013
DATIME EXTRCTD: 06/01/0417:30 06/01/0417:30 DATE COLLECTED: 05/17/04
DATIME ANALYZD: 06/02/0411:20 06/02/0411:20 DATE RECEIVED: 05/19/04
PREP. BATCH: HGF002S HGF002S
CALIB. REF: M47F002032 M47F002032

ACCESSION:

PARAMETER	SMPL RSLT (mg/kg)	SPIKE AMT (mg/kg)	AS RSLT (mg/kg)	AS % REC	QC LIMIT (%)
Mercury	ND	.369	.397	108	85-115

7050

APPENDIX C

Soil Boring Survey Data

Appendix
Boring Location Easting and Northings

Boring	Northing	Easting
KB-1	32.856815	-116.937184
KB-2	32.857689	-116.936643
KB-3	32.857298	-116.935801
KB-4	32.858081	-116.935259
KB-5	32.857668	-116.934307
KB-6	32.858749	-116.934697
KB-7	32.858405	-116.933938
KB-8	32.857903	-116.932685
KB-9	32.859235	-116.934061
KB-10	32.859305	-116.933053
KB-11	32.858707	-116.932047
KB-12	32.859183	-116.932249
KB-13	32.859413	-116.931409
KB-14	32.860632	-116.931059
KB-15	32.861942	-116.929591
KB-16	32.862792	-116.928927
KB-17	32.862239	-116.927826
KB-18	32.863251	-116.927601

APPENDIX D

Geotechnical Laboratory Test Results

APPENDIX D
LABORATORY DATA

GENERAL

Laboratory tests were performed on selected, representative samples as an aid in classifying the soils and to evaluate soil engineering properties. A description of the laboratory testing program is presented below.

ATTERBERG LIMITS

Atterberg limits tests were performed on 25 soil samples obtained from the field investigation. The tests were performed in general accordance with ASTM D 4318. The results of these tests are presented in Table D1 and on Figures D1 through D3.

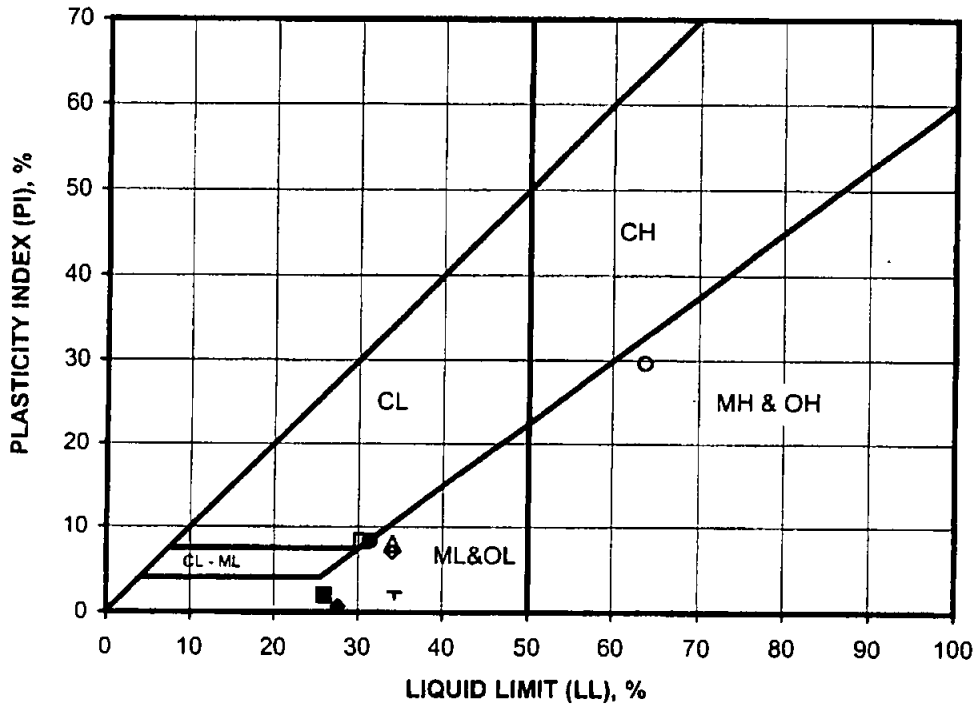
GRADATION ANALYSIS

A total of 25 grain size distribution analyses were performed on samples of the material encountered at the site to evaluate the gradation characteristics of the soil and to aid in classification. The tests were performed in general accordance with ASTM Test Method D 422. Results of these tests are presented in Table D1 and on Figures D4 through D29.

Copyright 2004 Kleinfelder, Inc.

SYMBOL	SAMPLE NAME	DEPTH (ft)	LL (%)	PL (%)	PI (%)	USCS CLASSIFICATION (Minus No. 40 Sieve Fraction)	USCS (Entire Sample)
●	KB-1	10	31	23	8	ML	SM
■	KB-1	19	26	24	2	ML	SM
◆	KB-2	5	28	27	1	ML	SM
○	KB-3	18	64	34	30	MH	MH
□	KB-4	15	30	22	8	CL	SM
△	KB-4	5	34	26	8	ML	SM
+	KB-5	10	34	32	2	ML	SM
◇	KB-5	18	34	27	7	ML	SM

Sample processed per client request.
NP - Indicates non-plastic



PERFORMED IN GENERAL ACCORDANCE WITH ASTM D 4318-98

KLEINFELDER
An employee owned company

ATTERBERG LIMITS TEST RESULTS

Lakeside Conservancy Fill

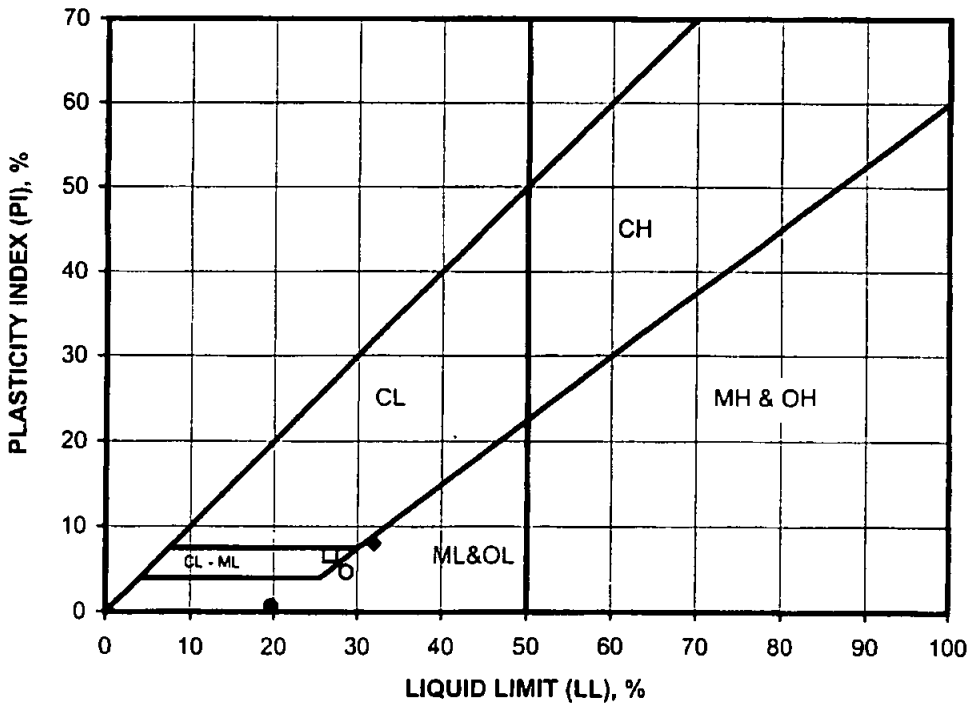
FIGURE

D1

CHECKED BY: LAB	FN: LAB
PROJECT NO.: 44102	5.25.04

SYMBOL	SAMPLE NAME	DEPTH (ft)	LL (%)	PL (%)	PI (%)	USCS CLASSIFICATION (Minus No. 40 Sieve Fraction)	USCS (Entire Sample)
●	KB-10	10	20	19	1	ML	SM
■	KB-7	5			NP	SM	SM
◆	KB-8	5	32	24	8	ML	SM
○	KB-9	10	29	24	5	ML	SM
□	KB-9	18	27	20	7	CL-ML	SM
△	KB-7	15			NP	SM	SM
+	KB-11	18			NP	SM	SM
◇	KB-11	10			NP	SM	SM

Sample processed per client request.
NP - Indicates non-plastic



PERFORMED IN GENERAL ACCORDANCE WITH ASTM D 4318-98

KLEINFELDER
An employee owned company

ATTERBERG LIMITS TEST RESULTS

Lakeside Conservancy Fill

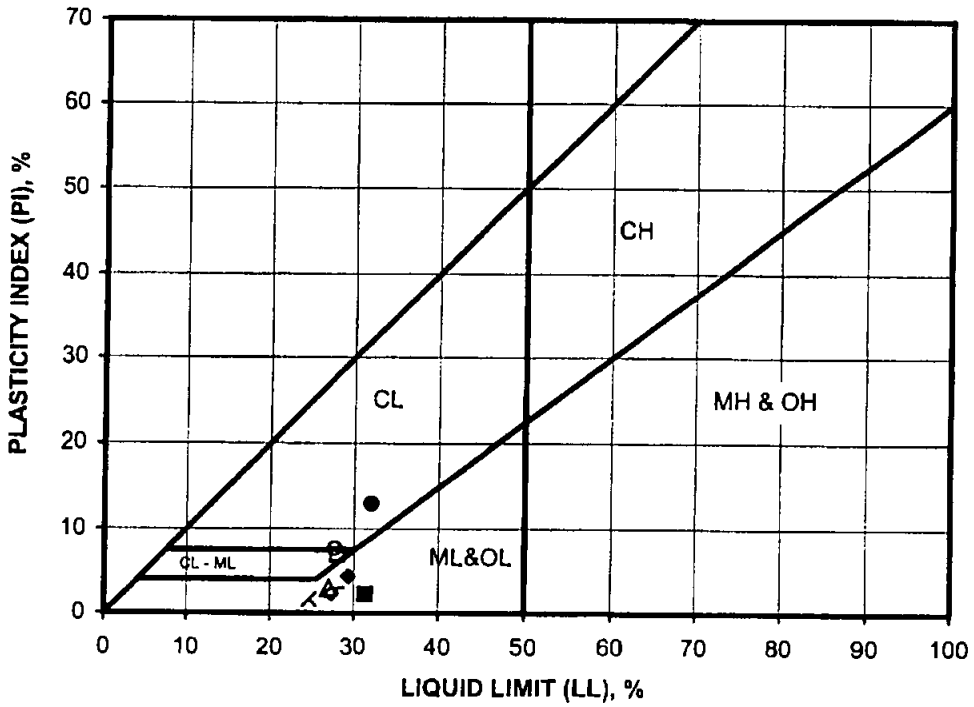
FIGURE

D2

CHECKED BY: LAB	FN: LAB
PROJECT NO.: 44102	5.25.04

SYMBOL	SAMPLE NAME	DEPTH (ft)	LL (%)	PL (%)	PI (%)	USCS CLASSIFICATION (Minus No. 40 Sieve Fraction)	USCS (Entire Sample)
●	KB-12	5	32	19	13	CL	SM
■	KB-12	15	31	29	2	ML	SM
◆	KB-13	10	29	25	4	ML	SM
○	KB-14	5	28	20	8	CL-ML	SM
□	KB-14	15	28	21	7	CL-ML	SM
△	KB-15	10	27	24	3	ML	SM
+	KB-16	5	28	25	3	ML	SM
◇	KB-17	10	27	25	2	ML	SM
X	KB-18	5	25	23	2	ML	SM

Sample processed per client request.
NP - Indicates non-plastic



PERFORMED IN GENERAL ACCORDANCE WITH ASTM D 4318-98

KLEINFELDER
An employee owned company

ATTERBERG LIMITS TEST RESULTS

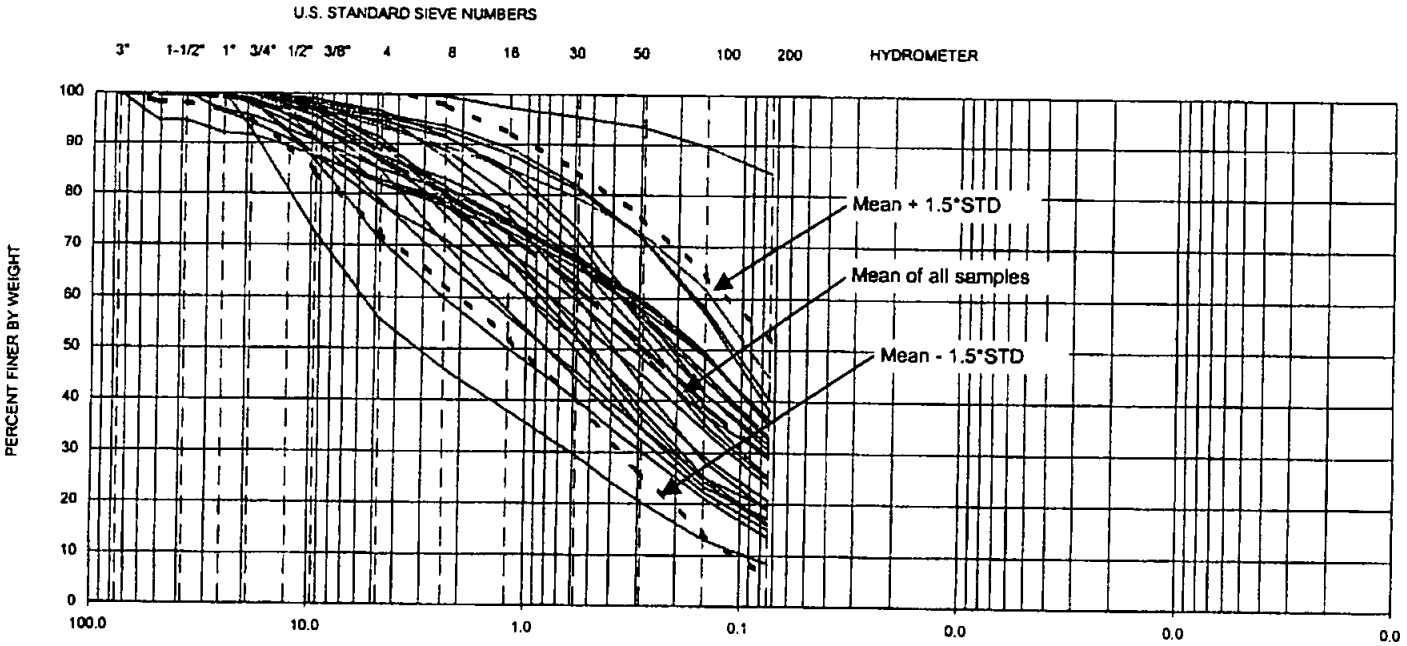
Lakeside Conservancy Fill

FIGURE

D3

CHECKED BY: LAB	FN: LAB
PROJECT NO.: 44102	5.25.04

GRAVEL		SAND			FINES	
Coarse	Fine	Coarse	Medium	Fine	Silt	Clay



GRAIN SIZE IN MILLIMETERS

Note:
STD = standard deviation

PERFORMED IN GENERAL ACCORDANCE WITH ASTM D 422

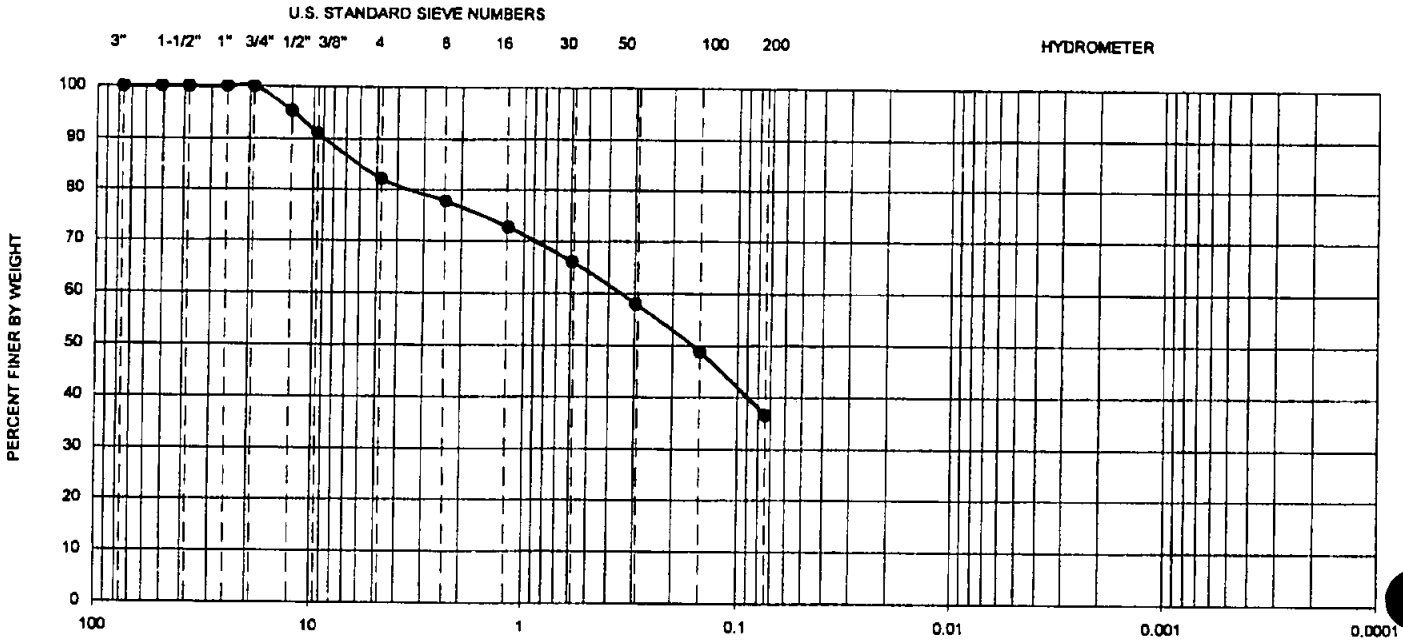
KLEINFELDER
An employee owned company

CHECKED BY: JRG	FN: LAB
JOB # 44102	5.25.04

GRADATION TEST RESULTS
ALL SAMPLES SHOWN
Lakeside Conservancy Fill

FIGURE
D4

GRAVEL		SAND			FINES	
Coarse	Fine	Coarse	Medium	Fine	Silt	Clay



GRAIN SIZE IN MILLIMETERS

SYMBOL	SAMPLE LOCATION	PASSING NO. 200 (PERCENT)	U.S.C.S
●	KB-1@10'	36	SM

PERFORMED IN GENERAL ACCORDANCE WITH ASTM D 422

KLEINFELDER
An employee owned company

GRADATION TEST RESULTS

Lakeside Conservancy Fill

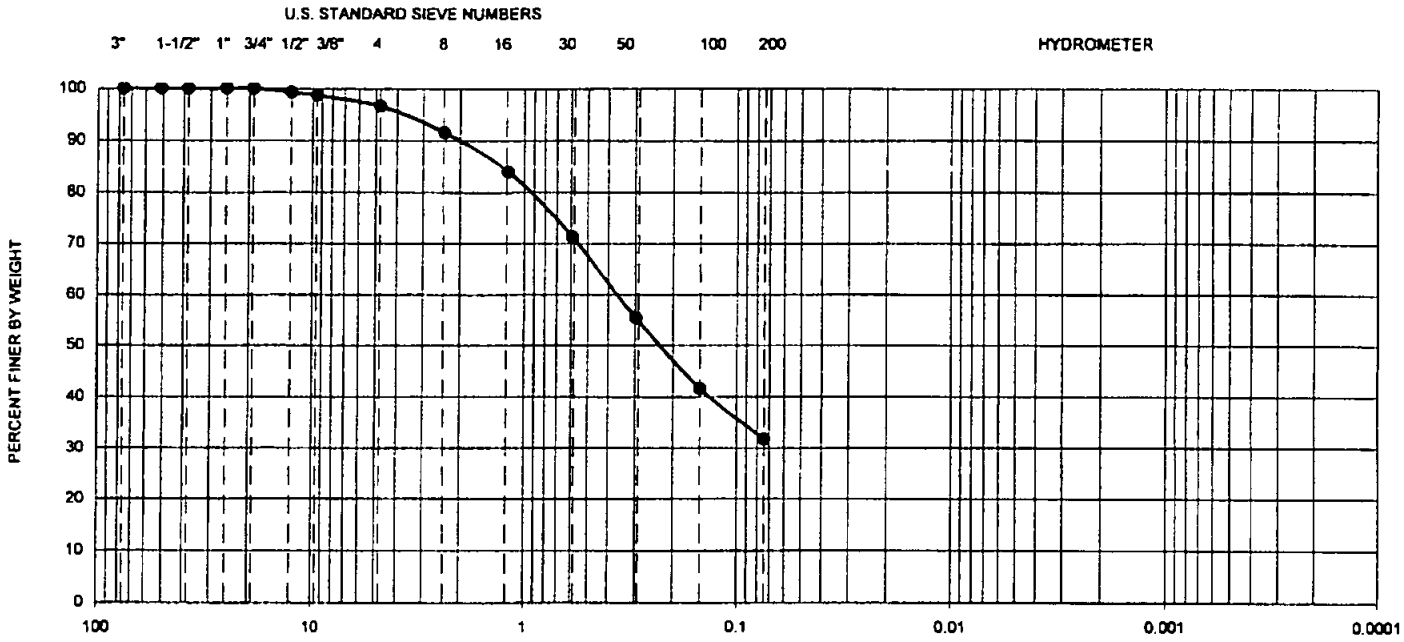
FIGURE

D5

CHECKED BY: JRG	FN: LAB
JOB # 44102	5.25.04

D05 KB-01@10 5.25.05 F-C Sieve (8,16,30,50) with graph.xls

GRAVEL		SAND			FINES	
Coarse	Fine	Coarse	Medium	Fine	Silt	Clay



SYMBOL	SAMPLE LOCATION	PASSING NO. 200 (PERCENT)	U.S.C.S
●	KB-1@19	32	SM

PERFORMED IN GENERAL ACCORDANCE WITH ASTM D 422

KLEINFELDER
An employee owned company

GRADATION TEST RESULTS

Lakeside Conservancy Fill

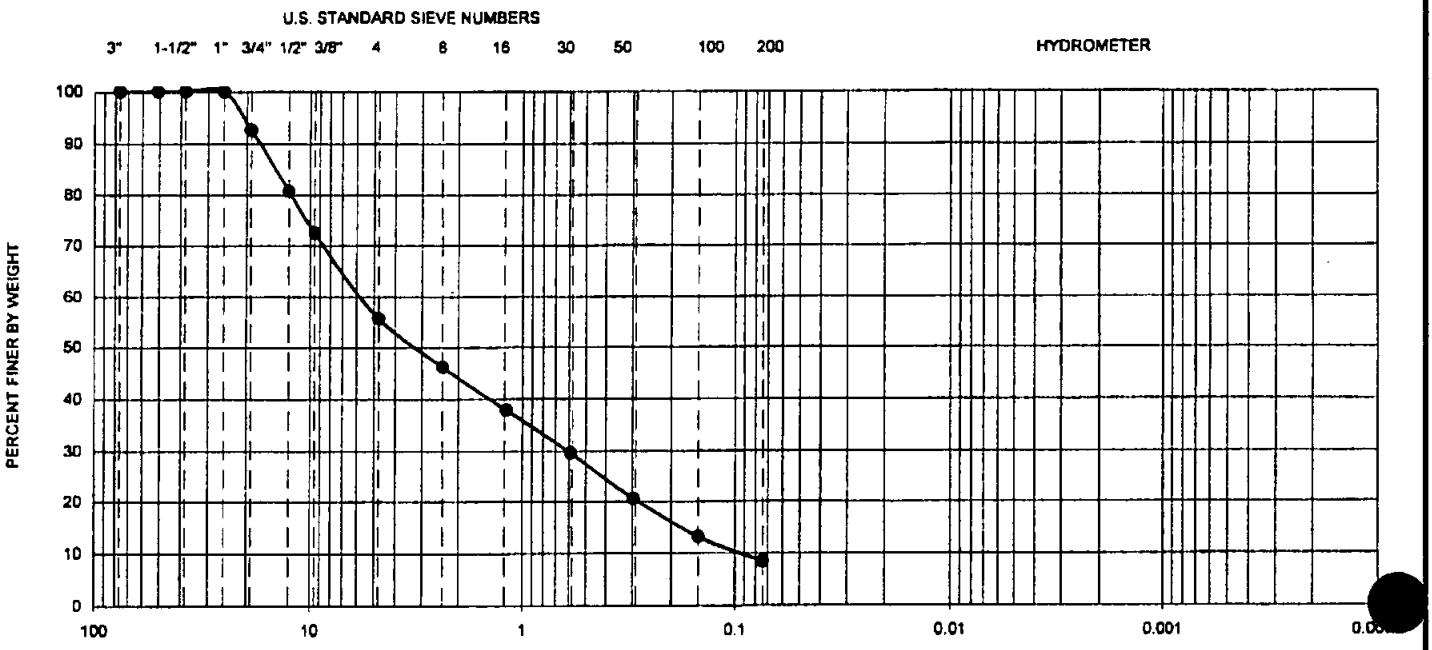
FIGURE

D6

CHECKED BY: JRG	FN: LAB
JOB # 44102	5.25.04

D06 KB-01@19 5.25.05 F-C Sieve (8,18,30,50) with graph.xls

GRAVEL		SAND			FINES	
Coarse	Fine	Coarse	Medium	Fine	Silt	Clay



GRAIN SIZE IN MILLIMETERS

SYMBOL	SAMPLE LOCATION	PASSING NO. 200 (PERCENT)	U.S.C.S
●	KB-2@5	8	SM

PERFORMED IN GENERAL ACCORDANCE WITH ASTM D 422

KLEINFELDER
An employee owned company

GRADATION TEST RESULTS

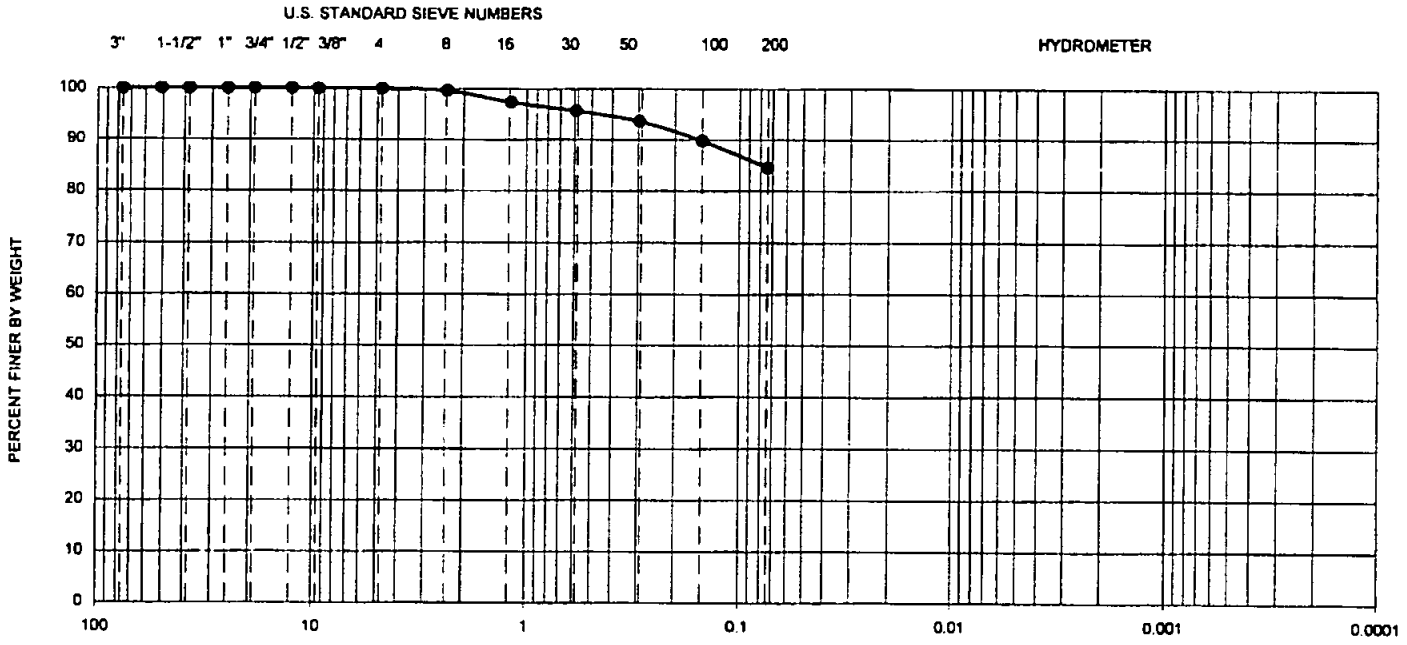
Lakeside Conservancy Fill

FIGURE

D7

CHECKED BY: JRG	FN: LAB
JOB # 44102	5.25.04

GRAVEL		SAND			FINES	
Coarse	Fine	Coarse	Medium	Fine	Silt	Clay



GRAIN SIZE IN MILLIMETERS

SYMBOL	SAMPLE LOCATION	PASSING NO. 200 (PERCENT)	U.S.C.S
●	KB-3@18	84	MH

PERFORMED IN GENERAL ACCORDANCE WITH ASTM D 422

KLEINFELDER
An employee owned company

GRADATION TEST RESULTS

Lakeside Conservancy Fill

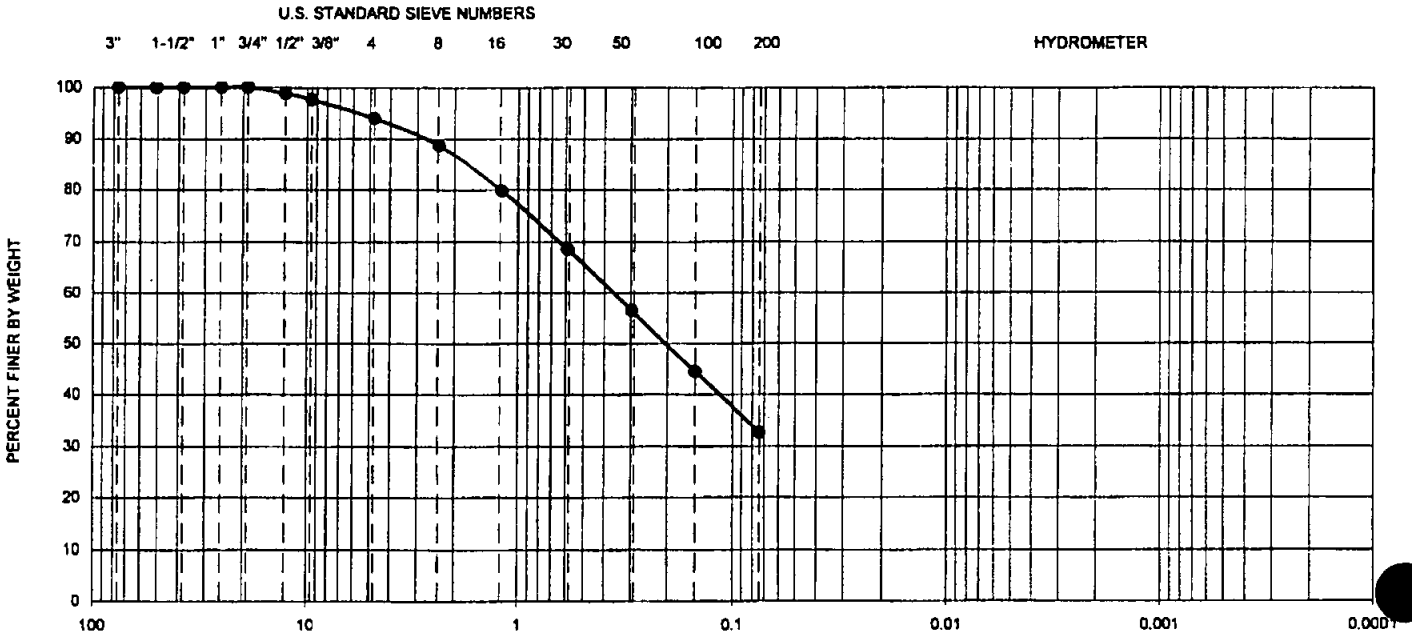
FIGURE

D8

CHECKED BY: JRG	FN: LAB
JOB # 44102	5.25.04

D08 KB-03@18 5.25.05 F-C Sieve (8,16,30,50) with graph.xls

GRAVEL		SAND			FINES	
Coarse	Fine	Coarse	Medium	Fine	Silt	Clay



GRAIN SIZE IN MILLIMETERS

SYMBOL	SAMPLE LOCATION	PASSING NO. 200 (PERCENT)	U.S.C.S
●	KB-4@15	33	SM

PERFORMED IN GENERAL ACCORDANCE WITH ASTM D 422

KLEINFELDER
An employee owned company

GRADATION TEST RESULTS

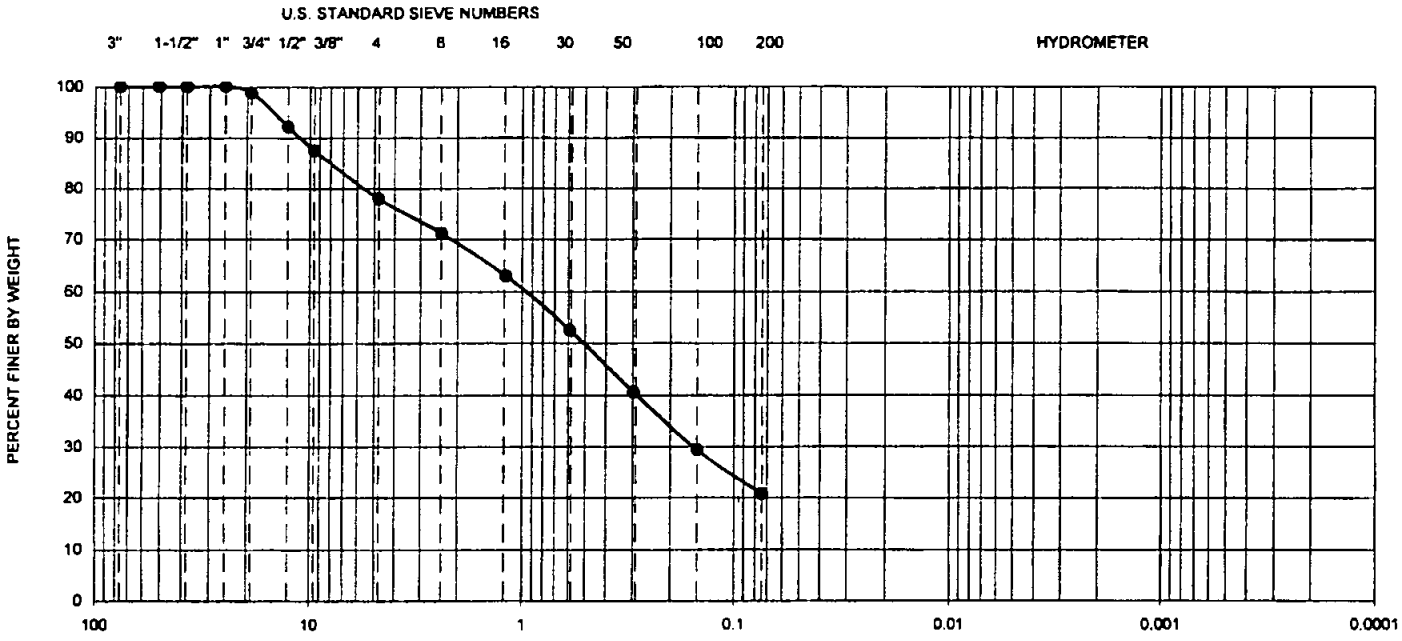
Lakeside Conservancy Fill

FIGURE

D9

CHECKED BY: JRG	FN: LAB
JOB # 44102	5.25.04

GRAVEL		SAND			FINES	
Coarse	Fine	Coarse	Medium	Fine	Silt	Clay



GRAIN SIZE IN MILLIMETERS

SYMBOL	SAMPLE LOCATION	PASSING NO. 200 (PERCENT)	U.S.C.S
●	KB-4@5	21	SM

PERFORMED IN GENERAL ACCORDANCE WITH ASTM D 422

KLEINFELDER
An employee owned company

GRADATION TEST RESULTS

Lakeside Conservancy Fill

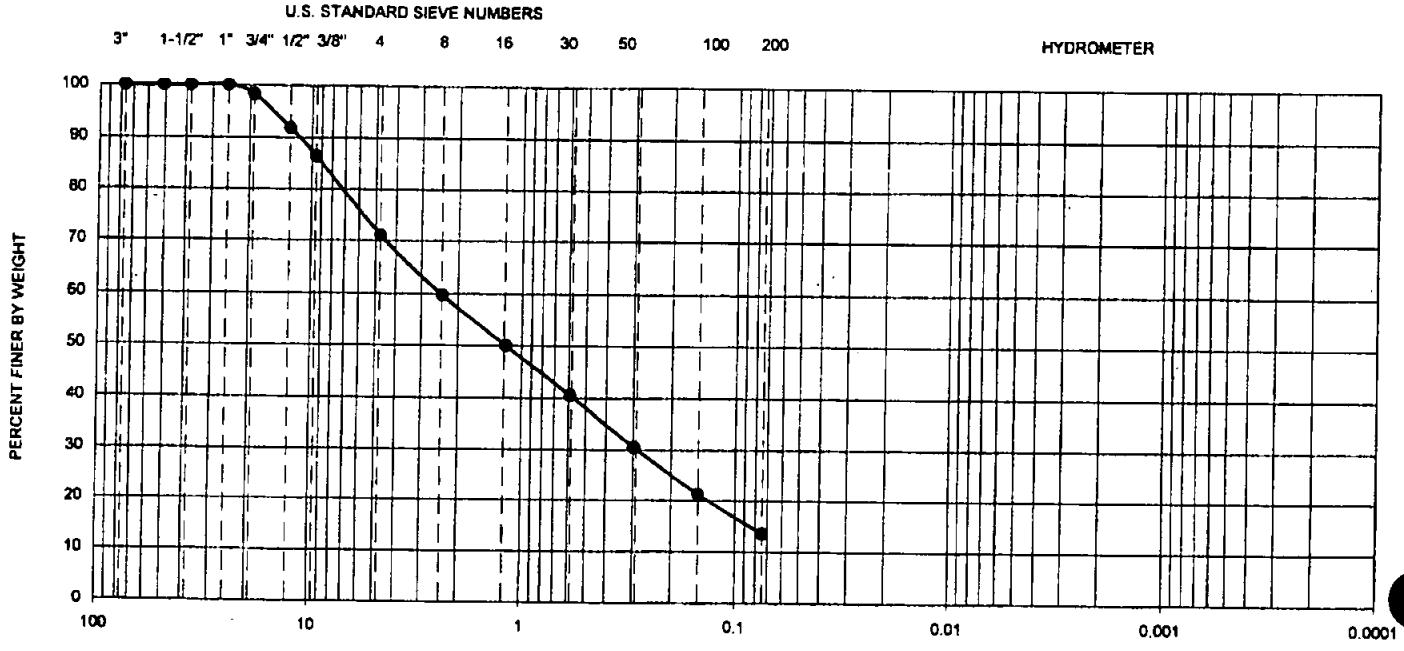
FIGURE

D10

CHECKED BY: JRG	FN: LAB
JOB # 44102	5.25.04

D10 KB-04@5 5.25.05 F-C Sieve (8,16,30,50) with graph.xls

GRAVEL		SAND			FINES	
Coarse	Fine	Coarse	Medium	Fine	Silt	Clay



GRAIN SIZE IN MILLIMETERS

SYMBOL	SAMPLE LOCATION	PASSING NO. 200 (PERCENT)	U.S.C.S
●	KB-5@10'	13	SM

PERFORMED IN GENERAL ACCORDANCE WITH ASTM D 422

KLEINFELDER
An employee owned company

GRADATION TEST RESULTS

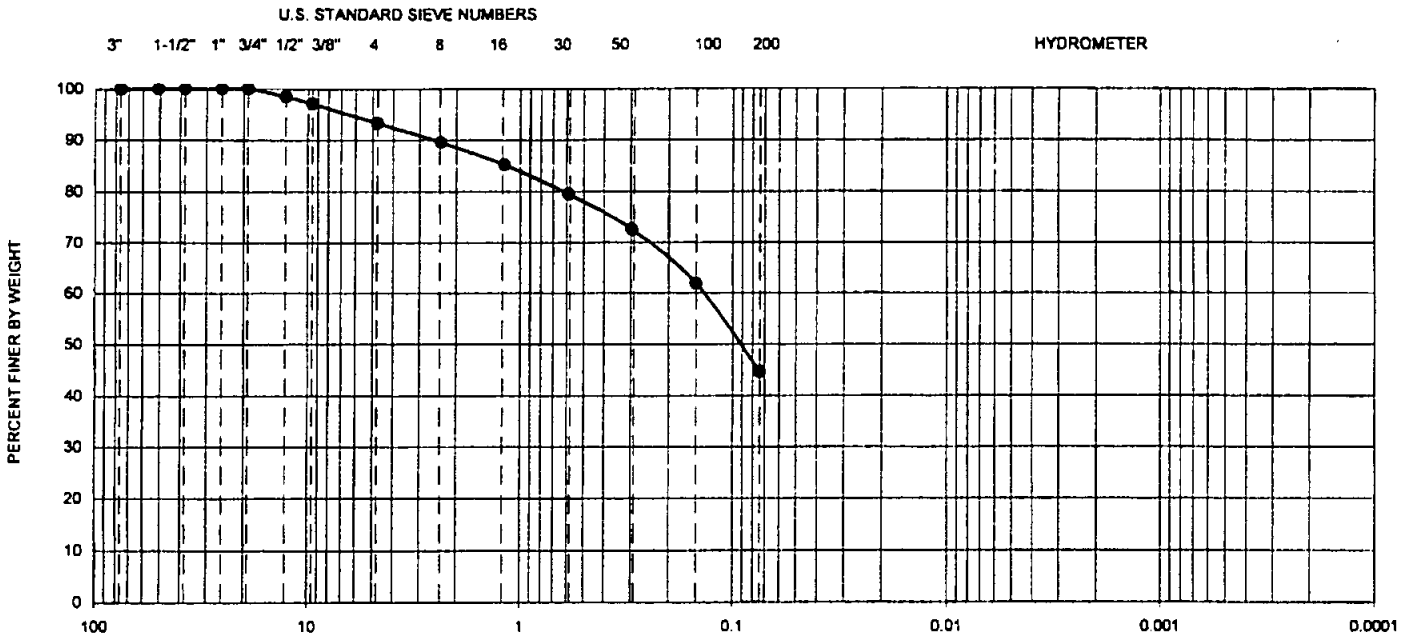
Lakeside Conservancy Fill

FIGURE

D11

CHECKED BY: JRG	FN: LAB
JOB # 44102	5.25.04

GRAVEL		SAND			FINES	
Coarse	Fine	Coarse	Medium	Fine	Silt	Clay



GRAIN SIZE IN MILLIMETERS

SYMBOL	SAMPLE LOCATION	PASSING NO. 200 (PERCENT)	U.S.C.S
●	KB-5@18'	45	SM

PERFORMED IN GENERAL ACCORDANCE WITH ASTM D 422

KLEINFELDER
An employee owned company

GRADATION TEST RESULTS

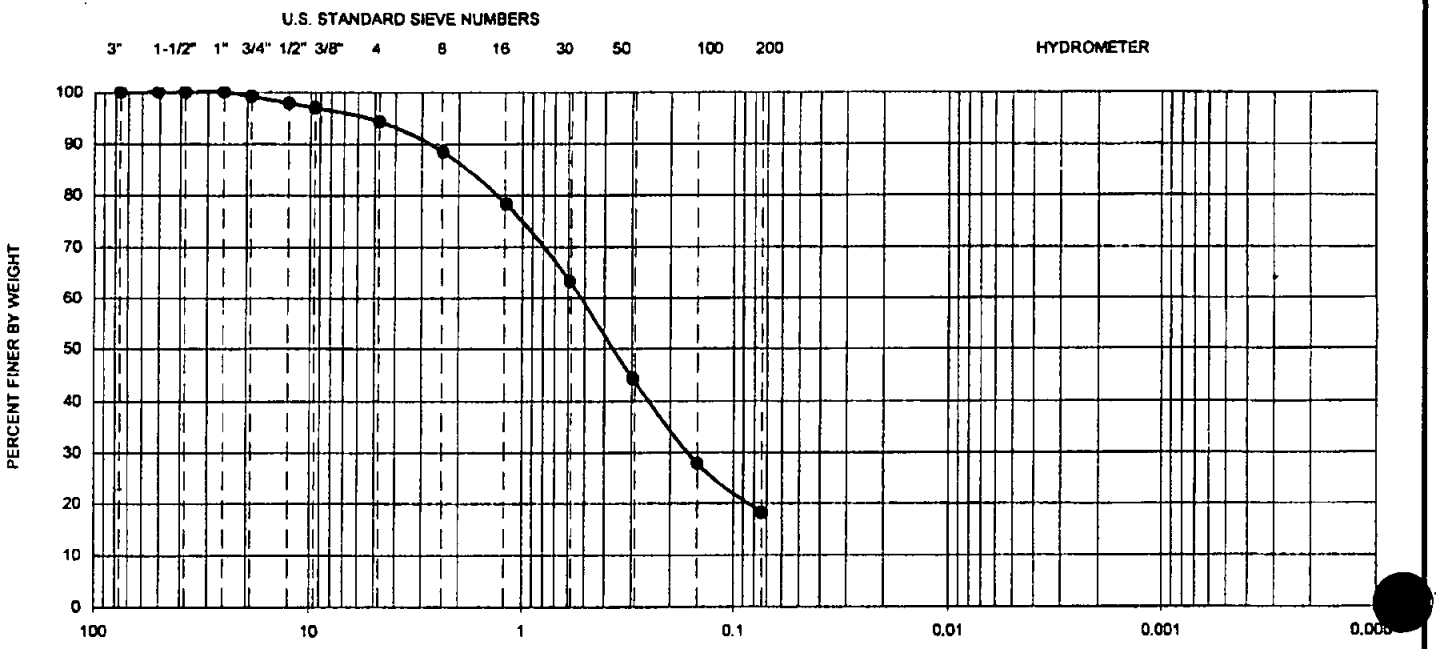
Lakeside Conservancy Fill

FIGURE

D12

CHECKED BY: JRG	FN: LAB
JOB # 44102	5.25.04

GRAVEL		SAND			FINES	
Coarse	Fine	Coarse	Medium	Fine	Silt	Clay



GRAIN SIZE IN MILLIMETERS

SYMBOL	SAMPLE LOCATION	PASSING NO. 200 (PERCENT)	U.S.C.S
●	KB-7@15'	18	SM

PERFORMED IN GENERAL ACCORDANCE WITH ASTM D 422

KLEINFELDER
An employee owned company

CHECKED BY: JRG	FN: LAB
JOB # 44102	5.25.04

GRADATION TEST RESULTS

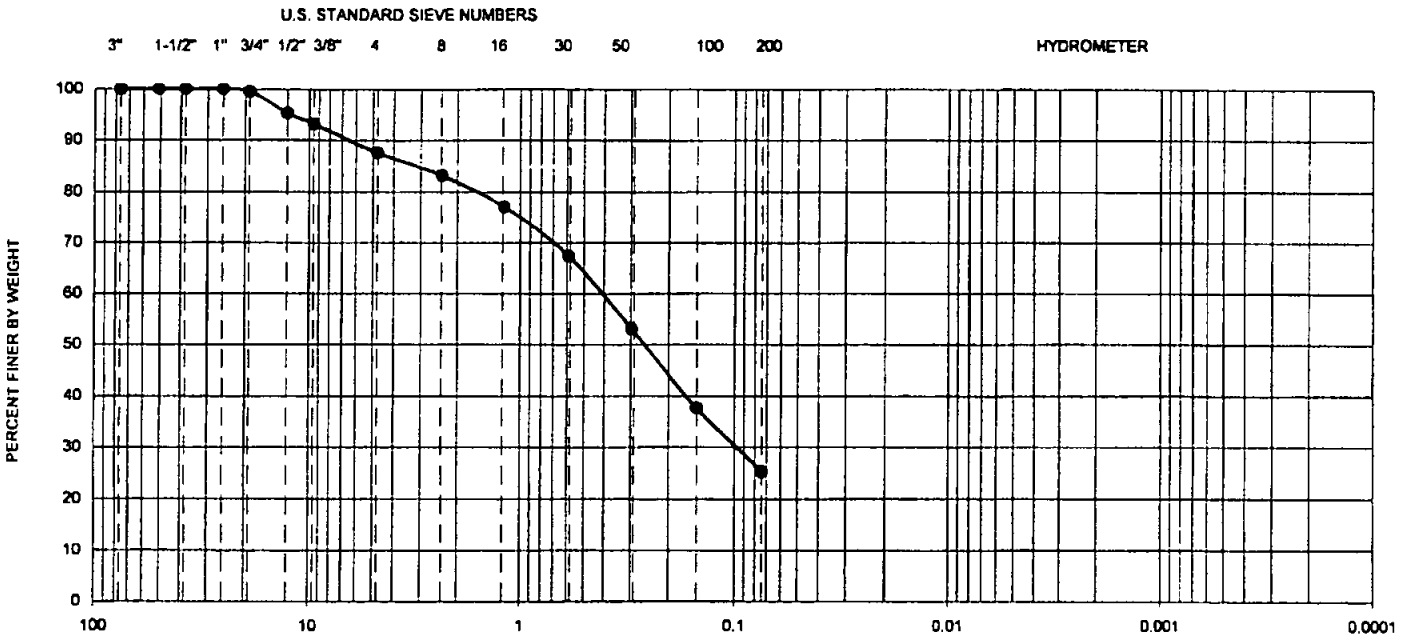
Lakeside Conservancy Fill

FIGURE

D13

D13 KB-07@15 5.25.05 F-C Sieve (8,16,30,50) with graph.xls

GRAVEL		SAND			FINES	
Coarse	Fine	Coarse	Medium	Fine	Silt	Clay



GRAIN SIZE IN MILLIMETERS

SYMBOL	SAMPLE LOCATION	PASSING NO. 200 (PERCENT)	U.S.C.S
●	KB-7@5'	25	SM

PERFORMED IN GENERAL ACCORDANCE WITH ASTM D 422

KLEINFELDER
An employee owned company

GRADATION TEST RESULTS

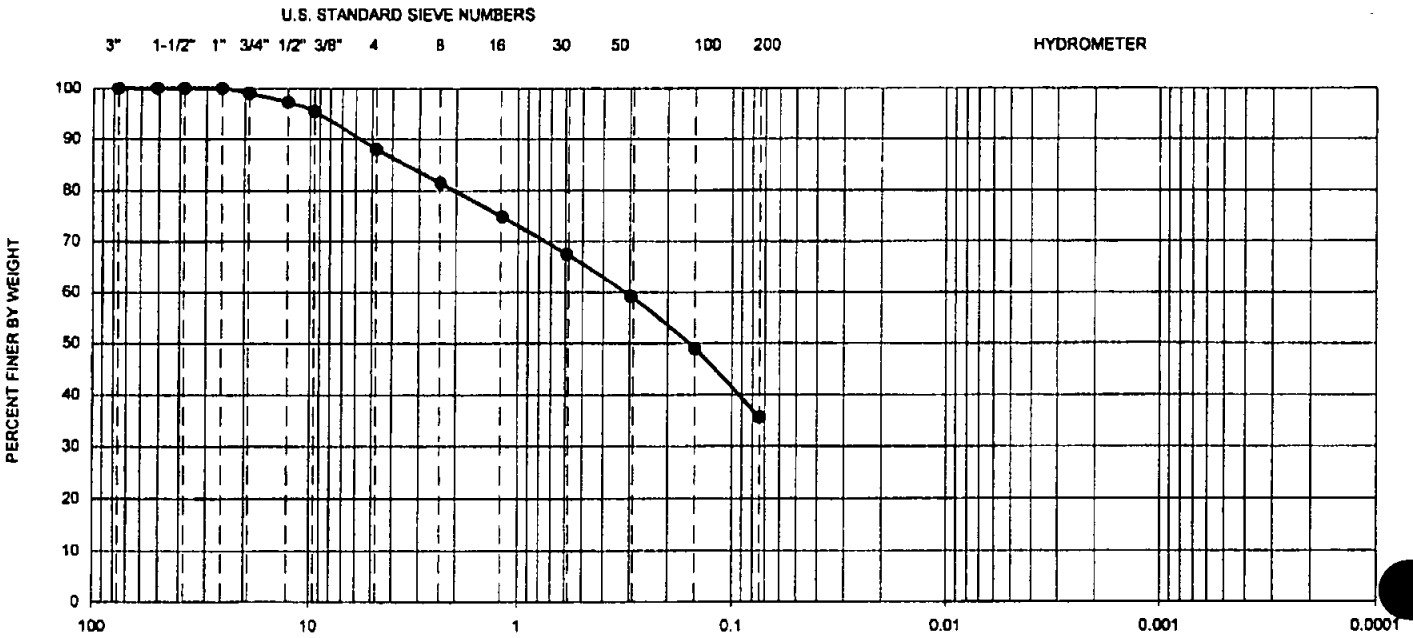
Lakeside Conservancy Fill

FIGURE

D14

CHECKED BY: JRG	FN: LAB
JOB # 44102	5.25.04

GRAVEL		SAND			FINES	
Coarse	Fine	Coarse	Medium	Fine	Silt	Clay



GRAIN SIZE IN MILLIMETERS

SYMBOL	SAMPLE LOCATION	PASSING NO. 200 (PERCENT)	U.S.C.S
●	KB-8@5'	36	SM

PERFORMED IN GENERAL ACCORDANCE WITH ASTM D 422

KLEINFELDER
An employee owned company

GRADATION TEST RESULTS

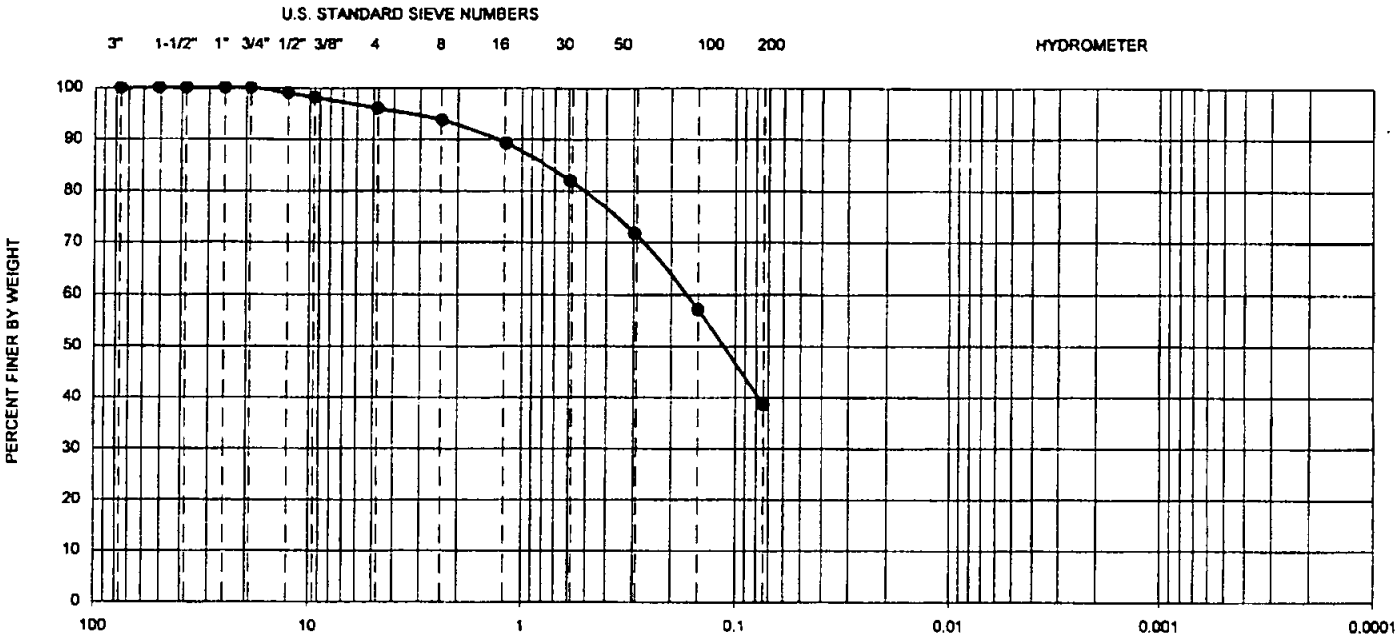
Lakeside Conservancy Fill

FIGURE

D15

CHECKED BY: JRG	FN: LAB
JOB # 44102	5.25.04

GRAVEL		SAND			FINES	
Coarse	Fine	Coarse	Medium	Fine	Silt	Clay



GRAIN SIZE IN MILLIMETERS

SYMBOL	SAMPLE LOCATION	PASSING NO. 200 (PERCENT)	U.S.C.S
●	KB-9@10'	38	SM

PERFORMED IN GENERAL ACCORDANCE WITH ASTM D 422

KLEINFELDER
An employee owned company

GRADATION TEST RESULTS

Lakeside Conservancy Fill

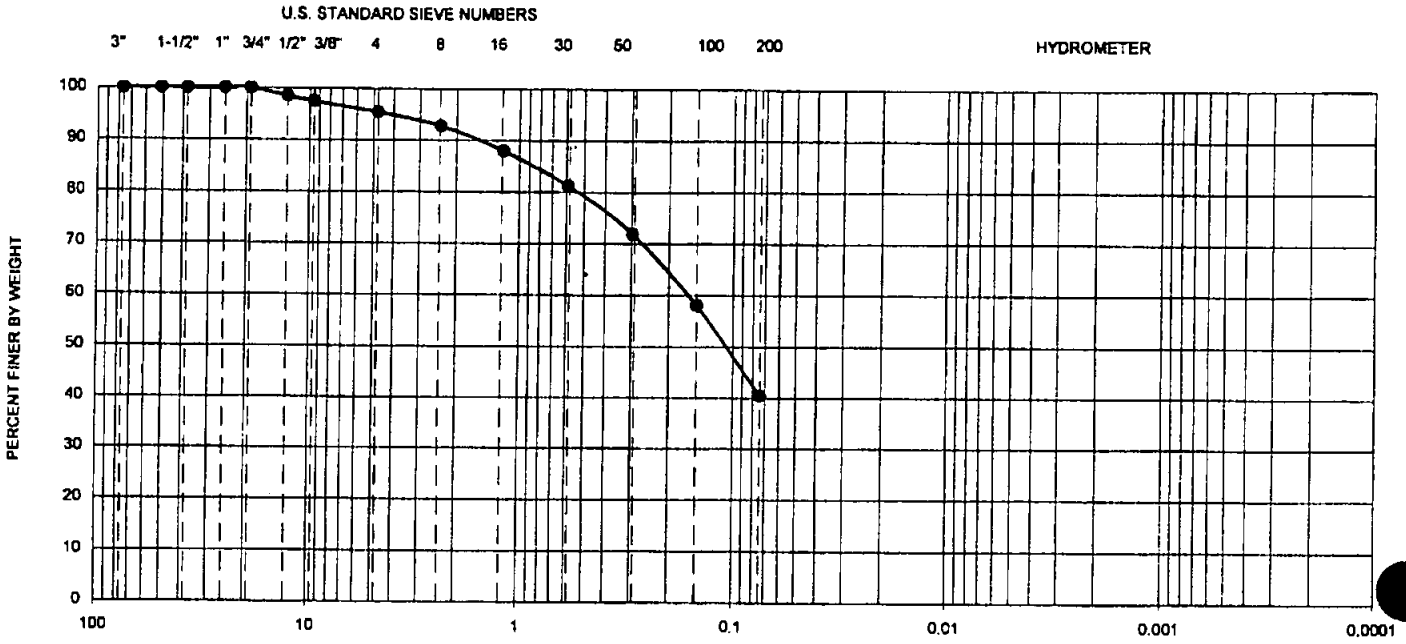
FIGURE

D16

CHECKED BY: JRG	FN: LAB
JOB # 44102	5.25.04

D16 KB-09@10 5.25.05 F-C Sieve (8,16,30,50) with graph.xls

GRAVEL		SAND			FINES	
Coarse	Fine	Coarse	Medium	Fine	Silt	Clay



GRAIN SIZE IN MILLIMETERS

SYMBOL	SAMPLE LOCATION	PASSING NO. 200 (PERCENT)	U.S.C.S
●	KB-9@18'	40	SM

PERFORMED IN GENERAL ACCORDANCE WITH ASTM D 422

KLEINFELDER
An employee owned company

GRADATION TEST RESULTS

Lakeside Conservancy Fill

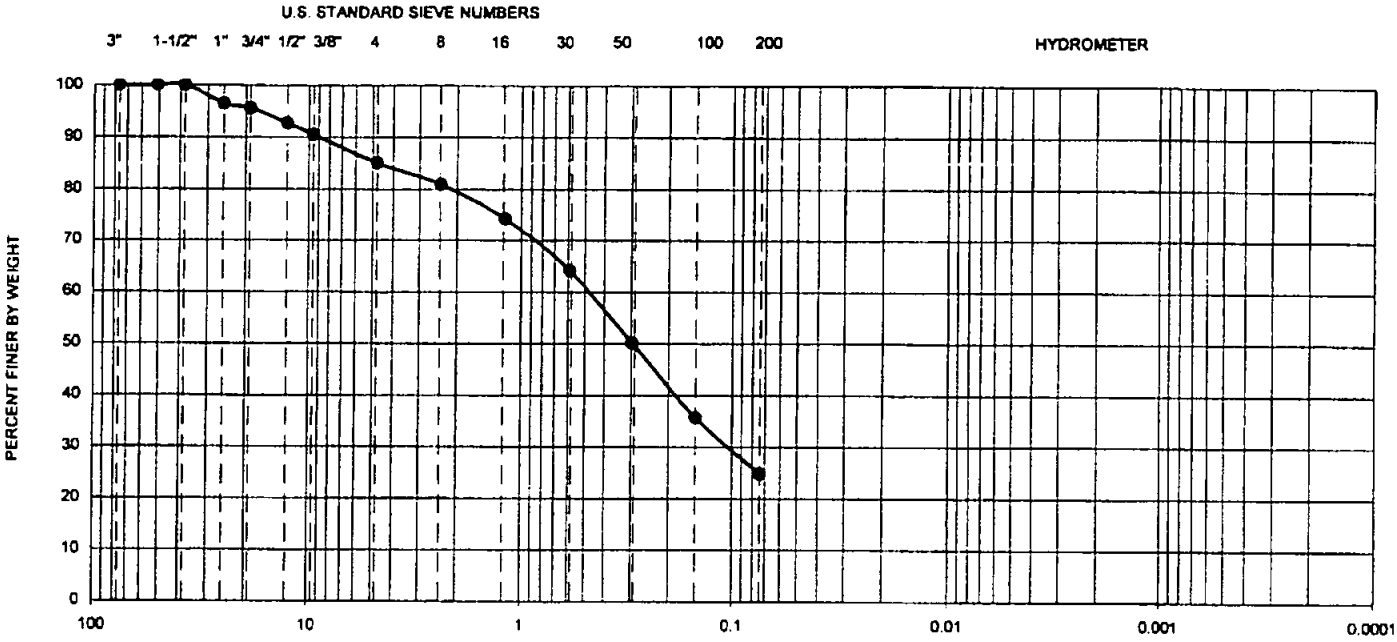
FIGURE

D17

CHECKED BY: JRG	FN: LAB
JOB # 44102	5.25.04

D17 KB-09@18 5.25.05 F-C Sieve (8,16,30,50) with graph.xls

GRAVEL		SAND			FINES	
Coarse	Fine	Coarse	Medium	Fine	Silt	Clay



GRAIN SIZE IN MILLIMETERS

SYMBOL	SAMPLE LOCATION	PASSING NO. 200 (PERCENT)	U.S.C.S
●	KB-10@10'	25	SM

PERFORMED IN GENERAL ACCORDANCE WITH ASTM D 422

KLEINFELDER
An employee owned company

GRADATION TEST RESULTS

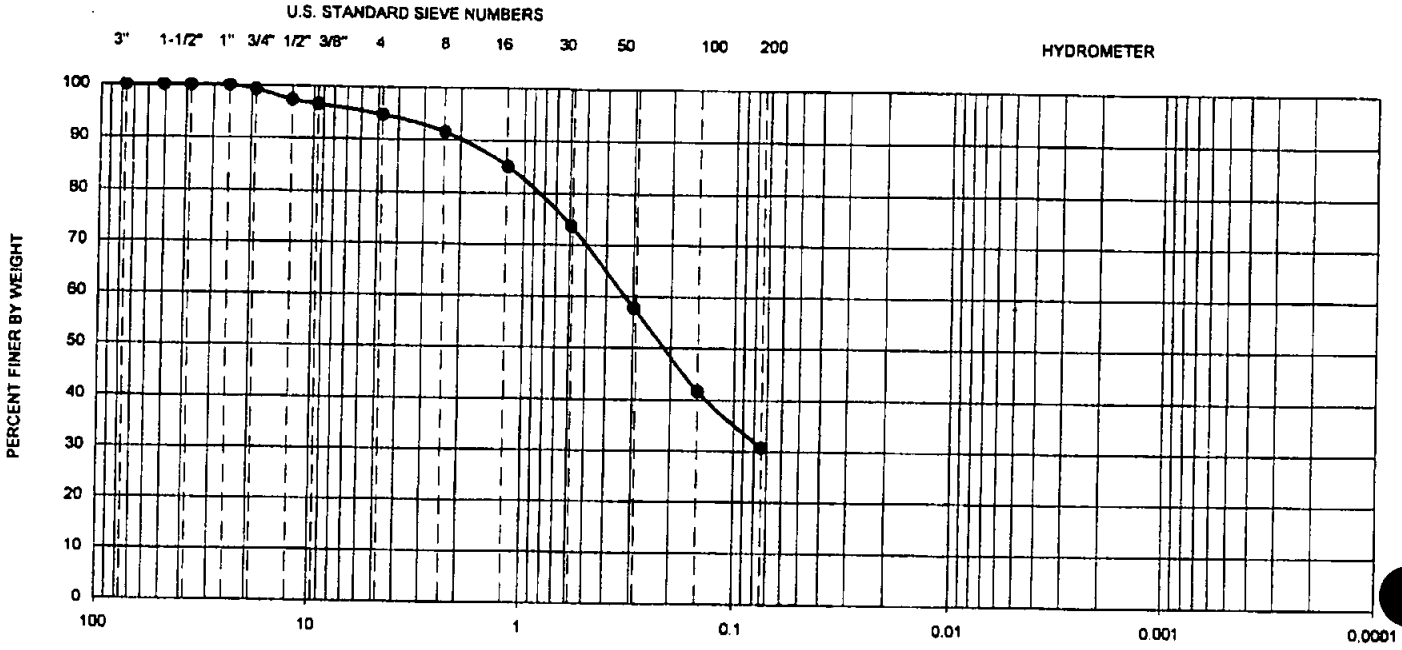
Lakeside Conservancy Fill

FIGURE

D18

CHECKED BY: JRG	FN: LAB
JOB # 44102	5.25.04

GRAVEL		SAND			FINES	
Coarse	Fine	Coarse	Medium	Fine	Silt	Clay



GRAIN SIZE IN MILLIMETERS

SYMBOL	SAMPLE LOCATION	PASSING NO. 200 (PERCENT)	U.S.C.S
●	KB-11@10'	31	SM

PERFORMED IN GENERAL ACCORDANCE WITH ASTM D 422

KLEINFELDER
An employee owned company

CHECKED BY: JRG	FN: LAB
JOB # 44102	5.25.04

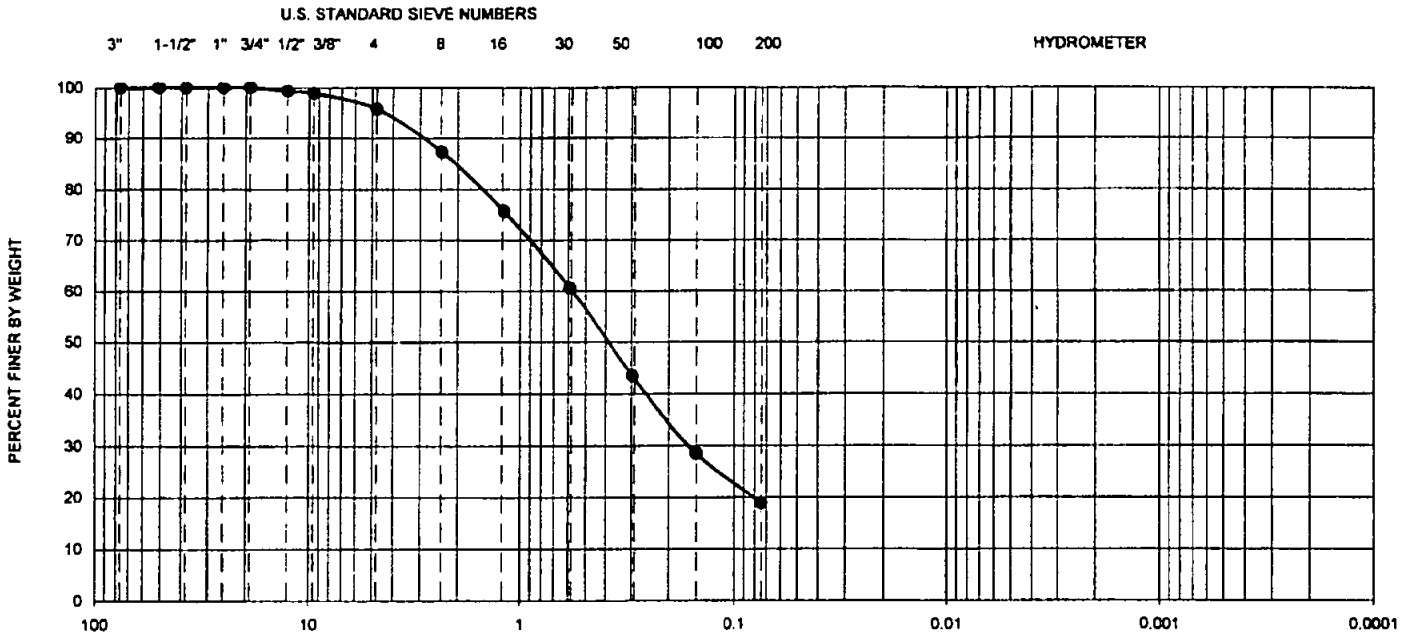
GRADATION TEST RESULTS

Lakeside Conservancy Fill

FIGURE

D19

GRAVEL		SAND			FINES	
Coarse	Fine	Coarse	Medium	Fine	Silt	Clay



SYMBOL	SAMPLE LOCATION	PASSING NO. 200 (PERCENT)	U.S.C.S
●	KB-11@18'	19	SM

PERFORMED IN GENERAL ACCORDANCE WITH ASTM D 422

KLEINFELDER
An employee owned company

GRADATION TEST RESULTS

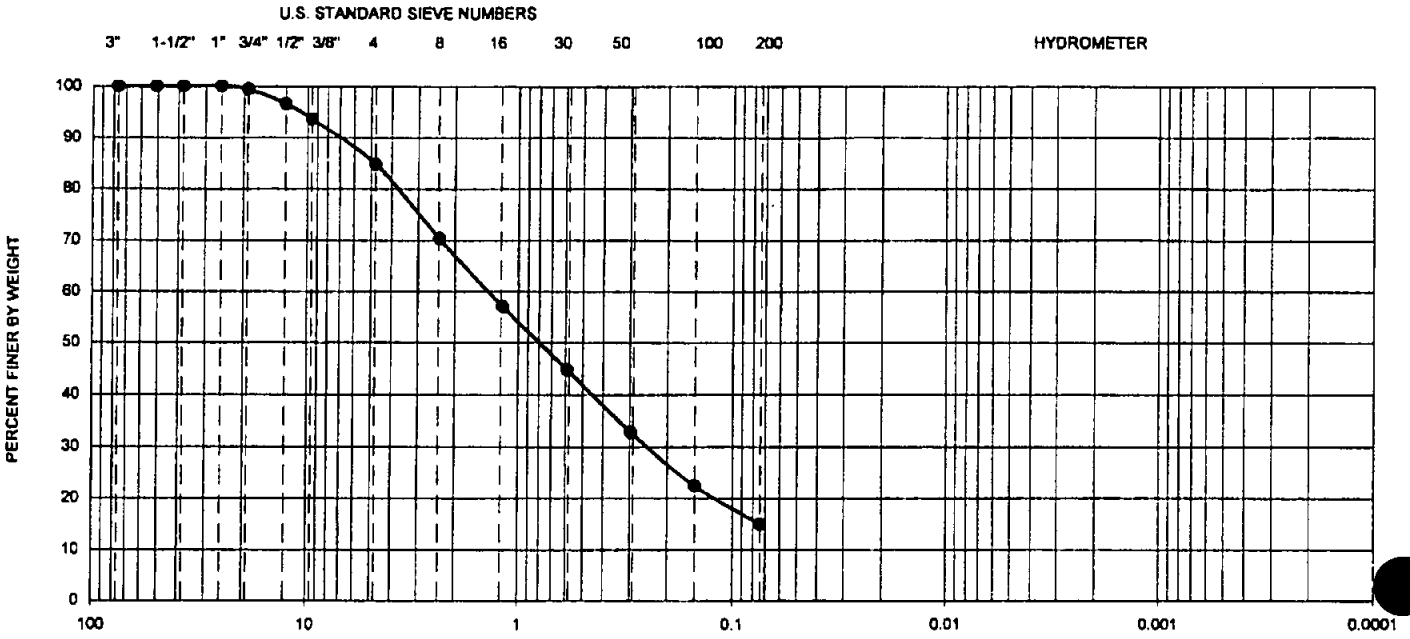
Lakeside Conservancy Fill

FIGURE

D20

CHECKED BY: JRG	FN: LAB
JOB # 44102	5.25.04

GRAVEL		SAND			FINES	
Coarse	Fine	Coarse	Medium	Fine	Silt	Clay



GRAIN SIZE IN MILLIMETERS

SYMBOL	SAMPLE LOCATION	PASSING NO. 200 (PERCENT)	U.S.C.S
●	KB-12@15'	15	SM

PERFORMED IN GENERAL ACCORDANCE WITH ASTM D 422

KLEINFELDER
An employee owned company

GRADATION TEST RESULTS

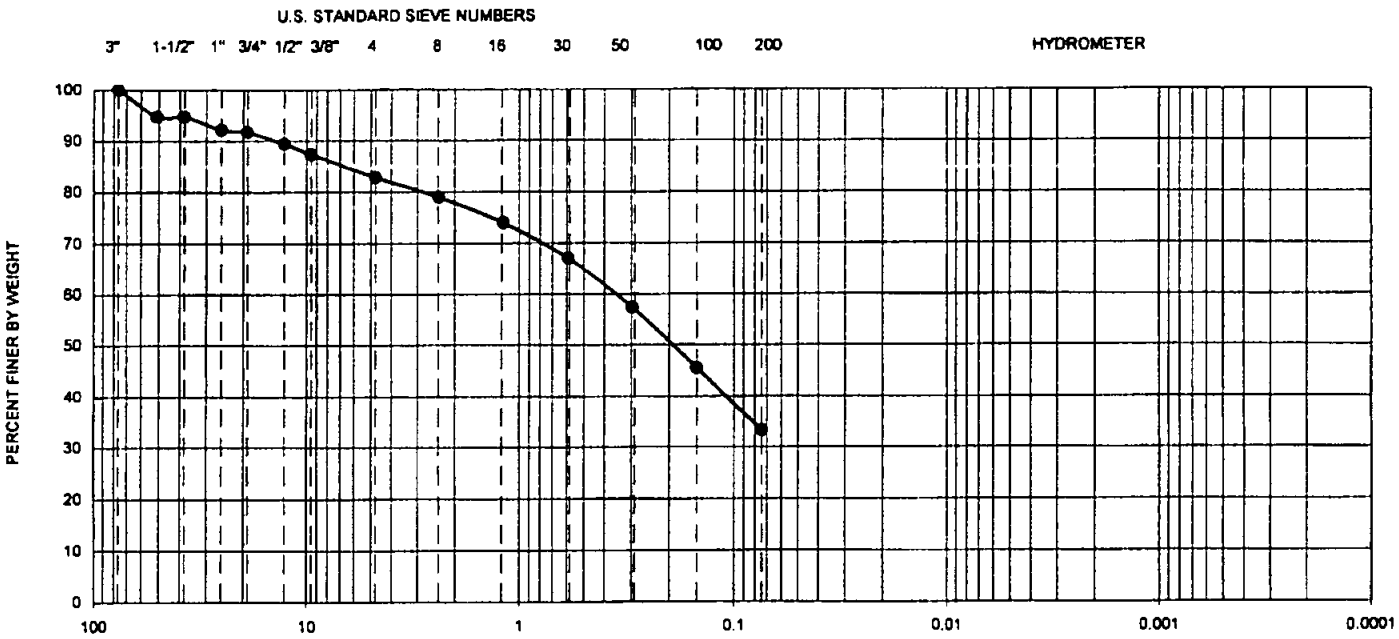
Lakeside Conservancy Fill

FIGURE

D21

CHECKED BY: JRG	FN: LAB
JOB # 44102	5.25.04

GRAVEL		SAND			FINES	
Coarse	Fine	Coarse	Medium	Fine	Silt	Clay



GRAIN SIZE IN MILLIMETERS

SYMBOL	SAMPLE LOCATION	PASSING NO. 200 (PERCENT)	U.S.C.S
●	KB-12@5'	33	SM

PERFORMED IN GENERAL ACCORDANCE WITH ASTM D 422

KLEINFELDER
An employee owned company

GRADATION TEST RESULTS

Lakeside Conservancy Fill

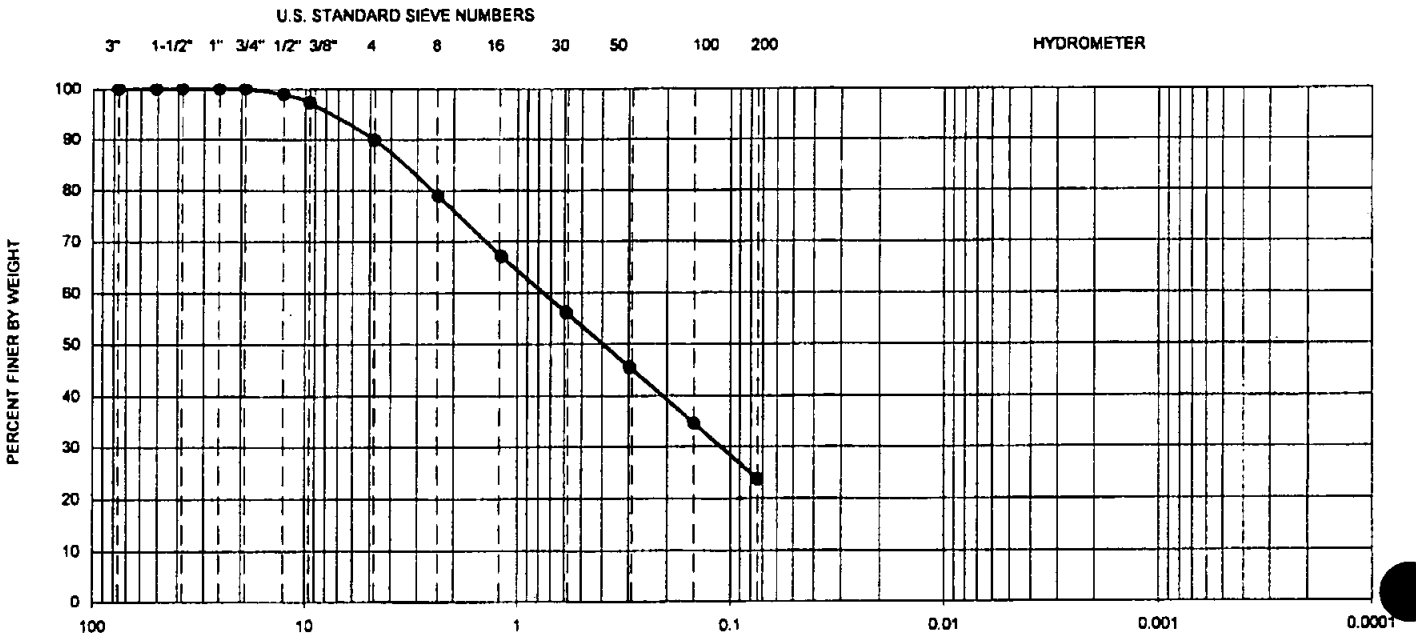
FIGURE

D22

CHECKED BY: JRG	FN: LAB
JOB # 44102	5.25.04

D22 KB-12@5 5.25.05 F-C Sieve (8,16,30,50) with graph.xls

GRAVEL		SAND			FINES	
Coarse	Fine	Coarse	Medium	Fine	Silt	Clay



GRAIN SIZE IN MILLIMETERS

SYMBOL	SAMPLE LOCATION	PASSING NO. 200 (PERCENT)	U.S.C.S
●	KB-13@10'	24	SM

PERFORMED IN GENERAL ACCORDANCE WITH ASTM D 422

KLEINFELDER
An employee owned company

GRADATION TEST RESULTS

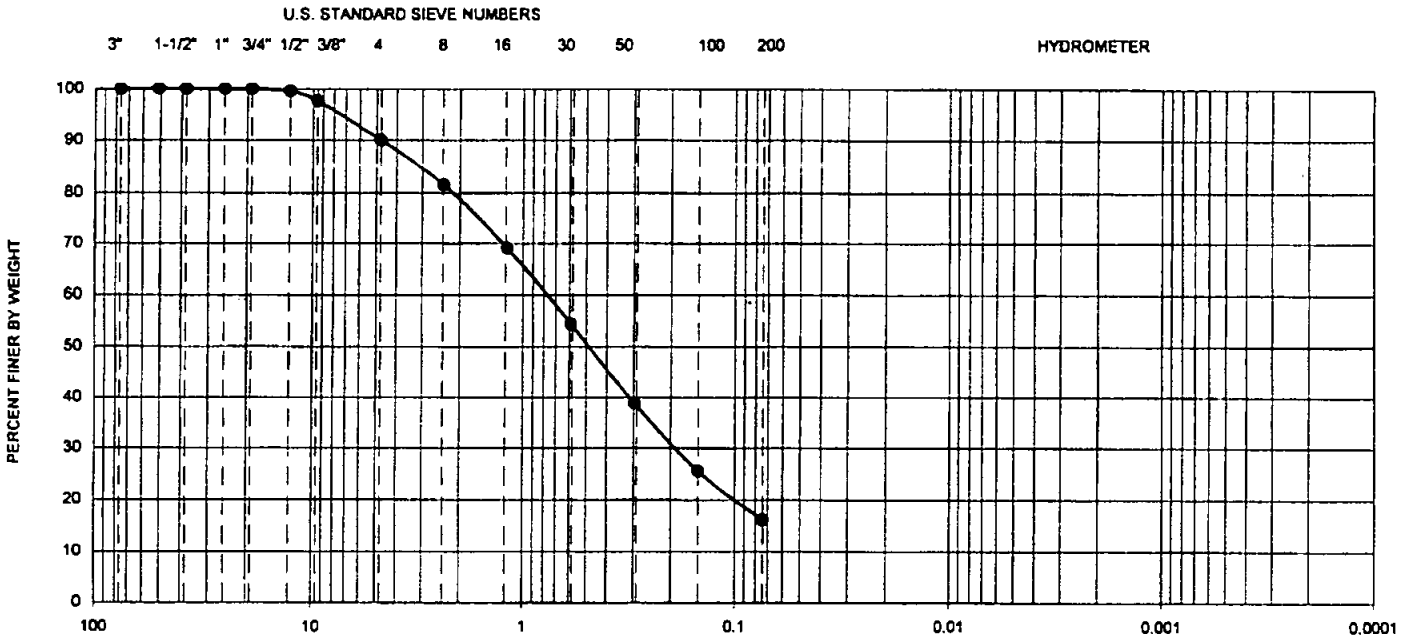
Lakeside Conservancy Fill

FIGURE

D23

CHECKED BY: JRG	FN: LAB
JOB # 44102	5.25.04

GRAVEL		SAND			FINES	
Coarse	Fine	Coarse	Medium	Fine	Silt	Clay



GRAIN SIZE IN MILLIMETERS

SYMBOL	SAMPLE LOCATION	PASSING NO. 200 (PERCENT)	U.S.C.S
●	KB-14@15'	16	SM

PERFORMED IN GENERAL ACCORDANCE WITH ASTM D 422

KLEINFELDER
An employee owned company

GRADATION TEST RESULTS

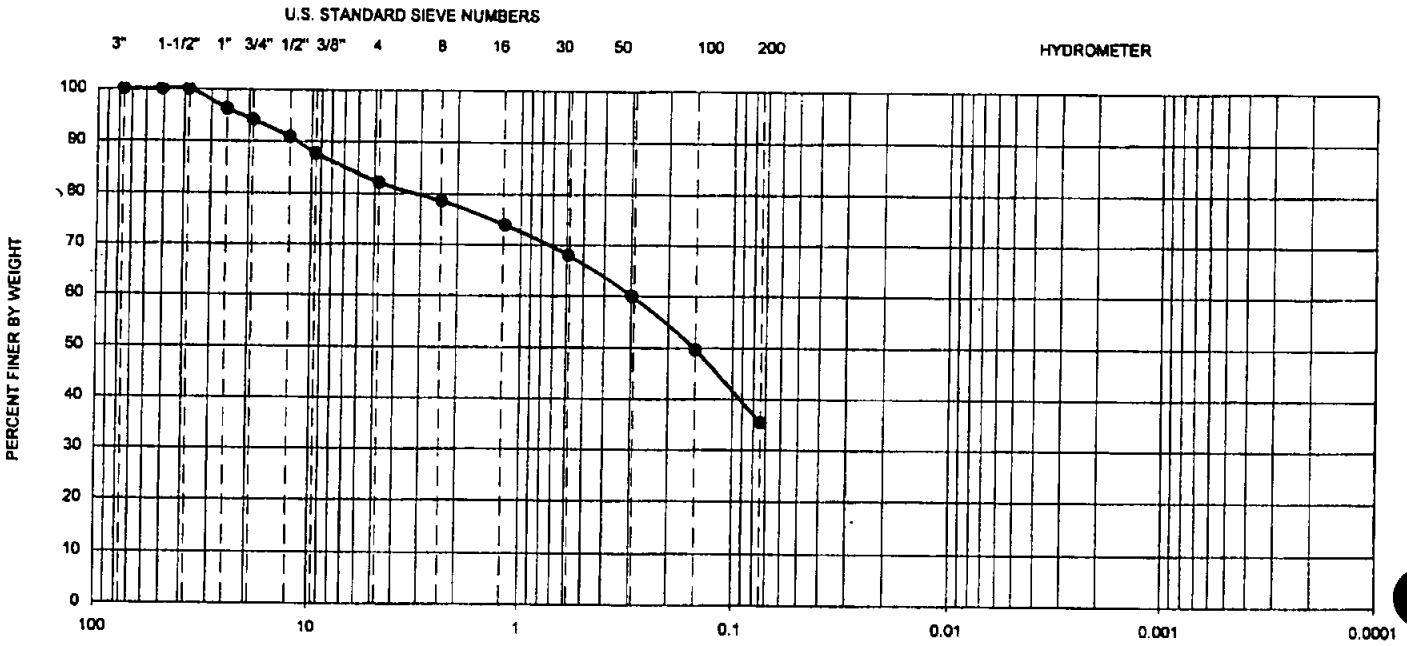
Lakeside Conservancy Fill

FIGURE

D24

CHECKED BY: JRG	FN: LAB
JOB # 44102	5.25.04

GRAVEL		SAND			FINES	
Coarse	Fine	Coarse	Medium	Fine	Silt	Clay



GRAIN SIZE IN MILLIMETERS

SYMBOL	SAMPLE LOCATION	PASSING NO. 200 (PERCENT)	U.S.C.S
●	KB-14@5'	35	SM

PERFORMED IN GENERAL ACCORDANCE WITH ASTM D 422

KLEINFELDER
An employee owned company

CHECKED BY: JRG	FN: LAB
JOB # 44102	5.25.04

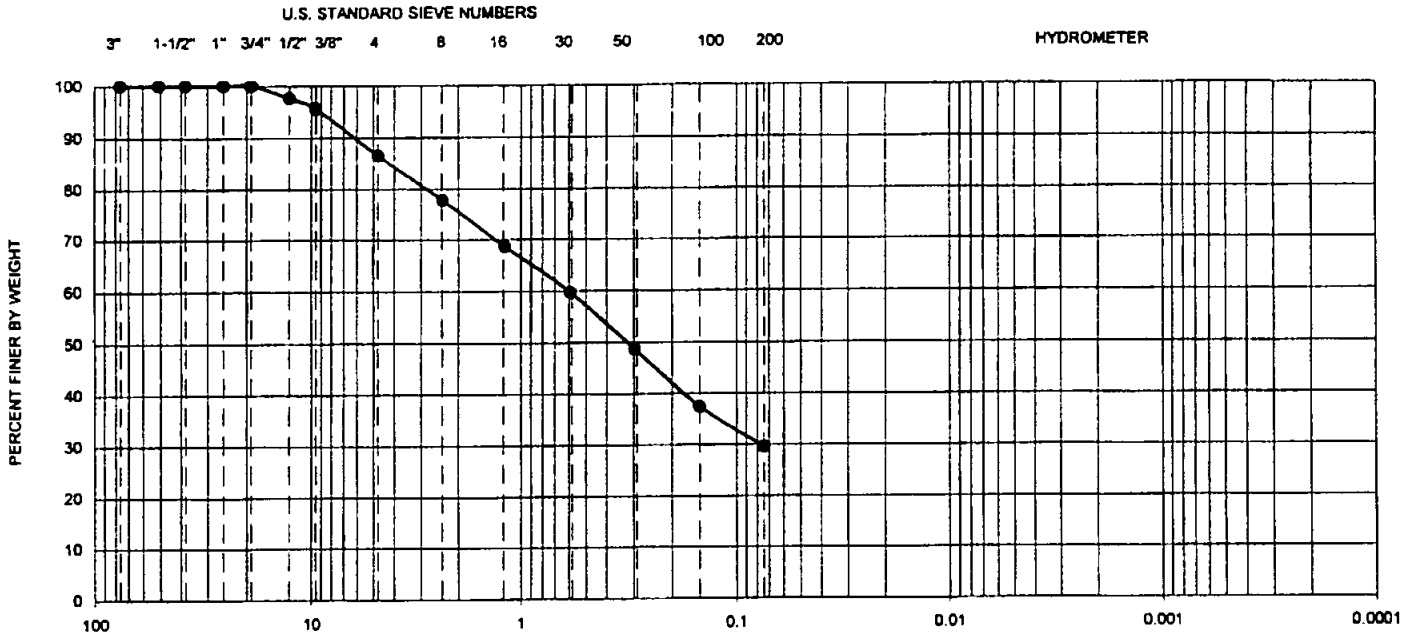
GRADATION TEST RESULTS

Lakeside Conservancy Fill

FIGURE

D25

GRAVEL		SAND			FINES	
Coarse	Fine	Coarse	Medium	Fine	Silt	Clay



GRAIN SIZE IN MILLIMETERS

SYMBOL	SAMPLE LOCATION	PASSING NO. 200 (PERCENT)	U.S.C.S
●	KB-15@10'	29	SM

PERFORMED IN GENERAL ACCORDANCE WITH ASTM D 422

KLEINFELDER
An employee owned company

GRADATION TEST RESULTS

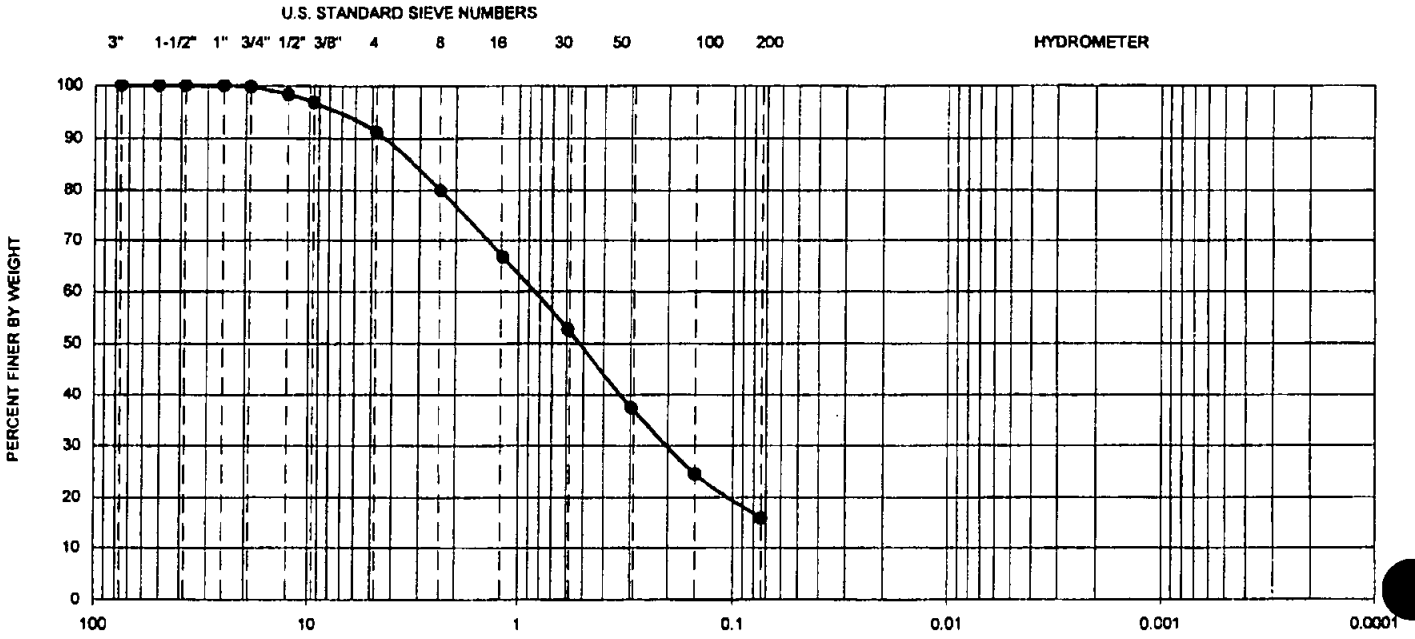
Lakeside Conservancy Fill

FIGURE

D26

CHECKED BY: JRG	FN: LAB
JOB # 44102	5.25.04

GRAVEL		SAND			FINES	
Coarse	Fine	Coarse	Medium	Fine	Silt	Clay



GRAIN SIZE IN MILLIMETERS

SYMBOL	SAMPLE LOCATION	PASSING NO. 200 (PERCENT)	U.S.C.S
●	KB-16@5'	16	SM

PERFORMED IN GENERAL ACCORDANCE WITH ASTM D 422

KLEINFELDER
An employee owned company

GRADATION TEST RESULTS

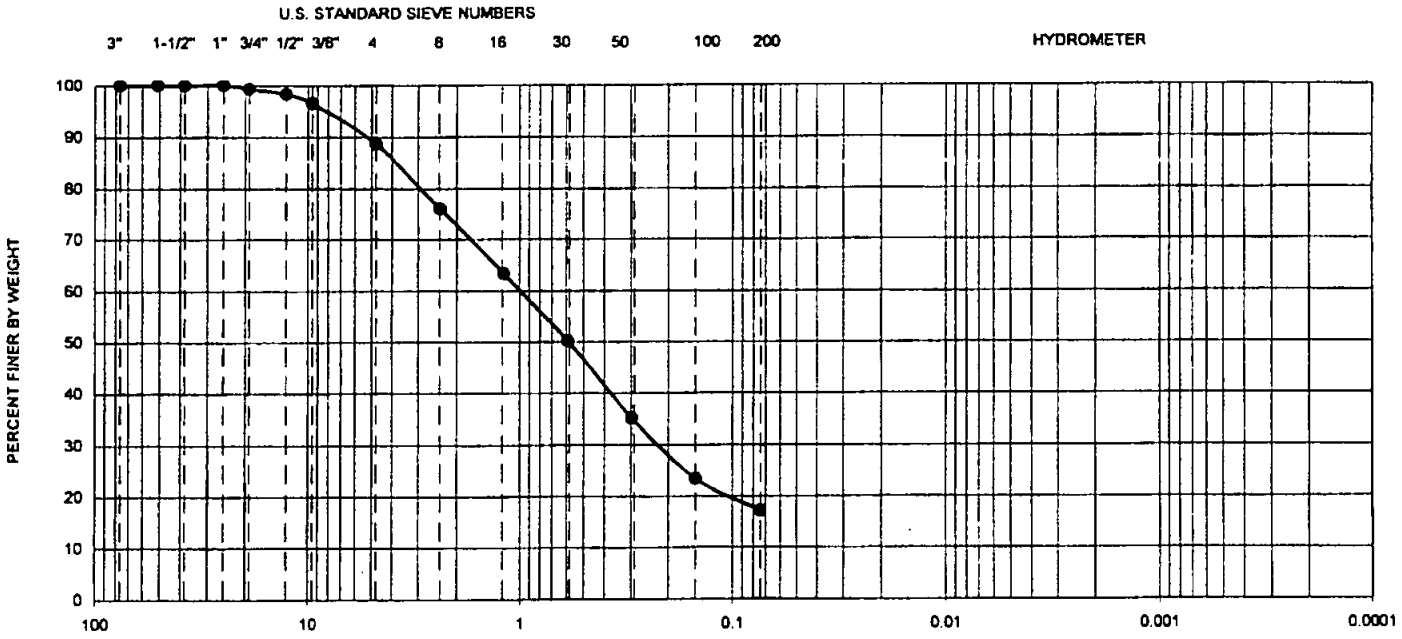
Lakeside Conservancy Fill

FIGURE

D27

CHECKED BY: JRG	FN: LAB
JOB # 44102	5.25.04

GRAVEL		SAND			FINES	
Coarse	Fine	Coarse	Medium	Fine	Silt	Clay



SYMBOL	SAMPLE LOCATION	PASSING NO. 200 (PERCENT)	U.S.C.S
●	KB-17@10'	17	SM

PERFORMED IN GENERAL ACCORDANCE WITH ASTM D 422

KLEINFELDER
An employee owned company

GRADATION TEST RESULTS

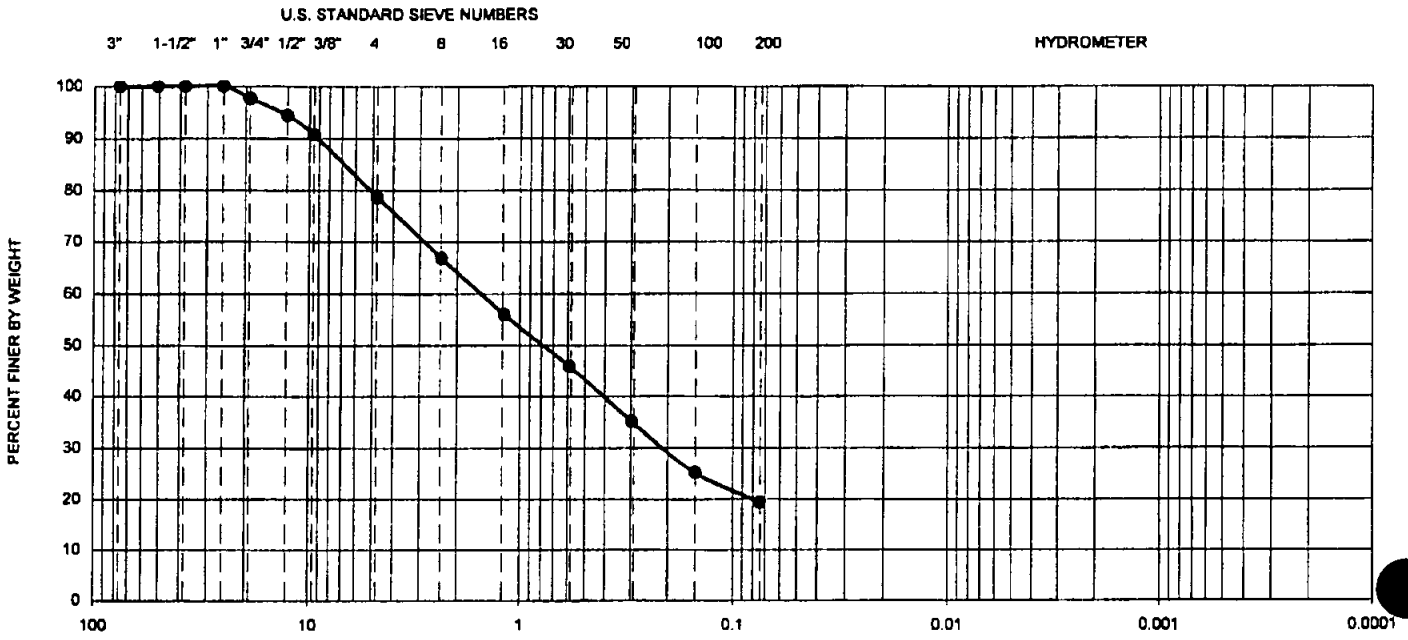
Lakeside Conservancy Fill

FIGURE

D28

CHECKED BY: JRG	FN: LAB
JOB # 44102	5.25.04

GRAVEL		SAND			FINES	
Coarse	Fine	Coarse	Medium	Fine	Silt	Clay



SYMBOL	SAMPLE LOCATION	PASSING NO. 200 (PERCENT)	U.S.C.S
●	KB-18@5'	19	SM

PERFORMED IN GENERAL ACCORDANCE WITH ASTM D 422

KLEINFELDER
An employee owned company

GRADATION TEST RESULTS

Lakeside Conservancy Fill

FIGURE

D29

CHECKED BY: JRG	FN: LAB
JOB # 44102	5.25.04

D29 KB-18@5 5.25.05 F-C Sieve (8,16,30,50) with graph.xls

James R. Dodson Consulting
12963 Creek Park Dr
Poway, CA 92064

April 6, 2005

John R. Odermatt
Senior Engineering Geologist
Regional Water Quality Control Board
Land Discharge and Tank Site Mitigation and
Cleanup Units
9174 Sky Park Court, Suite 100
San Diego, CA 92123

Re: Lakeside's River Park Conservancy
Proposed Flood Control, Habitat Restoration, and Recharge Project
Utilization of On-site Inert Debris for Project Construction

Hand Delivered

Dear Mr. Odermatt:

Lakeside's River Park Conservancy (Lakeside Conservancy), a non-profit and charitable corporation, is striving to fulfill its mission, "to preserve and restore the biological integrity and beauty of the San Diego River while integrating recreational, educational, and cultural opportunities for youth, seniors, families and citizens of East San Diego County." As a part of its efforts, the Lakeside Conservancy is in the process of acquiring permits to construct it s proposed Flood Control, Habitat Rehabilitation, and Recharge Project on approximately one hundred (100) acres of real property it owns in the unincorporated community of Lakeside, County of San Diego, California. The site location and the Project location maps are Figures 1a and 1b of Volume 2, Restoration Plan and Feasibility Report for the Project, prepared for the Lakeside Conservancy by Huffman and Carpenter, Inc. (December 2004) and enclosed herewith. The referenced Volume 2 is a part of a multi-volume submittal made to the County of San Diego and other federal and state agencies.[1] In the event you may need to refer to another portion of the Application, I am taking the liberty of also enclosing the

[1] This includes the RWQCB (Chiara Clemente-Grant Manager).

cc. Jaques Land ✓

remaining volumes, namely, Volume 1, United States Army Corps of Engineers Preconstruction Notification (PCN) For a Nationwide Permit 27, Volume 3, NPDES Application, Notice of Intent, and Storm Water Pollution Prevention Plan, and Volumes 4A, Reclamation Plan Application; 4B, California Environmental Quality Act Documentation; 4D, Grading Permit Application; 4E, Revegetation Plan; and 4G, Storm Water Management Plan (4A -4G in one binder).

The portion of the San Diego River channel traversing the Lakeside Conservancy property has been substantially disturbed over the last several decades due to extensive sand and gravel mining in the past and is subject to recurrent flooding. Past activities on the property have severely reduced, degraded and fragmented habitat for threatened, endangered, sensitive and other native species having a significant and adverse impact on existing species abundance and diversity. The Project proposed by the Lakeside Conservancy would increase flood control capacity, restore, and expand habitat for native species, and improve groundwater and surface water quality. In this regard, the Lakeside Conservancy is grateful to have received grant funding for its Project from the State Water Resources Control Board and from the Department of Water Resources.[2]

As discussed in more detail below, completion of the Lakeside Conservancy Project depends upon the removal of approximately three hundred thousand (300,000) cubic yards and the on-site reuse of approximately One hundred and sixteen thousand (116,000) cubic yards of "inert debris" comprised of fill material deposited on the site many years ago. The deposits were made as a part of a reclamation plan under the Surface Mining And Reclamation Act at the conclusion of sand/gravel mining operations on the site. On-site reutilization of the "inert debris" would include site contouring, the construction of wetlands above and within the floodplain and the conversion of two water-filled sand/gravel extraction pits into shallow emergent perennial marshes. The Lakeside Conservancy needs the assistance of the Regional Water Quality Control Board (RWQCB) to ensure that the work is conducted in a manner protective of public health and sensitive environmental receptors and to ensure that any RWQCB requirements are identified and achieved.

[2] The grant funding agreements are administered by Chiara Clemente at the RWQCB and Earl Nelson at DWR.

I. The Lakeside Conservancy's Project

The Lakeside Conservancy's project benefiting the San Diego River is described in detail in the enclosed Restoration Plan and Feasibility Report.[3] However, to facilitate our discussion, a summary of key Project components is provided below.

(a) At the eastern boundary of the property, a large constriction in the river channel impeding flood flows near Channel Road, would be removed. The channel constriction is largely composed of imported fill sands, gravels and concrete debris. The area would be restored to a natural ephemeral channel similar to the surrounding Lower San Diego River channel. Proper bed and bank protection would be employed to safeguard surrounding properties within and near the constriction area. Work would be conducted from the upland and north side of the river channel. This Project component would lower the depth and velocity of flood flows in the area.

(b) Selective invasive vegetation and trash removal may take place in the natural river channel and adjacent upland areas. Work would include the utilization of machinery and be conducted outside of the established bird-nesting season.

(c) Adjacent to the river channel, an existing abandoned floodplain upland terrace would be planted with native vegetation consisting of a Coastal Sage Scrub community, along with an Urban Forest/Riparian plant community composed of native willows and trees. Work would be done with machinery and conducted outside of the established bird-nesting season.

(d) Adjacent to the river channel, existing denuded upland areas would be converted to native vegetation consisting of a Coastal Sage Scrub community. Work would be done with machinery and conducted outside of the established bird-nesting season.

(e) Adjacent to the Los Coches Creek outfall structure, a group of Urban Non-Point Source Water Quality Improvement basins would be

[3] A good Project description also appears in Volume 4B, California Environmental Quality Act Documentation.

constructed. The basins would be located upon and within existing upland fill materials in the area. As designed, the basins would serve to reduce certain non-point source pollutants (e.g., nutrients) in waters emanating from Los Coches Creek before the waters enter the San Diego River channel.

(e) Approximately four hundred and twenty thousand (420,000) cubic yards of imported fill material would be removed from the site or relocated on-site as a part of the Project design utilizing machinery. Of the estimated four hundred and twenty thousand (420,000) cubic yards of fill material, approximately one hundred and sixteen thousand (116,000) cubic yards would be utilized to restore wetland habitat values in the area of two existing gravel/sand extraction pits; and, approximately three hundred thousand (300,000) cubic yards would be removed from the site and hauled (with appropriate shipping documents) to an appropriate off-site location. The area from which fill materials would be removed from the site would be thereafter transformed into a seasonal wetland to attract the least Bell's vireo (Vireo bellii pusillus).

(f) Two large gravel/sand extraction pits, now filled with water, would be partially back-filled utilizing the fill material until the water depth in the pits is reduced to approximately 2.5 to 3 feet. This component of the Project would serve two functions. First, it would restore floodplain and sediment transport functions. Second, it would meet restoration objectives within the present sand/gravel extraction pit areas for the establishment of emergent perennial marsh wetlands created to mimic the functionality of oxbow marshes.

(g) A Constructed Wetland would be built upon and within the upland fill material tailings pile above the 100-year floodplain elevation. The Constructed Wetland is designed to encompass a six-acre area and be comprised of five wetland cells and a dedicated Rapid Infiltration Basin (RIB). The Constructed Wetland would reduce pollutants (e.g., nitrates) present in the groundwater utilized by the Riverview Water District through phyto-remediation and other passive mechanisms. Groundwater would be pumped into the wetlands from the Riverview Water District wells, allowed to flow through the wetland basins, and then re-enter the groundwater reservoir through the Rapid Infiltration Basin. The Constructed

Wetland could accommodate maximum pumping rates from the Riverview Water District well field (approximately 400 gallons per minute per day). Preliminary design models estimate up to an 80% nitrogen removal rate (from a mean total nitrogen concentration of 60 mg/l to 10 mg/l). Final design is being conducted. The source of the subject groundwater's nitrogen contamination is poorly understood. Future work may help to isolate the nitrogen source and local communities may then be able to reduce the future nitrogen load to groundwater. This Project component is expected to significantly improve groundwater quality in the vicinity of the Riverview wells and to reduce the higher costs incurred by the Riverview Water District arising because of its need to blend relatively expensive imported water with the pumped groundwater to meet applicable drinking water standards.

(h) A bioswale/water quality BMP would be constructed on the project site below and along State Route 67 to reduce certain pollutants from State Route 67 storm water discharges prior to such storm waters entering the San Diego River at the newly created freshwater perennial marshes.

(i) An Educational Interpretative Nature Trail (EINT) is planned for the north side of the Lower San Diego River.

(j) An Urban Forest interface is planned on the south side of the project, along State Route 67. This area would serve as an upland buffer and would be planted with trees, utilizing machinery.

II. Characterization of Fill Materials for Reuse

The Lakeside Conservancy property is host to approximately two million (2,000,000) cubic yards of fill materials (referenced in the Project summary above) deposited onto the property from various off-site locations many years ago (as a part of a SMARA reclamation plan) prior to the Lakeside Conservancy's ownership. As stated in the Project summary above, implementation of the Project would require removing a portion of these fill materials from the site to an off-site location and the reuse of other portions of these fill materials on-site in accordance with the Project design. The greater volume of the existing fill materials would be left in place.

The fill materials have been the subject of extensive geotechnical and environmental testing by Kleinfelder, Inc., culminating in three (3) assessment reports, to wit: *Final Report of Undocumented Fill Assessment Activities, Future Lakeside Riverpark, Highway 67 and Winter Gardens Boulevard, Lakeside, California* dated July 21, 2004; *Report of Area 1 Additional Undocumented Fill Assessment Activities, Future lakeside Riverpark, Highway 67 and Winter Gardens Boulevard, Lakeside, California* dated December 14, 2004; and, *Report of Supplemental Fill Assessment Activities, Areas 1, 3 and Hanson Diversion [sic] Area, Future Lakeside Riverpark, Highway 67 and Winter Gardens Boulevard, Lakeside, California* dated March 9, 2005. A copy of these three reports area enclosed for your reference and review. For purposes of these reports, the location of the fill materials are divided into three areas as shown on Figure 2 of the July 2004 Kleinfelder report. The fill materials which will be affected by the Project are located substantially within Area 3.

As a result of these assessment studies, the Lakeside Conservancy believes the fill materials in Area 3 to be properly characterized as "inert debris" or "inert waste", as defined by the California Integrated Waste Management Board (CIWMB) regulations in Titles 14 and 27 of the California Code of Regulations.[5] While the entirety of the Kleinfelder reports should be reviewed for a complete understanding for the basis of Lakeside Conservancy's belief that the fill materials are "inert debris"/"inert waste", a brief summary of the assessment work relevant to Area 3 is set forth below.

In preparting the July 2004 report, Kleinfelder pursued eleven soil borings (KB-1 to KB-11) within Area 3[6], located as shown on Figure 2 of the report, and analyzed a sample from each boring for,

> "Title 22 metals in general accordance with EPA Methods 6010B/7470 and total recoverable petroleum hydrocarbons (TRPH) in general accordance with EPA Method 418.1. Selected soil samples would be further analyzed for total petroleum hydrocarbons as gasoline and diesel (TPH-g and TPH-d) in general accordance with

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[5] 14 CCR §§ 17381(k) and 17388(k); 27 CCR §§ 20164 and 20230(a).
[6] A total of eighteen (18) borings were pursued in Areas 1, 2, and 3.

EPA Method 8015M, pesticides in general accordance with EPA Method 8081A, polychlorinated biphenyls (PCBs) in general accordance with EPA Method 8082, volatile organic compounds (VOCs) ingeneral accordance with EPA Method 8260B, and semi-volatile organic compounds in general accordance with EPA Method8270C."[7]

From borings KB-1 through KB-5 and KB-7 through KB-11, ten (10) samples from Area 3[8] were submitted for environmental analysis for Title 22 metals (by EPA Methods 6010B/7470) and TRPH (by EPA Method 418.1).[9] From the total of fifteen (15) samples taken from Areas 1, 2, and 3[10] the "samples with the three highest reported concentrations of TRPH were further analyzed for TPH-g and TPH-d by EPA Method 8015 Modified, VOCs by EPOA Method 8260B, SVOCs by EPA Method 8270C, pesticides by EPA Method 8081A, and PCBs by EPA Method 8082."[11]

A. No Significant Concentrations of Metals Found

Metals were not found to be present on the Lakeside Conservancy property, inclusive of Area 3, in significant concentrations.[12] As set forth in Table 2, Summary of Title 22 Metals Analytical Results (mg/kg), from the July 2004 report, Kleinfelder found that the "highest detected metal concentrations of metals reported are below the TTLC and 10×STLC regulatory limits."[13] A comparison of the maximum detected metals concentrations against the regulatory TTLC and 10×STLC limits is made in the July 2004 Kleinfelder report as Table 3, Maximum Detected Metals Concentrations Versus TTLC and STLC Regulatory Limits. Indeed, the concentrations of metals detected are consistent with background metals concentrations in Southern California soils.

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[7] Kleinfelder, Final Report of Undocumented Fill Assessment Activities, Future Lakeside Riverpark, Highway 67 and Winter Gardens Boulevard, Lakeside, California dated July 21, 2004, at pp. 3-5 of 15.
[8] There was no recovery of sample materials from KB-6.
[9] Id. at p. 6 of 15.
[10] There was also no recovery from KB-16 or KB-18 in Area 1.
[11] Id.
[12] However, in Kleinfelder, Report of Area 1 Additional Undocumented Fill Assessment Activities, Future Lakeside Riverpark, Highway 67 and Winter Gardens Boulevard, Lakeside, California, dated December 14, 2004, an elevated level for lead was detected in Area 1. It is believed that the elevated lead level detected arose from the sample inclusion of a chip of road paint originating from asphalt brought to the site in the fill materials.
[13] Id. at p. 13 0f 15.

B. No Significant Hydrocarbons Found in Area 3

As a part of the July 2004 report, Kleinfelder indicated that TPRH was detected in only four (4) of the borings taken from Area 3, of which the highest detectable concentration was only 220 mg/kg in KB-2.[14] The sample from KB-2 was further analyzed for TPH-g, TPH-d, VOCs, SVOCs, pesticides and PCBs, as prescribed earlier. The results are shown on Table 5 of Kleinfelder's July 2004 report and describe no detectable concentrations of VOCs, SVOCs, or PCBs. The analysis found detectable but very low concentrations of pesticide well below applicable EPA Region 9's risk-based residential Preliminary Remediation Goals (PRGs) (alpha-Chlordane and gamma-Chlordane). And, the analysis detected hydrocarbons at 260 mg/kg in the diesel range (TPH-d). Concerning detected hydrocarbons, please refer to the discussion in subsection C below, addressing the likelihood that detected hydrocarbons reflect the presence of asphalt in the fill materials.

C. Area 3 Hydrocarbons Detected Likely to be Old Asphalt

At the Lakeside Conservancy's request, Kleinfelder conducted a further assessment of the environmental conditions existing in Area 3 fill materials, as a part of a broader effort to further assess the environmental and geotechnical condition of on-site and off-site fill materials affecting the proposed Project as a whole, to ensure the protection of public health and sensitive environmental receptors. The results of this further assessment for Area 3 fill materials are described in Kleinfelder's March 2005 report.

The two highest detectable concentrations of hydrocarbons in Area 3 were KB-8 (93mg/kg) and KB-2 (220mg/kg)[15]. Four (4) trenches were advanced around KB-2 (T3-3 through T3-6) and two (2) trenches were advanced adjacent to KB-8 (T3-1 and T3-2). The locations of KB-2 and KB-8 are shown on Figure 2 of the March 2005 Kleinfelder report. Eighteen samples were collected from the six Area 3 trenches to assess the extent and character of the hydrocarbons present in the

[14] Id. at p. 10 of 15 (Table 4, Summary of TPRH Analytical Results).
[15] Though a subsequent analysis of the sample detected 260mg/kg TPH-d.

vicinity of KB-2 and KB-8. Samples were also analyzed for VOCs, SVOCs, metals and bioassay acute toxicity screening.[16]

Of the eighteen samples taken, only two indicated the presence of hydrocarbons in the range of TPH-d, namely, trenches T3-4 (136mg/kg at 15 ft BGS) and T3-6 (77.6mg/kg at 9 ft BGS) in the vicinity of KB-2. In addition, trenches T3-1 through T3-5 each revealed the presence of hydrocarbons in the range of TPH-ho (heavy oil) in one or more sample locations, the detectable concentrations of which ranged from 187mg/kg to 1180mg/kg.[17]

A review of these hydrocarbon results must consider the important fact that Kleinfelder's assessment efforts reported a direct observation of the significant presence of crushed asphalt in the fill materials in Area 3 (and an occasional asphalt chunk does appear). The Lakeside Conservancy believes that the above-referenced findings of detectable concentrations of TPH-d and TPH-ho are from varying constituents of such asphalt materials. Indeed, at the Lakeside Conservancy's request, Kl[illegible] concentrations of hydrocarbons in Area 3, as described above, are California crude oil, with some lighter fractions, collectively used for asphalt base. This is certainly consistent with [illegible] in Area 3 and suggests that while TPRH, TPH-d, or TPH-ho may be detected [illegible] the presence of old asphalt in the fill materials and not of independent hydrocarbon contamination by gas, diesel or other hydrocarbon fuels or mineral oil.

D. No Significant VOCs or SVOCs Found in Area 3

No detectable VOCs were found in the trenches.

Table 13, Summary of Area 3 Semivolatile Organic Compounds (8270C) of the March 2005 Kleinfelder report reflects the detection of some SVOCs believed to be consistent with the presence of plastic sheeting (phthalates)

[16] Kleinfelder, Report of Supplemental Fill Assessment Activities, Areas 1, 3 and Hanson Diversion [illegible] Area, Future Lakeside Riverpark, Highway 67 and Winter Gardens Boulevard, [illegible] March 9, 2005, at p. 18 of 25.

[17] Id. at p. 19 of 25, Table 12, Summary of Area 3 Analyt[illegible]

and constituents of asphalt (PAHs).[18] Indeed, the TTLC and STLC tests of sample materials for these parameters have resulted in "non-detects" for SVOCs in the leachate. This, again, is consistent with the conclusion that the SVOCs noted in table 13 are either bound up as a part of plastic sheeting (e.g., visqueen) debris or asphalt debris.

E. Bioassay Acute Toxicity Screening Negative for Five Trenches

A bioassay acute toxicity screening sample was collected from each of the six (6) Area 3 trenches for toxicity analysis using flathead minnows and water fleas. The flathead minnows had a 100% survival rate in all six tests. The water fleas had a 93 to 100% survival rate in five (5) of the six (6) tests.

Screening Inconclusive for Sixth Trench

In the remaining sixth bioassay acute toxicity screening test, one hundred percent (100%) of the flat head minnows survived; however, the water fleas failed to survive. Given the very sensitive nature of water fleas and the possibility for laboratory error, a duplicate bioassay acute toxicity screening test was run using water fleas resulting in a thirty-five percent (35%) survival rate. Because there are no toxic indicators in T3-2 material [illegible] appears to be less burdened by organic [illegible] mortality of water fleas, and because no pattern emerged which would make T3-2 stand out from a metals perspective, Kleinfelder believes that "it is possible [illegible] is misleading as a false positive."[19] T3-2 is located [illegible] Creek and adjacent to Highway 67 (the outskirts of the planned project). The Lakeside Conservancy will not remove [illegible] demonstrating its lack of toxicity.

III. Area 3 Fill Materials Are Inert Debris/Inert Waste

Inert Debris and Inert Waste are defined as follows:

[18] Id. at p. 19 of 25.
[19] Id. at pp 22 of 25 – 23 of 25.

"Inert Debris" means solid waste and recyclable materials that are source separated or separated for reuse, do not contain [illegible] waste (as defined in CCR, Title 22, section 66261.3 et seq.) or soluble pollutants at concentrations in excess of applicable water quality objectives and do not contain significant qualntities of decomposable [illegible] is not limited to concrete (including fiberg[illegible] roofing shingles, brick, slag, ceramics, plaster, clay, and clay products. Type A inert debris is waste that [illegible] has not been treated in orde[illegible]

"Inert Waste" is that subset of solid waste that does not contain hazardous waste or soluble pollutants at concentrations in excess of applicable water quality objectives, and does not contain significant quantities of decomposable waste.[21]

[illegible] in distinct locations on the property and have not been com[illegible] and available for appropriate reuse as "inert debris" on-site and off-site. The [illegible] materials do not contain hazardous substances or [illegible] significant quantities of decomposable waste. Of primary importance is that the [illegible] indicate that the fill ma[illegible] soluble hydrocarbons. The hydrocarbons are comprised of asphalt debris (including non-soluble SVOCs), no VOCs, no PCBs, and only very low detectable levels of [illegible]idential PRGs). Bioassay acute toxicity screening substan[illegible] toxic in light of one hundred percent (100%) survival for flat head minnow and near one hundred percent (100%) survival for water fleas. (One bioassay test was inconclusive f[illegible]

[20] Title 14 CCR Section 17380.1(k).
[21] Title 27 CCR Section 20230(a).

IV. Conclusion

Based on the data presented in the Kleinfelder reports, the fill materials of Area 3 constitute "inert debris"/"inert waste" within the meaning of the Integrated Waste Management Board regulations as they have been promulgated by the SWRCB and local government EAs. The Lakeside Conservancy respectfully requests the RWQCB's concurrence that (a) the materials may be used on site in accordance with approved plans such as for site/habitat contouring, wetland construction above and within the flood[illegible]ent marshes, and that (b) the fill materials may also be removed from the site [illegible] terms of government agencies having jurisdiction.

I am very grateful for your productive assistance (... McDaniel) concerning the Lakeside Conservancy's contemplation of an appropriate disposition for the "inert debris" located on the site. The Lakeside Conservancy desires to create a public amenity and to enhance and [illegible] values on the site and, consistent with its public benefit motive for the Project, to do so in a [illegible] public health and positive environmental receptors. I look [illegible] meeting with you and your staff to discuss this Project with you in the near future and the contemplated use of the inert [illegible] construction.

If you have any questions or comments, please feel free to contact me at 858-395-3581 or jamesdodson[illegible]

Sincerely,
James R. Dodson Consulting

James Dodson

JRD/jd

cc. Robin Rierdon (w/o enclosures)
cc. Lori Carpenter (w/o enclosures)

James R. Dodson Consulting
12963 Creek Park Dr
Poway, CA 92064

April 3, 2005

John R. Odermatt
Senior Engineering Geologist
Regional Water Quality Control Board
Land Discharge and Tank Site Mitigation and
Cleanup Units
9174 Sky Park Court, Suite 100
San Diego, CA 92123

Re: Lakeside's River Park Conservancy
Proposed Flood Control, Habitat Restoration, and Recharge Project
Utilization of Inert Debris for Project Construction

Dear Mr. Odermatt:

Lakeside's River Park Conservancy (Lakeside Conservancy), a non-profit and charitable corporation, is striving to fulfill its mission, "to preserve and restore the biological integrity and beauty of the San Diego River while integrating recreational, educational, and cultural opportunities for youth, seniors, families and citizens of East San Diego County." As a part of its efforts, the Lakeside Conservancy is in the process of acquiring permits to construct its proposed Flood Control, Habitat Rehabilitation, and Recharge Project on approximately one hundred (100) acres of real property it owns in the unincorporated community of Lakeside, County of San Diego, California. The site location and the Project location maps are Figures 1a and 1b of Volume 2, Restoration Plan and Feasibility Report for the Project, prepared for the Lakeside Conservancy by Huffman and Carpenter, Inc. (December 2004) and enclosed herewith. The referenced Volume 2 is a part of a multi-volume submittal made to the County of San Diego and other federal and state agencies.[1] In the event you may need to refer to another portion of the Application, I am taking the liberty of also enclosing the remaining volumes, namely, Volume 1, United States Army Corps of Engineers Preconstruction Notification (PCN) For a Nationwide Permit 27,

[1] This includes the RWQCB (Chiara Clemente-Grant Manager).

Volume 3, NPDES Application, Notice of Intent, and Storm Water Pollution Prevention Plan, and Volumes 4A, Reclamation Plan Application; 4B, California Environmental Quality Act Documentation; 4D, Grading Permit Application; 4E, Revegetation Plan; and 4G, Storm Water Management Plan (4A -4G in one binder).

The portion of the San Diego River channel traversing the Lakeside Conservancy property has been substantially disturbed due to extensive sand and gravel mining in the past and is subject to recurrent flooding. Activities on the property have severely reduced, degraded and fragmented habitat for threatened, endangered, sensitive and other native species having a significant and adverse impact on species abundance and diversity. The Project proposed by the Lakeside Conservancy would increase flood control capacity, restore and expand habitat for native species, and improve groundwater and surface water quality. In this regard, the Lakeside Conservancy is grateful to have received grant funding for its Project from the State Water Resources Control Board and from the Department of Water Resources.[2]

As discussed in more detail below, completion of the Lakeside Conservancy Project depends upon the removal of approximately three hundred thousand (300,000) cubic yards and the on-site reuse of approximately One hundred and sixteen thousand (116,000) cubic yards of "inert debris" comprised of fill material deposited on the site many years ago. The deposits were made as a part of a reclamation plan under the Surface Mining And Reclamation Act at the conclusion of sand/gravel mining operations on the site. On-site reutilization of the "inert debris" would include site contouring, the construction of wetlands above and within the floodplain and the conversion of two water-filled sand/gravel extraction pits into shallow emergent perennial marshes. The Lakeside Conservancy needs the assistance of the Regional Water Quality Control Board (RWQCB) to ensure that the work is conducted in a manner protective of public health and sensitive environmental receptors and to ensure that any RWQCB requirements are identified and achieved.

I. The Lakeside Conservancy's Project

[2] The grant funding agreements are administered by Chiara Clemente at the RWQCB and Earl Nelson at DWR.

The Lakeside Conservancy's project benefiting the San Diego River is described in detail in the enclosed Restoration Plan and Feasibility Report.[3] However, to facilitate our discussion, a summary of key Project components is provided below.

(a) At the eastern boundary of the property, a large constriction in the river channel impeding flood flows near Channel Road, would be removed. The channel constriction is largely composed of imported fill sands, gravels and concrete debris. The area would be restored to a natural ephemeral channel similar to the surrounding Lower San Diego River channel. Proper bed and bank protection would be employed to safeguard surrounding properties within and near the constriction area. Work would be conducted from the upland and north side of the river channel. This Project component would lower the depth and velocity of flood flows in the area.

(b) Selective invasive vegetation and trash removal may take place in the natural river channel and adjacent upland areas. Work would include the utilization of machinery and be conducted out of the bird-nesting season.

(c) Adjacent to the river channel, an existing abandoned floodplain upland terrace would be planted with native vegetation consisting of a Coastal Sage Scrub community, along with an Urban Forest/Riparian plant community composed of native willows and trees. Work would be done with machinery and conducted out of the bird-nesting season.

(d) Adjacent to the river channel, existing denuded upland areas would be converted to native vegetation consisting of a Coastal Sage Scrub community. Work would be done with machinery and conducted out of the bird-nesting season.

(e) Adjacent to the Los Coches Creek outfall structure, a group of Urban Non-Point Source Water Quality Improvement basins would be constructed. The basins would be located upon and within existing upland fill materials in the area. As designed, the basins would serve

[3] A good Project description also appears in Volume 4B, California Environmental Quality Act Documentation.

to reduce certain non-point source pollutants (e.g., nutrients) in waters emanating from Los Coches Creek before the waters enter the San Diego River channel.

(e) Approximately four hundred and twenty thousand (420,000) cubic yards of imported fill material would be removed from the site or relocated on-site as a part of the Project design utilizing machinery. Of the estimated four hundred and twenty thousand (420,000) cubic yards of fill material, approximately one hundred and sixteen thousand (116,000) cubic yards would be utilized to restore wetland habitat values in the area of two existing gravel/sand extraction pits; and, approximately three hundred thousand (300,000) cubic yards would be removed from the site and hauled to an appropriate off-site location. The area from which fill materials would be removed from the site would be thereafter transformed into a seasonal wetland to attract the least Bell's vireo (*Vireo bellii pusillus).*

(f) Two large gravel/sand extraction pits, now filled with water, would be partially back-filled utilizing the fill material until the water depth in the pits is reduced to approximately 2.5 to 3 feet. This component of the Project would serve two functions. First, it would restore floodplain and sediment transport functions. Second, it would meet restoration objectives within the present sand/gravel extraction pit areas for the establishment of emergent perennial marsh wetlands created to mimic the functionality of oxbow marshes.

(g) A Constructed Wetland would be built upon and within the upland fill material tailings pile above the 100-year floodplain elevation. The Constructed Wetland is designed to encompass a six-acre area and be comprised of five wetland cells and a dedicated Rapid Infiltration Basin (RIB). The Constructed Wetland would reduce pollutants (e.g., nitrates) present in the groundwater utilized by the Riverview Water District through phyto-remediation and other passive mechanisms. Groundwater would be pumped into the wetlands from the Riverview Water District wells, allowed to flow through the wetland basins, and then re-enter the groundwater reservoir through the Rapid Infiltration Basin. The Constructed Wetland could accommodate maximum pumping rates from the Riverview Water District well field (approximately 400 gallons per minute per day). Preliminary design models estimate up to an 80%

nitrogen removal rate (from a mean total nitrogen concentration of 60 mg/l to 10 mg/l). Final design is being conducted. The source of the subject groundwater's nitrogen contamination is poorly understood. Future work may help to isolate the nitrogen source and local communities may then be able to reduce the future nitrogen load to groundwater. This Project component is expected to significantly improve groundwater quality in the vicinity of the Riverview wells and to reduce the higher costs incurred by the Riverview Water District arising because of its need to blend relatively expensive imported water with the pumped groundwater to meet applicable drinking water standards.

(h) A bioswale/water quality BMP would be constructed on the project site below and along State Route 67 to reduce certain pollutants from State Route 67 storm water discharges prior to such storm waters entering the San Diego River at the newly created freshwater perennial marshes.

(i) An Educational Interpretative Nature Trail (EINT) is planned for the north side of the Lower San Diego River.

(j) An Urban Forest interface is planned on the south side of the project, along State Route 67. This area would serve as an upland buffer and would be planted with trees, utilizing machinery.

II. Characterization of Fill Materials for Reuse

The Lakeside Conservancy property is host to approximately two million (2,000,000) cubic yards of fill materials (referenced in the Project summary above) deposited onto the property from various off-site locations many years ago (as a part of a SMARA reclamation plan) prior to the Lakeside Conservancy's ownership. As stated in the Project summary above, implementation of the Project would require removing a portion of these fill materials from the site to an off-site location and the reuse of other portions of these fill materials on-site in accordance with the Project design. The greater volume of the existing fill materials would be left in place.

The fill materials have been the subject of extensive geotechnical and environmental testing by Kleinfelder, Inc., culminating in three (3) assessment reports, to wit: *Final Report of Undocumented Fill Assessment Activities, Future Lakeside Riverpark, Highway 67 and Winter Gardens Boulevard, Lakeside, California* dated July 21, 2004; *Report of Area 1 Additional Undocumented Fill Assessment Activities, Future lakeside Riverpark, Highway 67 and Winter Gardens Boulevard, Lakeside, California* dated December 14, 2004; and, *Report of Supplemental Fill Assessment Activities, Areas 1, 3 and Hanson Diversion [sic] Area, Future Lakeside Riverpark, Highway 67 and Winter Gardens Boulevard, Lakeside, California* dated March 9, 2005. A copy of these three reports area enclosed for your reference and review. For purposes of these reports, the location of the fill materials are divided into three areas as shown on Figure 2 of the July 2004 Kleinfelder report. The fill materials which will be affected by the Project are located substantially within Area 3.

As a result of these assessment studies, the Lakeside Conservancy believes the fill materials in Area 3 to be properly characterized as "inert debris" or "inert waste", as defined by the California Integrated Waste Management Board (CIWMB) regulations in Titles 14 and 27 of the California Code of Regulations.[5] While the entirety of the Kleinfelder reports should be reviewed for a complete understanding for the basis of Lakeside Conservancy's belief that the fill materials are "inert debris"/"inert waste", a brief summary of the assessment work relevant to Area 3 is set forth below.

In preparing the July 2004 report, Kleinfelder pursued eleven soil borings (KB-1 to KB-11) within Area 3[6], located as shown on Figure 2 of the report, and analyzed a sample from each boring for,

> "Title 22 metals in general accordance with EPA Methods 6010B/7470 and total recoverable petroleum hydrocarbons (TRPH) in general accordance with EPA Method 418.1. Selected soil samples would be further analyzed for total petroleum hydrocarbons as gasoline and diesel (TPH-g and TPH-d) in general accordance with EPA Method 8015M, pesticides in general accordance with EPA

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[5] 14 CCR §§ 17381(k) and 17388(k); 27 CCR §§ 20164 and 20230(a).

[6] A total of eighteen (18) borings were pursued in Areas 1, 2, and 3.

Method 8081A, polychlorinated biphenyls (PCBs) in general accordance with EPA Method 8082, volatile organic compounds (VOCs) in general accordance with EPA Method 8260B, and semi-volatile organic compounds in general accordance with EPA Method8270C."[7]

From borings KB-1 through KB-5 and KB-7 through KB-11, ten (10) samples from Area 3[8] were submitted for environmental analysis for Title 22 metals (by EPA Methods 6010B/7470) and TRPH (by EPA Method 418.1).[9] From the total of fifteen (15) samples taken from Areas 1, 2, and 3[10] the "samples with the three highest reported concentrations of TRPH were further analyzed for TPH-g and TPH-d by EPA Method 8015 Modified, VOCs by EPOA Method 8260B, SVOCs by EPA Method 8270C, pesticides by EPA Method 8081A, and PCBs by EPA Method 8082."[11]

A. No Significant Concentrations of Metals Found

Metals were not found to be present on the Lakeside Conservancy property, inclusive of Area 3, in significant concentrations.[12] As set forth in Table 2, Summary of Title 22 Metals Analytical Results (mg/kg), from the July 2004 report, Kleinfelder found that the "highest detected metal concentrations of metals reported are below the TTLC and 10×STLC regulatory limits."[13] A comparison of the maximum detected metals concentrations against the regulatory TTLC and 10×STLC limits is made in the July 2004 Kleinfelder report as Table 3, Maximum Detected Metals Concentrations Versus TTLC and STLC Regulatory Limits. Indeed, the concentrations of metals detected are consistent with background metals concentrations in Southern California soils.

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[7] Kleinfelder, Final Report of Undocumented Fill Assessment Activities, Future Lakeside Riverpark, Highway 67 and Winter Gardens Boulevard, Lakeside, California dated July 21, 2004, at pp. 3-5 of 15.
[8] There was no recovery of sample materials from KB-6.
[9] Id. at p. 6 of 15.
[10] There was also no recovery from KB-16 or KB-18 in Area 1.
[11] Id.
[12] However, in Kleinfelder, Report of Area 1 Additional Undocumented Fill Assessment Activities, Future Lakeside Riverpark, Highway 67 and Winter Gardens Boulevard, Lakeside, California, dated December 14, 2004, an elevated level for lead was detected in Area 1. It is believed that the elevated lead level detected arose from the sample inclusion of a chip of road paint originating from asphalt brought to the site in the fill materials.
[13] Id. at p. 13 0f 15.

B. No Significant Hydrocarbons Found in Area 3

As a part of the July 2004 report, Kleinfelder indicated that TPRH was detected in only four (4) of the borings taken from Area 3, of which the highest detectable concentration was only 220 mg/kg in KB-2.[14] The sample from KB-2 was further analyzed for TPH-g, TPH-d, VOCs, SVOCs, pesticides and PCBs, as prescribed earlier. The results are shown on Table 5 of Kleinfelder's July 2004 report and describe no detectable concentrations of VOCs, SVOCs, or PCBs. The analysis found detectable but very low concentrations of pesticide well below applicable EPA Region 9's risk-based residential Preliminary Remediation Goals (PRGs) (alpha-Chlordane and gamma-Chlordane). And, the analysis detected hydrocarbons at 260 mg/kg in the diesel range (TPH-d). Concerning detected hydrocarbons, please rtefer to the discussion in subsection C below, addressing the likelihood that detected hydrocarbons reflect the presence of asphalt in the fill materials.

C. Area 3 Hydrocarbons Detected Likely to be Old Asphalt

At the Lakeside Conservancy's request, Kleinfelder conducted a further assessment of the environmental conditions existing in Area 3 fill materials, as a part of a broader effort to further assess the environmental and geotechnical condition of on-site and off-site fill materials affecting the proposed Project as a whole, to ensure the protection of public health and sensitive environmental receptors. The results of this further assessment for Area 3 fill materials are described in Kleinfelder's March 2005 report.

The two highest detectable concentrations of hydrocarbons in Area 3 were found in KB-8 (93mg/kg) and KB-2 (220mg/kg)[15]. Four (4) trenches were advanced around KB-2 (T3-3 through T3-6) and two (2) trenches were advanced adjacent to KB-8 (T3-1 and T3-2). The locations of the trenches relative to KB-2 and KB-8 are shown on Figure 2 of the March 2005 Kleinfelder report. Eighteen samples were collected from the six Area 3 trenches to assess the extent and character of the hydrocarbon present in the

[14] Id. at p. 10 of 15 (Table 4, Summary of TPRH Analytical Results).
[15] Though a subsequent analysis of the sample detected 260mg/kg TPH-d.

vicinity of KB-2 and KB-8. Samples were also analyzed for VOCs, SVOCs, metals and bioassay toxicity screening.[16]

Of the eighteen samples taken, only two indicated the presence of hydrocarbons in the range of TPH-d, namely, trenches T3-4 (136mg/kg at 15 ft BGS) and T3-6 (77.6mg/kg at 9 ft BGS) in the vicinity of KB-2. In addition, trenches T3-1 through T3-5 each revealed the presence of hydrocarbons in the range of TPH-ho (heavy oil) in one or more sample locations, the detectable concentrations of which ranged from 187mg/kg to 1180mg/kg.[17]

A review of these hydrocarbon results must consider the important fact that Kleinfelder's assessment efforts revealed the significant presence of crushed asphalt in the fill materials in Area 3 (and an occasional asphalt chunk does appear). The Lakeside Conservancy believes that the above-referenced findings of detectable concentrations of TPH-d and TPH-ho are from varying constituents of such asphalt materials. Indeed, at the Lakeside Conservancy's request, Kleinfelder has determined that the materials giving rise to the detectable concentrations of hydrocarbons in Area 3, as described above, are California Crude oil, with some lighter fractions, collectively used for asphalt base. This is certainly consistent with the presence of crushed asphalt in Area 3 and suggests that while TPRH, TPH-d, or TPH-ho may be detected in Area 3, the results are indicative of the presence of old asphalt in the fill materials and not of independent hydrocarbon contamination by gas, diesel or oil.

D. No Significant VOCs or SVOCs Found in Area 3

No detectable VOCs were found in the trenches.

Table 13, Summary of Area 3 Semivolatile Organic Compounds (8270C) of the March 2005 Kleinfelder report reflects the detection of some SVOCs believed to be consistent with the presence of plastic sheeting (phthalates)

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[16] Kleinfelder, Report of Supplemental Fill Assessment Activities, Areas 1, 3 and Hanson Diversion [sic] Area, Future Lakeside Riverpark, Highway 67 and Winter Gardens Boulevard, Lakeside, [16]California dated March 9, 2005, at p. 18 of 25..

[17] Id. at p. 19 of 25, Table 12, Summary of Area 3 Analytical Results Total Petroleum Hydrocarbons

and constituents of asphalt (PAHs).[18] Indeed, the TTLC and STLC tests of sample materials for these parameters have resulted in "non-detects" for SVOCs in the leachate. This, again, is consistent with the conclusion that the SVOCs noted in table 13 are either bound up as a part of plastic sheeting (e.g., visqueen) debris or asphalt debris.

E. Bioassay Toxicity Screening Negative for Five Trenches

A bioassay toxicity screening sample was collected from each of the six (6) Area 3 trenches for toxicity analysis using flathead minnows and water fleas. The flathead minnows had a 100% survival rate in all six tests. The water fleas had a 93 to 100% survival rate in five (5) of the six (6) tests.

F. Bioassay Toxicity Screening Inconclusive for Sixth Trench

In the remaining sixth bioassay toxicity screening test, one hundred percent (100%) of the flat head minnows survived; however, the water fleas failed to survive. Given the very sensitive nature of water fleas and the possibility for laboratory error, a duplicate bioassay toxicity screening test was run using water fleas resulting in a thirty-five percent (35%) survival rate. Because there are no toxic indicators in T3-2 material in contrast with materials from the other five trenches (and, in fact, T3-2 appears to be less burdened by organic materials than the other trenches), because of the sensitivity of water fleas, and because no pattern emerged which would make T3-2 stand out from a metals perspective, Kleinfelder believes that "it is possible that the T3-2 toxicity testing data is misleading or a false positive."[19] T3-2 is located just west of Los Coches Creek and adjacent to Highway 67 (the outskirts of the planned project). The Lakeside Conservancy will not remove or reuse soil in the vicinity of the T3-2 trench without further conclusive bioassay toxicity analysis demonstrating its lack of toxicity.

III. Area 3 Fill Materials Are Inert Debris/Inert Waste

Inert Debris and Inert Waste are defined as follows:

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[18] Id. at p. 19 of 25.
[19] Id. at pp 22 of 25 – 23 of 25.

"Inert Debris" means solid waste and recyclable materials that are source separated or separated for reuse, do not contain hazardous waste (as defined in CCR, Title 22, section 66261.3 et seq.) or soluble pollutants at concentrations in excess of applicable water quality objectives and do not contain significant quantities of decomposable waste..." (1) "Type A Inert Debris" includes but is not limited to concrete (including fiberglass or steel reinforcing bar embedded in the concrete), fully cured asphalt, glass, fiberglass,, asphalt or fiberglass roofing shingles, brick, slag, ceramics, plaster, clay, and clay products. Type A inert debris is waste that does not contain soluble pollutants at concentrations in excess of water quality objectives and has not been treated in order to reduce pollutants....[20]

"Inert Waste" is that subset of solid waste that does not contain hazardous waste or soluble pollutants at concentrations in excess of applicable water quality objectives, and does not contain significant quantities of decomposable waste.[21]

The Area 3 fill materials on the site are in distinct locations on the property and have not been commingled with other materials. They are accessible and available for appropriate reuse as "inert debris" on-site and off-site. The Kleinfelder reports have demonstrated that the fill materials do not contain hazardous substances or waste within the meaning of Title 22 CCR Sections 66261.3 et seq. and that they do not contain significant quantities of decomposable waste. Of primary importance is that the Kleinfelder reports indicate that the fill materials do not contain metals beyond background levels for Southern California soils or soluble hydrocarbons. The hydrocarbons are comprised of asphalt debris (including non-soluble SVOCs), no VOCs, no PCBs, and only very low detectable levels of pesticides in some samples (well below residential PRGs). Bioassay toxicity screening substantially indicated that materials in Area 3 are non-toxic in light of one hundred percent (100%) survival for flat head minnows and near one hundred percent (100%) survival for water fleas. (One bioassay test was inconclusive for water fleas.)

[20] Title 14 CCR Section 17380.1(k).
[21] Title 27 CCR Section 20230(a).

IV. Conclusion

Based on the data presented in the Kleinfelder reports, the fill materials of Area 3 constitute "inert debris"/"inert waste" within the meaning of the Integrated Waste Management Board regulations as they have been promulgated by the SWRCB and local government EAs. The Lakeside Conservancy respectfully requests the RWQCB's concurrence that (a) the materials may be used on site in accordance with the Project design, as described above, such as for site/habitat contouring, wetland construction above and within the floodplain, and backfilling the sand/gravel extraction pits to establish perennial emergent marshes, and that (b) the fill materials may also be removed from the site and used for appropriate off-site projects, subject, of course, to applicable permit requirements of government agencies having jurisdiction.

I am very grateful for your productive assistance (and that of Brian McDaniel) concerning the Lakeside Conservancy's contemplation of an appropriate disposition for the "inert debris" located on the site. The Lakeside Conservancy desires to create a public amenity and to enhance and protect natural resource and environmental values on the site and, consistent with its public benefit motive for the Project, to do so in a manner which safeguards public health and sensitive environmental receptors. I look forward to discussing this project with you and the contemplated use of the "inert debris" in Project construction.

If you have any questions or comments, please feel free to contact me at 858-395-3581 or jamesdodson@cox.net. I look forward to our meeting to discuss the Project and the lakeside Conservancy's proposed use of the fill materials in the near future.

Sincerely,

James Dodson

KLEINFELDER
An employee owned company

March 9, 2005
Project No. 44102

Ms. Robin Rierden
Lakeside Conservancy USDRIP (Client)
11769 Waterhill Road
Lakeside, California 92040-2905

Subject: **Supplemental Fill Assessment Activities Report for Areas 1, 3 and Hanson Diversion Area**

Project: **Future Lakeside Riverpark**
Highway 67 & Winter Gardens Boulevard
Lakeside, California

Dear Ms. Rierden:

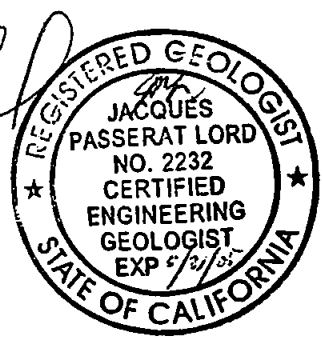
Kleinfelder, Inc. is pleased to submit a copy for your review of the report detailing the additional Area 1 undocumented fill assessment activities at the above referenced site. Should you have any comments or questions, please contact me at (858) 320-2206.

Sincerely,

KLEINFELDER, INC.

Jacques P. Lord, CEG #2232
Environmental Department Manager

JPL:jb



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REPORT OF
SUPPLEMENTAL FILL
ASSESSMENT ACTIVITIES
AREAS 1, 3 AND HANSON DIVERSION AREA
FUTURE LAKESIDE RIVERPARK
HIGHWAY 67 AND
WINTER GARDENS BOULEVARD
LAKESIDE, CALIFORNIA

March 9, 2005

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A Report Prepared for:

Ms. Robin Rierden
Lakeside Conservancy
11769 Waterhill Road
Lakeside, California 92040-2905

REPORT OF
SUPPLEMENTAL FILL ASSESSMENT ACTIVITIES
AREAS 1, 3 AND HANSON DIVERSION AREA
FUTURE LAKESIDE RIVERPARK
HIGHWAY 67 AND
WINTER GARDENS BOULEVARD
LAKESIDE, CALIFORNIA

Project No. 44102

Prepared by:

Sean T. Kearney
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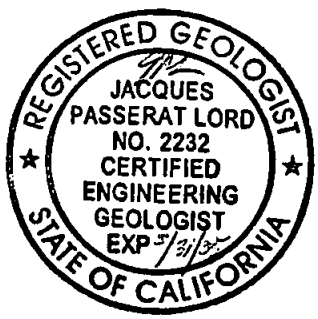
Environmental Department Manager



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March 9, 2005

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LAKESIDE, CALIFORNIA

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March 9, 2005

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1.0 INTRODUCTION

The Site consists of three parcels that may be included in the proposed Lakeside's Riverpark Conservancy restoration project, located from west of the intersection of Channel Road and Maple View Road and East of Riverford Road, in the Lakeside area of San Diego County, California (Figure 1). Adjacent features include the San Diego River to the north and west and Highway 67 to the south. The Site is an approximately 100-acre area formerly operated as a sand and gravel mining and aggregate operation. Apparently mined areas of the Site were backfilled with undocumented fill materials, including demolition debris (e.g., concrete and asphalt), petroleum hydrocarbon-bearing soils, rebar, vinyl and plastic-coated wire, and bricks.

The Lakeside's Riverpark Conservancy (Client) would like to use part of the fill material in the construction of the Riverpark or have material removed from the parcels as a part of the restoration efforts. The results of the first round of sampling in July 2004 indicated that additional information was needed in Area 1, the eastern-most parcel. Results from that supplemental effort as well as additional questions about Area 3 and a river channel restriction on Hanson property led to an additional supplemental assessment program of Areas 1, 3 and a portion of the Hanson property. The purpose was to provide additional assessment for most of the fill and evaluate the appropriate options for how to handle any unsuitable material. This report presents the results, recommendations, and conclusions based on the additional activities performed in Areas 1, 3 and the adjacent Hanson construction area.

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2.0 SITE INFORMATION

Name of Facility:	Area 1 and 3; Future Lakeside Riverpark Former VULCAN materials property
Site Address:	Channel Road & Maple View Road Lakeside, California 92040
Assessor's Parcel Number:	382-250-3000
Current Property Owner:	Lakeside's Riverpark Conservancy
Contact Person:	Ms. Robin Rierdon Lakeside's Riverpark Conservancy 11769 Waterhill Road Lakeside, CA 92040-2905 (619) 443-4770
Consultant:	Kleinfelder, Inc. 5015 Shoreham Place San Diego, CA 92122 (858) 320-2000

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3.0 PREVIOUS STUDIES

3.1 UNDOCUMENTED FILL ASSESSMENT ACTIVITES REPORT

Kleinfelder, Inc. (Kleinfelder) was contracted by the Lakeside Conservancy in a competitive bid process to perform an assessment of the undocumented fill at three parcels located north of Highway 67 and Winter Gardens Boulevard in Lakeside, California (Figure 1). The initial assessment activities for the undocumented fill were conducted in general accordance with the *Proposal to Assess Undocumented Fill Areas*, dated April 1, 2004, prepared by Kleinfelder, Inc. Fieldwork was performed on May 17, 2004 and the report of the results was issued July 21, 2004. The following summary Tables 1 through 3 present the analytical results from this initial investigation. Sample locations are presented in Figure 2.

Table 1
Initial Assessment Activities Report
Summary of TRPH Analytical Results

Boring Number	Sample Name	Area	Sample Depth (feet bgs)	TRPH Concentration (mg/kg)
Area 3				
KB-1	KB-1@5'	3	5	<11.1
KB-2	KB-2@5'	3	5	93
KB-3	KB-3@15'	3	15	7.1 J
KB-4	KB-4@10'	3	10	<10.2
KB-5	KB-5@19'	3	19	<11.7
KB-6	-	3	-	-
KB-7	KB-7@10'	3	10	<10.2
KB-8	**KB-8@10'**	3	**10**	**220**
KB-9	KB-9@5'	3	5	<12.7
KB-10	KB-10@5'	3	5	8.6 J
KB-11	KB-11@15'	3	15	<10.3
Area 2				
KB-12	**KB-12@5'**	**2**	**5**	**3,400**
KB-13	KB-13@5'	2	5	190
KB-14	KB-14@10'	2	10	200
Area 1				
KB-15	KB-15@5'	1	5	86
KB-16	-	1	-	-
KB-17	**KB-17@5'**	**1**	**5**	**24,000**
KB-18	-	1	-	-

TRPH: total recoverable petroleum hydrocarbon
mg/kg: milligram per kilogram
BOLD: three highest reported concentrations
bgs: below ground surface
<: not detected above reporting limit

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Table 2
Initial Assessment Activities Report
Summary of Title 22 Metals Analytical Results (mg/kg)

Boring	Sample Depth (ft bgs)	Area	Sb	As	Ba	Be	Cd	Cr	Co	Cu	Pb	Hg	Mo	Ni	Se	Ag	Th	V	Zi
Area 3																			
KB-1	5'	3	<11.1	0.944J	113	0.199J	<1.11	20.8	7.63	16.5	1.96	<0.111	<5.54	6.86	<1.11	1.07J	<1.11	50	38.7
KB-2	5'	3	<11.9	3.44	60.3	0.27J	<1.19	10.5	5.01	15.6	10.9	<0.119	<5.97	5.17	<1.19	0.987J	<1.19	31	46.7
KB-3	15'	3	<11.4	0.87J	61.3	<1.14	<1.14	10.8	4.26	7.76	1.38	<0.114	<5.71	3.59	<1.14	0.836J	<1.14	27.6	21.5
KB-4	10'	3	<10.2	0.44J	42.5	<1.02	<1.02	7.16	2.94	8.67	0.65J	<0.102	<5.11	2.47	<1.02	<2.04	<1.02	20.3	1[redacted]
KB-5	19'	3	<11.7	<1.17	181	0.209J	<1.17	21.3	**9.14**	18.4	2.05	<0.117	<5.85	**8.12**	<1.17	0.823J	<1.17	47.8	38.8
KB-6	-	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
KB-7	10'	3	<10.2	<1.02	17.5	<1.02	<1.02	4.53	1.2J	6.65	0.42J	<0.102	<5.11	1.81J	<1.02	<2.04	<1.02	17.5	9.59
KB-8	10'	3	<10.9	1.3	64	<1.09	<1.09	9.25	4 41	10	8.24	<0.109	<5.46	5.17	<1.09	<2.19	<1.09	29	30.7
KB-9	5'	3	3.45J	2.04	202	0.217J	<1.27	**32.6**	12.5	22.3	3.99	<0.127	<6.33	12	<1.27	**1.84J**	<1.27	**80.1**	**68.4**
KB-10	5'	3	<10.4	0.478J	39.5	<1.04	<1.04	7.33	3.04	6.92	0.994J	<0.104	<5.2	2.88	<1.04	0.82J	<1.04	22.5	16
KB-11	15'	3	<10.3	<1.03	40.2	<1.03	<1.03	9.7	3.87	6.15	0.739J	<0.103	<5.14	3	<1.03	<2.06	<1.03	24.6	16.2
Area 2																			
KB-12	5'	2	**3.92J**	4.47	83.5	0.229J	<1.1	10.8	4.97	**33.6**	11.8	<0.11	<5.52	6.52	<1.1	<2.21	<1.1	31.4	57.9
KB-13	5'	2	2.52J	4.71	**502**	**0.497J**	<1.18	22.6	4.1	8.51	5.37	<0.118	<5.89	7.46	<1.18	0.81J	<1.18	**47**	28.4
KB-14	10'	2	<11.5	3.42	78.2	0.236J	<1.15	10.6	6.91	11.2	8.51	<0.115	<5.73	4.32	<1.15	<2.29	<1.15	34.7	32.4
Area 1																			
KB-15	5'	1	<11.7	7.85	108	0.352J	<1.17	10.3	5.03	8.74	**13**	<0.117	<5.85	4.51	<1.17	<2.34	<1.17	36.3	42.3
KB-16	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
KB-17	5'	1	<10.3	**7.91**	63.7	0.235J	<1.03	2.81	1.77J	5.7	4.42	<0.103	<5.17	7.33	**1.75**	<2.07	<1.03	12.8	3[redacted]
KB-18	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

mg/kg: milligrams per kilogram
ft bgs: feet below ground surface
<: not detected above reporting limit
J: laboratory estimated concentration above method detection limit, but not above reporting limit
BOLD: maximum detected concentration

Sb: Antimony
As: Arsenic
Ba: Barium
Be: Beryllium
Cd: Cadmium
Cr: Chromium
Co: Cobalt
Cu: Copper
Pb: Lead
Hg: Mercury
Mo: Molybdenum
Ni: Nickel
Se: Selenium
Ag: Silver
Th: Thallium
V: Vanadium
Zi: Zinc

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Table 3
Initial Assessment Activities Report
Summary of Additional Analytical Results

EPA Analytical Test Method	Chemical Analysis	Constituent Detected	Sample Name		
			KB-8@10'	KB-12@5'	KB17@5'
EPA 418.1	TRPH	TRPH	**220 mg/kg**	**3,400 mg/kg**	**24,000 mg/kg**
EPA 8015M	TPH-d TPH-g	TPH-d	**260 mg/kg**	**3,100 mg/kg**	**5,100 mg/kg**
		TPH-g	<1.1 mg/kg	<1.1 mg/kg	**14 mg/kg**
EPA 8081A	Pesticides	alpha-BHC	<11 ug/kg	**3.6 ug/kg J**	<31 ug/kg
		beta-BHC	<11 ug/kg	**5.4 ug/kg J**	<31 ug/kg
		gamma-BHC	<11 ug/kg	**7 ug/kg J**	<31 ug/kg
		alpha-Chlordane	**4.9 ug/kg J**	**8.4 ug/kg J**	<31 ug/kg
		gamma-Chlordane	**5.1 ug/kg J**	**8.9 ug/kg J**	**4.7 ug/kg J**
		4,4'-DDD	<22 ug/kg	**5.8 ug/kg J**	<62 ug/kg
		4,4'-DDE	<22 ug/kg	**13 ug/kg J**	<62 ug/kg
		4,4'-DDT	<22 ug/kg	**11 ug/kg J**	<62 ug/kg
		Dieldrin	<22 ug/kg	**3.6 ug/kg J**	<62 ug/kg
		Endrin Aldehyde	<22 ug/kg	**11 ug/kg J**	<62 ug/kg
		Endrin Ketone	<22 ug/kg	**16 ug/kg J**	<62 ug/kg
		Methoxychlor	<110 ug/kg	**28 ug/kg J**	<310 ug/kg
EPA 8082	PCBs	NA	ND	ND	ND
EPA 8260B	VOCs	Acetone	<22 ug/kg	<22 ug/kg	**6.6 ug/kg J**
EPA 8270C	SVOCs	NA	ND	ND	ND

TRPH: total recoverable petroleum hydrocarbon
BHC: benzenehexachloride
mg/kg: milligrams per kilogram
TPH-d: total petroleum hydrocarbon as diesel
DDD: dichlorodiphenyldichloroethane
ug/kg: micrograms per kilogram
TPH-g: total petroleum hydrocarbon as gasoline
DDE: dichlorodiphenyldichloroethylene
NA: not applicable, no constituents detected
PCB: polychlorinated biphenyl
DDT: dichlorodiphenyltrichloroethane
ND: not detected, no constituents detected
VOC: volatile organic compound
<: not detected above reporting limit
SVOC: semivolatile organic compound
BOLD: constituent detected
J: laboratory estimated concentration greater than method detection limit, but less than reporting limit

3.2 AREA 1 UNDOCUMENTED FILL SUPPLEMENTAL ASSESSMENT ACTIVITIES REPORT

The July 21, 2004, report of the initial investigation activities included data that showed petroleum hydrocarbon-bearing fill material in Area 1, the eastern-most parcel, adjacent to Channel Road. In addition to reported hydrocarbons, two of the four borings in Area 1 did not penetrate below 5 feet from the surface. After meeting with the Client and discussing questions that the assessment raised and options for answering those questions, Kleinfelder prepared *Scope*

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of Services Change Order #1 (SSC#1) entitled *Petroleum Hydrocarbon-Bearing Soils Assessment*, dated August 6, 2004.

The objectives for the proposed SSC #1 were to:

- Assess the nature and extent of the petroleum hydrocarbon-bearing soils reported at the Site Area 1, Boring KB-17;
- Assess the potential for a petroleum hydrocarbon release into the San Diego River; and
- Assess the geotechnical nature of the fill material in Area 1 between KB-17 and KB-18 as boring refusals at all 4 borings in the Area 1 truncated collection of sufficient fill data.

The Client authorized the additional fieldwork, and Kleinfelder mobilized to the Site August 26, 2004, and performed the additional assessment activities. The following summary Tables 4 through 6 present analytical results from the work performed during this investigation. Figure 2 presents the sampling locations.

Table 4
Area 1 Supplemental Assessment Activities Report
Summary of TRPH and TPH Analytical Results

Boring Number	Sample Name	Sample Depth (feet bgs)	TRPH Concentration (mg/kg)	TPHg Concentration (mg/kg)	TPHd Concentration (mg/kg)	TPHho Concentration (mg/kg)
KPH-1	KPH-1-11	11	1,930	NA	NA	NA
KPH-1	KPH-1-13	13	2,580	NA	NA	NA
KPH-1	KPH-1-15	15	258	NA	NA	NA
KPH-2	KPH-2-13	13	888	NA	NA	NA
KPH-2	KPH-2-16	16	919	NA	NA	NA
KPH-3	KPH-3-8	8	2,960	NA	NA	NA
KPH-3	KPH-3-16	16	139	NA	NA	NA
KPH-4	KPH-4-7	7	1,850	NA	NA	NA
KPH-4	KPH-4-12	12	164	NA	NA	NA
KPH-4	KPH-4-12.5	12.5	<10	NA	NA	NA
KPH-5	KPH-5-10	10	1,050	NA	NA	NA
KPH-6	KPH-6-10	10	**3,950**	<10	<10	**506**
KPH-6	KPH-6-16	16	**3,270**	<10	<10	**819**

TRPH: Total Recoverable Petroleum Hydrocarbons (g – gasoline range) (d – diesel range) (ho – heavy oil range)
bgs: below ground surface
mg/kg: milligrams per kilogram
BOLD: Two highest reported concentrations
NA: Not analyzed

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Table 5
Area 1 Supplemental Assessment Activities Report
Summary of Title 22 Metals Analytical Results

Metal	Reported Concentration (mg/kg)		
	KPH-6-10	KPH-6-16	KB-17@5'
Antimony	<10	11.7	<10.3
Arsenic	**3.34**	**3.95**	**7.91**
Barium	78.1	**113**	63.7
Beryllium	<1.0	<1.0	0.235**J**
Cadmium	<1.0	1.28	<1.03
Chromium	10.2	**13.2**	2.81
Cobalt	<1.0	<1.0	1.77**J**
Copper	7.46	**19.2**	5.7
Lead	<10.0	**1,410**	4.42
Mercury	**0.02**	**0.04**	<0.103
Molybdenum	<5.0	<5.0	<5.17
Nickel	9.43	10.6	7.33
Selenium	<1.0	<1.0	**1.75**
Silver	<0.1	<0.1	<2.07
Thallium	<0.5	<0.5	<1.03
Vanadium	34.7	40.0	12.8
Zinc	37.1	56.1	30.6

mg/kg: milligrams per kilogram
J: laboratory estimated concentration above method detection limit, but below reporting limit

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Table 6
Area 1 Supplemental Assessment Activities Report
Summary of Additional Organic Compounds Analytical Results

EPA Analytical Test Method	Chemical Analysis	Constituent Detected	Sample Name		
			KPH-6-10'	KPH-6-16'	KB17@5'
EPA 418.1	TRPH	TRPH	**3,950 mg/kg**	**3,270 mg/kg**	**24,000 mg/kg**
EPA 8015M	TPH	TPHg	<10 mg/kg	<10 mg/kg	**14 mg/kg**
		TPHd	<10 mg/kg	<10 mg/kg	**5,100 mg/kg**
		TPHho	**506**	**819**	NA
EPA 8081A	Pesticides	alpha-BHC	<20 ug/kg	<20 ug/kg	<31 ug/kg
		beta-BHC	<20 ug/kg	<20 ug/kg	<31 ug/kg
		gamma-BHC	<20 ug/kg	<20 ug/kg	<31 ug/kg
		alpha-Chlordane	<50 ug/kg	<50 ug/kg	<31 ug/kg
		gamma-Chlordane	<50 ug/kg	<50 ug/kg	**4.7 ug/kg J**
		4,4'-DDD	<20 ug/kg	<20 ug/kg	<62 ug/kg
		4,4'-DDE	<20 ug/kg	<20 ug/kg	<62 ug/kg
		4,4'-DDT	<20 ug/kg	<20 ug/kg	<62 ug/kg
		Dieldrin	<20 ug/kg	<20 ug/kg	<62 ug/kg
		Endrin Aldehyde	<20 ug/kg	<20 ug/kg	<62 ug/kg
		Endrin Ketone	<20 ug/kg	<20 ug/kg	<62 ug/kg
		Methoxychlor	<50 ug/kg	<50 ug/kg	<310 ug/kg
EPA 8082	PCBs	PCBs	ND	ND	ND
EPA 8260B	VOCs	Acetone	<22 ug/kg	<22 ug/kg	**6.6 ug/kg J**
		Benzene	**2 ug/kg**	ND	ND
EPA 8270C	SVOCs	Benzo(a)anthracene	**127 ug/kg**	ND	ND
		Benzo(b)fluoranthene	**134 ug/kg**	ND	ND
		Bis(2-ethylhexyl)phthalate	**485 ug/kg**	ND	ND
		Chrysene	**154 ug/kg**	**124 ug/kg**	ND
		Fluoranthene	**164 ug/kg**	**145 ug/kg**	ND
		Phenanthrene	**137 ug/kg**	**118 ug/kg**	ND
		Pyrene	**171 ug/kg**	**164 ug/kg**	ND

TRPH: total recoverable petroleum hydrocarbon (g – gasoline) (d – diesel) (ho – heavy oil)
mg/kg: milligrams per kilogram
<: not detected above reporting limit
PCB: polychlorinated biphenyl
ug/kg: micrograms per kilogram
BOLD: analyte detected
VOC: volatile organic compound
NA: not applicable, not analyzed
J: laboratory estimated concentration
SVOC: semivolatile organic compound
ND: not detected, no constituents detected

The supplemental assessment work was performed in accordance with SSC#1 and findings presented in the report entitled *Area 1 Additional Fill Assessment Activities Report*, dated December 14, 2004.

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In accordance with the Client's request at a meeting held at the Conservancy offices on September 28, 2004, and phone conversations with Joe Haskell of Huffman & Carpenter, Kleinfelder prepared Scope of Services Change Order #2 (SSC#2) entitled *Additional Soils Assessment,* dated November 23, 2004.

The objectives for the proposed SSC #2 were to:

- Further assess the nature and extent of lead and the petroleum hydrocarbon-bearing soils reported at the Site Area 1 for the purpose of disposal options and on-site reuse options under Waste Discharge Requirement (WDR) Order R9-2002-342, issued by the Region 9 Water Quality Control Board;
- Further assess the nature and extent of hydrocarbons observed in Borings KB-8 and KB-2 at the Site Area 3;
- Further assess the potential for a lead and/or petroleum hydrocarbon release into the San Diego River;
- Assess the geotechnical and environmental properties of soils in the southeast corner of the Hanson Sand and Gravel operation where the San Diego River is proposed for opening a constriction; and
- Assess the thickness of the fill material to the extent practicable.

The results of the August 26, 2004 fieldwork were presented in the report *Area 1 Undocumented Fill, Additional Assessment Activities, Future Lakeside Riverpark, Highway 67 and Winter Gardens Boulevard, Lakeside, California,* issued December 14, 2004. Based on the results of the first two reports and the evolving needs of the Riverpark designers and permit preparation needs, *Revised Scope of Services Change No. 2,* dated November 23, 2004, was prepared by Kleinfelder, Inc. Fieldwork was performed from January 24 through 26, 2005.

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4.0 FIELD INVESTIGATION

Field investigation activities for SSC#2 were performed between January 24 and January 26, 2005. A total of 15 trenches were excavated with a Caterpillar 320C tracked excavator with an 18-inch wide toothed bucket (provided by SOCLARIS Contracting) in Areas 1 and 3 and at the adjacent Hanson Facility. Samples were collected from each location at varying depths in accordance with the criteria outlined in SSC#2. The excavation depths ranged from 4 to 17 feet below ground surface and were dependant on the subsurface conditions encountered. Test Pit locations were selected based on previous detections of hydrocarbon documented at several areas within the Site. A County of San Diego boring permit was not required since trenching with an excavator was used to collect subsurface information, rather than a drilling rig.

4.1 AREA 1 INVESTIGATION

An evaluation of subsurface soil was conducted for the purposes of disposal options and on-site reuse during construction. Table 7 summarizes the sampling information from test pits T1-7 through T1-12 located within Area 1. Six locations (T1-7 through T1-12) were chosen to further asses the extent of petroleum bearing fill identified from trenches KPH-1 through KPH-6 identified in Kleinfelder's Area 1 "Additional Fill Assessment Activities Report". Excavation depths ranged from 15 to 17 feet below ground surface through miscellaneous fill material. Native soils were encountered at locations T1-7 and T1-8, and other Area 1 supplemental trenches did not penetrate the fill. Samples collected were analyzed for Total Petroleum Hydrocarbon (TPH) extended or heavy oil range (TPH-ho); diesel range (TPH-d), and gasoline range (TPH-g) in general accordance with EPA Method 8015M, Volatile Organic Compounds (VOCs) in general accordance with EPA Method 8260B, Semi-Volatile Organic Compounds (SVOCs) in general accordance with EPA Method 8270C, and Title 22 Metals in general accordance with EPA Method 6010B/7470. Trench locations are shown on Figure 2 and the Trench logs are included in Appendix A. Cross-sections detailing the subsurface of Area 1 including the interpreted thickness of the fill materials and depth to native or indigenous soils are presented as Figures 3, 4, and 5.

4.2 AREA 3 INVESTIGATION

Borings KB-2 and KB-8 reported concentrations of total recoverable petroleum hydrocarbon (TRPH) in the initial July 21, 2004 report. Test pits T3-1 and T3-2 were excavated to depths of 15 and 16 feet respectively adjacent to boring KB-8 to assess the subsurface conditions in that vicinity, and the extent or presence of petroleum hydrocarbons beyond KB-8. T3-1 is located

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northeast of KB-2 and T3-2 is located southeast. Figure 2 shows both locations and approximate distances from boring KB-8.

Four trenches (T3-3 through T3-6) were excavated on the southwest portion of Area 3 adjacent to KB-2 to depths ranging from 15 to 16 feet below grade. A total of 24 soil samples were collected from the six trenches and submitted for laboratory analyses detailed above.

4.3 HANSON DIVERSION INVESTIGATION

At the request of Huffman & Carpenter, Kleinfelder placed three trenches in the southeast corner of the Hanson Aggregate Yard, north of Area 1 and the San Diego River, immediately west of Channel Road (Figure 7). These were trenches T2-13 through T2-15. All three were sampled for TPH. Trench T2-14 consistently hit concrete slabs at 5 feet and was abandoned after three attempts. The other two trenches were moved slightly to gain access through the concrete debris.

Table 7
2005 Trench Soil Sampling Summary

Test Pit Number	Parcel Area	Date	Sample Depth (feet bgs)	Sample Name	Sample Material
Area 1					
T1-7	Area 1	1/25/05	3	T1-7-1	Fill
T1-7	Area 1	1/25/05	10	T1-7-2	Fill
T1-7	Area 1	1/25/05	15.5	T1-7-3	Native Sand
T1-8	Area 1	1/25/05	3	T1-8-1	Fill
T1-8	Area 1	1/25/05	10	T1-8-2	Fill
T1-8	Area 1	1/25/05	15	T1-8-3	Native Sand
T1-9	Area 1	1/25/05	3	T1-9-1	Fill
T1-9	Area 1	1/25/05	10	T1-9-2	Fill
T1-9	Area 1	1/25/05	15	T1-9-3	Fill
T1-10	Area 1	1/25/05	3	T1-10-1	Fill
T1-10	Area 1	1/25/05	10	T1-10-2	Fill
T1-10	Area 1	1/25/05	15.5	T1-10-3	Fill
T1-11	Area 1	1/25/05	3	T1-11-1	Fill
T1-11	Area 1	1/25/05	10	T1-11-2	Fill
T1-11	Area 1	1/25/05	16	T1-11-3	Fill
T1-12	Area 1	1/25/05	3	T1-12-1	Fill
T1-12	Area 1	1/25/05	10	T1-12-2	Fill
T1-12	Area 1	1/25/05	17	T1-12-3	Native Sand

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Table 7 (Continued)
2005 Trench Soil Sampling Summary

Area 3					
T3-1	Area 3	1/24/05	1	T3-1-1	Fill
T3-1	Area 3	1/24/05	9	T3-1-9	Native Sand
T3-1	Area 3	1/24/05	15	T3-1-15	Native Sand
T3-2	Area 3	1/24/05	1	T3-2-1	Fill
T3-2	Area 3	1/24/05	9	T3-2-9	Native Sand
T3-2	Area 3	1/24/05	15	T3-2-15	Native Sand
T3-3	Area 3	1/24/05	1	T3-3-1	Fill
T3-3	Area 3	1/24/05	9	T3-3-9	Fill
T3-3	Area 3	1/24/05	15	T3-3-15	Fill
T3-4	Area 3	1/24/05	1	T3-4-1	Fill
T3-4	Area 3	1/24/05	9	T3-4-9	Fill
T3-4	Area 3	1/24/05	15	T3-4-15	Fill
T3-5	Area 3	1/24/05	1	T3-5-1	Fill
T3-5	Area 3	1/24/05	9	T3-5-9	Fill
T3-5	Area 3	1/24/05	15	T3-5-15	Fill
T3-6	Area 3	1/24/05	1	T3-6-1	Fill
T3-6	Area 3	1/24/05	9	T2-13-1	Native Sand
T3-6	Area 3	1/24/05	15	T2-13-2	Native Sand
Hanson Diversion					
T2-13	Hanson	1/26/05	2.5	T2-13-1	Fill
T2-13	Hanson	1/26/05	9	T2-13-2	Fill
T2-13	Hanson	1/26/05	15	T2-13-3	Fill
T2-14	Hanson	1/26/05	3	T2-14-1	Fill
T2-15	Hanson	1/26/05	3	T2-15-1	Fill
T2-15	Hanson	1/26/05	7	T2-15-2	Fill
T2-15	Hanson	1/26/05	9.5	T2-15-3	Fill
T2-15	Hanson	1/26/05	15	T2-15-4	Fill

bgs: below ground surface

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5.0 INVESTIGATIVE RESULTS

5.1 SITE SUBSURFACE CONDITIONS

Materials encountered within the trenches again consisted predominately of fill. Indigenous alluvium (fluvial silts and sands) was also encountered in three of the six trenches in Area 1 and three of the six trenches in Area 3 (Table 7), reinforcing the pattern seen in the initial and second investigations. Detailed descriptions of these materials are included in the July 2004 report and the trench logs included in this report (Appendix A). Trench locations are shown on Figure 2 and Figure 7. Groundwater was not encountered within the trenches during field activities. Some perched water was observed in individual trenches and usually from a discrete location, not along an entire horizon (trench wall).

5.2 ENVIRONMENTAL LABORATORY TEST RESULTS

5.2.1 Area 1 Analytical Results

A total of eighteen samples were collected and submitted for environmental analysis. Tables 8 through 11 summarize the results. Raw lab reports are included in Appendix B.

Gasoline range hydrocarbons were not detected in any of the eighteen samples collected. Diesel range hydrocarbons were detected in 6 of eighteen samples with concentrations ranging from 155 milligrams per kilogram (mg/kg) to 666 mg/kg. Extended range hydrocarbons were detected in each of the eighteen samples with concentrations ranging from 208 mg/kg to 1,430 mg/kg. The two highest reported concentrations of diesel range TPH were detected in samples T1-10-3 (666 mg/kg) and T1-11-3 (533 mg/kg). The two highest reported concentrations of heavy oil TPH were detected in samples T1-10-3 (1,430 mg/kg) and T1-7-1(1,410 mg/kg).

A total of sixteen samples were collected and analyzed for SVOCs in accordance with EPA Method 8270C. Specific SVOC species were detected in the sixteen samples analyzed, but the same species was not necessarily detected in each sample. The SVOC compounds reported can be classed as polycyclic aromatics (PAHs; the compounds ending in "-ene") plus one phthalate plasticizer (most likely a cross-contaminant or remnant of visqueen plastics in that sample). Table 9 summarizes the concentrations of analytes detected in each sample. Exceedances of the U.S. EPA Region 9 2004 Residential Preliminary Remediation Goals (PRGs) were observed for individual compounds within samples where SVOCs were detected.

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Table 8
Summary of Area 1 Analytical Results
Total Petroleum Hydrocarbons (8015B)

Test Pit Number	Sample Name	Sample Depth (feet bgs)	TPHg Concentration (mg/kg)	TPHd Concentration (mg/kg)	TPHho Concentration (mg/kg)
T1-7	T1-7-1	3.0	ND	ND	**1,410**
T1-7	T1-7-2	10.0	ND	448	837
T1-7	T1-7-3	15.5	ND	ND	ND
T1-8	T1-8-1	3.0	ND	ND	1,040
T1-8	T1-8-2	10.0	ND	ND	789
T1-8	T1-8-3	15.0	ND	ND	277
T1-9	T1-9-1	3.0	ND	ND	820
T1-9	T1-9-2	10.0	ND	325	585
T1-9	T1-9-3	15.0	ND	ND	290
T1-10	T1-10-1	3.0	ND	ND	442
T1-10	T1-10-2	10.0	ND	197	702
T1-10	T1-10-3	15.5	ND	**666**	**1,430**
T1-11	T1-11-1	3.0	ND	ND	843
T1-11	T1-11-2	10.0	ND	ND	604
T1-11	T1-11-3	16.0	ND	**533**	841
T1-12	T1-12-1	3.0	ND	ND	530
T1-12	T1-12-2	10.0	ND	ND	ND
T1-12	T1-12-3	17.0	ND	155	208

TPH: total petroleum hydrocarbon (g - gasoline range) (d – diesel range)(ho – heavy oil range)
bgs: below ground surface
mg/kg: milligram per kilogram
ND: not detected above reporting limit
BOLD: Two highest reported concentrations

In order to characterize the leachability or mobility of the SVOC and PAH compounds reported in the data, Kleinfelder selected three samples with the highest levels of SVOCs and requested the laboratory perform Toxicity Charactaristic Leaching Procedure (TCLP) and Soluble Threshold Limit Concentration (STLC) tests. The three samples selected for additional analyses were T1-10-3, T1-11-1 and T1-11-2. No SVOCs or PAHs were reported above the detection limit in the TCLP and STLC tests.

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Table 9
Summary of Area 1 Analytical Results
Semivolatile Organic Compounds (8270C)

SVOC Analyte	Reported Concentration (mg/kg)								
	T1-7-2 10'	T1-8-3 15'	T1-9-2 10'	T1-9-3 15'	T1-10-2 10'	T1-10-3 15.5'	T1-11-1 3'	T1-11-2 10'	T1-11-3 16'
Benzo(a)anthracene	ND	ND	ND	**207**	ND	**1,080**	**3,710**	**2,680**	ND
Benzo(a)pyrene	ND	ND	ND	**254**	ND	ND	**3,820**	**4,740**	ND
Benzo(b)fluoranthene	ND	**184**	ND	**373**	ND	**1,540**	ND	**5,710**	ND
Benzo(g,h,i)perylene	ND	ND	ND	ND	ND	ND	2,870	5,800	ND
Benzo(k)fluoranthene	ND	ND	ND	ND	ND	ND	ND	**2,280**	ND
Bis(2-ethylhexyl) phthalate	**5,400**	ND	ND	ND	ND	ND	ND	ND	**273**
Chrysene	ND	**121**	**107**	**355**	**151**	ND	**5,390**	**3,850**	**193**
Dibenz(a,h)anthracene	ND	ND	ND	**218**	ND	**1,500**	ND	ND	ND
Fluoranthene	ND	279	152	627	189	**2,700**	**7,960**	**3,590**	**229**
Indeo(1,2,3-cd)pyrene	ND	ND	ND	**231**	ND	**1,900**	**3,180**	**6,110**	ND
Phenanthrene	ND	192	155	472	255	1,730	2,140	ND	294
Pyrene	ND	282	172	637	262	**2,790**	**9,180**	**4,860**	296

ND: Not Detected SVOCs: Semivolatile Organic Compounds **BOLD:** value exceeds 2004 Residential PRG

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Table 10
Summary Area 1 Analytical Results
Volatile Organic Compounds (8260B)

VOC Analyte	Reported Concentration (mg/kg)										
	T1-7-2 10'	T1-8-2 10'	T1-8-3 15'	T1-9-2 10'	T1-9-3 15'	T1-10-2 10'	T1-10-3 15.5'	T1-11-2 10'	T1-11-3 16'	T1-12-2 10'	T1-12-3 17'
1,2,4-Trimethylbenzene	2.78	ND	ND	ND	4.5	7.38	3.65	ND	ND	ND	ND
1,3,5-Trimethylbenzene	ND	ND	ND	ND	ND	3.8	ND	ND	ND	ND	ND
Acetone	67.2	138	60.6	154	72.4	ND	ND	57.2	63.2	79.5	61.1
Napthalene	ND	ND	ND	ND	6.02	7.2	82	ND	ND	ND	ND
M,P-xylene	ND	ND	ND	ND	ND	8.45	ND	ND	ND	ND	ND
o-xylene	ND	ND	ND	ND	ND	5.0	ND	ND	ND	ND	ND

ND: Not Detected
mg/kg: milligrams per kilogram
VOCs: Volatile Organic Compounds

VOCs were detected at low levels in 11 of eighteen samples collected. Three of the six analytes reported in Table 10 are common laboratory contaminants used in the equipment decontamination process. There were four detections of 1,2,4 Trimethylbenzene ranging from 2.78 to 7.38 mg/kg. There was one detection of 1,3,5 Trimethylbenzene at 3.8 mg/kg. Acetone was present in nine samples ranging from 60.6 to 154 mg/kg. There were three detections of napthalene ranging from 6.02 to 82 mg/kg. There was also one detection of m,p-xylene and o-xylene at 8.45 and 5 mg/kg, respectively. The naphthalene and xylenes are the largest molecules of diesel and gasoline fuels, as well as common solvents, and the presence of these compounds is not out of context with the more dominant diesel and heavy oil range organics. There were no exceedances of residential PRGs for VOCs or indications of VOCs being a compound of concern.

Eighteen soil samples were analyzed for metals. Of particular concern was the lead results due to a reported lead value in Trench KPH-6 that was hazardous (Table 5). The sixteen samples reported in Table 11 do not report elevated values for any of the elements. "Background" concentrations of metals were reported in all eighteen samples collected. Residential PRGs for metals were not exceeded.

The three materials samples with the highest SVOC concentrations were submitted for a leachate analysis using TCLP (EPA 1311/8015m) and STLC (Cal-WET) methods and analyzing the resulting leachate in general accordance with EPA Method 8270C, and 8260B. Results reported no VOCs or SVOCs in the resulting leachate solutions from either leachate method.

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Table 11
Summary of Area 1 Analytical Results
Title 22 Metals (6000/7000 Series)

Metals	Reported Concentration (mg/kg)																	
	T1-7-1 3'	T1-7-2 10'	T1-7-3 15.5'	T1-8-1 3'	T1-8-2 10'	T1-8-3 15'	T1-9-1 3'	T1-9-2 10'	T1-9-3 15'	T1-10-1 3'	T1-10-2 10'	T1-10-3 15.5'	T1-11-1 3'	T1-11-2 10'	T1-11-3 16'	T1-12-1 3'	T1-12-2 10'	T1-12-3 17'
Antimony	ND	ND	10.7	ND	12.2	ND	ND	11	14.5	11.1	ND	ND	14.2	ND	11.5	ND	14.7	ND
Arsenic	3.42	3.6	3.01	3.36	3.12	2.64	3.16	5.45	8.3	3.42	4.53	3.45	3.79	2.73	3.05	2.84	3.96	3.95
Barium	62.3	61.4	87.1	50.9	75.9	69.8	65.1	72.6	132	86.6	88.4	109	93.1	105	74.7	87.8	215	131
Chromium	52.6	53.1	37.7	51.4	67.9	56.3	52.1	59.4	72.1	65.4	70.7	57.8	71.4	69	75.3	63.5	105	63
Cobalt	ND	ND	ND	ND	ND	ND	ND	ND	1.83	ND	ND	ND	ND	ND	ND	ND	ND	ND
Copper	12.4	8.62	10.1	11.7	17.3	11.4	9.57	12.3	10.1	54.1	12.9	11.6	19	13.2	13.1	9.64	11.3	16.5
Lead	10.2	ND	17.8	ND	12.2	ND	ND	20.9	18.9	ND	16.3	12.8	12.8	17.1	13.7	14.2	19.3	ND
Mercury	0.02	0.03	0.02	0.02	0.03	ND	0.02	0.02	0.03	0.02	0.03	0.03	0.02	ND	0.03	0.03	ND	0.03
Nickel	9.17	7.62	5.09	7.19	7.81	7.24	8.4	8.61	8.79	6.95	8.45	8.08	14	8.25	7.87	7.07	9.19	6.17
Vanadium	29.7	27.2	26.4	25.4	36.3	28.2	24.2	24.9	29.6	26.5	36.9	29.9	35.1	39.4	38.2	32.4	51.9	38.2
Zinc	32.6	30.7	92.8	31.9	37.1	42.2	34.2	45	40.8	71.7	44.1	44.5	44.2	42.6	41.4	37.2	79.2	32.9

mg/kg: milligrams per kilogram
ND: Not Detected
J: laboratory estimated concentration above method detection limit, but below reporting limit

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5.2.2 Area 3 Analytical Results

A total of 18 samples were collected in Area 3 from six trenches focused at two locations. Trenches T3-1 and T3-2 assessed hydrocarbons in the vicinity of boring KB-8, and trenches T3-3 through T3-6 assessed the presence and extent of hydrocarbons in the vicinity of boring KB-2. Borings KB-2 and KB-8 reported TPH-d in the initial assessment (Table 1). Samples were collected on January 24, 2005 and submitted to Enviromatrix Laboratories under chain of custody for analysis. The new soil samples were analyzed for TPH, VOCs, SVOCs, bioassay toxicity, and metals. Results are presented in Tables 12, 13, and 14. There is no table summarizing VOC results because no VOC compounds were reported in the eighteen samples submitted.

Table 12
Summary of Area 3 Analytical Results
Total Petroleum Hydrocarbons (8015B)

Test Pit Number	Sample Name	Sample Depth (feet bgs)	TPHg Concentration (mg/kg)	TPHd Concentration (mg/kg)	TPHho Concentration (mg/kg)
T3-1	T3-1-1	1.0	ND	ND	**1110**
	T3-1-2	9.0	ND	ND	ND
	T3-1-3	15.0	ND	ND	ND
T3-2	T3-2-1	1.0	ND	ND	**1180**
	T3-2-9	9.0	ND	ND	ND
	T3-2-15	15.0	ND	ND	218
T3-3	T3-3-1	1.0	ND	ND	539
	T3-3-9	9.0	ND	ND	824
	T3-3-15	15.0	ND	ND	419
T3-4	T3-4-1	1.0	ND	ND	ND
	T3-4-9	9.0	ND	ND	289
	T3-4-15	15.0	ND	**136**	187
T3-5	T3-5-1	1.0	ND	ND	1,090
	T3-5-9	9.0	ND	ND	622
	T3-5-15	15.0	ND	ND	ND
T3-6	T3-6-1	1.0	ND	ND	ND
	T3-6-9	9.0	ND	**77.6**	ND
	T3-6-15	15.0	ND	ND	ND

TPH: total petroleum hydrocarbon (g - gasoline range) (d – diesel range)(ho – heavy oil range)
bgs: below ground surface
mg/kg: milligram per kilogram
ND: not detected above reporting limit

BOLD: Two highest reported concentrations

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The TPH results confirm the presence of diesel- and heavy oil-range organics in the vicinity of KB-2 and KB-8. Both T3-1 and T3-2 reported the highest concentrations of TPH-ho at the near surface. No TPH-d or TPH-g was reported in these two trenches. This is inconsistent with KB-8 results that reported 260 mg/kg TPH-d and some pesticides at 10 feet.

The four trenches around KB-2 reported no TPH-g or TPH-d at the 1-foot samples. One of four samples from 9-feet deep reported TPH-d and one of four samples from 15-feet deep reported TPH-d. Trenches T3-3, T3-4, and T3-5 reported TPH-ho concentrations in two or more of the three samples per trench. Trench T3-6 did not report TPH-ho concentrations. This indicates a relatively consistent presence of TPH-ho throughout the materials in the vicinity of KB-2.

Table 13
Summary of Area 3 Analytical Results
Semivolatile Organic Compounds (8270C)

SVOC Analyte	Reported Concentration (mg/kg)							
	T3-1-9 9.0'	T3-1-15 15.0'	T3-2-15 15.0'	T3-5-1 1.0'	T3-5-15 15.0'	T3-6-1 1.0'	T3-6-9 9.0'	T3-6-15 15.0'
Anthracene	ND	ND	ND	ND	ND	20.7	ND	ND
Benzo(b)fluoranthene	ND	ND	ND	ND	ND	**69**	**65.7**	**63**
Di-n-butyl phthalate	56.4	72.6	71.8	ND	46.8	117	54.7	55.4
Fluoranthene	ND	ND	ND	136	23.4	**87**	31.1	43.4
Phenanthrene	ND	ND	ND	ND	27	62.3	39.3	47
Pyrene	ND	ND	ND	155	20.6	73.7	23.2	34.8

ND: Not Detected
SVOCs: Semivolatile Organic Compounds
BOLD: value exceeds 2004 Residential PRG

Table 13 summarizes the results of SVOC analysis for the Area 3 trench samples. If a sample reported no SVOC compounds, it is not listed in the Table. The reported SVOCs appear in samples from all three sampling depths indicating no predominant depth over another. The most common compound is the phthalate, which as in Area 1 is suspected to be associated with plastic sheeting or other plastics in the material. The boring and trench logs identify asphalt as a common constituent in the fill material, and the PAHs reported in Table 13 are consistent with asphaltic compounds.

A bioassay or toxicity sample was also collected from each trench in Area 3, and submitted for a screening toxicity test using a vertebrate (fathead minnows) and an invertebrate (seriodaphnia water fleas). Of the six tests run, the fathead minnows had a 100 percent survival rate in all six samples and the seriodaphnia had a 93 to 100 percent survival rate in five of the six samples. The sample from T3-2 was apparently toxic with 0 percent and 35 percent survival rate in a duplicate.

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samples and the seriodaphnea had a 93 to 100 percent survival rate in five of the six samples. The sample from T3-2 was apparently toxic with 0 percent and 35 percent survival rate in a duplicate.

A total of 18 samples were analyzed for VOCs in Area 3. The analytical results indicated the presence of acetone in samples T3-3-15 and T3-4-15 at concentrations of 90.8 and 97.7 mg/kg respectively. There were no PRG exceedances for this analyte. Acetone is a common laboratory contaminant used in equipment decontamination, and can also be a natural by-product of fat decomposition and the combustion of certain compounds. Due to the low levels of acetone reported in two samples only with no other VOC compounds to report, a table is not presented for VOCs at Area 3 and acetone is not considered a compound of concern.

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Table 14
Summary of Area 3 Analytical Results
Title 22 Metals (6000/7000 Series)

Metals	Reported Concentration (mg/kg)																	
	T3-1-1 1'	T3-1-9 9'	T3-1-15 15'	T3-2-1 1'	T3-2-9 9'	T3-2-15 15'	T3-3-1 1'	T3-3-9 9'	T3-3-15 15'	T3-4-1 1'	T3-4-9 9'	T3-4-15 15'	T3-5-1 1'	T3-5-9 9'	T3-5-15 15'	T3-6-1 1'	T3-6-9 9'	T3-6-15 15'
Antimony	12.9	ND	22.5	15.6	13.5	16.1	15.4	12.3	14.5	10.3	16.4	11.6	12.8	13.7	18.4	14.3	14.2	12.7
Barium	72.9	24.2	174	99.4	183	112	87.1	90.7	84.8	149	73.2	72.4	89.4	80.2	156	125	87.2	82.9
Chromium	62	26.6	153	63.7	143	108	80.3	67.3	73.3	66.6	69.9	74.8	74.5	80.2	143	112	86.8	73.4
Cobalt	3.38	ND	3.35	4.04	1.42	2.16	ND	ND	ND	ND	ND	ND	1.52	ND	3.58	1.87	ND	ND
Copper	12	1.81	24.7	12.9	16.9	15.3	12.4	11.4	11.4	9.09	8.3	8.62	13.5	12.4	20.2	15.9	12.5	9.65
Lead	16.6	ND	ND	12.8	ND	ND	11.1	11.5	24.8	11.2	10.4	ND	14.2	10.4	ND	ND	ND	ND
Nickel	9.56	2.42	15.6	8.63	12.1	9.98	8.57	9.09	7.51	7.95	8.59	7.49	9.73	8.56	12.8	10.7	8.05	6.76
Vanadium	38.3	23	106	41	96.9	75	49.8	41.6	53.1	34.1	40.2	46.8	44.2	48.5	93.7	75.1	58.6	54.2
Zinc	45.5	8.17	50.5	44.6	51.4	37.1	47.3	37.4	45.3	38.5	30.7	30.7	47.4	32.4	50.1	39.8	40.1	30.8
Arsenic	3.93	ND	0.947	3.69	1.08	1.1	5.04	4.96	2.97	9.45	4.37	4.07	4.28	2.64	1.1	1.14	1.49	1.85
Mercury	0.02	ND	ND	ND	ND	ND	0.02	0.02	0.05	ND	ND	ND	ND	0.02	ND	ND	ND	ND

mg/kg: milligrams per kilogram
ND: Not Detected
J: laboratory estimated concentration above method detection limit, but below reporting limit

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5.2.3 Hanson Facility Analytical Results

A total of eight soil samples were collected from three trenches within the proposed Hanson Diversion Area (Figure 6). These samples were analyzed for TPH at discrete depths based on stratigraphic change in the subsurface (Table 7). Results of these analyses indicated the presence of TPH-ho in only one of the eight samples. Sample T2-13-3 collected at 15 feet below ground surface had concentrations of TPH-ho of 396 mg/kg.

Based on this result a leachate assessment using TCLP (EPA 1311/8015m) and STLC (Cal-WET) analysis was performed. Results reported no TPH-g, TPH-d, or TPH-ho in the resulting leachate solutions from either method.

5.3 LABORATORY TEST RESULT DISCUSSION

The reported results indicate that a majority of the fill material in Areas 1 and 3 has some petroleum hydrocarbon component to it; most likely asphalt. The nature of the petroleum hydrocarbons that are in the fill material apparently varies across the Areas, as some pesticides (KB-12; KB-17), diesel-range and even small detections of gasoline-range organics are reported. But the material of concern for the undocumented fill in the three areas owned by the Client is apparently asphalt.

There are apparent "hot spots" of TPH-ho in Area 3 in the vicinity of KB-2 and KB-8, and in the vicinity of KB-12 at Area 2. Area 1 cannot be characterized to contain hot spots but is almost uniformly encumbered with asphalt from the indigenous soils up to just below the last few feet of fill. No trenches have been dug in Area 2, so the hot spot in the vicinity of KB-12 may be a concern for the future, depending upon the Client's plans for the area (Figure 7).

Lead was reported in one material sample in Area 1 at an RCRA-hazardous level. The remaining lead analyses for the other material samples indicate that this one sample was an anomaly and not indicative of a release or widespread concern. Area 1 has been observed to contain a substantial amount of "slab" asphalt, and some of it still has roadway line paint on it. This paint is a known likely lead-based paint prior to 1984 and would account for concentrated lead in a hot spot, but not distributed over a wider area.

The bioassay results for the Hanson Diversion material and the six trenches in Area 3 are encouraging with a 100 percent survival rate for the vertebrates, and a nearly perfect survival rate for the invertebrates with the exception of the trench T3-2. Because the bioassay tests requested were "screening" methodology, the fact that trench T3-2 soils were apparently toxic to the

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invertebrates is not conclusive. The water fleas are sensitive to a great deal of factors, including laboratory handling, hence their usefulness as an indicator of the health of the water in which they reside, but results need to be interpreted with caution. Because there is nothing correspondingly toxic about the analytical results of the T3-2 material versus the material from the other Area 3 trenches (indeed the T3-2 material seems less burdened by organic compounds than the other Area 3 samples, and no pattern emerges from the metals data to make T3-2 stand out), it is possible that the T3-2 toxicity data is misleading or a false positive.

5.4 LABORATORY DATA QUALITY

The laboratory quality control methodology and results (including duplicates, method blanks, method spikes, and method spike duplicates) indicate that the data sets included in this report, and those data referred to in prior reports, are within acceptable limits for the methods used. Chain-of-custody documentation and data results reported in this document can be relied upon for the intended decisions and purposes of the Client's investigation.

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6.0 CONCLUSIONS AND RECOMMENDATIONS

Based on the results of our previous subsurface investigations, the investigation described in this report, environmental laboratory testing, and data assessment, we make following conclusions and recommendations:

- Kleinfelder has assessed Areas 1 through 3 using eighteen borings and eighteen trenches to assess subsurface materials. Thirty-six samples of fill and soil material were collected in the most recent twelve-trench assessment effort;
- A material is classified as hazardous if the material's concentration of specific metals identified by regulation exceeds Total Threshold Limit Concentrations (TTLC). Or, if the metal concentration is greater than 10x the soluble threshold limit concentration (STLC), the soil may also be classified as hazardous. With the exception of lead in sample KPH-6-16, the highest detected metal concentrations reported in the Area 1 fill materials are below the TTLC and 10 x STLC regulatory limits. Therefore, the risk of fill in Area 1 being designated hazardous due to metals is low. The level of lead in sample KPH-6-16 is sufficiently high to classify the sample as RCRA-hazardous (A federal designation), but the source of the lead is interpreted to be roadway paint from demolished asphalt, and the lead is encapsulated in paint;
- Based on laboratory results, there were no detectable concentrations of PCBs. There were detectable concentrations of TPHho, TPHd, TPHg, SVOCs, pesticides, and VOCs. However, the detectable concentrations of pesticides, and VOCs are below the EPA Region 9 rPRG values and do not indicate that the material in any of the three parcels is a hazardous waste, either RCRA or CalHAZ. The SVOCs detected indicate inefficient burning of plastics and fibrous (wood) material and mostly the presence of asphalt as a demolition debris (Area 1) and as a recycled granular material (Area 3); and
- The suitability of the fill material for disposal onsite as berm fill or reclamation landscaping is dependent upon negotiations and permit applications with the Regional Water Quality Control Board Waste Discharge Requirements (WDRs) for disposal of petroleum-bearing soils on site. The trench and boring logs, laboratory test results, and report text descriptions/discussions presented herein are likely to be sufficient to apply to the RWQCB for permits and move the Client's project forward. Additional soil samples may be required to confirm suspected toxicity analysis false positives. Material that is not suitable for reuse in the construction of the Riverpark may have to be disposed at an appropriate off-site facility, or left onsite possibly with a cap or other containment.

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7.0 LIMITATIONS

Kleinfelder has performed the services for this project in accordance with our contract with the Lakeside Conservancy and with the current practices in this geographic area for site assessment investigations. No guarantees are either expressed or implied. There is no investigation, which is thorough enough to preclude the presence of materials at the site, which presently, or in the future may be considered hazardous. Because regulatory evaluation criteria change, acceptable concentrations of contaminants present at the time of investigation may in the future become subject to different regulatory standards.

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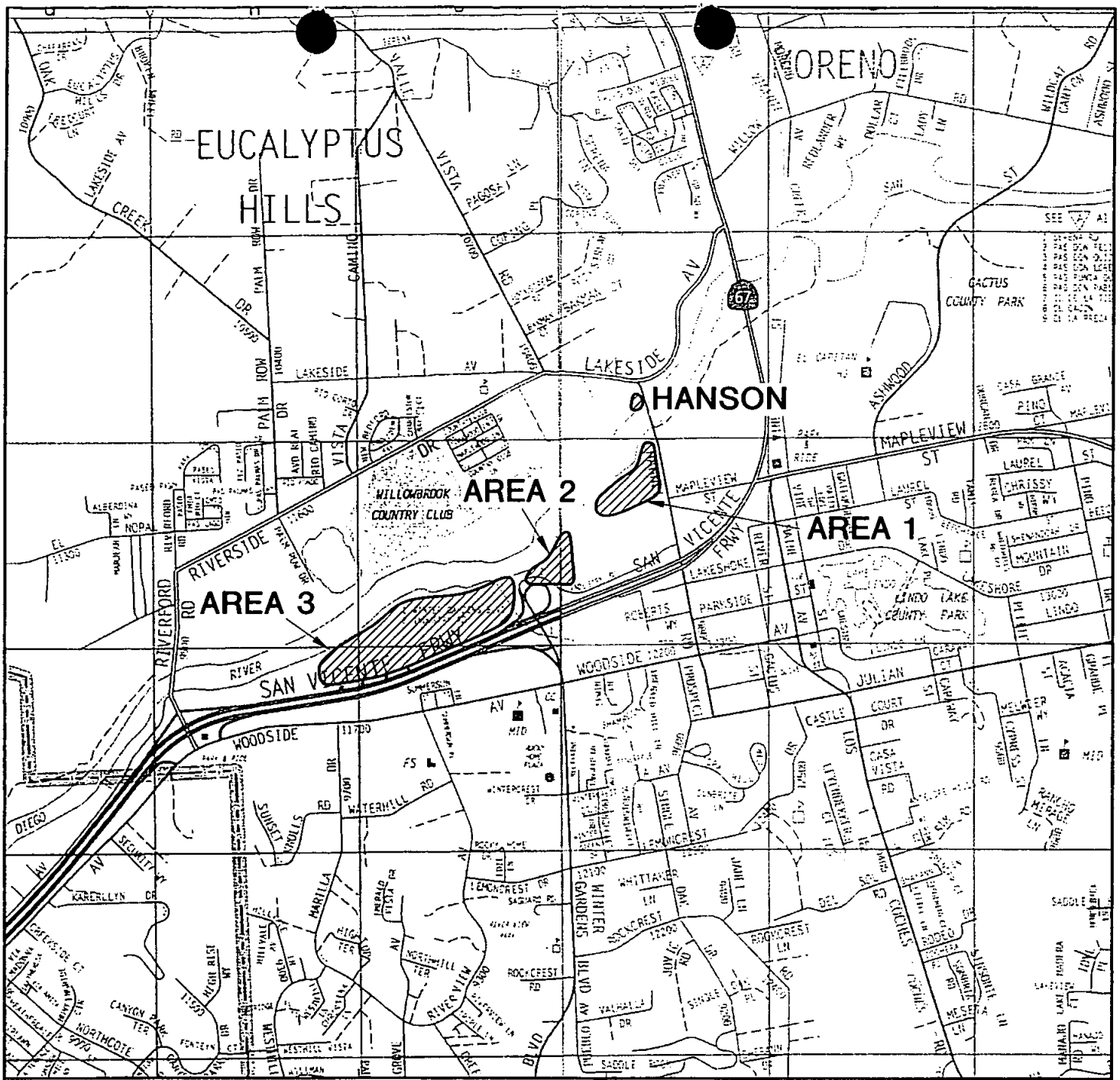

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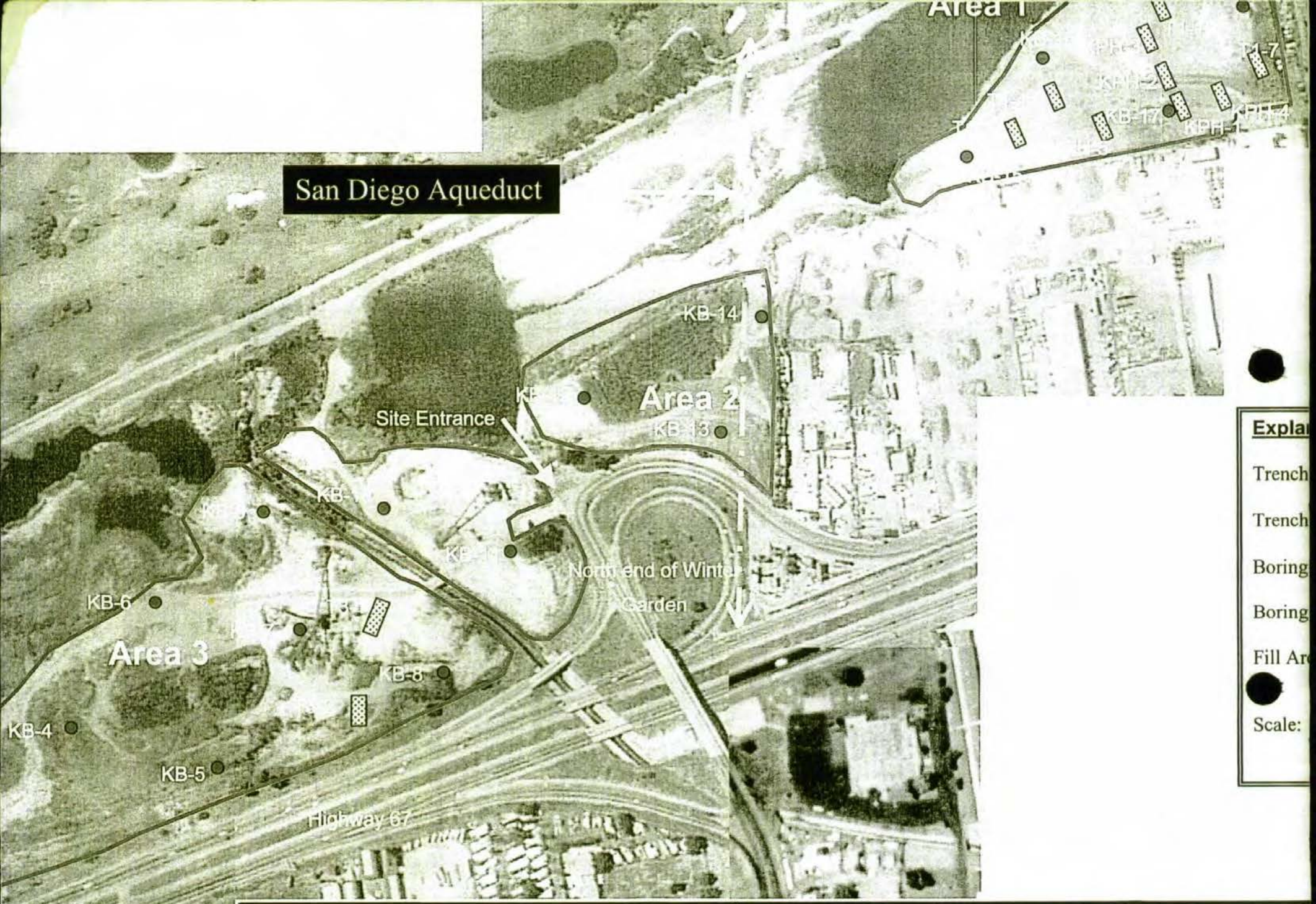
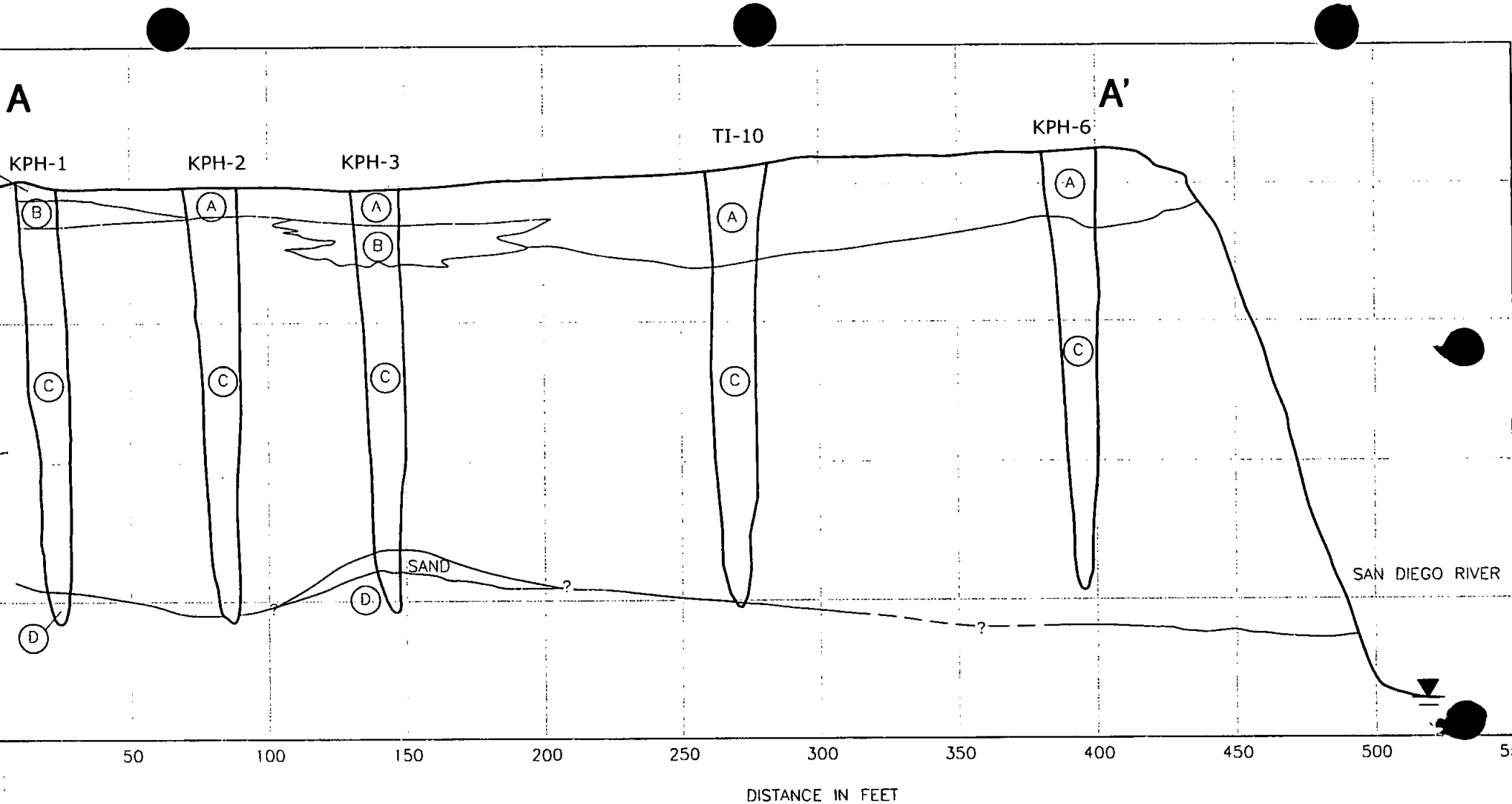
KLEINFELDER	VICINITY MAP	FIGURE
5015 SHOREHAM PLACE SAN DIEGO, CALIFORNIA 92122	LAKESIDE CONSERVANCY FILL LAKESIDE, CALIFORNIA	1
CHECKED BY: MV	FN: 44102VIC	
PROJECT NO. 44102	DATE. 03/2005	



KLEINFELDER

5015 SHOREHAM PLACE
SAN DIEGO, CALIFORNIA

Lakeside Conservancy Riverpark
Fill Assessment
Boring and Trench Locations



LEGEND:

(A) FILL SOIL, CONCRETE, ASPHALT DEBRIS

(B) ROOTS, SOIL, FILL

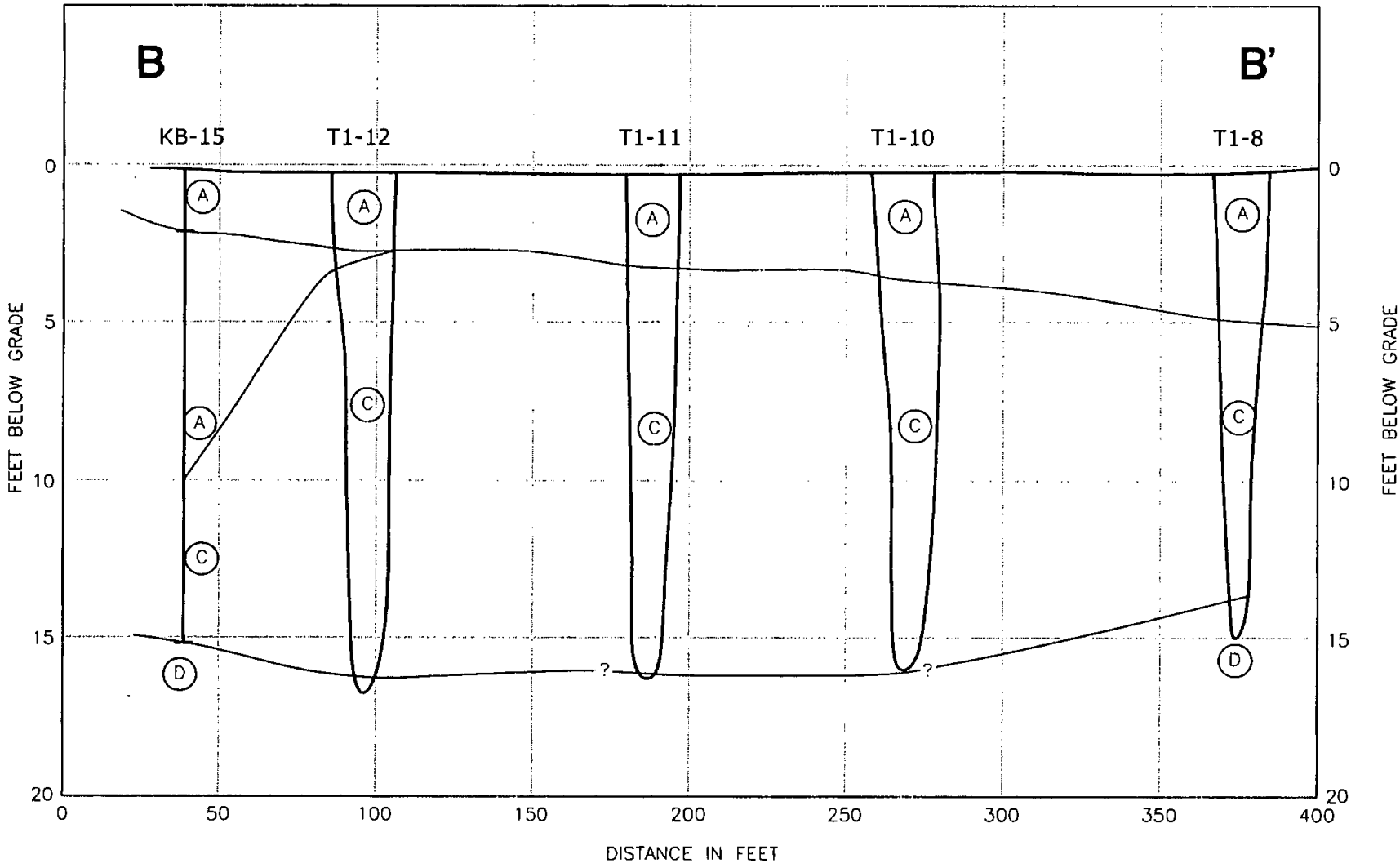
(C) PETROLEUM HYDROCARBON-BEARING FILL.

10:1 VERTICAL EXA
APPROXIMATE GRAP

0 5

0 50

(FEET)



LEGEND:

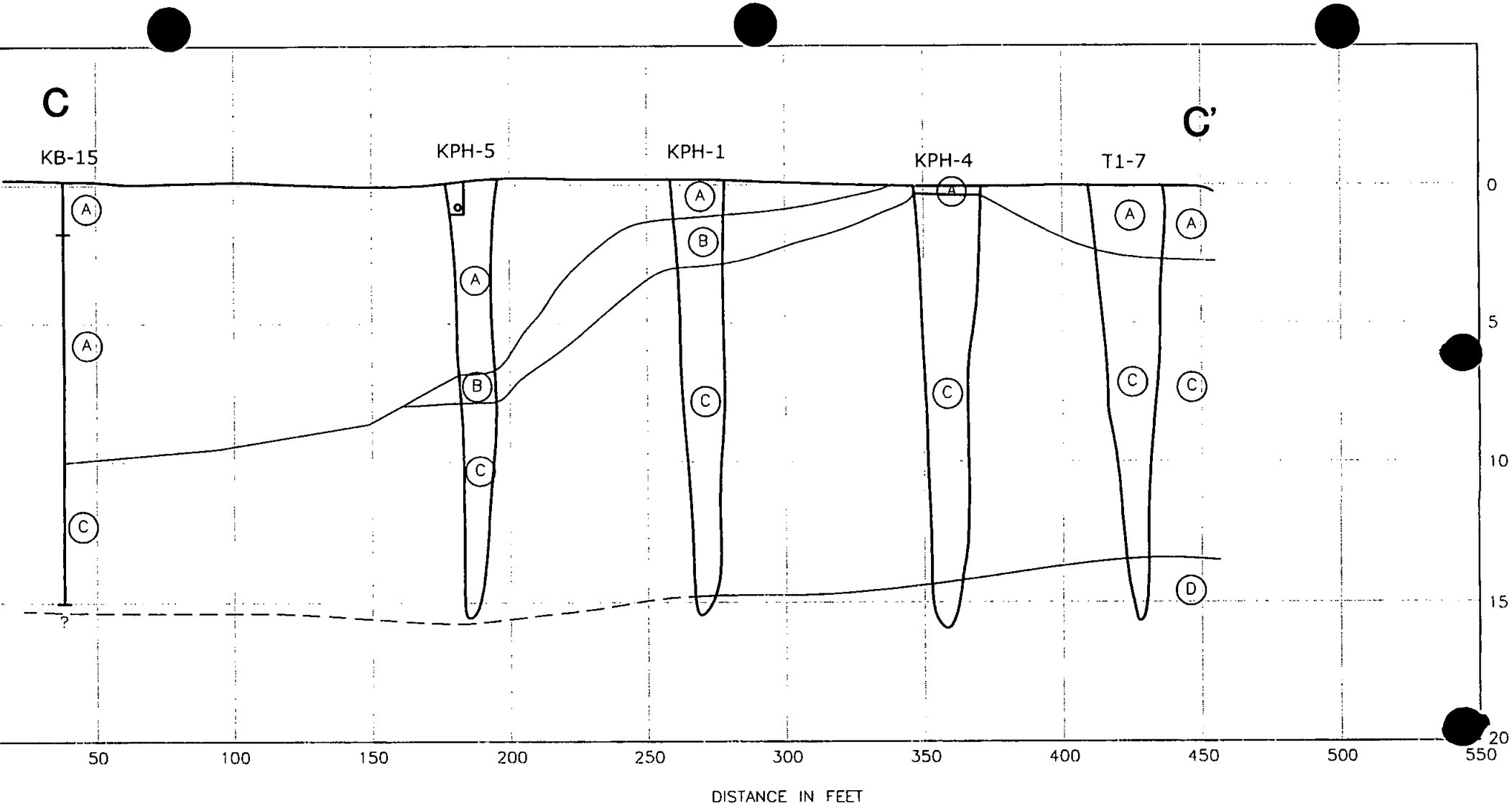
(A) FILL SOIL, CONCRETE, ASPHALT DEBRIS

(B) ROOTS, SOIL, FILL

(C) PETROLEUM HYDROCARBON–BEARING FILL,

10:1 VERTICAL EXAG
APPROXIMATE GRAPH

0 5
50
(FEET)



LEGEND:

(A) FILL SOIL, CONCRETE, ASPHALT DEBRIS

(B) ROOTS, SOIL, FILL

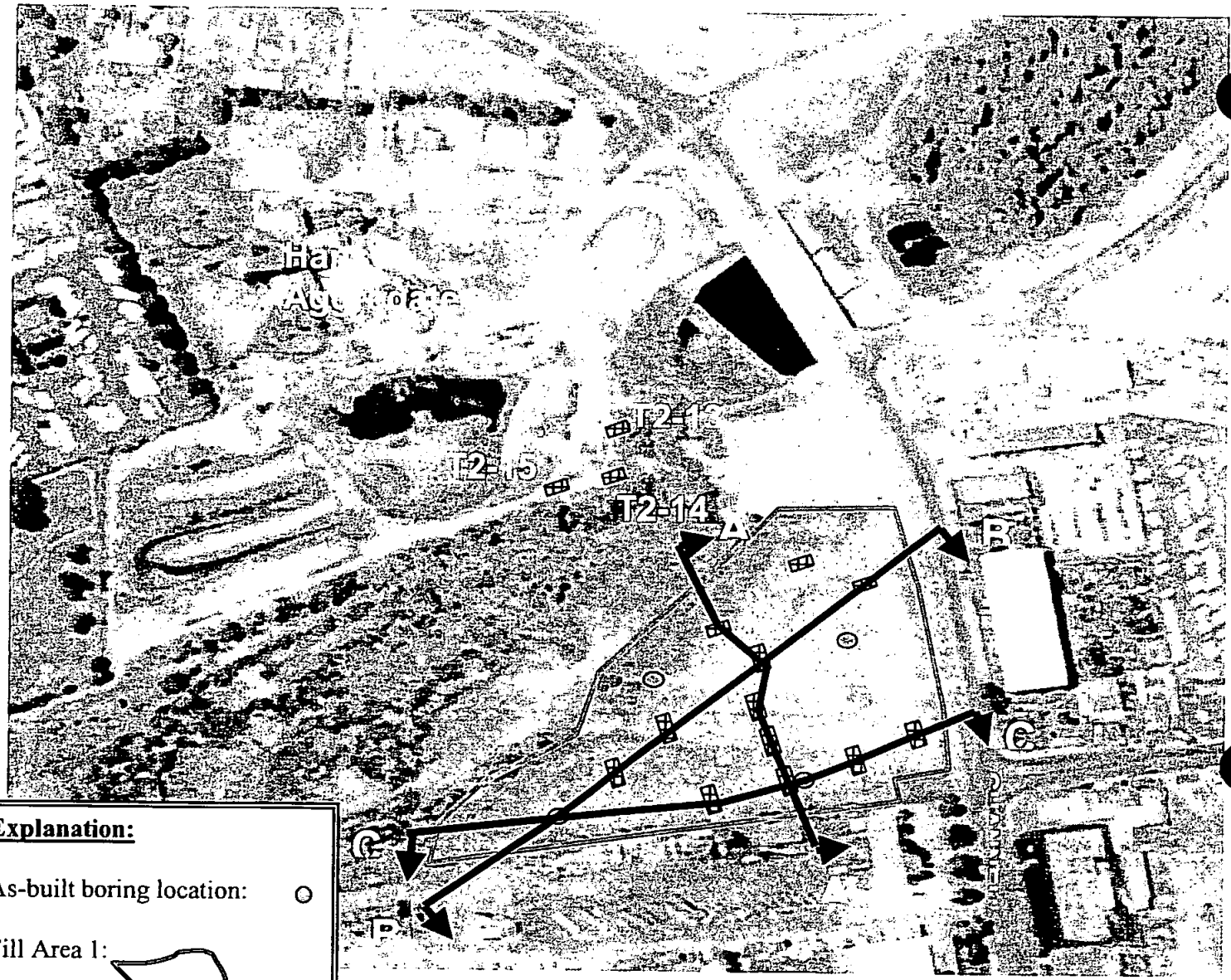
(C) PETROLEUM HYDROCARBON-BEARING FILL,

10:1 VERTICAL EXA
APPROXIMATE GRAP

0 5

0 50

(FEET)



Explanation:

As-built boring location: ○

Fill Area 1:

Trench:

Cross-Section: **A – A'**

Scale: 0 100 200 300 feet

KLEINFELDER

5015 SHOREHAM PLACE
SAN DIEGO, CALIFORNIA

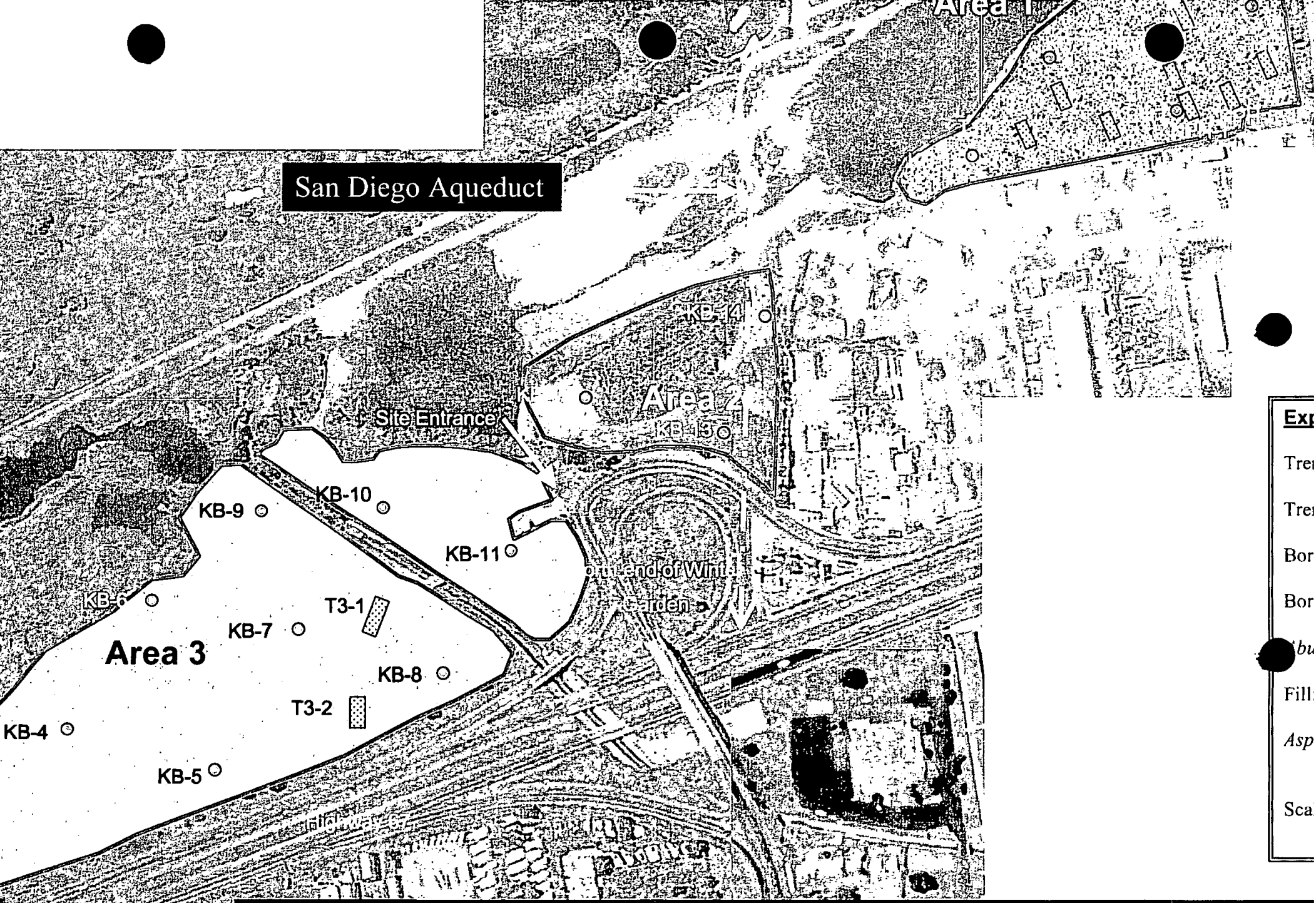
CHECKED BY: jpl	FN: Lakeside Conservancy
PROJECT NO.	DATE 3/8/05

Lakeside Conservancy Riverpark
Fill Assessment
Hanson Trench Locations
Cross-Section Locations
Lakeside, California

March 2005

FIGURE

6



KLEINFELDER

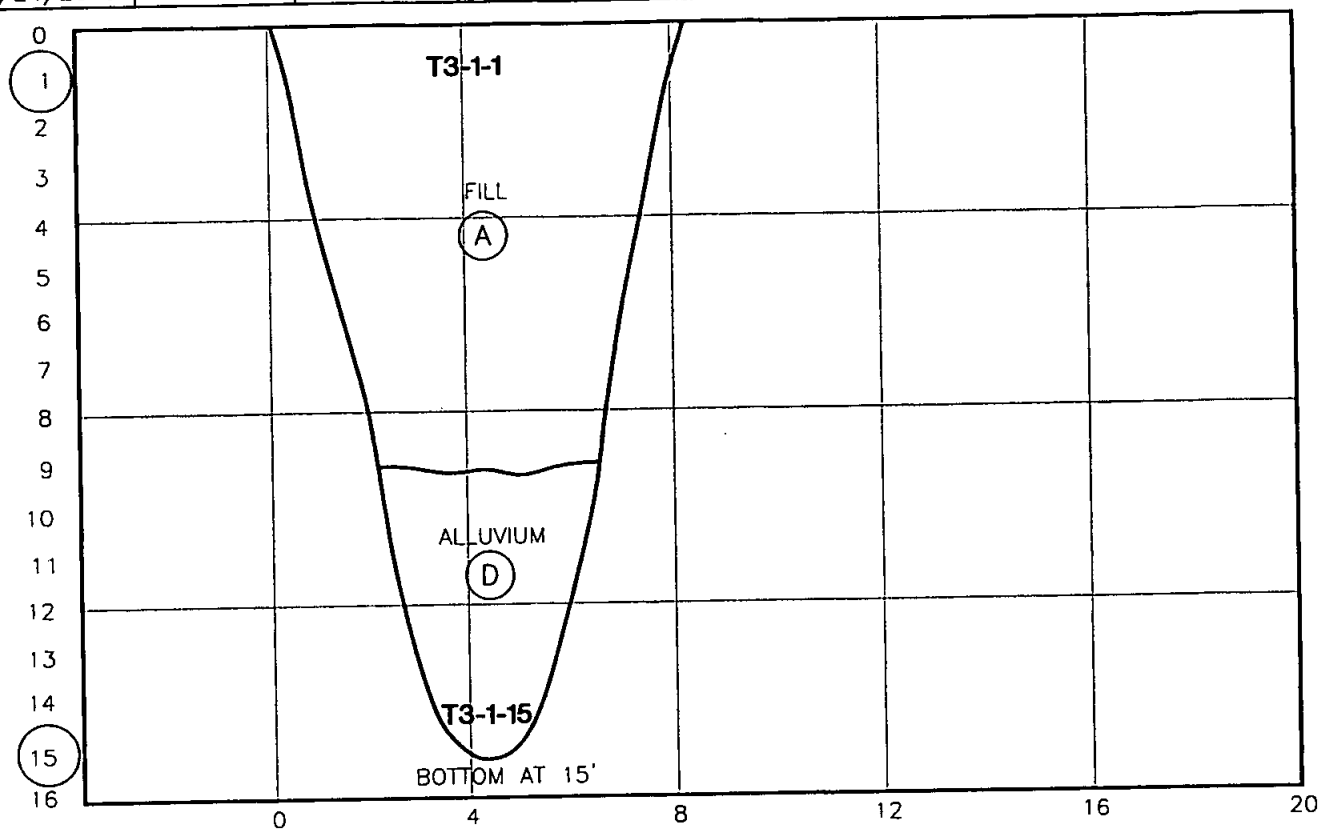
5015 SHOREHAM PLACE
SAN DIEGO, CALIFORNIA

Lakeside Conservancy Riverpark
Fill Assessment
Asphalt Distribution

PROJECT NO	LOG OF TEST PIT NO. T3-1	SHEET
44102		1 OF 1

EXCAVATION EQUIPMENT	PROJECT NAME	LOCATION
CAT 320 C	LAKESIDE CONSERVANCY	T3-1

DATE:	LOGGED BY:	CHECKED BY:	DEPTH:	ELEVATION:	DIRECTION:
01/24/2005	SK	JPL	15'		



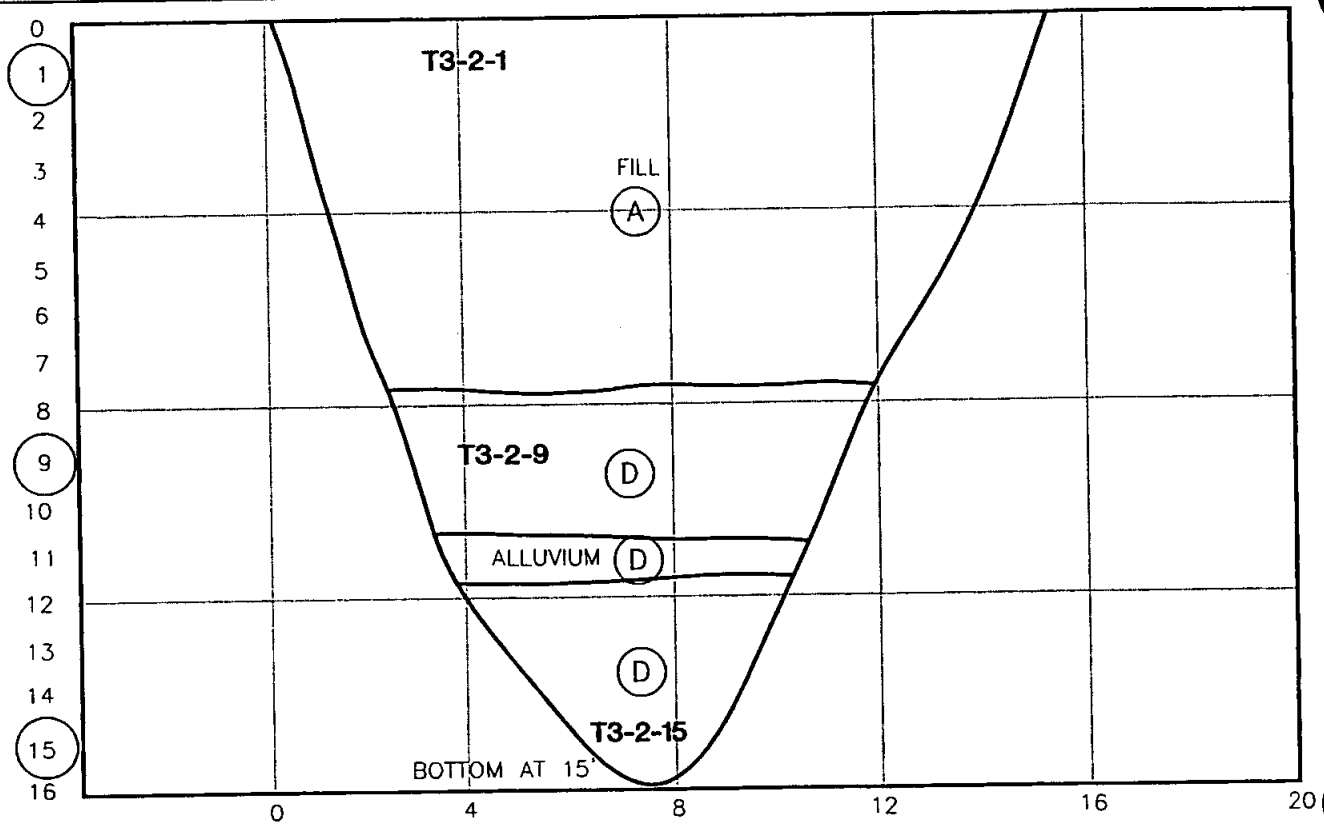
DEPTH IN FEET	MATERIAL DESCRIPTION
0-9'	FILL: SAND (SW), brown (7.5 YR 4/6), moist, medium dense, fine to coarse grained, with concrete and aspholt
9'-15'	ALLUVIUM: SILTY SAND (SM), light brown (7.5 YR 6/4), moist, medium dense, fine to medium groined
15'	(CLAY) SILTY CLAY (CL), brown (7.5 YR 4/6), moderately plastic (on bucket teeth)
(1) (15)	NOTE: circled numbers indicate sample depth

FN: 44102TP-1	KLEINFELDER	5015 SHOREHAM PLACE SAN DIEGO, CALIFORNIA 92122	FIGURE NO.: A-T3-1

PROJECT NO.	LOG OF TEST PIT NO. T3-2	SHEET
44102		1 OF 1

EXCAVATION EQUIPMENT	PROJECT NAME	LOCATION
CAT 320 C	LAKESIDE CONSERVANCY	T3-2

DATE:	LOGGED BY:	CHECKED BY:	DEPTH:	ELEVATION:	DIRECTION:
01/24/2005	SK	JPL	15'		

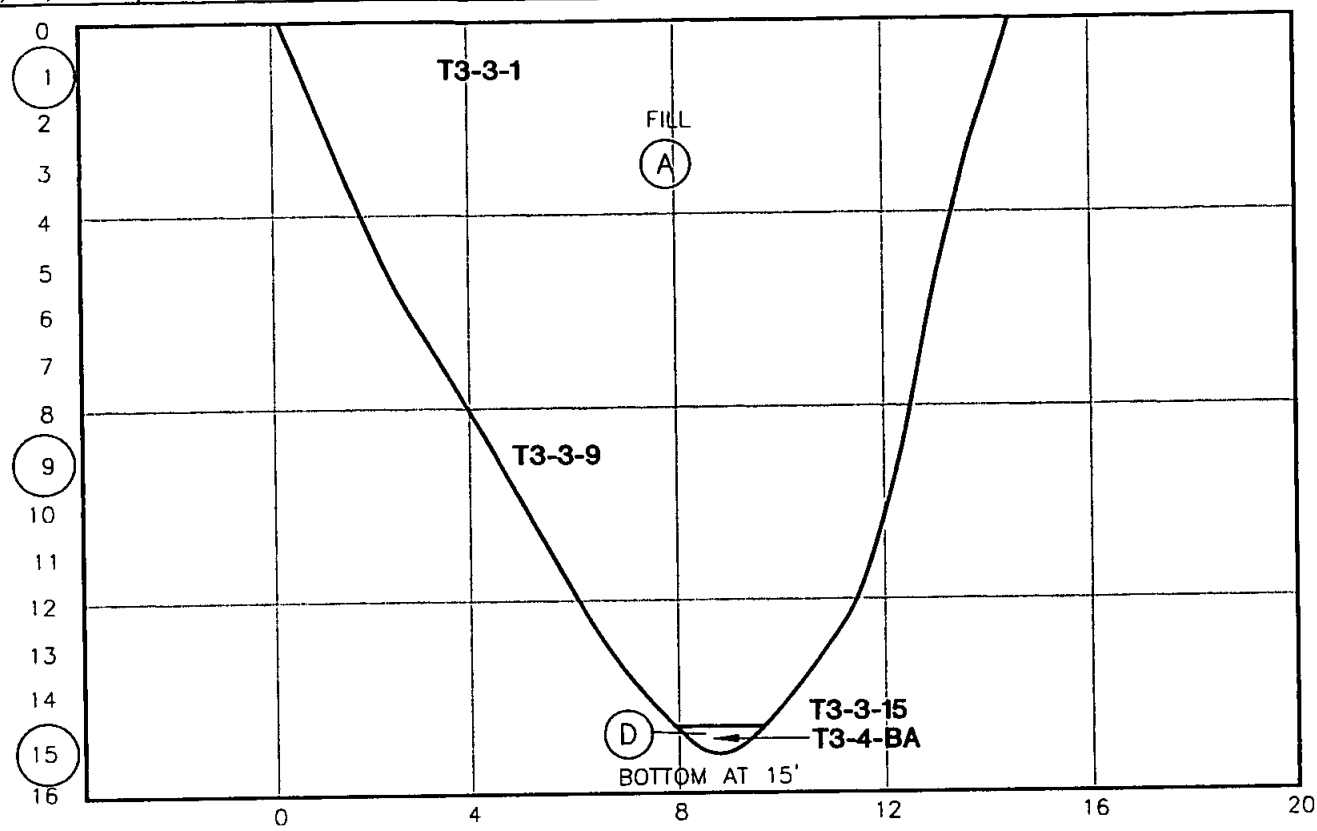


DEPTH IN FEET	MATERIAL DESCRIPTION
0–7.5'	FILL: SILTY SAND (SM), brown (7.5 YR 4/6), moist, medium dense, medium to coarse groined, with gravel, cobbles and concrete
7.5'–10'	ALLUVIUM: SAND (SP), light brown (7.5 YR 6/4), moist, loose, fine to medium groined
10'–11.5'	ALLUVIUM: SILTY SAND (SM), light brown (7.5 YR 6/4), moist, medium dense, fine groined
11.5'–15'	ALLUVIUM: SILTY SAND (SM), light brown (7.5 YR 6/4), moist, medium dense, fine to medium groined
1, 15, 9	NOTE: Circled numbers indicate sample depth

PROJECT NO.	LOG OF TEST PIT NO. T3-3	SHEET
44102		1 OF 1

EXCAVATION EQUIPMENT	PROJECT NAME	LOCATION
CAT 320 C	LAKESIDE CONSERVANCY	T3-3

DATE:	LOGGED BY:	CHECKED BY:	DEPTH:	ELEVATION:	DIRECTION:
01/24/2005	SK	JPL	15'		



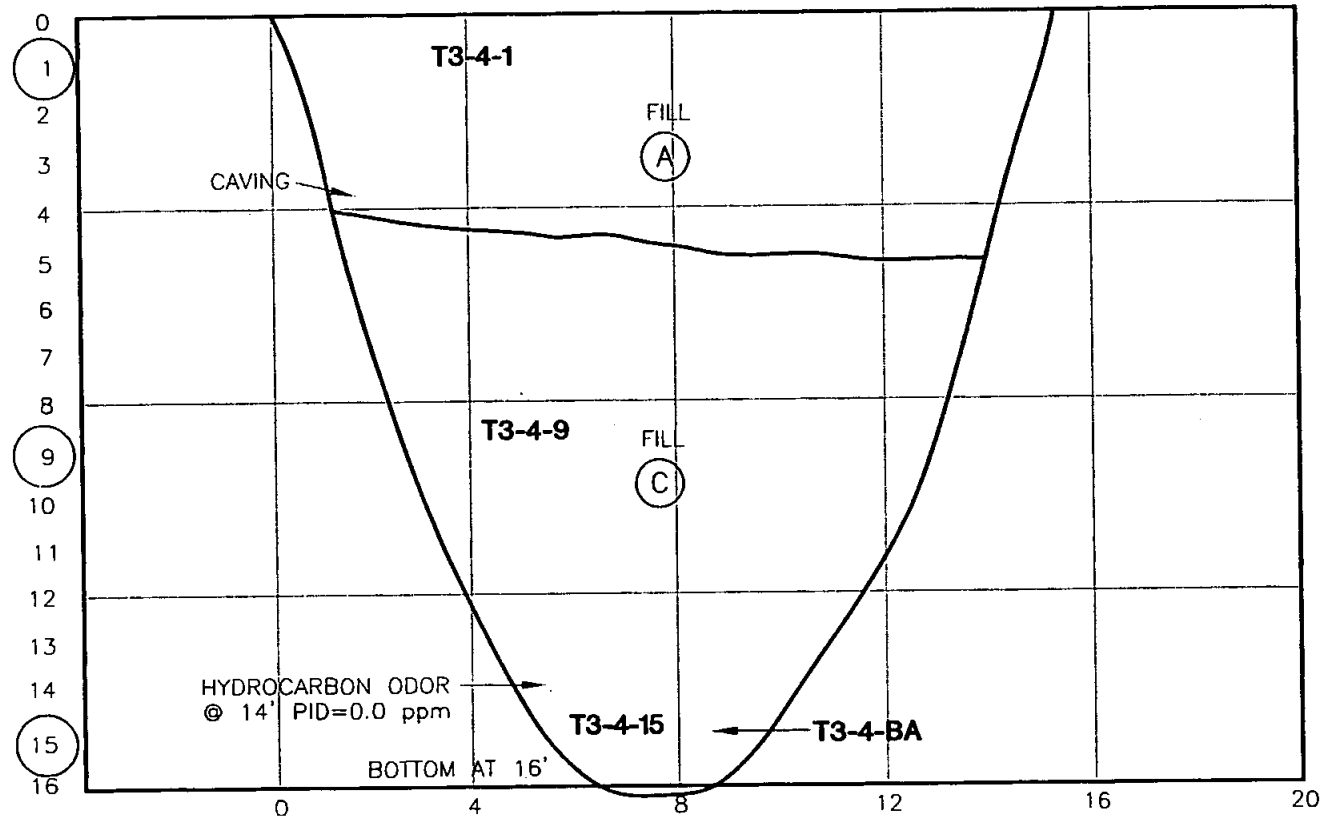
DEPTH IN FEET	MATERIAL DESCRIPTION
0-15'	FILL: SILTY SAND (SM), brown (7.5 YR 6/4), moist, loose, fine to medium grained, with concrete, asphalt, gravel, cobbles, rebar and clothing
15'	ALLUVIUM: SILTY SAND (SM), dark groy (2.5 YR 4/1), moist, medium dense, fine grained (on bucket teeth)
(1) (9) (15)	NOTE: Circled numbers indicate sample depth

FN: 44102TP-1	KLEINFELDER	5015 SHOREHAM PLACE SAN DIEGO, CALIFORNIA 92122	FIGURE NO.: A-T3-3

PROJECT NO	LOG OF TEST PIT NO. T3-4	SHEET
44102		1 OF 1

EXCAVATION EQUIPMENT	PROJECT NAME	LOCATION
CAT 320 C	LAKESIDE CONSERVANCY	T3-4

DATE:	LOGGED BY:	CHECKED BY:	DEPTH:	ELEVATION:	DIRECTION:
01/24/2005	SK	JPL	16'		

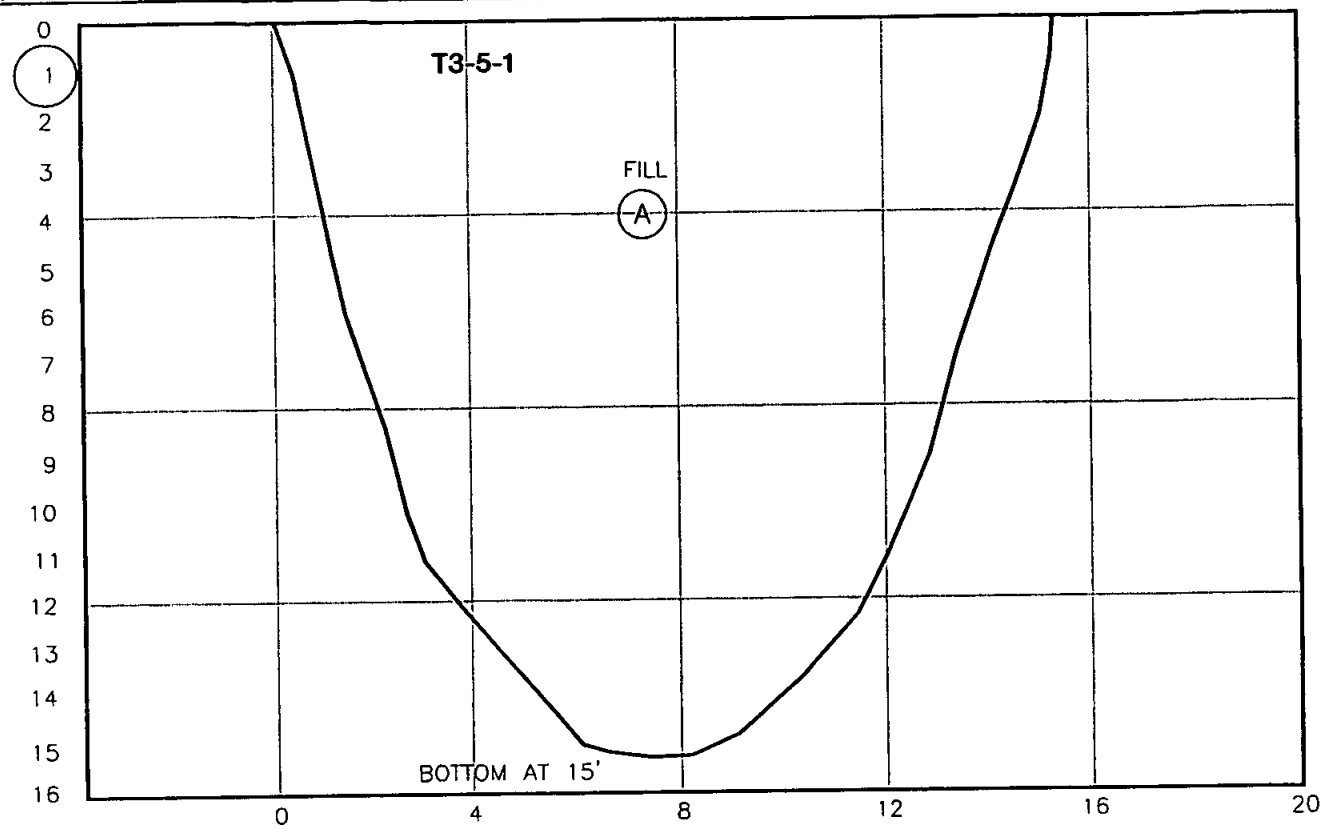


DEPTH IN FEET	MATERIAL DESCRIPTION
0-7.5'	FILL: SILTY SAND (SM), brown *7.5 YR 6/4), moist, loose, fine to medium grained, with concrete, asphalt, gravel and cobbles
7.5'-10'	FILL: SILTY SAND (SM), brown (7.5 YR 6/4), moist, loose, fine to medium grained, with concrete, plastic, wood, brick, rebar, wire and glass
(1) (9) (15)	NOTE: Circled numbers indicate sample depth

PROJECT NO	LOG OF TEST PIT NO. T3-5	SHEET
44102		1 OF 1

EXCAVATION EQUIPMENT	PROJECT NAME	LOCATION
CAT 320 C	LAKESIDE CONSERVANCY	T3-5

DATE:	LOGGED BY:	CHECKED BY:	DEPTH:	ELEVATION:	DIRECTION:
01/24/2005	SK	JPL	15'		



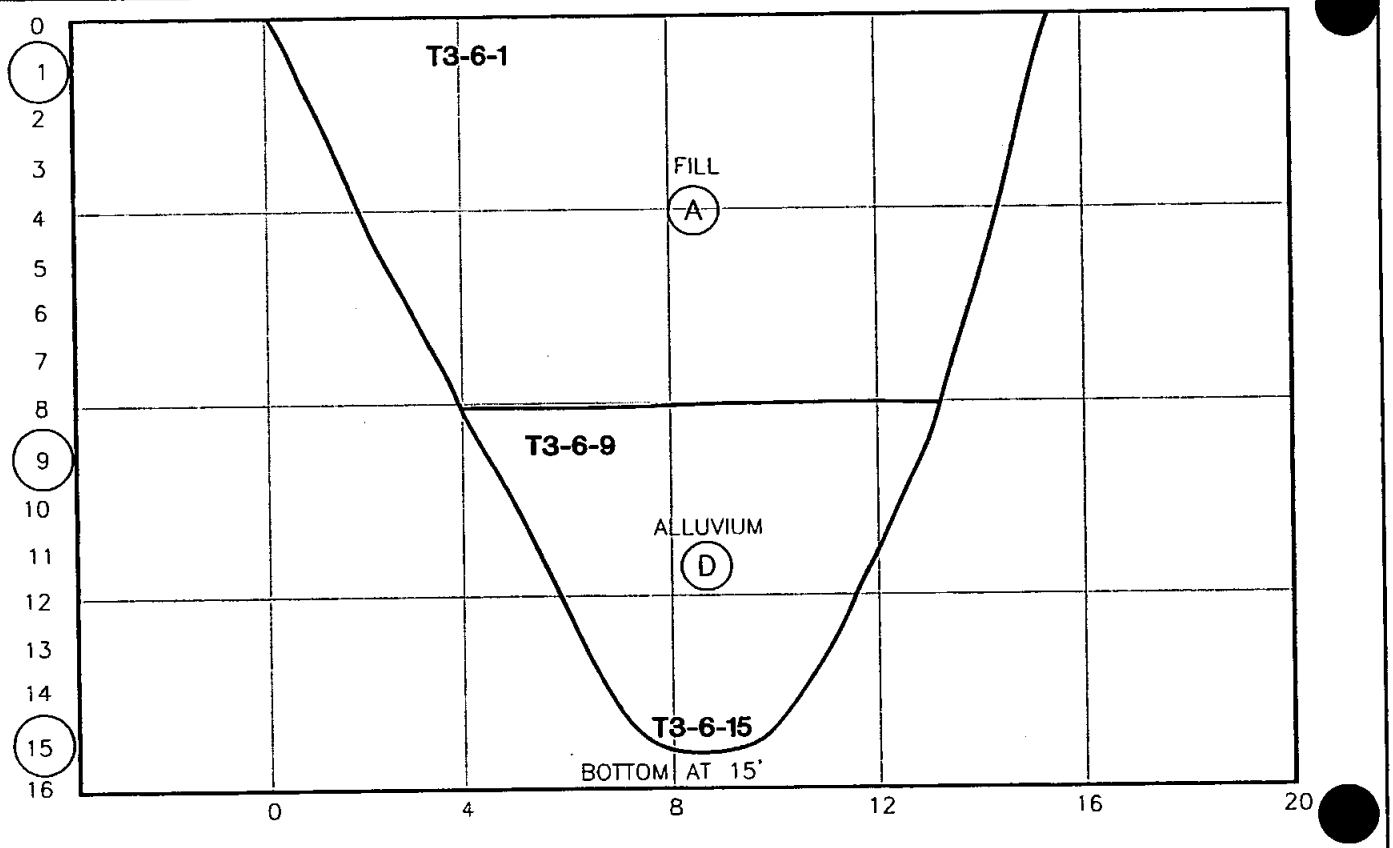
DEPTH IN FEET	MATERIAL DESCRIPTION
0-15'	FILL: SILTY SAND (SM), brown (7.5 YR 6/4), moist, loose, fine to medium grained, with concrete, asphalt, gravel and cobbles, plastic, brick and wood present in top 5 feet
(1)	NOTES: Sidewall caving prevented deep sampling Circled numbers indicate sample depth

FN: 44102TP-1	KLEINFELDER	5015 SHOREHAM PLACE SAN DIEGO, CALIFORNIA 92122	FIGURE NO.: A-T3-5

PROJECT NO	LOG OF TEST PIT NO. T3-6	SHEET
44102		1 OF 1

EXCAVATION EQUIPMENT	PROJECT NAME	LOCATION
CAT 320 C	LAKESIDE CONSERVANCY	T3-6

DATE:	LOGGED BY:	CHECKED BY:	DEPTH:	ELEVATION:	DIRECTION:
01/24/2005	SK	JPL	15'		

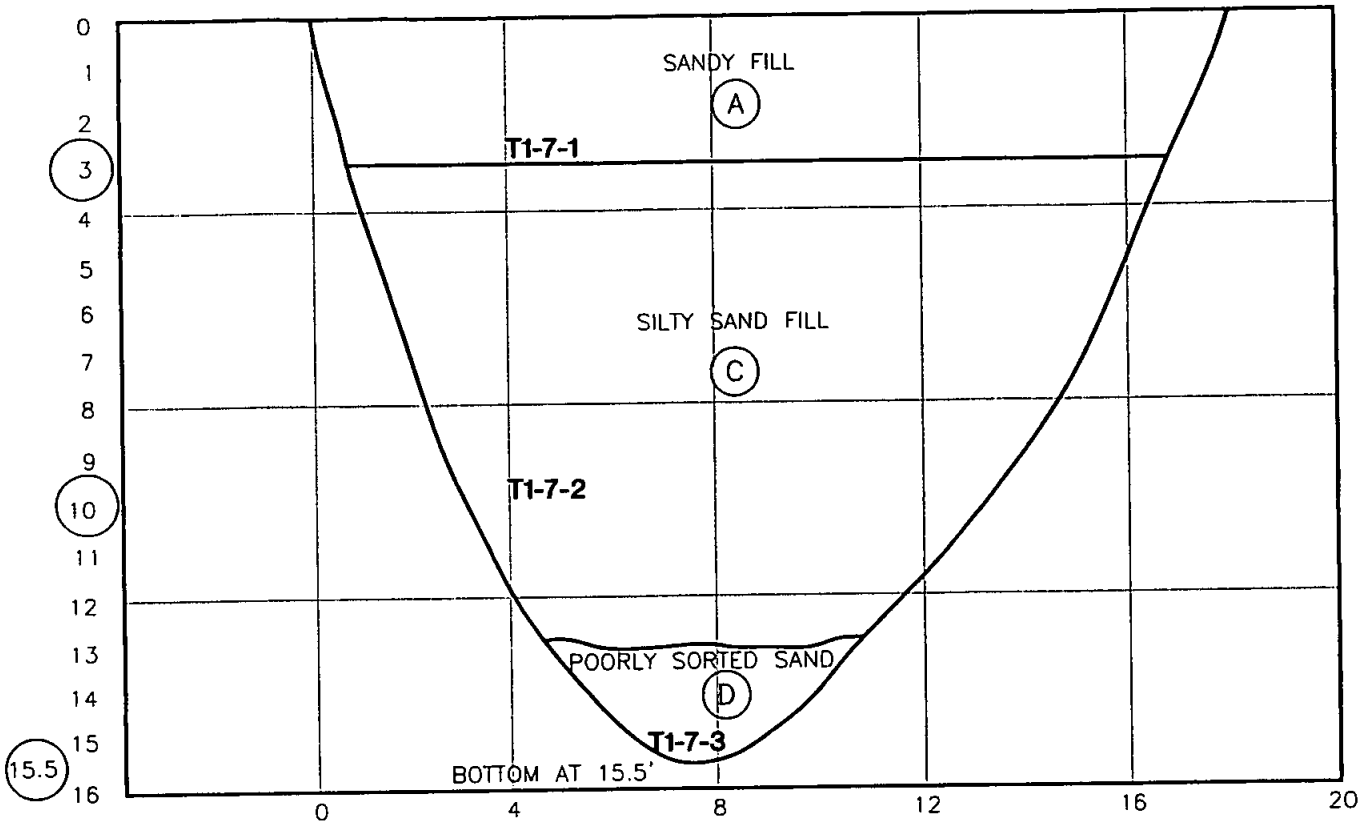


DEPTH IN FEET	MATERIAL DESCRIPTION
0–2"	Gravel and crushed asphalt
2"–8'	FILL: SILTY SAND (SM), brown (7.5 YR 4/6), dry, medium dense, fine to medium grained, with gravel, small cobbles, and concrete
8'–15'	ALLUVIUM: SILTY SAND (SM), brown (7.5 YR 4/6), moist, medium dense, fine grained, with rounded gravel
(1) (9) (15)	NOTE: Circled numbers indicate sample depth

PROJECT NO.	LOG OF TEST PIT NO. T1-7	SHEET
44102		1 OF 1

EXCAVATION EQUIPMENT	PROJECT NAME	LOCATION
CAT 320 C	LAKESIDE CONSERVANCY	T1-7

DATE:	LOGGED BY:	CHECKED BY:	DEPTH:	ELEVATION:	DIRECTION:
01/25/2005	SK	JPL	15.5'		

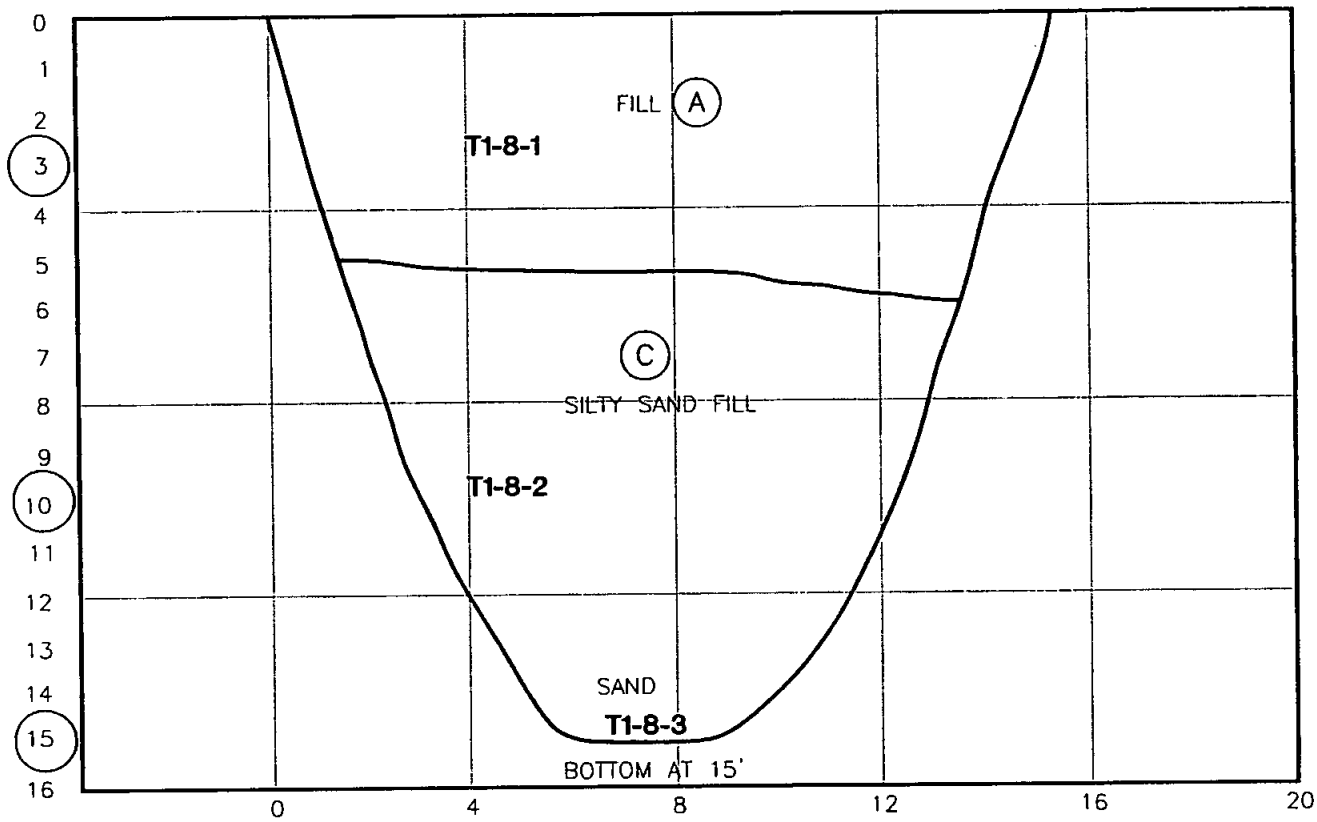


DEPTH IN FEET	MATERIAL DESCRIPTION
0–3'	SANDY FILL (SW), light brown, dry, loose, fine to medium grained, with gravel, asphalt, trace brick, trace plastic
5'–13'	SILTY SAND FILL (SM), grayish brown to dark brown, moist, fine to medium grained with concrete, asphalt, gravel, trace brick, trace rebar, slight petroleum odor
13'–15.5'	POORLY SORTED SAND (SP), gray, moist, loose, trace medium to coarse sand
(3) (10) (15.5)	NOTE: circled numbers indicates sample depth.

PROJECT NO.	LOG OF TEST PIT NO. T1-8	SHEET
44102		1 OF 1

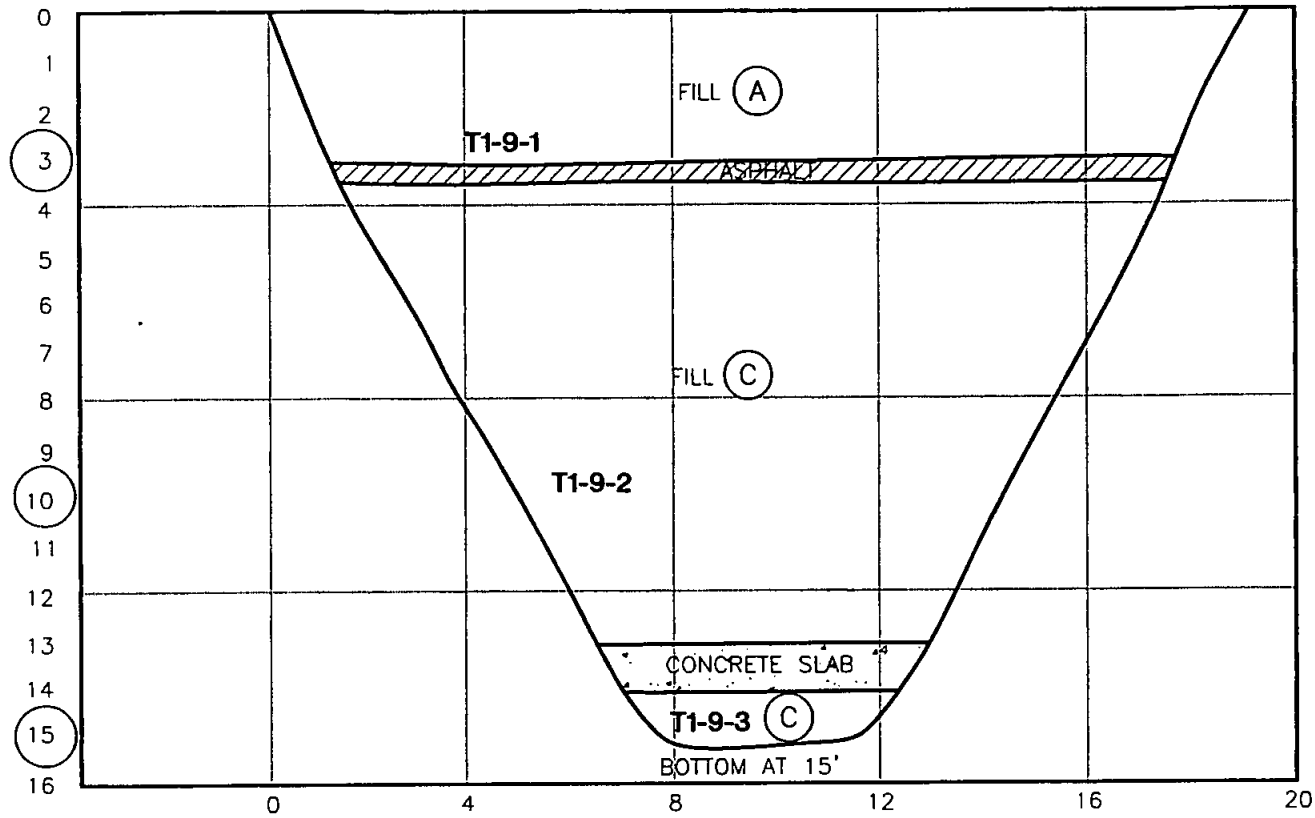
EXCAVATION EQUIPMENT	PROJECT NAME	LOCATION
CAT 320 C	LAKESIDE CONSERVANCY	T1-8

DATE:	LOGGED BY:	CHECKED BY:	DEPTH:	ELEVATION:	DIRECTION:
01/25/2005	SK	JPL	15'		



DEPTH IN FEET	MATERIAL DESCRIPTION
0--5'	FILL: SAND (SW), brown (7.5 YR 4/6), dry, loose, fine to coarse, some gravel, trace asphalt, trace wood
5'-15.5'	SILTY SAND FILL (SM), dark gray (2.5 YR 4/1) to dark brown (7.5 YR 2.5/1), moist, medium dense, with asphalt, concrete, trace brick, ash, glass, wood. PID: 1.2 ppm
(3) (10) (15)	NOTE: circled numbers indicates sample depth.

PROJECT NO.					SHEET
44102	# LOG OF TEST PIT NO. T1-9				1 OF 1
EXCAVATION EQUIPMENT: CAT 320 C	PROJECT NAME: LAKESIDE CONSERVANCY			LOCATION: T1-9	
DATE: 01/25/2005	LOGGED BY: SK	CHECKED BY: JPL	DEPTH: 15'	ELEVATION:	DIRECTION:

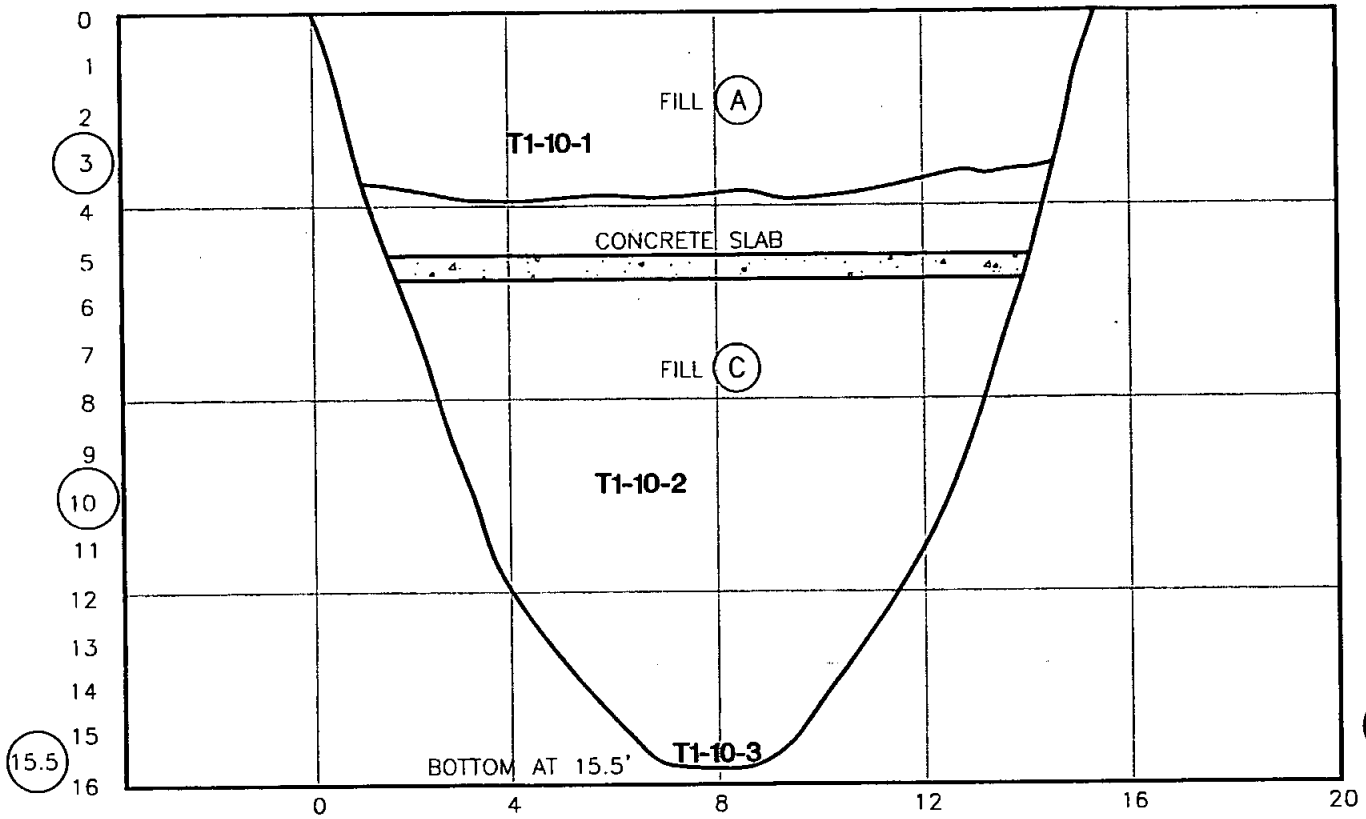


DEPTH IN FEET	MATERIAL DESCRIPTION
0–3'	FILL: SAND (SP), brown (7.5 YR 4/6), wet, loose, fine to coarse grained, some gravel, trace asphalt, trace brick Perched water at 3 feet along asphalt layer
3'–14'	SILTY SAND FILL (SM), dark brown (7.5 YR 2.5/1), moist, medium dense, fine to medium grained with aspholt, brick, gravel, concrete Concrete slab at 13 to 14 feet
14'–15'	SAND with GRAVEL (SP), light brown (7.5 4/1), dry, medium dense, fine to medium groined, with gravel, troce asphalt
(3) (10) (15)	NOTE: circled numbers indicates sample depth.

PROJECT NO.	LOG OF TEST PIT NO. T1-10	SHEET
44102		1 OF 1

EXCAVATION EQUIPMENT	PROJECT NAME	LOCATION
CAT 320 C	LAKESIDE CONSERVANCY	T1-10

DATE:	LOGGED BY:	CHECKED BY:	DEPTH:	ELEVATION:	DIRECTION:
01/25/2005	SK	JPL	15.5'		



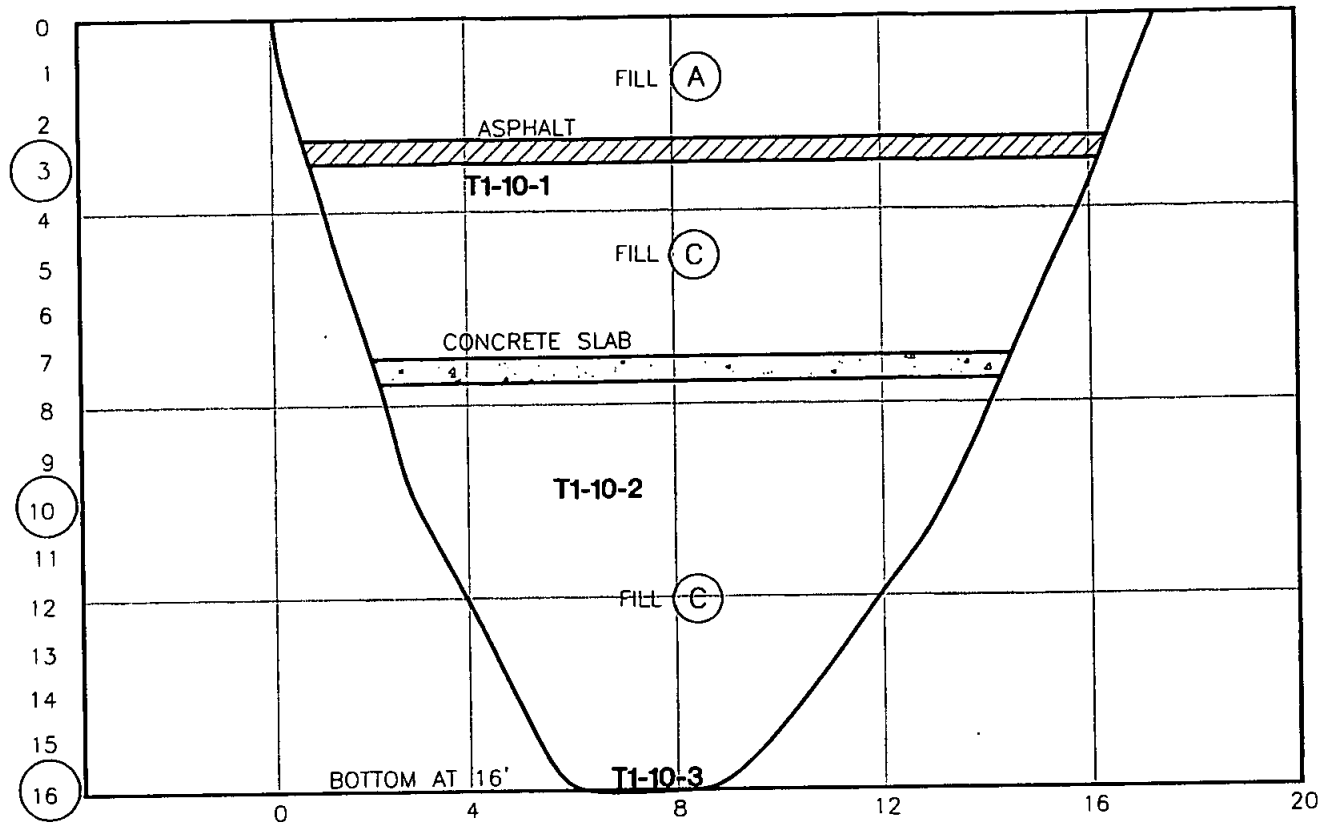
DEPTH IN FEET	MATERIAL DESCRIPTION
0-3.5'	FILL: SAND (SW), light brown (7.5 YR 4/3), dry, loose, fine to coarse grained, with gravel, trace asphalt
3.5'-15.5'	SILTY SAND (SM), grayish brown (2.5 Y 4/1), moist, loose, fine to medium grained with concrete, asphalt, gravel, cobbles and brick PID: 1.4 ppm
(3) (10) (15.5)	NOTES: Lost sample was collected at excavator limit, still in the fill. Circled numbers indicate sample depth.

FN: 44102TP-1	KLEINFELDER	5015 SHOREHAM PLACE SAN DIEGO, CALIFORNIA 92122	FIGURE NO.: A-T1-10

PROJECT NO.	LOG OF TEST PIT NO. T1-11	SHEET
44102		1 OF 1

EXCAVATION EQUIPMENT	PROJECT NAME	LOCATION
CAT 320 C	LAKESIDE CONSERVANCY	T1-11

DATE:	LOGGED BY:	CHECKED BY:	DEPTH:	ELEVATION:	DIRECTION:
01/25/2005	SK	JPL	16'		

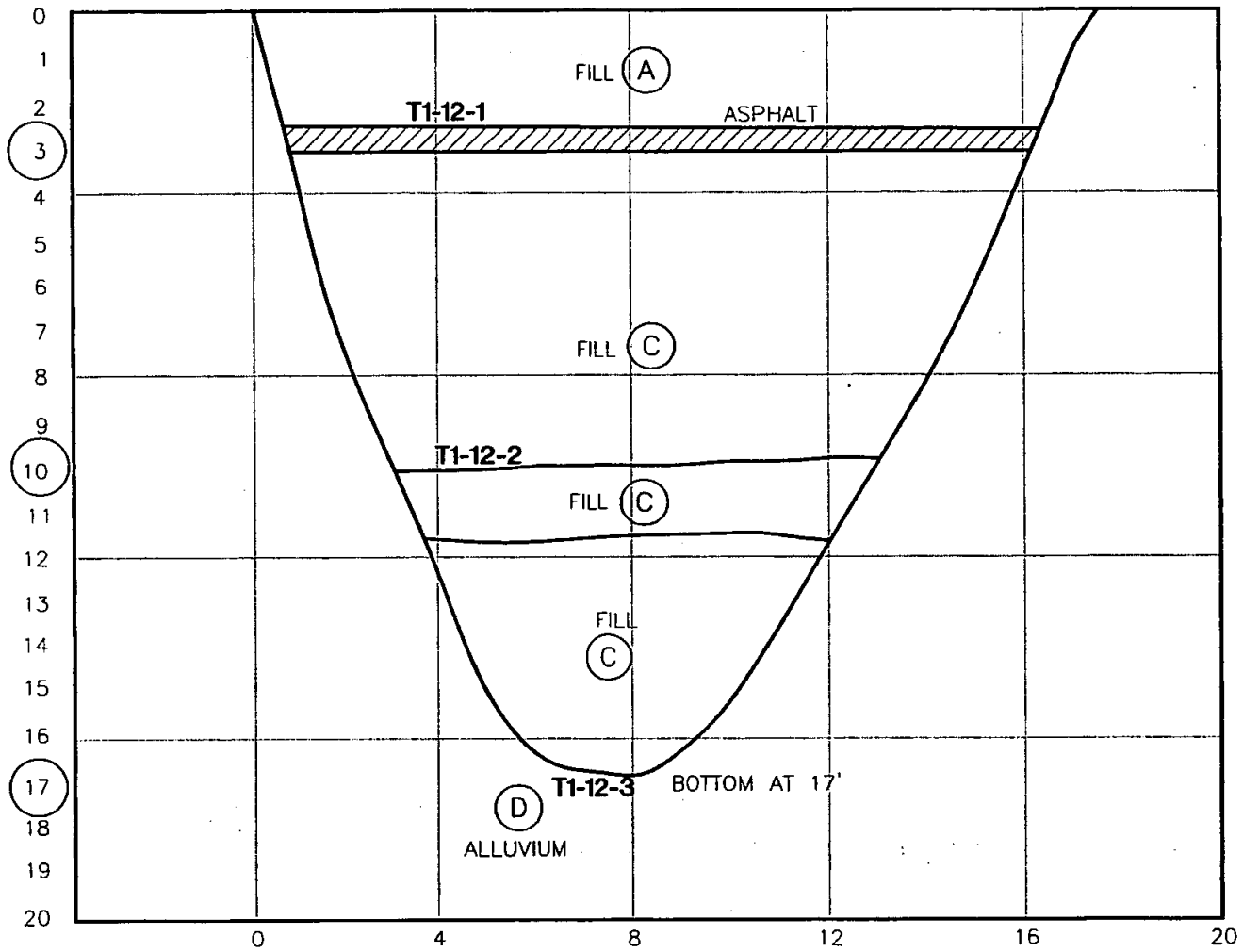


DEPTH IN FEET	MATERIAL DESCRIPTION
0–3'	FILL: WELL GRADED SAND (SW), light brown (7.5 YR 4/3), dry, loose, fine to coarse grained with gravel and asphalt
3'–16'	FILL: POORLY GRADED SAND (SP), grayish brown (2.5 YR 4/1), dry, loose, fine to medium grained with concrete, some asphalt, trace brick and ash
16'	POORLY GRADED SAND (SP), grayish brown (2.5 YR 4/1), dry, medium dense, fine to medium grained, with concrete and asphalt.
(3) (10) (16)	NOTES: Last sample was collected at excavator limit, transitioning out of fill. Circled numbers indicate sample depth.

PROJECT NO	LOG OF TEST PIT NO. T1-12	SHEET
44102		1 OF 1

EXCAVATION EQUIPMENT	PROJECT NAME	LOCATION
CAT 320 C	LAKESIDE CONSERVANCY	T1-12

DATE:	LOGGED BY:	CHECKED BY:	DEPTH:	ELEVATION:	DIRECTION:
01/25/2005	SK	JPL	17'		



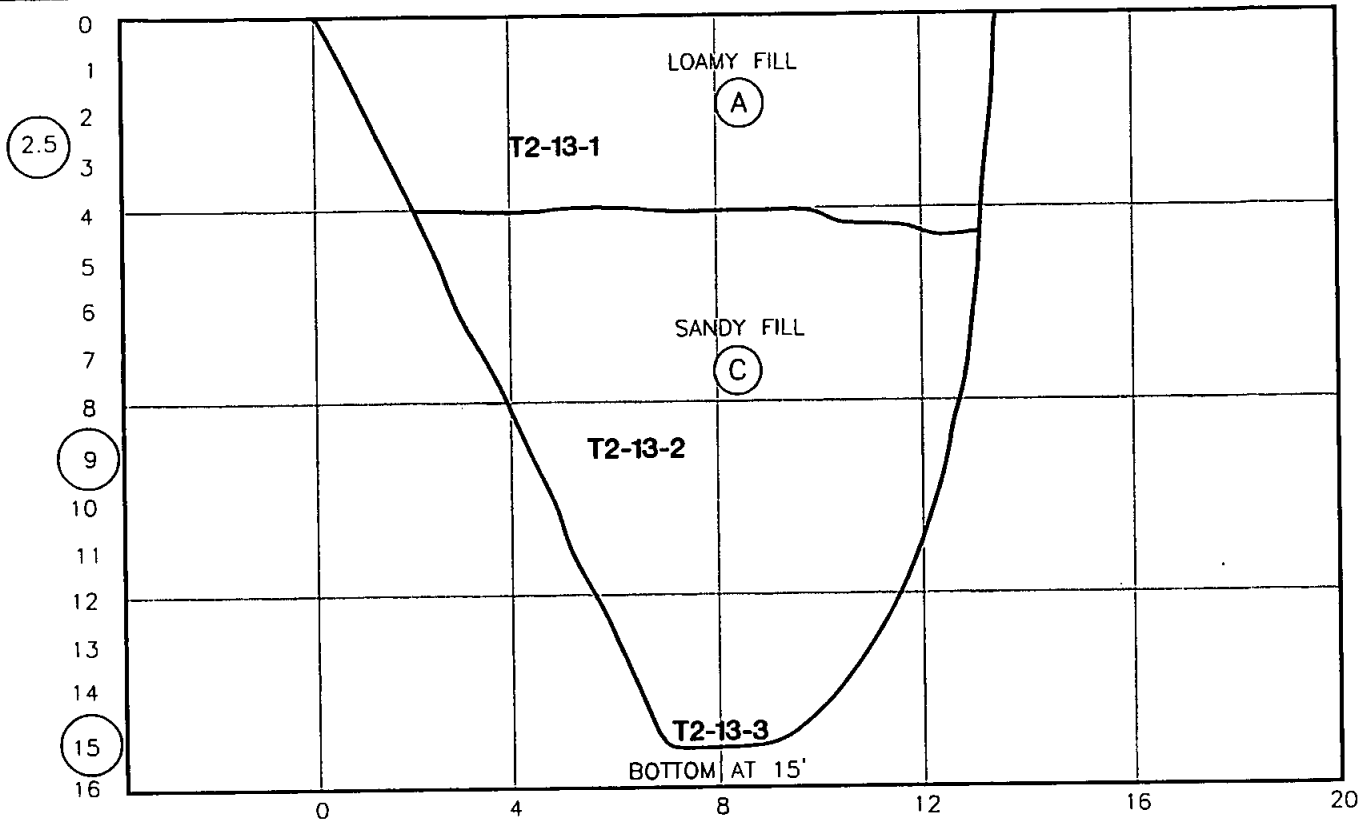
DEPTH IN FEET	MATERIAL DESCRIPTION
0-2.5'	FILL: SAND (SW), light brown (7.5 YR 4/3), dry, loose, fine to coarse grained, some gravel, trace asphalt
3'-10'	SILTY SAND (SM), gray (2.5 Y 5/1), moist, medium dense, fine to medium grained, with concrete, asphalt, wood, steel pipe, gravel, bricks
10'-11.5'	SANDY CLAY (CL), gray (2.5 Y 5/1), moist, hard, fine to coarse, medium plasticity, with grovel and asphalt and clothing and metal scraps
11.5'-17'	SILTY SAND (SM), gray (2.5 Y 5/1), moist, medium dense, fine to medium grained, with gravel, concrete, asphalt, transitoning out of fill
(3) (10) (17)	ALLUVIUM: SILTY SAND (SM), gray (2.5 Y 5/1), moist, medium dense, fine to medium grained NOTE: circled numbers indicates sample depth.

FN: 44102TP-1	KLEINFELDER	5015 SHOREHAM PLACE SAN DIEGO, CALIFORNIA 92122	FIGURE NO.: A-T1-12

PROJECT NO	LOG OF TEST PIT NO. T2-13	SHEET
44102		1 OF 1

EXCAVATION EQUIPMENT	PROJECT NAME	LOCATION
CAT 320 C	LAKESIDE CONSERVANCY	T2-13

DATE:	LOGGED BY:	CHECKED BY:	DEPTH:	ELEVATION:	DIRECTION:
01/25/2005	SK	JPL	15'		



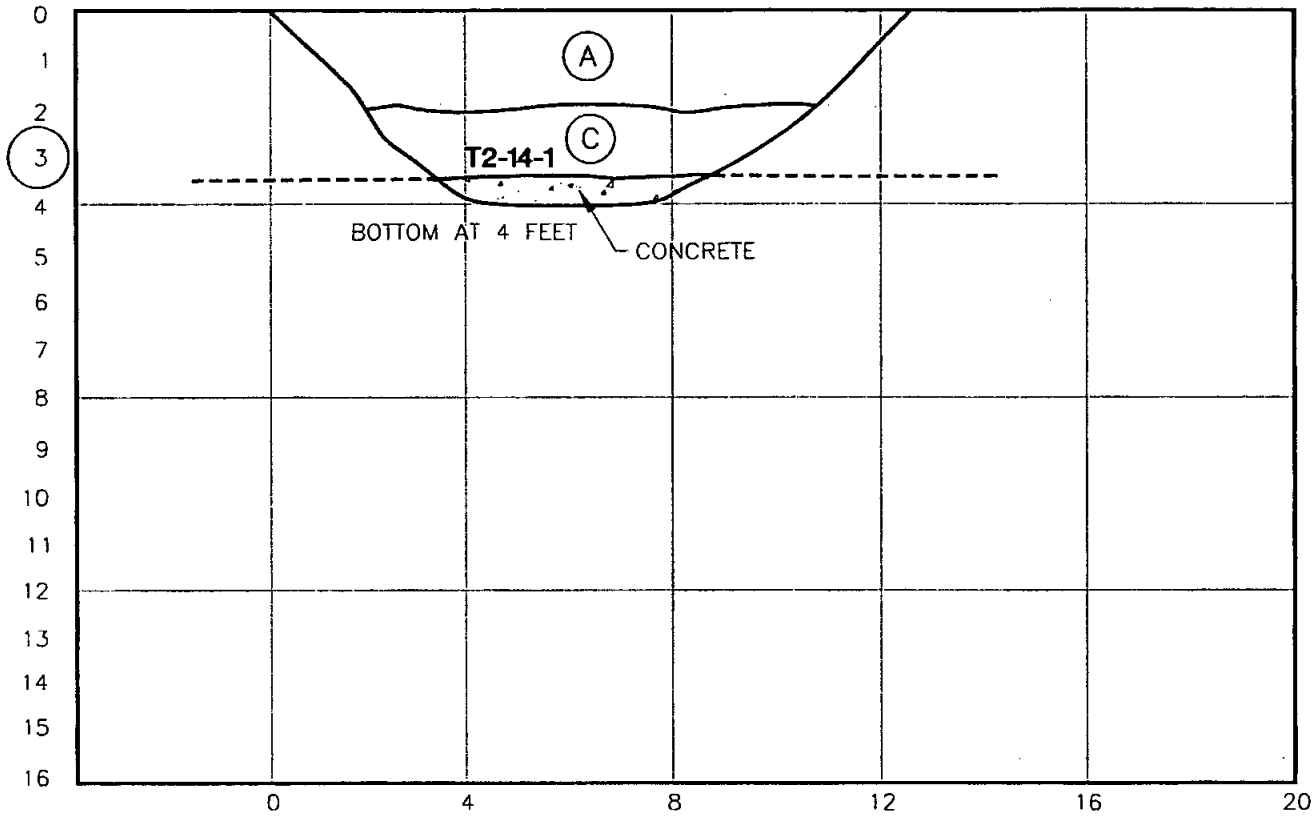
DEPTH IN FEET	MATERIAL DESCRIPTION
0-3' 5'-13'	LOAMY FILL: SILTY SAND (SM), brown (7.5 YR 4/2), dry, loose, fine to medium grained with gravel, roots
13'-15.5'	FILL: SAND (SP-SM), brown (7.5 YR 4/2), moist, medium dense, fine to medium grained with gravel, boulders, concrete, asphalt, clay
(2.5) (9) (15)	NOTE: Native soils not encountered, terminated hole at 15' due to sidewall instability. Circled numbers indicote sample depth.

FN: 44102TP-1	KLEINFELDER	5015 SHOREHAM PLACE SAN DIEGO, CALIFORNIA 92122	FIGURE NO.: A-T2-13

PROJECT NO.	LOG OF TEST PIT NO. T2-14	SHEET
44102		1 OF 1

EXCAVATION EQUIPMENT	PROJECT NAME	LOCATION
CAT 320 C	LAKESIDE CONSERVANCY	T2-14

DATE:	LOGGED BY:	CHECKED BY:	DEPTH:	ELEVATION:	DIRECTION:
01/25/2005	SK	JPL	4'		



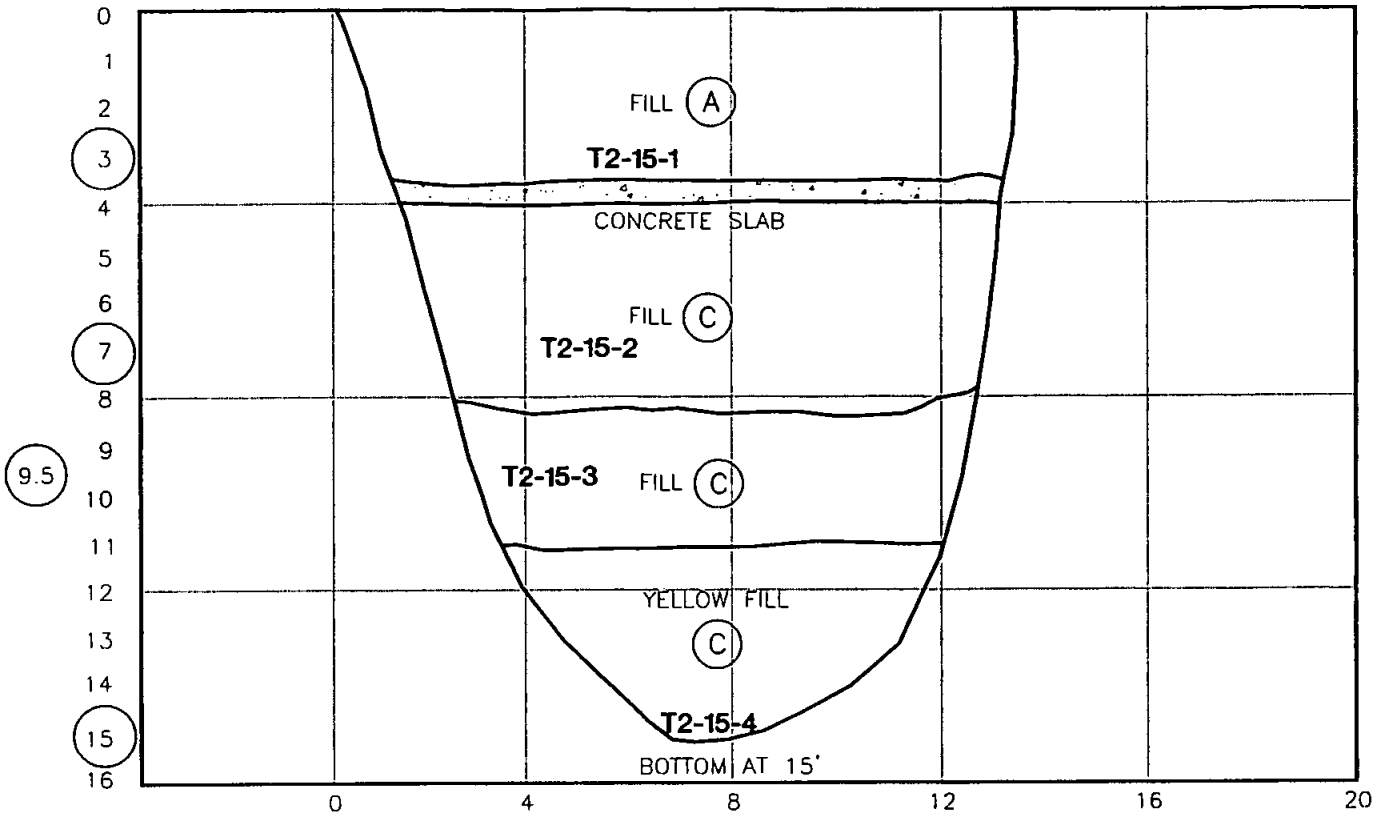
DEPTH IN FEET	MATERIAL DESCRIPTION
0-2'	FILL: SAND (SW) and CONCRETE, brown (7.5 YR 4/2), dry, dense, fine to coarse grained, concrete pieces up to 2 feet wide.
2'-3.5'	FILL: SAND (SW), brown (7.5 YR 4/2), dry, loose, fine to medium grained, some concrete
3.5'-4'	Concrete slab
(3)	NOTES: Tried 3 locations to get through the concrete slab at 4 feet, all attempts failed, decided to terminate the test pit. Circled numbers indicate sample depth.

FN: 44102TP-1	KLEINFELDER	5015 SHOREHAM PLACE SAN DIEGO, CALIFORNIA 92122	FIGURE NO.: A-T2-14

PROJECT NO.	LOG OF TEST PIT NO. T2-15	SHEET
44102		1 OF 1

EXCAVATION EQUIPMENT	PROJECT NAME	LOCATION
CAT 320 C	LAKESIDE CONSERVANCY	T2-15

DATE:	LOGGED BY:	CHECKED BY:	DEPTH:	ELEVATION:	DIRECTION:
01/26/2005	SK	JPL	15'		



DEPTH IN FEET	MATERIAL DESCRIPTION
0–3.5'	LOAMY FILL: SILTY SAND (SM), brown (7.5 YR 4/2), dry, loose, fine to medium grained, with roots, trace concrete
3.5'–4'	Concrete slab
4'–8'	FILL: SILTY SAND (SM), brown (7.5 YR 4/2), moist, loose, fine to medium grained, with concrete ond gravel
8'–11'	FILL: SILTY SAND (SM) and GRAVEL (GM), block ond green, wet, loose, fine to medium with organics, orgonic odor (possible pond bottom), layer of brown silt in bottom 4 inches
11'–15'	YELLOW FILL: SILTY SAND (SM) and GRAVEL (GM), orange brown (7.5 YR 5/6), moist, loose, fine to medium grained
(3) (7) (9.5) (15)	NOTE: Circled numbers indicate sample depth

KLEINFELDER
5015 SHOREHAM PLACE
SAN DIEGO, CALIFORNIA 92122

FIGURE NO.: A-T2-15

APPENDIX B

Laboratory Reports and Chain-Of-Custody Documents

EnviroMatrix Analytical, Inc.

25 February 2005

Kleinfelder, Inc.
Attn: Jacques Lord
5015 Shoreham Place
San Diego, CA 92122

EMA Log #: 0502135

Project Name: 44102-002

Enclosed are the results of analyses for samples received by the laboratory on 01/25/05 16:45. Samples were analyzed pursuant to client request utilizing EPA or other ELAP approved methodologies. I certify that this data is in compliance both technically and for completeness.

Dan Verdon
Laboratory Director

CA ELAP Certification #: 2564

Client Name: Kleinfelder, Inc.
Project Name: 44102-002

EMA Log #: 0502135

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
T1-10-3	0502135-01	Soil	01/25/05 13:45	01/25/05 16:45
T1-11-1	0502135-02	Soil	01/25/05 14:07	01/25/05 16:45
T1-11-2	0502135-03	Soil	01/25/05 14:25	01/25/05 16:45

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Client Name: Kleinfelder, Inc.
Project Name: 44102-002

EMA Log #: 0502135

TCLP Semivolatile Compounds by EPA Method 1311/8270C

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
T1-10-3 (0502135-01) Soil Sampled: 01/25/05 13:45 Received: 01/25/05 16:45									**HT-07**
Acenaphthene	ND	8.00	ug/l	1	5021805	02/18/05	02/24/05	EPA 8270C	
Acenaphthylene	ND	8.00	"	"	"	"	"	"	
Anthracene	ND	8.00	"	"	"	"	"	"	
Benzo (a) anthracene	ND	8.00	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	8.00	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	8.00	"	"	"	"	"	"	
Benzo (g,h,i) perylene	ND	8.00	"	"	"	"	"	"	
Benzo (a) pyrene	ND	8.00	"	"	"	"	"	"	
Chrysene	ND	8.00	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	8.00	"	"	"	"	"	"	
Fluoranthene	ND	8.00	"	"	"	"	"	"	
Fluorene	ND	8.00	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	8.00	"	"	"	"	"	"	
Naphthalene	ND	8.00	"	"	"	"	"	"	
Phenanthrene	ND	8.00	"	"	"	"	"	"	
Pyrene	ND	8.00	"	"	"	"	"	"	
Surrogate: Nitrobenzene-d5		*78 %*	*35-121*		"	"	"	"	
Surrogate: 2-Fluorobiphenyl		*97 %*	*30-130*		"	"	"	"	
Surrogate: Terphenyl-dl4		*101 %*	*30-140*		"	"	"	"	
T1-11-1 (0502135-02) Soil Sampled: 01/25/05 14:07 Received: 01/25/05 16:45									**HT-07**
Acenaphthene	ND	8.00	ug/l	1	5021805	02/18/05	02/24/05	EPA 8270C	
Acenaphthylene	ND	8.00	"	"	"	"	"	"	
Anthracene	ND	8.00	"	"	"	"	"	"	
Benzo (a) anthracene	ND	8.00	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	8.00	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	8.00	"	"	"	"	"	"	
Benzo (g,h,i) perylene	ND	8.00	"	"	"	"	"	"	
Benzo (a) pyrene	ND	8.00	"	"	"	"	"	"	
Chrysene	ND	8.00	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	8.00	"	"	"	"	"	"	
Fluoranthene	ND	8.00	"	"	"	"	"	"	
Fluorene	ND	8.00	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	8.00	"	"	"	"	"	"	
Naphthalene	ND	8.00	"	"	"	"	"	"	
Phenanthrene	ND	8.00	"	"	"	"	"	"	
Pyrene	ND	8.00	"	"	"	"	"	"	
Surrogate. Nitrobenzene-d5		*86 %*	*35-121*		"	"	"	"	
Surrogate. 2-Fluorobiphenyl		*106 %*	*30-130*		"	"	"	"	
Surrogate: Terphenyl-dl4		*90 %*	*30-140*		"	"	"	"	

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Client Name: Kleinfelder, Inc.
Project Name: 44102-002

EMA Log #: 0502135

TCLP Semivolatile Compounds by EPA Method 1311/8270C

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
T1-11-2 (0502135-03) Soil Sampled: 01/25/05 14:25 Received: 01/25/05 16:45									**HT-07**
Acenaphthene	ND	8.00	ug/l	1	5021805	02/18/05	02/24/05	EPA 8270C	
Acenaphthylene	ND	8.00	"	"	"	"	"	"	
Anthracene	ND	8.00	"	"	"	"	"	"	
Benzo (a) anthracene	ND	8.00	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	8.00	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	8.00	"	"	"	"	"	"	
Benzo (g,h,i) perylene	ND	8.00	"	"	"	"	"	"	
Benzo (a) pyrene	ND	8.00	"	"	"	"	"	"	
Chrysene	ND	8.00	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	8.00	"	"	"	"	"	"	
Fluoranthene	ND	8.00	"	"	"	"	"	"	
Fluorene	ND	8.00	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	8.00	"	"	"	"	"	"	
Naphthalene	ND	8.00	"	"	"	"	"	"	
Phenanthrene	ND	8.00	"	"	"	"	"	"	
Pyrene	ND	8.00	"	"	"	"	"	"	
Surrogate: Nitrobenzene-d5		*75 %*	*35-121*		"	"	"	"	
Surrogate: 2-Fluorobiphenyl		*100 %*	*30-130*		"	"	"	"	
Surrogate: Terphenyl-dl4		*105 %*	*30-140*		"	"	"	"	

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Client Name: Kleinfelder, Inc.
Project Name: 44102-002

EMA Log #: 0502135

STLC-PAH compounds by GC/MS

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
T1-10-3 (0502135-01) Soil Sampled: 01/25/05 13:45 Received: 01/25/05 16:45									**HT-07**
Acenaphthene	ND	8.00	ug/l	1	5021811	02/18/05	02/25/05	EPA 8270C	
Acenaphthylene	ND	8.00	"	"	"	"	"	"	
Anthracene	ND	8.00	"	"	"	"	"	"	
Benzo (a) anthracene	ND	8.00	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	8.00	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	8.00	"	"	"	"	"	"	
Benzo (g,h,i) perylene	ND	8.00	"	"	"	"	"	"	
Benzo (a) pyrene	ND	8.00	"	"	"	"	"	"	
Chrysene	ND	8.00	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	8.00	"	"	"	"	"	"	
Fluoranthene	ND	8.00	"	"	"	"	"	"	
Fluorene	ND	8.00	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	8.00	"	"	"	"	"	"	
Naphthalene	ND	8.00	"	"	"	"	"	"	
Phenanthrene	ND	8.00	"	"	"	"	"	"	
Pyrene	ND	8.00	"	"	"	"	"	"	
Surrogate: Nitrobenzene-d5		*75 %*	*56-121*		"	"	"	"	
Surrogate: 2-Fluorobiphenyl		*100 %*	*30-130*		"	"	"	"	
Surrogate: Terphenyl-dl4		*93 %*	*30-140*		"	"	"	"	
T1-11-1 (0502135-02) Soil Sampled: 01/25/05 14:07 Received: 01/25/05 16:45									**HT-07**
Acenaphthene	ND	8.00	ug/l	1	5021811	02/18/05	02/25/05	EPA 8270C	
Acenaphthylene	ND	8.00	"	"	"	"	"	"	
Anthracene	ND	8.00	"	"	"	"	"	"	
Benzo (a) anthracene	ND	8.00	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	8.00	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	8.00	"	"	"	"	"	"	
Benzo (g,h,i) perylene	ND	8.00	"	"	"	"	"	"	
Benzo (a) pyrene	ND	8.00	"	"	"	"	"	"	
Chrysene	ND	8.00	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	8.00	"	"	"	"	"	"	
Fluoranthene	ND	8.00	"	"	"	"	"	"	
Fluorene	ND	8.00	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	8.00	"	"	"	"	"	"	
Naphthalene	ND	8.00	"	"	"	"	"	"	
Phenanthrene	ND	8.00	"	"	"	"	"	"	
Pyrene	ND	8.00	"	"	"	"	"	"	
Surrogate: Nitrobenzene-d5		*74 %*	*56-121*		"	"	"	"	
Surrogate: 2-Fluorobiphenyl		*105 %*	*30-130*		"	"	"	"	
Surrogate: Terphenyl-dl4		*108 %*	*30-140*		"	"	"	"	

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Client Name: Kleinfelder, Inc.
Project Name: 44102-002

EMA Log #: 0502135

STLC-PAH compounds by GC/MS

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
T1-11-2 (0502135-03) Soil	**Sampled: 01/25/05 14:25**	**Received: 01/25/05 16:45**							**HT-07**
Acenaphthene	ND	8.00	ug/l	1	5021811	02/18/05	02/25/05	EPA 8270C	
Acenaphthylene	ND	8.00	"	"	"	"	"	"	
Anthracene	ND	8.00	"	"	"	"	"	"	
Benzo (a) anthracene	ND	8.00	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	8.00	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	8.00	"	"	"	"	"	"	
Benzo (g,h,i) perylene	ND	8.00	"	"	"	"	"	"	
Benzo (a) pyrene	ND	8.00	"	"	"	"	"	"	
Chrysene	ND	8.00	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	8.00	"	"	"	"	"	"	
Fluoranthene	ND	8.00	"	"	"	"	"	"	
Fluorene	ND	8.00	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	8.00	"	"	"	"	"	"	
Naphthalene	ND	8.00	"	"	"	"	"	"	
Phenanthrene	ND	8.00	"	"	"	"	"	"	
Pyrene	ND	8.00	"	"	"	"	"	"	
Surrogate: Nitrobenzene-d5		*64 %*	*56-121*		"	"	"	"	
Surrogate: 2-Fluorobiphenyl		*86 %*	*30-130*		"	"	"	"	
Surrogate: Terphenyl-dl4		*77 %*	*30-140*		"	"	"	"	

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Client Name: Kleinfelder, Inc.
Project Name: 44102-002

EMA Log #: 0502135

TCLP Semivolatile Compounds by EPA Method 1311/8270C - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 5021805										
Blank (5021805-BLK1)				Prepared: 02/18/05 Analyzed: 02/24/05						
Acenaphthene	ND	8.00	ug/l							
Acenaphthylene	ND	8.00	"							
Anthracene	ND	8.00	"							
Benzo (a) anthracene	ND	8.00	"							
Benzo (b) fluoranthene	ND	8.00	"							
Benzo (k) fluoranthene	ND	8.00	"							
Benzo (g,h,i) perylene	ND	8.00	"							
Benzo (a) pyrene	ND	8.00	"							
Chrysene	ND	8.00	"							
Dibenz (a,h) anthracene	ND	8.00	"							
Fluoranthene	ND	8.00	"							
Fluorene	ND	8.00	"							
Indeno (1,2,3-cd) pyrene	ND	8.00	"							
Naphthalene	ND	8.00	"							
Phenanthrene	ND	8.00	"							
Pyrene	ND	8.00	"							
Surrogate: Nitrobenzene-d5	*80.9*		"	*100*		*81*	*35-121*			
Surrogate: 2-Fluorobiphenyl	*110*		"	*100*		*110*	*30-130*			
Surrogate: Terphenyl-d14	*97.1*		"	*100*		*97*	*30-140*			
LCS (5021805-BS1)				Prepared: 02/18/05 Analyzed: 02/24/05						
Acenaphthene	23.6	8.00	ug/l	25.0		94	47-145			
Acenaphthylene	24.0	8.00	"	25.0		96	33-145			
Anthracene	20.0	8.00	"	25.0		80	27-133			
Benzo (a) anthracene	22.9	8.00	"	25.0		92	33-143			
Benzo (b) fluoranthene	23.0	8.00	"	25.0		92	24-159			
Benzo (k) fluoranthene	26.4	8.00	"	25.0		106	11-162			
Benzo (g,h,i) perylene	28.2	8.00	"	25.0		113	0-219			
Benzo (a) pyrene	21.1	8.00	"	25.0		84	17-163			
Chrysene	25.0	8.00	"	25.0		100	17-168			
Dibenz (a,h) anthracene	22.9	8.00	"	25.0		92	0-227			
Fluoranthene	24.6	8.00	"	25.0		98	26-137			
Fluorene	24.1	8.00	"	25.0		96	59-121			
Indeno (1,2,3-cd) pyrene	27.0	8.00	"	25.0		108	0-171			
Naphthalene	22.4	8.00	"	25.0		90	21-133			
Phenanthrene	23.5	8.00	"	25.0		94	54-120			
Pyrene	24.8	8.00	"	25.0		99	52-115			
Surrogate: Nitrobenzene-d5	*21.0*		"	*25.0*		*84*	*35-121*			

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Client Name: Kleinfelder, Inc.
Project Name: 44102-002

EMA Log #: 0502135

TCLP Semivolatile Compounds by EPA Method 1311/8270C - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 5021805										
LCS (5021805-BS1)				Prepared: 02/18/05 Analyzed: 02/24/05						
Surrogate: 2-Fluorobiphenyl	*25.3*		*ug/l*	*25.0*		*101*	*30-130*			
Surrogate: Terphenyl-dl4	*25.6*		"	*25.0*		*102*	*30-140*			
LCS Dup (5021805-BSD1)				Prepared: 02/18/05 Analyzed: 02/24/05						
Acenaphthene	23.4	8.00	ug/l	25.0		94	47-145	0.9	30	
Acenaphthylene	23.5	8.00	"	25.0		94	33-145	2	30	
Anthracene	19.7	8.00	"	25.0		79	27-133	2	30	
Benzo (a) anthracene	22.5	8.00	"	25.0		90	33-143	2	30	
Benzo (b) fluoranthene	23.8	8.00	"	25.0		95	24-159	3	30	
Benzo (k) fluoranthene	26.1	8.00	"	25.0		104	11-162	1	30	
Benzo (g,h,i) perylene	24.3	8.00	"	25.0		97	0-219	15	30	
Benzo (a) pyrene	20.8	8.00	"	25.0		83	17-163	1	30	
Chrysene	25.2	8.00	"	25.0		101	17-168	0.8	30	
Dibenz (a,h) anthracene	20.4	8.00	"	25.0		82	0-227	12	30	
Fluoranthene	24.0	8.00	"	25.0		96	26-137	2	30	
Fluorene	24.2	8.00	"	25.0		97	59-121	0.4	30	
Indeno (1,2,3-cd) pyrene	23.6	8.00	"	25.0		94	0-171	13	30	
Naphthalene	22.4	8.00	"	25.0		90	21-133	0	30	
Phenanthrene	23.5	8.00	"	25.0		94	54-120	0	30	
Pyrene	24.7	8.00	"	25.0		99	52-115	0.4	30	
Surrogate: Nitrobenzene-d5	*20.3*		"	*25.0*		*81*	*35-121*			
Surrogate: 2-Fluorobiphenyl	*25.5*		"	*25.0*		*102*	*30-130*			
Surrogate: Terphenyl-dl4	*25.6*		"	*25.0*		*102*	*30-140*			

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Client Name: Kleinfelder, Inc.
Project Name: 44102-002

EMA Log #: 0502135

STLC-PAH compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 5021811										
Blank (5021811-BLK1)				Prepared: 02/18/05 Analyzed: 02/24/05						
Acenaphthene	ND	8.00	ug/l							
Acenaphthylene	ND	8.00	"							
Anthracene	ND	8.00	"							
Benzo (a) anthracene	ND	8.00	"							
Benzo (b) fluoranthene	ND	8.00	"							
Benzo (k) fluoranthene	ND	8.00	"							
Benzo (g,h,i) perylene	ND	8.00	"							
Benzo (a) pyrene	ND	8.00	"							
Chrysene	ND	8.00	"							
Dibenz (a,h) anthracene	ND	8.00	"							
Fluoranthene	ND	8.00	"							
Fluorene	ND	8.00	"							
Indeno (1,2,3-cd) pyrene	ND	8.00	"							
Naphthalene	ND	8.00	"							
Phenanthrene	ND	8.00	"							
Pyrene	ND	8.00	"							
Surrogate: Nitrobenzene-d5	*80.0*		"	*100*		*80*	*56-121*			
Surrogate: 2-Fluorobiphenyl	*105*		"	*100*		*105*	*30-130*			
Surrogate: Terphenyl-dl4	*111*		"	*100*		*111*	*30-140*			
LCS (5021811-BS1)				Prepared: 02/18/05 Analyzed: 02/24/05						
Acenaphthene	23.3	8.00	ug/l	25.0		93	47-145			
Acenaphthylene	23.6	8.00	"	25.0		94	33-145			
Anthracene	19.5	8.00	"	25.0		78	27-133			
Benzo (a) anthracene	22.5	8.00	"	25.0		90	33-143			
Benzo (b) fluoranthene	22.9	8.00	"	25.0		92	24-159			
Benzo (k) fluoranthene	26.0	8.00	"	25.0		104	11-162			
Benzo (g,h,i) perylene	27.3	8.00	"	25.0		109	0-219			
Benzo (a) pyrene	20.2	8.00	"	25.0		81	17-163			
Chrysene	24.3	8.00	"	25.0		97	17-168			
Dibenz (a,h) anthracene	19.6	8.00	"	25.0		78	0-227			
Fluoranthene	23.4	8.00	"	25.0		94	26-137			
Fluorene	23.3	8.00	"	25.0		93	59-121			
Indeno (1,2,3-cd) pyrene	23.8	8.00	"	25.0		95	0-171			
Naphthalene	22.1	8.00	"	25.0		88	21-133			
Phenanthrene	23.4	8.00	"	25.0		94	54-120			
Pyrene	25.3	8.00	"	25.0		101	52-115			
Surrogate: Nitrobenzene-d5	*19.6*		"	*25.0*		*78*	*56-121*			

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Client Name: Kleinfelder, Inc.
Project Name: 44102-002

EMA Log #: 0502135

STLC-PAH compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 5021811										
LCS (5021811-BS1)				Prepared: 02/18/05 Analyzed: 02/24/05						
Surrogate: 2-Fluorobiphenyl	*25.3*		*ug/l*	*25.0*		*101*	*30-130*			
Surrogate: Terphenyl-dl4	*25.9*		*"*	*25.0*		*104*	*30-140*			
LCS Dup (5021811-BSD1)				Prepared: 02/18/05 Analyzed: 02/24/05						
Acenaphthene	22.8	8.00	ug/l	25.0		91	47-145	2	30	
Acenaphthylene	23.6	8.00	"	25.0		94	33-145	0	30	
Anthracene	19.7	8.00	"	25.0		79	27-133	1	30	
Benzo (a) anthracene	22.3	8.00	"	25.0		89	33-143	0.9	30	
Benzo (b) fluoranthene	23.4	8.00	"	25.0		94	24-159	2	30	
Benzo (k) fluoranthene	25.2	8.00	"	25.0		101	11-162	3	30	
Benzo (g,h,i) perylene	27.0	8.00	"	25.0		108	0-219	1	30	
Benzo (a) pyrene	20.2	8.00	"	25.0		81	17-163	0	30	
Chrysene	24.4	8.00	"	25.0		98	17-168	0.4	30	
Dibenz (a,h) anthracene	20.0	8.00	"	25.0		80	0-227	2	30	
Fluoranthene	23.6	8.00	"	25.0		94	26-137	0.9	30	
Fluorene	23.8	8.00	"	25.0		95	59-121	2	30	
Indeno (1,2,3-cd) pyrene	24.1	8.00	"	25.0		96	0-171	1	30	
Naphthalene	21.5	8.00	"	25.0		86	21-133	3	30	
Phenanthrene	23.3	8.00	"	25.0		93	54-120	0.4	30	
Pyrene	25.7	8.00	"	25.0		103	52-115	2	30	
Surrogate: Nitrobenzene-d5	*18.3*		*"*	*25.0*		*73*	*56-121*			
Surrogate: 2-Fluorobiphenyl	*24.5*		*"*	*25.0*		*98*	*30-130*			
Surrogate: Terphenyl-dl4	*26.0*		*"*	*25.0*		*104*	*30-140*			

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Notes and Definitions

HT-07	This sample was analyzed outside of the method recommended holding time due to the analysis request being made after the holding time had expired.
ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not Reported
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference

Results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

CHAIN-OF-CUSTODY RECORD

W.O# 0502135

EnviroMatrix Analytical, Inc.

4340 Viewridge Ave., Ste. A • San Diego, CA 92123 • Phone (858) 560-7717 • Fax (858) 560-7763

EMA DATE/TIME STAMP

EMA LOG #: 0501269

Client: Kleinfelder Inc

Address: 5015 Shoreham Place

San Diego CA 92122

Attn: J Lord Phone: (858) 320-2206

Sampled by: DPS Fax: (858) 320-2001

Billing Address: Same

Project: 44102-002 PO #:

EMA ID #	Client Sample ID	Sample Date	Sample Time	Sample Matrix	Container(s) #	Container(s) Type*
1	T1-7-1	1/25/05	0944	Soil	1	8oz
2	T1-7-2		0955		1	
3	T1-7-3		1012		1	
4	T1-8-1		1038		1	
5	T1-8-2		1045		1	
6	T1-8-3		1105		1	
7	T1-9-1		1123		1	
8	T1-9-2		1130		1	
9	T1-9-3	↓	1205	↓	1	↓
10						

REQUESTED ANALYSIS

418.1 (TRPH)	Oil & Grease 413.1 413.2 1664	TPH (8015B) Gas Diesel	TPH-Extended 8015B ASTM D2887	602 / 8021 BTXE MTBE	601 / 8021 (Purgeable Halocarbons)	608 / 8081 (Pesticides)	608 / 8082 (PCB's)	624 / 8260 (Volatile Organics)	625 / 8270 (Semi Volatile Organics)	TTLC Metals (CAC Title 22)	STLC Metals (CAC Title 22)	TCLP (RCRA) Metals Organics	Cd Cr Cu Pb Ni Ag Zn	pH EC TSS TDS	STLC - PAH's	TCLP - PAH's
			X					X	X	X						
			X					X	X	X						
			X					X	X	X						
			X					X	X	X						
			X					X	X	X						
			X					X	X	X						
			X					X	X	X						
			X					X	X	X						
			X					X	X	X						

*Container Types: B=Brass Tube; V=VOA; G=Glass; P=Plastic; O=Other (list)

Tamper-Proof Seals Intact: Yes No N/A | Correct Containers: Yes No

Sample(s): Cold Ambient Warm | VOAs w/ZHS: Yes No N/A

All Samples Properly Preserved: Yes No N/A

Disposal: N/C (aqueous) *EMA (@$5.00/sample) Return Hold

Turnaround Time: 24 hr 48 hr 3 day 4 day 5 day Normal

Comments: Addition request per Jacques Lord on 2/10/05 @ 2:10pm. N-TAT. NCF

700

RELINQUISHED BY	DATE/TIME	RECEIVED BY
Signature: Sean Kearney	1/25/05	Signature:
Print: Sean Kearney	1645	Print:
Company: Kleinfelder		Company: EMA
Signature		Signature
Print		Print
Company:		Company:
Signature		Signature
Print		Print
Company:		Company:

*EMA reserves the right to return samples that do not match our waste profile.

White - EMA Canary - Accounting Pink - Client (w/Report) Goldenrod - Client (Relinquish Samples)

CHAIN-OF-CUSTODY RECORD

W.O.# 0502135

EnviroMatrix Analytical, Inc.
4340 Viewridge Ave., Ste. A • San Diego, CA 92123 • Phone (858) 560-7717 • Fax (858) 560-7763

EMA LOG #: 0501269

EMA DATE/TIME STAMP

Client: Kleinfelder Inc
Address: 5015 Shoreham Place
San Diego CA 92122
Attn: J Lord Phone: (858) 320-2206
Sampled by: DPG Fax: (858) 320-2001
Billing Address: Same
Project: 44102-002 PO #:

REQUESTED ANALYSIS

EMA ID #	Client Sample ID	Sample Date	Sample Time	Sample Matrix	Container(s) #	Container(s) Type*	418.1 (TRPH)	Oil & Grease 413.1__ 413.2__ 1664__	TPH (8015B) Gas__ Diesel__	TPH-Extended 8015B X ASTM D2887X	602 / 8021 BTXE__ MTBE__	601 / 8021 (Purgeable Halocarbons)	608 / 8081 (Pesticides)	608 / 8082 (PCB's)	624 / 8260 (Volatile Organics)	625 / 8270 (Semi Volatile Organics)	TTLC Metals (CAC Title 22)	STLC Metals (CAC Title 22)	TCLP (RCRA) Metals__ Organics__	Cd Cr Cu Pb Ni Ag Zn	pH EC TSS TDS	STLC - PAH's	TCLP - PAH's
1	T1-10-1	1/25/05	1313	So.	1	8oz				X					X	X	X						
2	T1-10-2		1326		1					X					X	X	X						
3	T1-10-3		1345		1					X					X	X	X					X	X
4	T1-11-1		1407		1					X					X	X	X					X	X
5	T1-11-2		1425		1					X					X	X	X					X	X
6	T1-11-3		1440		1					X					X	X	X						
7	T1-12-1		1500		1					X					X	X	X						
8	T1-12-2		1507		1					X					X	X	X						
9	T1-12-3		1510		1					X					X	X	X						
10	—																						

*Container Types: B=Brass Tube; V=VOA; G=Glass; P=Plastic; O=Other (list)
Tamper-Proof Seals Intact: Yes No N/A
Correct Containers: Yes No
Sample(s): Cold Ambient Warm
VOAs w/ZHS: Yes No N/A
All Samples Properly Preserved: Yes No N/A
Disposal: N/C (aqueous) *EMA (@$5.00/sample) Return Hold
Turnaround Time: 24 hr 48 hr 3 day 4 day 5 day Normal
Comments:

RELINQUISHED BY	DATE/TIME	RECEIVED BY
Signature: Sean Kearney	1/25/05	Signature:
Print: Sean Kearney	1645	Print:
Company: Kleinfelder		Company: EMA
Signature		Signature
Print		Print
Company:		Company:
Signature		Signature
Print		Print
Company:		Company:

*EMA reserves the right to return samples that do not match our waste profile.

White - EMA Canary - Accounting Pink - Client (w/Report) Goldenrod - Client (Relinquish Samples)

EnviroMatrix Analytical, Inc.

04 February 2005

Kleinfelder, Inc.
Attn: Jacques Lord
5015 Shoreham Place
San Diego, CA 92122

EMA Log #: 0501277

Project Name: 44102

Enclosed are the results of analyses for samples received by the laboratory on 01/26/05 14:17. Samples were analyzed pursuant to client request utilizing EPA or other ELAP approved methodologies. I certify that this data is in compliance both technically and for completeness.

Dan Verdon
Laboratory Director

CA ELAP Certification #: 2564

Client Name: Kleinfelder, Inc.
Project Name: 44102

EMA Log #: 0501277

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
T2-13-1	0501277-01	Soil	01/26/05 09:03	01/26/05 14:17
T2-13-2	0501277-02	Soil	01/26/05 09:17	01/26/05 14:17
T2-13-3	0501277-03	Soil	01/26/05 09:45	01/26/05 14:17
T2-14-1	0501277-04	Soil	01/26/05 10:20	01/26/05 14:17
T2-15-1	0501277-05	Soil	01/26/05 10:52	01/26/05 14:17
T2-15-2	0501277-06	Soil	01/26/05 11:00	01/26/05 14:17
T2-15-3	0501277-07	Soil	01/26/05 11:10	01/26/05 14:17
T2-15-4	0501277-08	Soil	01/26/05 11:30	01/26/05 14:17

Results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety

Client Name: Kleinfelder, Inc.
Project Name: 44102

EMA Log #: 0501277

TPH by EPA 8015B

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
T2-13-1 (0501277-01) Soil Sampled: 01/26/05 09:03 Received: 01/26/05 14:17									
Gasoline (C6-C10)	ND	10.0	mg/kg	1	5013101	01/31/05	02/01/05	EPA 8015 M	
Diesel (C10-C28)	ND	10.0	"	"	"	"	"	"	
Extended Range HC (C28-C40)	ND	10.0	"	"	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*96 %*	*75-129*		"	"	"	"	
T2-13-2 (0501277-02) Soil Sampled: 01/26/05 09:17 Received: 01/26/05 14:17									
Gasoline (C6-C10)	ND	10.0	mg/kg	1	5013101	01/31/05	02/02/05	EPA 8015 M	
Diesel (C10-C28)	ND	10.0	"	"	"	"	"	"	
Extended Range HC (C28-C40)	ND	10.0	"	"	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*94 %*	*75-129*		"	"	"	"	
T2-13-3 (0501277-03) Soil Sampled: 01/26/05 09:45 Received: 01/26/05 14:17									
Gasoline (C6-C10)	ND	10.0	mg/kg	1	5013101	01/31/05	02/02/05	EPA 8015 M	
Diesel (C10-C28)	ND	10.0	"	"	"	"	"	"	D-09
Extended Range HC (C28-C40)	**396**	10.0	"	"	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*93 %*	*75-129*		"	"	"	"	
T2-14-1 (0501277-04) Soil Sampled: 01/26/05 10:20 Received: 01/26/05 14:17									
Gasoline (C6-C10)	ND	10.0	mg/kg	1	5013101	01/31/05	02/02/05	EPA 8015 M	
Diesel (C10-C28)	ND	10.0	"	"	"	"	"	"	
Extended Range HC (C28-C40)	ND	10.0	"	"	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*96 %*	*75-129*		"	"	"	"	
T2-15-1 (0501277-05) Soil Sampled: 01/26/05 10:52 Received: 01/26/05 14:17									
Gasoline (C6-C10)	ND	10.0	mg/kg	1	5013101	01/31/05	02/03/05	EPA 8015 M	
Diesel (C10-C28)	ND	10.0	"	"	"	"	"	"	
Extended Range HC (C28-C40)	ND	10.0	"	"	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*95 %*	*75-129*		"	"	"	"	

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Client Name: Kleinfelder, Inc.
Project Name: 44102

EMA Log #: 0501277

TPH by EPA 8015B

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
T2-15-2 (0501277-06) Soil Sampled: 01/26/05 11:00 Received: 01/26/05 14:17									
Gasoline (C6-C10)	ND	10.0	mg/kg	1	5013101	01/31/05	02/03/05	EPA 8015 M	
Diesel (C10-C28)	ND	10.0	"	"	"	"	"	"	
Extended Range HC (C28-C40)	ND	10.0	"	"	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*96 %*	*75-129*		"	"	"	"	
T2-15-3 (0501277-07) Soil Sampled: 01/26/05 11:10 Received: 01/26/05 14:17									
Gasoline (C6-C10)	ND	10.0	mg/kg	1	5013101	01/31/05	02/03/05	EPA 8015 M	
Diesel (C10-C28)	ND	10.0	"	"	"	"	"	"	
Extended Range HC (C28-C40)	ND	10.0	"	"	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*97 %*	*75-129*		"	"	"	"	
T2-15-4 (0501277-08) Soil Sampled: 01/26/05 11:30 Received: 01/26/05 14:17									
Gasoline (C6-C10)	ND	10.0	mg/kg	1	5013101	01/31/05	02/03/05	EPA 8015 M	
Diesel (C10-C28)	ND	10.0	"	"	"	"	"	"	
Extended Range HC (C28-C40)	ND	10.0	"	"	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*93 %*	*75-129*		"	"	"	"	

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Client Name: Kleinfelder, Inc.
Project Name: 44102

EMA Log #: 0501277

TPH Extended Range by ASTM D2887

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
T2-13-1 (0501277-01) Soil Sampled: 01/26/05 09:03 Received: 01/26/05 14:17									
HC (C7 - C8)	ND	3.00	mg/kg	1	5013101	01/31/05	02/01/05	ASTM D2887	
HC (C8 - C9)	ND	3.00	"	"	"	"	"	"	
HC (C9 - C10)	ND	3.00	"	"	"	"	"	"	
HC (C10 - C11)	ND	1.25	"	"	"	"	"	"	
HC (C11 - C12)	ND	1.25	"	"	"	"	"	"	
HC (C12 - C14)	ND	1.25	"	"	"	"	"	"	
HC (C14 - C16)	ND	1.25	"	"	"	"	"	"	
HC (C16 - C18)	ND	1.25	"	"	"	"	"	"	
HC (C18 - C20)	ND	1.25	"	"	"	"	"	"	
HC (C20 - C24)	ND	1.25	"	"	"	"	"	"	
HC (C24 - C28)	ND	1.25	"	"	"	"	"	"	
HC (C28 - C32)	ND	2.50	"	"	"	"	"	"	
HC (C32 - C36)	ND	2.50	"	"	"	"	"	"	
HC (C36 - C40)	ND	2.50	"	"	"	"	"	"	
HC (C>40)	ND	2.50	"	"	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*96 %*	*77-135*		"	"	"	"	
T2-13-2 (0501277-02) Soil Sampled: 01/26/05 09:17 Received: 01/26/05 14:17									
HC (C7 - C8)	ND	3.00	mg/kg	1	5013101	01/31/05	02/02/05	ASTM D2887	
HC (C8 - C9)	ND	3.00	"	"	"	"	"	"	
HC (C9 - C10)	ND	3.00	"	"	"	"	"	"	
HC (C10 - C11)	ND	1.25	"	"	"	"	"	"	
HC (C11 - C12)	ND	1.25	"	"	"	"	"	"	
HC (C12 - C14)	ND	1.25	"	"	"	"	"	"	
HC (C14 - C16)	ND	1.25	"	"	"	"	"	"	
HC (C16 - C18)	ND	1.25	"	"	"	"	"	"	
HC (C18 - C20)	ND	1.25	"	"	"	"	"	"	
HC (C20 - C24)	ND	1.25	"	"	"	"	"	"	
HC (C24 - C28)	ND	1.25	"	"	"	"	"	"	
HC (C28 - C32)	ND	2.50	"	"	"	"	"	"	
HC (C32 - C36)	ND	2.50	"	"	"	"	"	"	
HC (C36 - C40)	ND	2.50	"	"	"	"	"	"	
HC (C>40)	ND	2.50	"	"	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*94 %*	*77-135*		"	"	"	"	

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Client Name: Kleinfelder, Inc.
Project Name: 44102

EMA Log #: 0501277

TPH Extended Range by ASTM D2887

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
T2-13-3 (0501277-03) Soil Sampled: 01/26/05 09:45 Received: 01/26/05 14:17									
HC (C7 - C8)	ND	3.00	mg/kg	1	5013101	01/31/05	02/02/05	ASTM D2887	
HC (C8 - C9)	ND	3.00	"	"	"	"	"	"	
HC (C9 - C10)	ND	3.00	"	"	"	"	"	"	
HC (C10 - C11)	ND	1.25	"	"	"	"	"	"	
HC (C11 - C12)	ND	1.25	"	"	"	"	"	"	
HC (C12 - C14)	ND	1.25	"	"	"	"	"	"	
HC (C14 - C16)	ND	1.25	"	"	"	"	"	"	
HC (C16 - C18)	ND	1.25	"	"	"	"	"	"	
HC (C18 - C20)	ND	1.25	"	"	"	"	"	"	
HC (C20 - C24)	ND	1.25	"	"	"	"	"	"	
HC (C24 - C28)	**2.44**	1.25	"	"	"	"	"	"	
HC (C28 - C32)	**21.9**	2.50	"	"	"	"	"	"	
HC (C32 - C36)	**20.2**	2.50	"	"	"	"	"	"	
HC (C36 - C40)	**23.3**	2.50	"	"	"	"	"	"	
HC (C>40)	ND	2.50	"	"	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*93 %*	*77-135*		"	"	"	"	
T2-14-1 (0501277-04) Soil Sampled: 01/26/05 10:20 Received: 01/26/05 14:17									
HC (C7 - C8)	ND	3.00	mg/kg	1	5013101	01/31/05	02/02/05	ASTM D2887	
HC (C8 - C9)	ND	3.00	"	"	"	"	"	"	
HC (C9 - C10)	ND	3.00	"	"	"	"	"	"	
HC (C10 - C11)	ND	1.25	"	"	"	"	"	"	
HC (C11 - C12)	ND	1.25	"	"	"	"	"	"	
HC (C12 - C14)	ND	1.25	"	"	"	"	"	"	
HC (C14 - C16)	ND	1.25	"	"	"	"	"	"	
HC (C16 - C18)	ND	1.25	"	"	"	"	"	"	
HC (C18 - C20)	ND	1.25	"	"	"	"	"	"	
HC (C20 - C24)	ND	1.25	"	"	"	"	"	"	
HC (C24 - C28)	ND	1.25	"	"	"	"	"	"	
HC (C28 - C32)	ND	2.50	"	"	"	"	"	"	
HC (C32 - C36)	ND	2.50	"	"	"	"	"	"	
HC (C36 - C40)	ND	2.50	"	"	"	"	"	"	
HC (C>40)	ND	2.50	"	"	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*96 %*	*77-135*		"	"	"	"	

Results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Client Name: Kleinfelder, Inc.
Project Name: 44102

EMA Log #: 0501277

TPH Extended Range by ASTM D2887

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
T2-15-1 (0501277-05) Soil Sampled: 01/26/05 10:52 Received: 01/26/05 14:17									
HC (C7 - C8)	ND	3.00	mg/kg	1	5013101	01/31/05	02/03/05	ASTM D2887	
HC (C8 - C9)	ND	3.00	"	"	"	"	"	"	
HC (C9 - C10)	ND	3.00	"	"	"	"	"	"	
HC (C10 - C11)	ND	1.25	"	"	"	"	"	"	
HC (C11 - C12)	ND	1.25	"	"	"	"	"	"	
HC (C12 - C14)	ND	1.25	"	"	"	"	"	"	
HC (C14 - C16)	ND	1.25	"	"	"	"	"	"	
HC (C16 - C18)	ND	1.25	"	"	"	"	"	"	
HC (C18 - C20)	ND	1.25	"	"	"	"	"	"	
HC (C20 - C24)	ND	1.25	"	"	"	"	"	"	
HC (C24 - C28)	ND	1.25	"	"	"	"	"	"	
HC (C28 - C32)	ND	2.50	"	"	"	"	"	"	
HC (C32 - C36)	ND	2.50	"	"	"	"	"	"	
HC (C36 - C40)	ND	2.50	"	"	"	"	"	"	
HC (C>40)	ND	2.50	"	"	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*95 %*	*77-135*		"	"	"	"	
T2-15-2 (0501277-06) Soil Sampled: 01/26/05 11:00 Received: 01/26/05 14:17									
HC (C7 - C8)	ND	3.00	mg/kg	1	5013101	01/31/05	02/03/05	ASTM D2887	
HC (C8 - C9)	ND	3.00	"	"	"	"	"	"	
HC (C9 - C10)	ND	3.00	"	"	"	"	"	"	
HC (C10 - C11)	ND	1.25	"	"	"	"	"	"	
HC (C11 - C12)	ND	1.25	"	"	"	"	"	"	
HC (C12 - C14)	ND	1.25	"	"	"	"	"	"	
HC (C14 - C16)	ND	1.25	"	"	"	"	"	"	
HC (C16 - C18)	ND	1.25	"	"	"	"	"	"	
HC (C18 - C20)	ND	1.25	"	"	"	"	"	"	
HC (C20 - C24)	ND	1.25	"	"	"	"	"	"	
HC (C24 - C28)	ND	1.25	"	"	"	"	"	"	
HC (C28 - C32)	ND	2.50	"	"	"	"	"	"	
HC (C32 - C36)	ND	2.50	"	"	"	"	"	"	
HC (C36 - C40)	ND	2.50	"	"	"	"	"	"	
HC (C>40)	ND	2.50	"	"	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*96 %*	*77-135*		"	"	"	"	

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Client Name: Kleinfelder, Inc.
Project Name: 44102

EMA Log #: 0501277

TPH Extended Range by ASTM D2887

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
T2-15-3 (0501277-07) Soil Sampled: 01/26/05 11:10 Received: 01/26/05 14:17									
HC (C7 - C8)	ND	3.00	mg/kg	1	5013101	01/31/05	02/03/05	ASTM D2887	
HC (C8 - C9)	ND	3.00	"	"	"	"	"	"	
HC (C9 - C10)	ND	3.00	"	"	"	"	"	"	
HC (C10 - C11)	ND	1.25	"	"	"	"	"	"	
HC (C11 - C12)	ND	1.25	"	"	"	"	"	"	
HC (C12 - C14)	ND	1.25	"	"	"	"	"	"	
HC (C14 - C16)	ND	1.25	"	"	"	"	"	"	
HC (C16 - C18)	ND	1.25	"	"	"	"	"	"	
HC (C18 - C20)	ND	1.25	"	"	"	"	"	"	
HC (C20 - C24)	ND	1.25	"	"	"	"	"	"	
HC (C24 - C28)	ND	1.25	"	"	"	"	"	"	
HC (C28 - C32)	ND	2.50	"	"	"	"	"	"	
HC (C32 - C36)	ND	2.50	"	"	"	"	"	"	
HC (C36 - C40)	ND	2.50	"	"	"	"	"	"	
HC (C>40)	ND	2.50	"	"	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*97 %*	*77-135*		"	"	"	"	
T2-15-4 (0501277-08) Soil Sampled: 01/26/05 11:30 Received: 01/26/05 14:17									
HC (C7 - C8)	ND	3.00	mg/kg	1	5013101	01/31/05	02/03/05	ASTM D2887	
HC (C8 - C9)	ND	3.00	"	"	"	"	"	"	
HC (C9 - C10)	ND	3.00	"	"	"	"	"	"	
HC (C10 - C11)	ND	1.25	"	"	"	"	"	"	
HC (C11 - C12)	ND	1.25	"	"	"	"	"	"	
HC (C12 - C14)	ND	1.25	"	"	"	"	"	"	
HC (C14 - C16)	ND	1.25	"	"	"	"	"	"	
HC (C16 - C18)	ND	1.25	"	"	"	"	"	"	
HC (C18 - C20)	ND	1.25	"	"	"	"	"	"	
HC (C20 - C24)	ND	1.25	"	"	"	"	"	"	
HC (C24 - C28)	ND	1.25	"	"	"	"	"	"	
HC (C28 - C32)	ND	2.50	"	"	"	"	"	"	
HC (C32 - C36)	ND	2.50	"	"	"	"	"	"	
HC (C36 - C40)	ND	2.50	"	"	"	"	"	"	
HC (C>40)	ND	2.50	"	"	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*93 %*	*77-135*		"	"	"	"	

results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Client Name: Kleinfelder, Inc.
Project Name: 44102

EMA Log #: 0501277

TPH by EPA 8015B - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 5013101										
Blank (5013101-BLK1)				Prepared: 01/31/05 Analyzed: 02/01/05						
Gasoline (C6-C10)	ND	10.0	mg/kg							
Diesel (C10-C28)	ND	10.0	"							
Extended Range HC (C28-C40)	ND	10.0	"							
Surrogate: 4-Bromofluorobenzene	*44.3*		"	*50.0*		*89*	*75-129*			
LCS (5013101-BS1)				Prepared: 01/31/05 Analyzed: 02/01/05						
Gasoline (C6-C10)	226	10.0	mg/kg	196		115	75-125			
Diesel (C10-C28)	445	10.0	"	504		88	75-125			
Surrogate: 4-Bromofluorobenzene	*48.4*		"	*50.0*		*97*	*75-129*			
LCS Dup (5013101-BSD1)				Prepared: 01/31/05 Analyzed: 02/01/05						
Gasoline (C6-C10)	206	10.0	mg/kg	196		105	75-125	9	30	
Diesel (C10-C28)	457	10.0	"	504		91	75-125	3	30	
Surrogate: 4-Bromofluorobenzene	*48.5*		"	*50.0*		*97*	*75-129*			
Duplicate (5013101-DUP1)		**Source: 0501277-01**		Prepared: 01/31/05 Analyzed: 02/01/05						
Gasoline (C6-C10)	ND	10.0	mg/kg		ND				30	
Diesel (C10-C28)	ND	10.0	"		ND				30	
Extended Range HC (C28-C40)	ND	10.0	"		ND				30	
Surrogate: 4-Bromofluorobenzene	*47.5*		"	*50.0*		*95*	*75-129*			
Matrix Spike (5013101-MS1)		**Source: 0501277-01**		Prepared: 01/31/05 Analyzed: 02/01/05						
Gasoline (C6-C10)	210	10.0	mg/kg	196	ND	107	75-125			
Diesel (C10-C28)	465	10.0	"	504	ND	92	75-125			
Surrogate: 4-Bromofluorobenzene	*48.3*		"	*50.0*		*97*	*75-129*			
Matrix Spike Dup (5013101-MSD1)		**Source: 0501277-01**		Prepared: 01/31/05 Analyzed: 02/01/05						
Gasoline (C6-C10)	225	10.0	mg/kg	196	ND	115	75-125	7	30	
Diesel (C10-C28)	470	10.0	"	504	ND	93	75-125	1	30	
Surrogate: 4-Bromofluorobenzene	*50.0*		"	*50.0*		*100*	*75-129*			

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Client Name: Kleinfelder, Inc.
Project Name: 44102

EMA Log #: 0501277

TPH Extended Range by ASTM D2887 - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 5013101										
Blank (5013101-BLK1)				Prepared: 01/31/05 Analyzed: 02/01/05						
HC (C7 - C8)	ND	3.00	mg/kg							
HC (C8 - C9)	ND	3.00	"							
HC (C9 - C10)	ND	3.00	"							
HC (C10 - C11)	ND	1.25	"							
HC (C11 - C12)	ND	1.25	"							
HC (C12 - C14)	ND	1.25	"							
HC (C14 - C16)	ND	1.25	"							
HC (C16 - C18)	ND	1.25	"							
HC (C18 - C20)	ND	1.25	"							
HC (C20 - C24)	ND	1.25	"							
HC (C24 - C28)	ND	1.25	"							
HC (C28 - C32)	ND	2.50	"							
HC (C32 - C36)	ND	2.50	"							
HC (C36 - C40)	ND	2.50	"							
HC (C>40)	ND	2.50	"							
Surrogate: 4-Bromofluorobenzene	*44.3*		"	*50.0*		*89*	*77-135*			
LCS (5013101-BS1)				Prepared: 01/31/05 Analyzed: 02/01/05						
Diesel (C10-C28)	445	10.0	mg/kg	504		88	75-125			
Gasoline (C6-C10)	226	10.0	"	196		115	75-125			
Surrogate: 4-Bromofluorobenzene	*48.4*		"	*50.0*		*97*	*77-135*			
LCS Dup (5013101-BSD1)				Prepared: 01/31/05 Analyzed: 02/01/05						
Diesel (C10-C28)	457	10.0	mg/kg	504		91	75-125	3	30	
Gasoline (C6-C10)	206	10.0	"	196		105	75-125	9	30	
Surrogate: 4-Bromofluorobenzene	*48.5*		"	*50.0*		*97*	*77-135*			
Duplicate (5013101-DUP1)		**Source: 0501277-01**		Prepared: 01/31/05 Analyzed: 02/01/05						
HC (C7 - C8)	ND	3.00	mg/kg		ND				30	
HC (C8 - C9)	ND	3.00	"		ND				30	
HC (C9 - C10)	ND	3.00	"		ND				30	
HC (C10 - C11)	ND	1.25	"		ND				30	
HC (C11 - C12)	ND	1.25	"		ND				30	
HC (C12 - C14)	ND	1.25	"		ND				30	
HC (C14 - C16)	ND	1.25	"		ND				30	
HC (C16 - C18)	ND	1.25	"		ND				30	
HC (C18 - C20)	ND	1.25	"		ND				30	
HC (C20 - C24)	ND	1.25	"		ND				30	
HC (C24 - C28)	ND	1.25	"		ND				30	

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Client Name: Kleinfelder, Inc.
Project Name: 44102

EMA Log #: 0501277

TPH Extended Range by ASTM D2887 - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 5013101										
Duplicate (5013101-DUP1)		**Source: 0501277-01**		Prepared: 01/31/05 Analyzed: 02/01/05						
HC (C28 - C32)	ND	2.50	mg/kg		ND				30	
HC (C32 - C36)	ND	2.50	"		ND				30	
HC (C36 - C40)	ND	2.50	"		ND				30	
HC (C>40)	ND	2.50	"		ND				30	
Diesel (C10-C28)	ND	10.0	"		ND				30	
Gasoline (C6-C10)	ND	10.0	"		ND				30	
Extended Range HC (C28-C40)	ND	10.0	"		ND				30	
Surrogate: 4-Bromofluorobenzene	*47.5*		"	*50.0*		*95*	*77-135*			
Matrix Spike (5013101-MS1)		**Source: 0501277-01**		Prepared: 01/31/05 Analyzed: 02/01/05						
Diesel (C10-C28)	465	10.0	mg/kg	504	ND	92	75-125			
Gasoline (C6-C10)	210	10.0	"	196	ND	107	75-125			
Surrogate: 4-Bromofluorobenzene	*48.3*		"	*50.0*		*97*	*77-135*			
Matrix Spike Dup (5013101-MSD1)		**Source: 0501277-01**		Prepared: 01/31/05 Analyzed: 02/01/05						
Diesel (C10-C28)	470	10.0	mg/kg	504	ND	93	75-125	1	30	
Gasoline (C6-C10)	225	10.0	"	196	ND	115	75-125	7	30	
Surrogate: 4-Bromofluorobenzene	*50.0*		"	*50.0*		*100*	*77-135*			

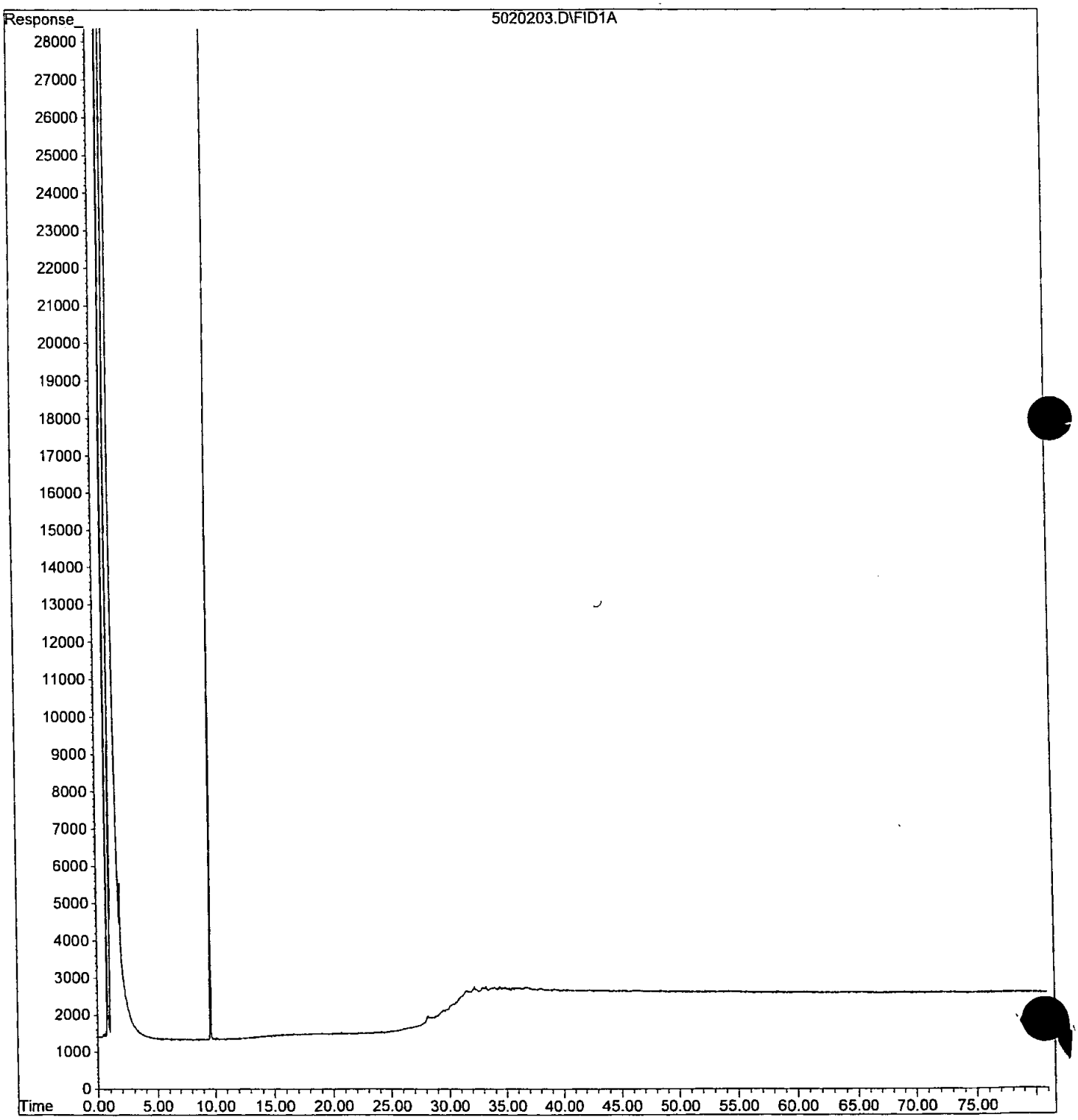
The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Notes and Definitions

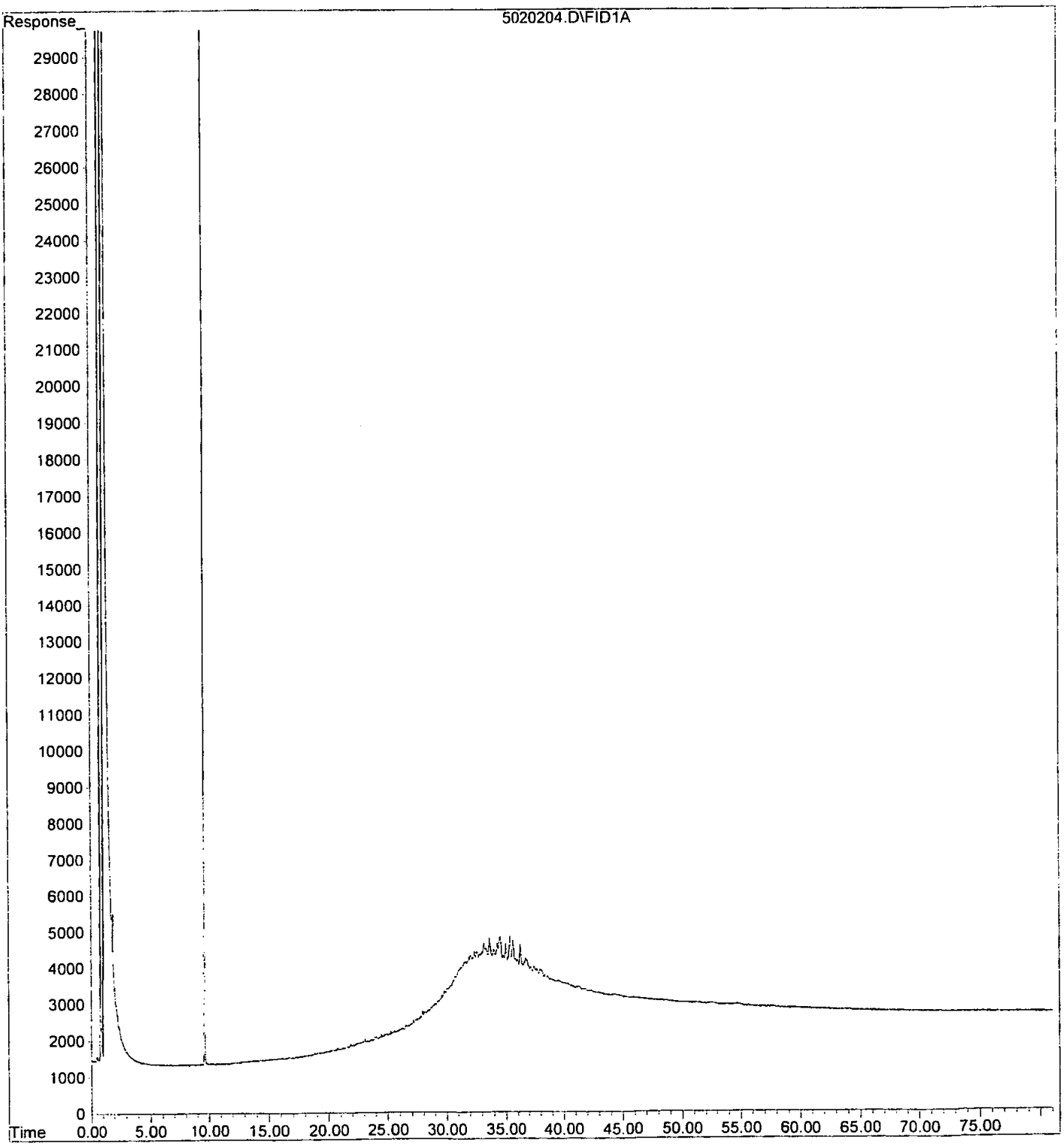
D-09	Results in the diesel organics range are primarily due to overlap from a heavy oil range product.
ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not Reported
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference

Results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

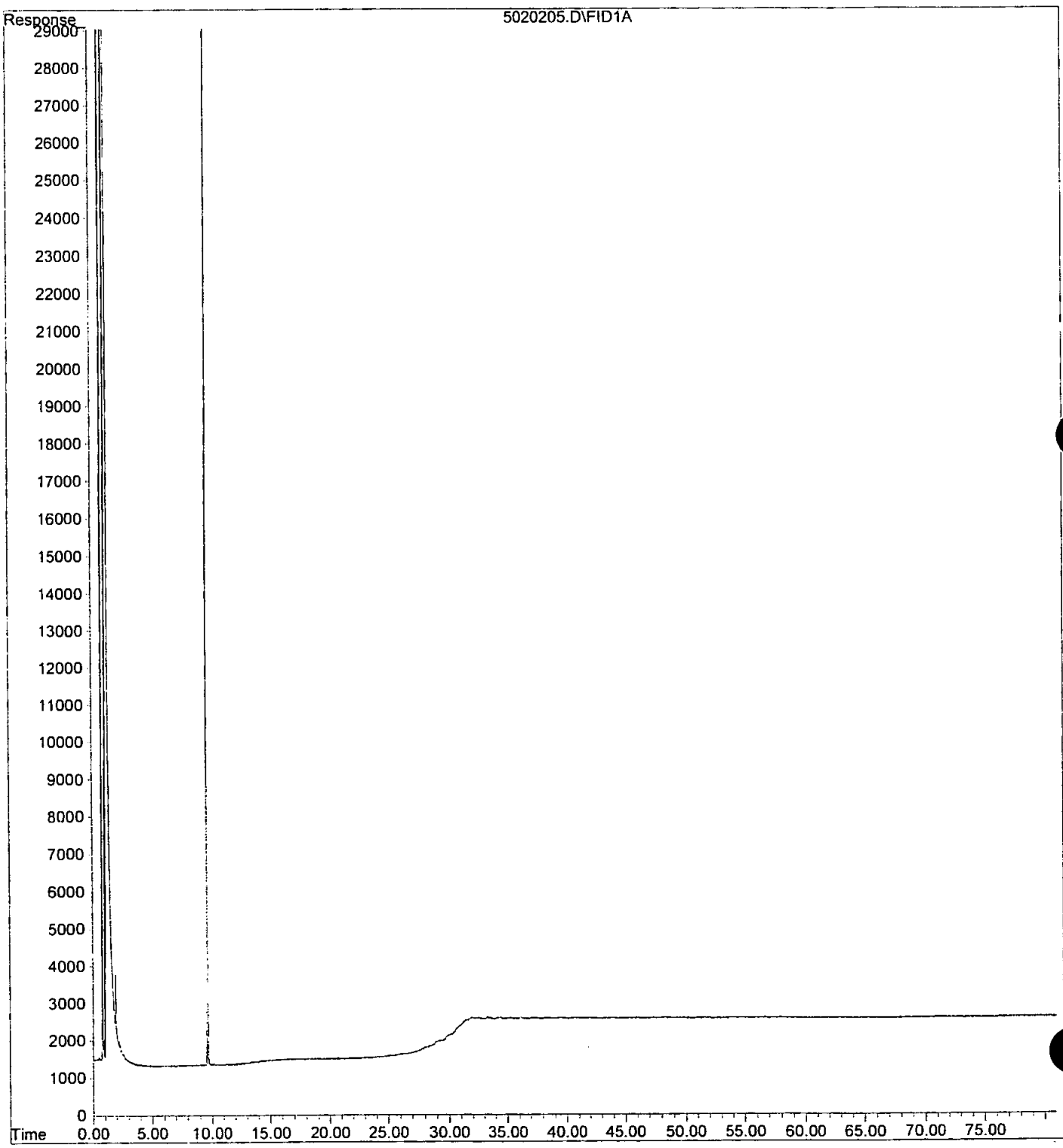
File : C:\HPCHEM\1\DATA\5020201.S\5020203.D
Operator :
Acquired : 2 Feb 20105 8:48 pm using AcqMethod ASTM.M
Instrument : TPH
Sample Name: 0501277-02
Misc Info :
Vial Number: 3



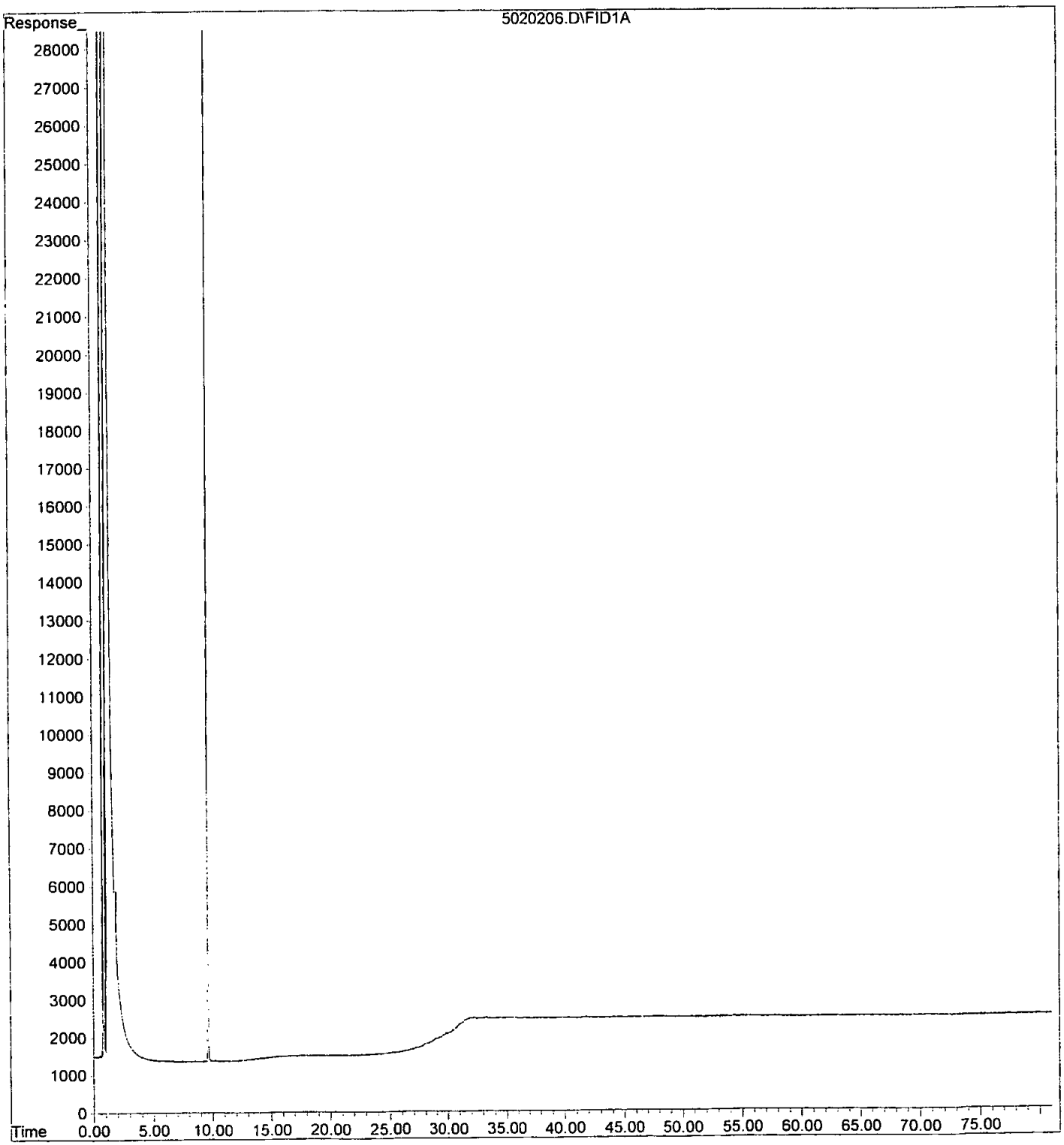
File : C:\HPCHEM\1\DATA\5020201.S\5020204.D
Operator :
Acquired : 2 Feb 20105 10:21 pm using AcqMethod ASTM.M
Instrument : TPH
Sample Name: 0501277-03
Misc Info :
Vial Number: 4



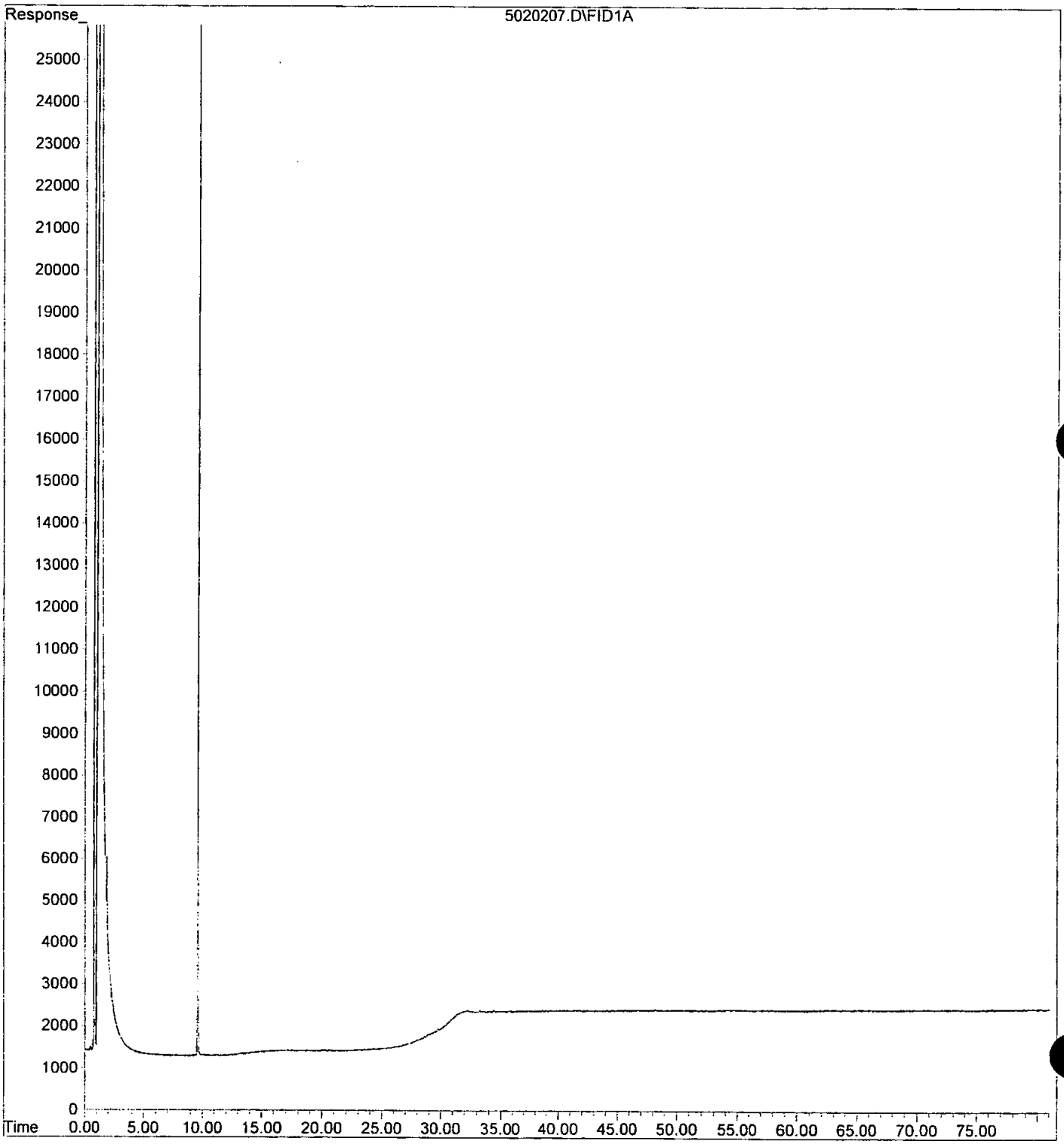
File : C:\HPCHEM\1\DATA\5020201.S\5020205.D
Operator :
Acquired : 2 Feb 20105 11:54 pm using AcqMethod ASTM.M
Instrument : TPH
Sample Name: 0501277-04
Misc Info :
Vial Number: 5



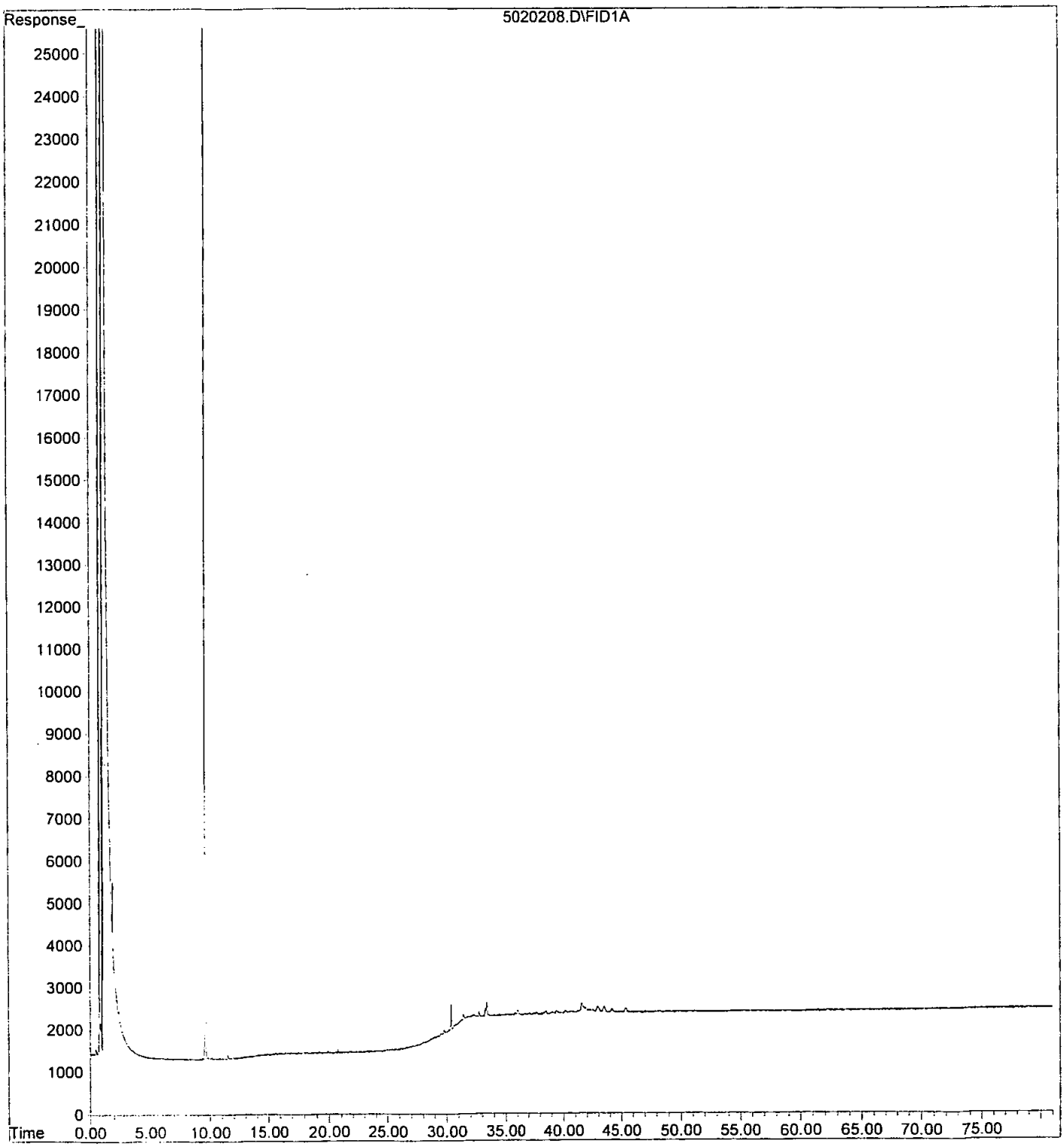
File : C:\HPCHEM\1\DATA\5020201.S\5020206.D
Operator :
Acquired : 3 Feb 20105 1:26 am using AcqMethod ASTM.M
Instrument : TPH
Sample Name: 0501277-05
Misc Info :
Vial Number: 6



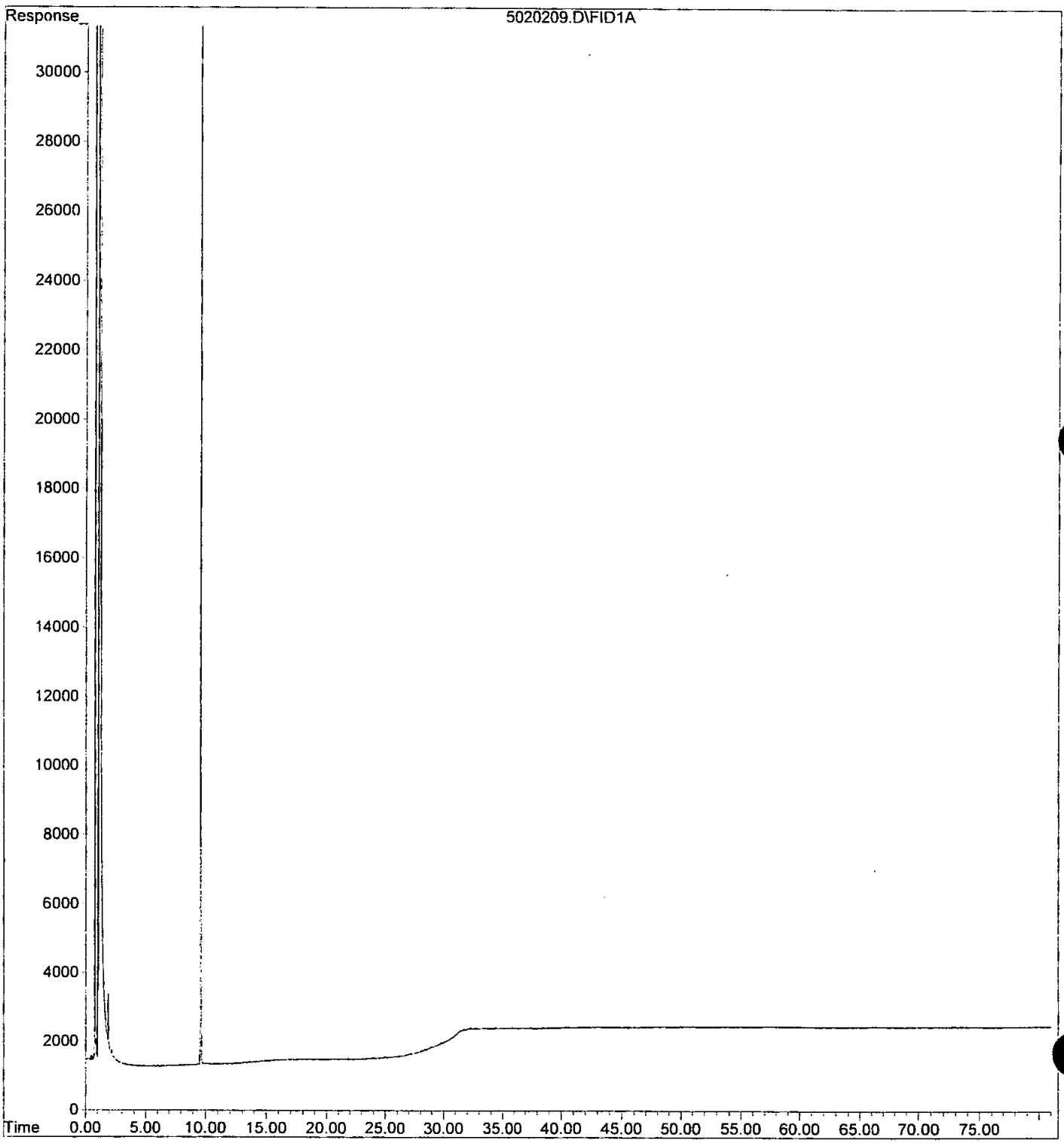
File : C:\HPCHEM\1\DATA\5020201.S\5020207.D
Operator :
Acquired : 3 Feb 20105 2:59 am using AcqMethod ASTM.M
Instrument : TPH
Sample Name: 0501277-06
Misc Info :
Vial Number: 7



File : C:\HPCHEM\1\DATA\5020201.S\5020208.D
Operator :
Acquired : 3 Feb 20105 4:32 am using AcqMethod ASTM.M
Instrument : TPH
Sample Name: 0501277-07
Misc Info :
Vial Number: 8



File : C:\HPCHEM\1\DATA\5020201.S\5020209.D
Operator :
Acquired : 3 Feb 20105 6:05 am using AcqMethod ASTM.M
Instrument : TPH
Sample Name: 0501277-08
Misc Info :
Vial Number: 9



CHAIN-OF-CUSTODY RECORD

EnviroMatrix EMA Analytical, Inc.

4340 Viewridge Ave., Ste. A • San Diego, CA 92123 • Phone (858) 560-7717 • Fax (858) 560-7763

1 of 1

EMA LOG #: 000477

EMA DATE/TIME STAMP

Client: Weinfeldor Inc.

Address: 5015 Shoreham Place

San Diego CA 92122

Attn: J. Lord - Sean Kearney Phone: 858-320-2260 (SK) 2264(SK)

Sampled by: Sean Kearney Fax: 858-320-2001

Billing Address: same

Project: 4410.2 PO #:

REQUESTED ANALYSIS

EMA ID #	Client Sample ID	Sample Date	Sample Time	Sample Matrix	Container(s) #	Container(s) Type*	418.1 (TRPH)	Oil & Grease 413.1__ 413.2__ 1664__	TPH (8015B) Gas__ Diesel__	TPH-Extended 8015B X ASTM D2887 X	602 / 8021 BTXE__ MTBE__	601 / 8021 (Purgeable Halocarbons)	608 / 8081 (Pesticides)	608 / 8082 (PCB's)	624 / 8260 (Volatile Organics)	625 / 8270 (Semi Volatile Organics)	TTLC Metals (CAC Title 22)	STLC Metals (CAC Title 22)	TCLP (RCRA) Metals__ Organics__	Cd Cr Cu Pb Ni Ag Zn	pH EC TSS TDS									
1	T2 - 13 - 1	10/6/05	0902	GW	1	Voa				X																				
2	T2 - 13 - 2	"	0917	"	"	"				X																				
3	T2 - 13 - 3	"	0945	"	"	"				X																				
4	T2 - 14 - 1	"	1020	"	"	"				X																				
5	T2 - 15 - 1	"	1052	"	"	"				X																				
6	T2 - 15 - 2	"	1100	"	"	"				X																				
7	T2 - 15 - 3	"	1110	"	"	"				X																				
8	T2 - 15 - 4	"	1120	"	"	"				X																				
9																														
10																														

*Container Types: B=Brass Tube; V=VOA; G=Glass; P=Plastic; O=Other (list)

	RELINQUISHED BY	DATE/TIME	RECEIVED BY
Tamper-Proof Seals Intact: Yes No N/A	Signature Sean Kearney	10/6/05 1115	Signature
Correct Containers: Yes No			
Sample(s): Cold Ambient Warm	Print Sean Kearney		Print
VOAs w/ZHS: Yes No N/A			
All Samples Properly Preserved: Yes No N/A	Company: Weinfeldor		Company:
Disposal: N/C (aqueous) *EMA (@$5.00/sample) Return Hold	Signature		Signature
Turnaround Time: 24 hr 48 hr 3 day 4 day 5 day (Normal)	Print		Print
Comments: Highest 3 samples will require additional analyses	Company:		Company:
	Signature		Signature
	Print		Print
	Company:		Company:

*EMA reserves the right to return samples that do not match our waste profile. White - EMA Canary - Accounting Pink - Client (w/Report) Goldenrod - Client (Relinquished samples)

EnviroMatrix Analytical, Inc.

08 February 2005

Kleinfelder, Inc.
Attn: Jacques Lord
5015 Shoreham Place
San Diego, CA 92122

EMA Log #: 0501269

Project Name: 44102-002

Enclosed are the results of analyses for samples received by the laboratory on 01/25/05 16:45. Samples were analyzed pursuant to client request utilizing EPA or other ELAP approved methodologies. I certify that this data is in compliance both technically and for completeness.

Dan Verdon
Laboratory Director

CA ELAP Certification #: 2564

Client Name: Kleinfelder, Inc.
Project Name: 44102-002

EMA Log #: 0501269

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
T1-7-1	0501269-01	Soil	01/25/05 09:44	01/25/05 16:45
T1-7-2	0501269-02	Soil	01/25/05 09:55	01/25/05 16:45
T1-7-3	0501269-03	Soil	01/25/05 10:12	01/25/05 16:45
T1-8-1	0501269-04	Soil	01/25/05 10:38	01/25/05 16:45
T1-8-2	0501269-05	Soil	01/25/05 10:45	01/25/05 16:45
T1-8-3	0501269-06	Soil	01/25/05 11:05	01/25/05 16:45
T1-9-1	0501269-07	Soil	01/25/05 11:23	01/25/05 16:45
T1-9-2	0501269-08	Soil	01/25/05 11:30	01/25/05 16:45
T1-9-3	0501269-09	Soil	01/25/05 12:05	01/25/05 16:45
T1-10-1	0501269-10	Soil	01/25/05 13:13	01/25/05 16:45
T1-10-2	0501269-11	Soil	01/25/05 13:26	01/25/05 16:45
T1-10-3	0501269-12	Soil	01/25/05 13:45	01/25/05 16:45
T1-11-1	0501269-13	Soil	01/25/05 14:07	01/25/05 16:45
T1-11-2	0501269-14	Soil	01/25/05 14:25	01/25/05 16:45
T1-11-3	0501269-15	Soil	01/25/05 14:40	01/25/05 16:45
T1-12-1	0501269-16	Soil	01/25/05 15:00	01/25/05 16:45
T1-12-2	0501269-17	Soil	01/25/05 15:07	01/25/05 16:45
T1-12-3	0501269-18	Soil	01/25/05 15:10	01/25/05 16:45

Results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Client Name: Kleinfelder, Inc.
Project Name: 44102-002

EMA Log #: 0501269

Total Metals by EPA 6000/7000 Series Methods

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
T1-7-1 (0501269-01) Soil Sampled: 01/25/05 09:44 Received: 01/25/05 16:45									
Antimony	ND	10.0	mg/kg	1	5012610	01/26/05	01/26/05	EPA 6010	
Barium	**62.3**	1.00	"	"	"	"	"	"	
Beryllium	ND	1.00	"	"	"	"	"	"	
Cadmium	ND	1.00	"	"	"	"	"	"	
Chromium	**52.6**	1.00	"	"	"	"	"	"	
Cobalt	ND	1.00	"	"	"	"	"	"	
Copper	**12.4**	1.00	"	"	"	"	"	"	
Lead	**10.2**	10.0	"	"	"	"	"	"	
Molybdenum	ND	5.00	"	"	"	"	"	"	
Nickel	**9.17**	1.00	"	"	"	"	"	"	
Vanadium	**29.7**	1.00	"	"	"	"	"	"	
Zinc	**32.6**	1.00	"	"	"	"	"	"	
Arsenic	**3.42**	0.500	"	"	5012611	01/26/05	01/26/05	EPA 6020	
Selenium	ND	1.00	"	"	"	"	"	"	
Silver	ND	0.100	"	"	"	"	"	"	
Thallium	ND	0.500	"	"	"	"	"	"	
Mercury	**0.02**	0.02	"	"	5020102	02/01/05	02/01/05	EPA 7471	
T1-7-2 (0501269-02) Soil Sampled: 01/25/05 09:55 Received: 01/25/05 16:45									
Antimony	ND	10.0	mg/kg	1	5012610	01/26/05	01/26/05	EPA 6010	
Barium	**61.4**	1.00	"	"	"	"	"	"	
Beryllium	ND	1.00	"	"	"	"	"	"	
Cadmium	ND	1.00	"	"	"	"	"	"	
Chromium	**53.1**	1.00	"	"	"	"	"	"	
Cobalt	ND	1.00	"	"	"	"	"	"	
Copper	**8.62**	1.00	"	"	"	"	"	"	
Lead	ND	10.0	"	"	"	"	"	"	
Molybdenum	ND	5.00	"	"	"	"	"	"	
Nickel	**7.62**	1.00	"	"	"	"	"	"	
Vanadium	**27.2**	1.00	"	"	"	"	"	"	
Zinc	**30.7**	1.00	"	"	"	"	"	"	
Arsenic	**3.60**	0.500	"	"	5012611	01/26/05	01/26/05	EPA 6020	
Selenium	ND	1.00	"	"	"	"	"	"	
Silver	ND	0.100	"	"	"	"	"	"	
Thallium	ND	0.500	"	"	"	"	"	"	
Mercury	**0.03**	0.02	"	"	5020102	02/01/05	02/01/05	EPA 7471	

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ent Name: Kleinfelder, Inc.
roject Name: 44102-002

EMA Log #: 0501269

Total Metals by EPA 6000/7000 Series Methods

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
T1-7-3 (0501269-03) Soil Sampled: 01/25/05 10:12 Received: 01/25/05 16:45									
Antimony	**10.7**	10.0	mg/kg	1	5012610	01/26/05	01/26/05	EPA 6010	
Barium	**87.1**	1.00	"	"	"	"	"	"	
Beryllium	ND	1.00	"	"	"	"	"	"	
Cadmium	ND	1.00	"	"	"	"	"	"	
Chromium	**37.7**	1.00	"	"	"	"	"	"	
Cobalt	ND	1.00	"	"	"	"	"	"	
Copper	**10.1**	1.00	"	"	"	"	"	"	
Lead	**17.8**	10.0	"	"	"	"	"	"	
Molybdenum	ND	5.00	"	"	"	"	"	"	
Nickel	**5.09**	1.00	"	"	"	"	"	"	
Vanadium	**26.4**	1.00	"	"	"	"	"	"	
Zinc	**92.8**	1.00	"	"	"	"	"	"	
Arsenic	**3.01**	0.500	"	"	5012611	01/26/05	01/26/05	EPA 6020	
Selenium	ND	1.00	"	"	"	"	"	"	
Silver	ND	0.100	"	"	"	"	"	"	
[illegible]llium	ND	0.500	"	"	"	"	"	"	
[illegible]cury	**0.02**	0.02	"	"	5020102	02/01/05	02/01/05	EPA 7471	
T1-8-1 (0501269-04) Soil Sampled: 01/25/05 10:38 Received: 01/25/05 16:45									
Antimony	ND	10.0	mg/kg	1	5012610	01/26/05	01/26/05	EPA 6010	
Barium	**50.9**	1.00	"	"	"	"	"	"	
Beryllium	ND	1.00	"	"	"	"	"	"	
Cadmium	ND	1.00	"	"	"	"	"	"	
Chromium	**51.4**	1.00	"	"	"	"	"	"	
Cobalt	ND	1.00	"	"	"	"	"	"	
Copper	**11.7**	1.00	"	"	"	"	"	"	
Lead	ND	10.0	"	"	"	"	"	"	
Molybdenum	ND	5.00	"	"	"	"	"	"	
Nickel	**7.19**	1.00	"	"	"	"	"	"	
Vanadium	**25.4**	1.00	"	"	"	"	"	"	
Zinc	**31.9**	1.00	"	"	"	"	"	"	
Arsenic	**3.36**	0.500	"	"	5012611	01/26/05	01/26/05	EPA 6020	
Selenium	ND	1.00	"	"	"	"	"	"	
Silver	ND	0.100	"	"	"	"	"	"	
Thallium	ND	0.500	"	"	"	"	"	"	
Mercury	**0.02**	0.02	"	"	5020102	02/01/05	02/01/05	EPA 7471	

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Client Name: Kleinfelder, Inc.
Project Name: 44102-002

EMA Log #: 0501269

Total Metals by EPA 6000/7000 Series Methods

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
T1-8-2 (0501269-05) Soil Sampled: 01/25/05 10:45 Received: 01/25/05 16:45									
Antimony	**12.2**	10.0	mg/kg	1	5012610	01/26/05	01/26/05	EPA 6010	
Barium	**75.9**	1.00	"	"	"	"	"	"	
Beryllium	ND	1.00	"	"	"	"	"	"	
Cadmium	ND	1.00	"	"	"	"	"	"	
Chromium	**67.9**	1.00	"	"	"	"	"	"	
Cobalt	ND	1.00	"	"	"	"	"	"	
Copper	**17.3**	1.00	"	"	"	"	"	"	
Lead	**12.2**	10.0	"	"	"	"	"	"	
Molybdenum	ND	5.00	"	"	"	"	"	"	
Nickel	**7.81**	1.00	"	"	"	"	"	"	
Vanadium	**36.3**	1.00	"	"	"	"	"	"	
Zinc	**37.1**	1.00	"	"	"	"	"	"	
Arsenic	**3.12**	0.500	"	"	5012611	01/26/05	01/26/05	EPA 6020	
Selenium	ND	1.00	"	"	"	"	"	"	
Silver	ND	0.100	"	"	"	"	"	"	
Thallium	ND	0.500	"	"	"	"	"	"	
Mercury	**0.03**	0.02	"	"	5020102	02/01/05	02/01/05	EPA 7471	
T1-8-3 (0501269-06) Soil Sampled: 01/25/05 11:05 Received: 01/25/05 16:45									
Antimony	ND	10.0	mg/kg	1	5012610	01/26/05	01/26/05	EPA 6010	
Barium	**69.8**	1.00	"	"	"	"	"	"	
Beryllium	ND	1.00	"	"	"	"	"	"	
Cadmium	ND	1.00	"	"	"	"	"	"	
Chromium	**56.3**	1.00	"	"	"	"	"	"	
Cobalt	ND	1.00	"	"	"	"	"	"	
Copper	**11.4**	1.00	"	"	"	"	"	"	
Lead	ND	10.0	"	"	"	"	"	"	
Molybdenum	ND	5.00	"	"	"	"	"	"	
Nickel	**7.24**	1.00	"	"	"	"	"	"	
Vanadium	**28.2**	1.00	"	"	"	"	"	"	
Zinc	**42.2**	1.00	"	"	"	"	"	"	
Arsenic	**2.64**	0.500	"	"	5012611	01/26/05	01/26/05	EPA 6020	
Selenium	ND	1.00	"	"	"	"	"	"	
Silver	ND	0.100	"	"	"	"	"	"	
Thallium	ND	0.500	"	"	"	"	"	"	
Mercury	ND	0.02	"	"	5020102	02/01/05	02/01/05	EPA 7471	

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Client Name: Kleinfelder, Inc.
Project Name: 44102-002

EMA Log #: 0501269

Total Metals by EPA 6000/7000 Series Methods

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
T1-9-1 (0501269-07) Soil Sampled: 01/25/05 11:23 Received: 01/25/05 16:45									
Antimony	ND	10.0	mg/kg	1	5012610	01/26/05	01/26/05	EPA 6010	
Barium	**65.1**	1.00	"	"	"	"	"	"	
Beryllium	ND	1.00	"	"	"	"	"	"	
Cadmium	ND	1.00	"	"	"	"	"	"	
Chromium	**52.1**	1.00	"	"	"	"	"	"	
Cobalt	ND	1.00	"	"	"	"	"	"	
Copper	**9.57**	1.00	"	"	"	"	"	"	
Lead	ND	10.0	"	"	"	"	"	"	
Molybdenum	ND	5.00	"	"	"	"	"	"	
Nickel	**8.40**	1.00	"	"	"	"	"	"	
Vanadium	**24.2**	1.00	"	"	"	"	"	"	
Zinc	**34.2**	1.00	"	"	"	"	"	"	
Arsenic	**3.16**	0.500	"	"	5012611	01/26/05	01/26/05	EPA 6020	
Selenium	ND	1.00	"	"	"	"	"	"	
Silver	ND	0.100	"	"	"	"	"	"	
Thallium	ND	0.500	"	"	"	"	"	"	
Mercury	**0.02**	0.02	"	"	5020102	02/01/05	02/01/05	EPA 7471	
T1-9-2 (0501269-08) Soil Sampled: 01/25/05 11:30 Received: 01/25/05 16:45									
Antimony	**11.0**	10.0	mg/kg	1	5012610	01/26/05	01/26/05	EPA 6010	
Barium	**72.6**	1.00	"	"	"	"	"	"	
Beryllium	ND	1.00	"	"	"	"	"	"	
Cadmium	ND	1.00	"	"	"	"	"	"	
Chromium	**59.4**	1.00	"	"	"	"	"	"	
Cobalt	ND	1.00	"	"	"	"	"	"	
Copper	**12.3**	1.00	"	"	"	"	"	"	
Lead	**20.9**	10.0	"	"	"	"	"	"	
Molybdenum	ND	5.00	"	"	"	"	"	"	
Nickel	**8.61**	1.00	"	"	"	"	"	"	
Vanadium	**24.9**	1.00	"	"	"	"	"	"	
Zinc	**45.0**	1.00	"	"	"	"	"	"	
Arsenic	**5.45**	0.500	"	"	5012611	01/26/05	01/26/05	EPA 6020	
Selenium	ND	1.00	"	"	"	"	"	"	
Silver	ND	0.100	"	"	"	"	"	"	
Thallium	ND	0.500	"	"	"	"	"	"	
Mercury	**0.02**	0.02	"	"	5020102	02/01/05	02/01/05	EPA 7471	

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Client Name: Kleinfelder, Inc.
Project Name: 44102-002

EMA Log #: 0501269

Total Metals by EPA 6000/7000 Series Methods

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
T1-9-3 (0501269-09) Soil Sampled: 01/25/05 12:05 Received: 01/25/05 16:45									
Antimony	**14.5**	10.0	mg/kg	1	5012610	01/26/05	01/26/05	EPA 6010	
Barium	**132**	1.00	"	"	"	"	"	"	
Beryllium	ND	1.00	"	"	"	"	"	"	
Cadmium	ND	1.00	"	"	"	"	"	"	
Chromium	**72.1**	1.00	"	"	"	"	"	"	
Cobalt	**1.83**	1.00	"	"	"	"	"	"	
Copper	**10.1**	1.00	"	"	"	"	"	"	
Lead	**18.9**	10.0	"	"	"	"	"	"	
Molybdenum	ND	5.00	"	"	"	"	"	"	
Nickel	**8.79**	1.00	"	"	"	"	"	"	
Vanadium	**29.6**	1.00	"	"	"	"	"	"	
Zinc	**40.8**	1.00	"	"	"	"	"	"	
Arsenic	**8.30**	0.500	"	"	5012611	01/26/05	01/26/05	EPA 6020	
Selenium	ND	1.00	"	"	"	"	"	"	
Silver	ND	0.100	"	"	"	"	"	"	
Thallium	ND	0.500	"	"	"	"	"	"	
Mercury	**0.03**	0.02	"	"	5020102	02/01/05	02/01/05	EPA 7471	
T1-10-1 (0501269-10) Soil Sampled: 01/25/05 13:13 Received: 01/25/05 16:45									
Antimony	**11.1**	10.0	mg/kg	1	5012610	01/26/05	01/26/05	EPA 6010	
Barium	**86.6**	1.00	"	"	"	"	"	"	
Beryllium	ND	1.00	"	"	"	"	"	"	
Cadmium	ND	1.00	"	"	"	"	"	"	
Chromium	**65.4**	1.00	"	"	"	"	"	"	
Cobalt	ND	1.00	"	"	"	"	"	"	
Copper	**54.1**	1.00	"	"	"	"	"	"	
Lead	ND	10.0	"	"	"	"	"	"	
Molybdenum	ND	5.00	"	"	"	"	"	"	
Nickel	**6.95**	1.00	"	"	"	"	"	"	
Vanadium	**26.5**	1.00	"	"	"	"	"	"	
Zinc	**71.7**	1.00	"	"	"	"	"	"	
Arsenic	**3.42**	0.500	"	"	5012611	01/26/05	01/26/05	EPA 6020	
Selenium	ND	1.00	"	"	"	"	"	"	
Silver	ND	0.100	"	"	"	"	"	"	
Thallium	ND	0.500	"	"	"	"	"	"	
Mercury	**0.02**	0.02	"	"	5020102	02/01/05	02/01/05	EPA 7471	

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[redacted]ient Name: Kleinfelder, Inc.
Project Name: 44102-002

EMA Log #: 0501269

Total Metals by EPA 6000/7000 Series Methods

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
T1-10-2 (0501269-11) Soil Sampled: 01/25/05 13:26 Received: 01/25/05 16:45									
Antimony	ND	10.0	mg/kg	1	5012610	01/26/05	01/26/05	EPA 6010	
Barium	**88.4**	1.00	"	"	"	"	"	"	
Beryllium	ND	1.00	"	"	"	"	"	"	
Cadmium	ND	1.00	"	"	"	"	"	"	
Chromium	**70.7**	1.00	"	"	"	"	"	"	
Cobalt	ND	1.00	"	"	"	"	"	"	
Copper	**12.9**	1.00	"	"	"	"	"	"	
Lead	**16.3**	10.0	"	"	"	"	"	"	
Molybdenum	ND	5.00	"	"	"	"	"	"	
Nickel	**8.45**	1.00	"	"	"	"	"	"	
Vanadium	**36.9**	1.00	"	"	"	"	"	"	
Zinc	**44.1**	1.00	"	"	"	"	"	"	
Arsenic	**4.53**	0.500	"	"	5012611	01/26/05	01/26/05	EPA 6020	
Selenium	ND	1.00	"	"	"	"	"	"	
Silver	ND	0.100	"	"	"	"	"	"	
[redacted]allium	ND	0.500	"	"	"	"	"	"	
[redacted]ercury	**0.03**	0.02	"	"	5020102	02/01/05	02/01/05	EPA 7471	
T1-10-3 (0501269-12) Soil Sampled: 01/25/05 13:45 Received: 01/25/05 16:45									
Antimony	ND	10.0	mg/kg	1	5012610	01/26/05	01/26/05	EPA 6010	
Barium	**109**	1.00	"	"	"	"	"	"	
Beryllium	ND	1.00	"	"	"	"	"	"	
Cadmium	ND	1.00	"	"	"	"	"	"	
Chromium	**57.8**	1.00	"	"	"	"	"	"	
Cobalt	ND	1.00	"	"	"	"	"	"	
Copper	**11.6**	1.00	"	"	"	"	"	"	
Lead	**12.8**	10.0	"	"	"	"	"	"	
Molybdenum	ND	5.00	"	"	"	"	"	"	
Nickel	**8.08**	1.00	"	"	"	"	"	"	
Vanadium	**29.9**	1.00	"	"	"	"	"	"	
Zinc	**44.5**	1.00	"	"	"	"	"	"	
Arsenic	**3.45**	0.500	"	"	5012611	01/26/05	01/26/05	EPA 6020	
Selenium	ND	1.00	"	"	"	"	"	"	
Silver	ND	0.100	"	"	"	"	"	"	
Thallium	ND	0.500	"	"	"	"	"	"	
Mercury	**0.03**	0.02	"	"	5020102	02/01/05	02/01/05	EPA 7471	

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Client Name: Kleinfelder, Inc.
Project Name: 44102-002

EMA Log #: 0501269

Total Metals by EPA 6000/7000 Series Methods

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
T1-11-1 (0501269-13) Soil Sampled: 01/25/05 14:07 Received: 01/25/05 16:45									
Antimony	**14.2**	10.0	mg/kg	1	5012610	01/26/05	01/26/05	EPA 6010	
Barium	**93.1**	1.00	"	"	"	"	"	"	
Beryllium	ND	1.00	"	"	"	"	"	"	
Cadmium	ND	1.00	"	"	"	"	"	"	
Chromium	**71.4**	1.00	"	"	"	"	"	"	
Cobalt	ND	1.00	"	"	"	"	"	"	
Copper	**19.0**	1.00	"	"	"	"	"	"	
Lead	**12.8**	10.0	"	"	"	"	"	"	
Molybdenum	ND	5.00	"	"	"	"	"	"	
Nickel	**14.0**	1.00	"	"	"	"	"	"	
Vanadium	**35.1**	1.00	"	"	"	"	"	"	
Zinc	**44.2**	1.00	"	"	"	"	"	"	
Arsenic	**3.79**	0.500	"	"	5012611	01/26/05	01/26/05	EPA 6020	
Selenium	ND	1.00	"	"	"	"	"	"	
Silver	ND	0.100	"	"	"	"	"	"	
Thallium	ND	0.500	"	"	"	"	"	"	
Mercury	**0.02**	0.02	"	"	5020102	02/01/05	02/01/05	EPA 7471	
T1-11-2 (0501269-14) Soil Sampled: 01/25/05 14:25 Received: 01/25/05 16:45									
Antimony	ND	10.0	mg/kg	1	5012610	01/26/05	01/26/05	EPA 6010	
Barium	**105**	1.00	"	"	"	"	"	"	
Beryllium	ND	1.00	"	"	"	"	"	"	
Cadmium	ND	1.00	"	"	"	"	"	"	
Chromium	**69.0**	1.00	"	"	"	"	"	"	
Cobalt	ND	1.00	"	"	"	"	"	"	
Copper	**13.2**	1.00	"	"	"	"	"	"	
Lead	**17.1**	10.0	"	"	"	"	"	"	
Molybdenum	ND	5.00	"	"	"	"	"	"	
Nickel	**8.25**	1.00	"	"	"	"	"	"	
Vanadium	**39.4**	1.00	"	"	"	"	"	"	
Zinc	**42.6**	1.00	"	"	"	"	"	"	
Arsenic	**2.73**	0.500	"	"	5012611	01/26/05	01/26/05	EPA 6020	
Selenium	ND	1.00	"	"	"	"	"	"	
Silver	ND	0.100	"	"	"	"	"	"	
Thallium	ND	0.500	"	"	"	"	"	"	
Mercury	ND	0.02	"	"	5020102	02/01/05	02/01/05	EPA 7471	

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Client Name: Kleinfelder, Inc.
Project Name: 44102-002

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Total Metals by EPA 6000/7000 Series Methods

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
T1-11-3 (0501269-15) Soil Sampled: 01/25/05 14:40 Received: 01/25/05 16:45									
Antimony	**11.5**	10.0	mg/kg	1	5012610	01/26/05	01/26/05	EPA 6010	
Barium	**74.7**	1.00	"	"	"	"	"	"	
Beryllium	ND	1.00	"	"	"	"	"	"	
Cadmium	ND	1.00	"	"	"	"	"	"	
Chromium	**75.3**	1.00	"	"	"	"	"	"	
Cobalt	ND	1.00	"	"	"	"	"	"	
Copper	**13.1**	1.00	"	"	"	"	"	"	
Lead	**13.7**	10.0	"	"	"	"	"	"	
Molybdenum	ND	5.00	"	"	"	"	"	"	
Nickel	**7.87**	1.00	"	"	"	"	"	"	
Vanadium	**38.2**	1.00	"	"	"	"	"	"	
Zinc	**41.4**	1.00	"	"	"	"	"	"	
Arsenic	**3.05**	0.500	"	"	5012611	01/26/05	01/26/05	EPA 6020	
Selenium	ND	1.00	"	"	"	"	"	"	
Silver	ND	0.100	"	"	"	"	"	"	
Thallium	ND	0.500	"	"	"	"	"	"	
Mercury	**0.03**	0.02	"	"	5020102	02/01/05	02/01/05	EPA 7471	
T1-12-1 (0501269-16) Soil Sampled: 01/25/05 15:00 Received: 01/25/05 16:45									
Antimony	ND	10.0	mg/kg	1	5012610	01/26/05	01/26/05	EPA 6010	
Barium	**87.8**	1.00	"	"	"	"	"	"	
Beryllium	ND	1.00	"	"	"	"	"	"	
Cadmium	ND	1.00	"	"	"	"	"	"	
Chromium	**63.5**	1.00	"	"	"	"	"	"	
Cobalt	ND	1.00	"	"	"	"	"	"	
Copper	**9.64**	1.00	"	"	"	"	"	"	
Lead	**14.2**	10.0	"	"	"	"	"	"	
Molybdenum	ND	5.00	"	"	"	"	"	"	
Nickel	**7.07**	1.00	"	"	"	"	"	"	
Vanadium	**32.4**	1.00	"	"	"	"	"	"	
Zinc	**37.2**	1.00	"	"	"	"	"	"	
Arsenic	**2.84**	0.500	"	"	5012611	01/26/05	01/26/05	EPA 6020	
Selenium	ND	1.00	"	"	"	"	"	"	
Silver	ND	0.100	"	"	"	"	"	"	
Thallium	ND	0.500	"	"	"	"	"	"	
Mercury	**0.03**	0.02	"	"	5020102	02/01/05	02/01/05	EPA 7471	

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Client Name: Kleinfelder, Inc.
Project Name: 44102-002

EMA Log #: 0501269

Total Metals by EPA 6000/7000 Series Methods

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
T1-12-2 (0501269-17) Soil Sampled: 01/25/05 15:07 Received: 01/25/05 16:45									
Antimony	**14.7**	10.0	mg/kg	1	5012610	01/26/05	01/26/05	EPA 6010	
Barium	**215**	1.00	"	"	"	"	"	"	
Beryllium	ND	1.00	"	"	"	"	"	"	
Cadmium	ND	1.00	"	"	"	"	"	"	
Chromium	**105**	1.00	"	"	"	"	"	"	
Cobalt	ND	1.00	"	"	"	"	"	"	
Copper	**11.3**	1.00	"	"	"	"	"	"	
Lead	**19.3**	10.0	"	"	"	"	"	"	
Molybdenum	ND	5.00	"	"	"	"	"	"	
Nickel	**9.19**	1.00	"	"	"	"	"	"	
Vanadium	**51.9**	1.00	"	"	"	"	"	"	
Zinc	**79.2**	1.00	"	"	"	"	"	"	
Arsenic	**3.96**	0.500	"	"	5012611	01/26/05	01/26/05	EPA 6020	
Selenium	ND	1.00	"	"	"	"	"	"	
Silver	ND	0.100	"	"	"	"	"	"	
Thallium	ND	0.500	"	"	"	"	"	"	
Mercury	ND	0.02	"	"	5020102	02/01/05	02/01/05	EPA 7471	
T1-12-3 (0501269-18) Soil Sampled: 01/25/05 15:10 Received: 01/25/05 16:45									
Antimony	ND	10.0	mg/kg	1	5012610	01/26/05	01/26/05	EPA 6010	
Barium	**131**	1.00	"	"	"	"	"	"	
Beryllium	ND	1.00	"	"	"	"	"	"	
Cadmium	ND	1.00	"	"	"	"	"	"	
Chromium	**63.6**	1.00	"	"	"	"	"	"	
Cobalt	ND	1.00	"	"	"	"	"	"	
Copper	**16.5**	1.00	"	"	"	"	"	"	
Lead	ND	10.0	"	"	"	"	"	"	
Molybdenum	ND	5.00	"	"	"	"	"	"	
Nickel	**6.17**	1.00	"	"	"	"	"	"	
Vanadium	**38.2**	1.00	"	"	"	"	"	"	
Zinc	**32.9**	1.00	"	"	"	"	"	"	
Arsenic	**3.95**	0.500	"	"	5012611	01/26/05	01/26/05	EPA 6020	
Selenium	ND	1.00	"	"	"	"	"	"	
Silver	ND	0.100	"	"	"	"	"	"	
Thallium	ND	0.500	"	"	"	"	"	"	
Mercury	**0.03**	0.02	"	"	5020102	02/01/05	02/01/05	EPA 7471	

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Client Name: Kleinfelder, Inc.
Project Name: 44102-002

EMA Log #: 0501269

Volatile Organic Compounds by EPA Method 8260B

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
T1-7-1 (0501269-01) Soil Sampled: 01/25/05 09:44 Received: 01/25/05 16:45									
Acetone	ND	50.0	ug/kg	1	5012701	01/27/05	01/27/05	EPA 8260B	
Acetonitrile	ND	50.0	"	"	"	"	"	"	
Acrolein	ND	100	"	"	"	"	"	"	
Acrylonitrile	ND	25.0	"	"	"	"	"	"	
Allyl chloride	ND	5.00	"	"	"	"	"	"	
Benzene	ND	2.00	"	"	"	"	"	"	
Bromobenzene	ND	2.00	"	"	"	"	"	"	
Bromochloromethane	ND	2.00	"	"	"	"	"	"	
Bromodichloromethane	ND	2.00	"	"	"	"	"	"	
Bromoform	ND	2.00	"	"	"	"	"	"	
Bromomethane	ND	5.00	"	"	"	"	"	"	
2-Butanone	ND	50.0	"	"	"	"	"	"	
n-Butylbenzene	ND	2.00	"	"	"	"	"	"	
sec-Butylbenzene	ND	5.00	"	"	"	"	"	"	
tert-Butylbenzene	ND	5.00	"	"	"	"	"	"	
Carbon disulfide	ND	5.00	"	"	"	"	"	"	
Carbon tetrachloride	ND	5.00	"	"	"	"	"	"	
Chlorobenzene	ND	2.00	"	"	"	"	"	"	
Chlorodibromomethane	ND	2.00	"	"	"	"	"	"	
Chloroethane	ND	5.00	"	"	"	"	"	"	
2-Chloroethylvinyl ether	ND	5.00	"	"	"	"	"	"	
Chloroform	ND	2.00	"	"	"	"	"	"	
Chloromethane	ND	5.00	"	"	"	"	"	"	
2-Chlorotoluene	ND	5.00	"	"	"	"	"	"	
4-Chlorotoluene	ND	5.00	"	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	ND	5.00	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	2.00	"	"	"	"	"	"	
Dibromomethane	ND	2.00	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	2.00	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	2.00	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	2.00	"	"	"	"	"	"	
trans-1,4-Dichloro-2-butene	ND	5.00	"	"	"	"	"	"	
Dichlorodifluoromethane	ND	5.00	"	"	"	"	"	"	
1,1-Dichloroethane	ND	2.00	"	"	"	"	"	"	
1,2-Dichloroethane	ND	2.00	"	"	"	"	"	"	
1,1-Dichloroethene	ND	2.00	"	"	"	"	"	"	
cis-1,2-Dichloroethene	ND	2.00	"	"	"	"	"	"	
trans-1,2-Dichloroethene	ND	2.00	"	"	"	"	"	"	
1,2-Dichloropropane	ND	2.00	"	"	"	"	"	"	
1,3-Dichloropropane	ND	2.00	"	"	"	"	"	"	
2,2-Dichloropropane	ND	5.00	"	"	"	"	"	"	
1,1-Dichloropropene	ND	5.00	"	"	"	"	"	"	
cis-1,3-Dichloropropene	ND	2.00	"	"	"	"	"	"	

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Client Name: Kleinfelder, Inc.
Project Name: 44102-002

EMA Log #: 0501269

Volatile Organic Compounds by EPA Method 8260B

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
T1-7-1 (0501269-01) Soil Sampled: 01/25/05 09:44 Received: 01/25/05 16:45									
trans-1,3-Dichloropropene	ND	2.00	ug/kg	1	5012701	01/27/05	01/27/05	EPA 8260B	
Diethyl ether	ND	5.00	"	"	"	"	"	"	
Ethylbenzene	ND	2.00	"	"	"	"	"	"	
Hexachlorobutadiene	ND	2.00	"	"	"	"	"	"	
Hexachloroethane	ND	2.00	"	"	"	"	"	"	
2-Hexanone	ND	10.0	"	"	"	"	"	"	
Iodomethane	ND	2.00	"	"	"	"	"	"	
Isopropylbenzene	ND	2.00	"	"	"	"	"	"	
Methylene chloride	ND	5.00	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	2.00	"	"	"	"	"	"	
4-Methyl-2-pentanone	ND	25.0	"	"	"	"	"	"	
Naphthalene	ND	5.00	"	"	"	"	"	"	
n-Propylbenzene	ND	2.00	"	"	"	"	"	"	
Styrene	ND	2.00	"	"	"	"	"	"	
1,1,1,2-Tetrachloroethane	ND	2.00	"	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	ND	5.00	"	"	"	"	"	"	
Tetrachloroethene	ND	2.00	"	"	"	"	"	"	
Toluene	ND	2.00	"	"	"	"	"	"	
1,2,3-Trichlorobenzene	ND	2.00	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	2.00	"	"	"	"	"	"	
1,1,1-Trichloroethane	ND	2.00	"	"	"	"	"	"	
1,1,2-Trichloroethane	ND	5.00	"	"	"	"	"	"	
Trichloroethene	ND	2.00	"	"	"	"	"	"	
Trichlorofluoromethane	ND	5.00	"	"	"	"	"	"	
1,2,3-Trichloropropane	ND	5.00	"	"	"	"	"	"	
1,1,2-Trichlorotrifluoroethane	ND	10.0	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	2.00	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	2.00	"	"	"	"	"	"	
Vinyl acetate	ND	10.0	"	"	"	"	"	"	
Vinyl chloride	ND	5.00	"	"	"	"	"	"	
m,p-Xylene	ND	5.00	"	"	"	"	"	"	
o-Xylene	ND	2.00	"	"	"	"	"	"	
Surrogate: Dibromofluoromethane		*107 %*	*61-141*		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*71 %*	*70-124*		"	"	"	"	
Surrogate: Toluene-d8		*93 %*	*80-121*		"	"	"	"	

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Client Name: Kleinfelder, Inc.
Project Name: 44102-002

EMA Log #: 0501269

Volatile Organic Compounds by EPA Method 8260B

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
T1-7-2 (0501269-02) Soil Sampled: 01/25/05 09:55 Received: 01/25/05 16:45									
Acetone	**67.2**	50.0	ug/kg	1	5012701	01/27/05	01/27/05	EPA 8260B	
Acetonitrile	ND	50.0	"	"	"	"	"	"	
Acrolein	ND	100	"	"	"	"	"	"	
Acrylonitrile	ND	25.0	"	"	"	"	"	"	
Allyl chloride	ND	5.00	"	"	"	"	"	"	
Benzene	ND	2.00	"	"	"	"	"	"	
Bromobenzene	ND	2.00	"	"	"	"	"	"	
Bromochloromethane	ND	2.00	"	"	"	"	"	"	
Bromodichloromethane	ND	2.00	"	"	"	"	"	"	
Bromoform	ND	2.00	"	"	"	"	"	"	
Bromomethane	ND	5.00	"	"	"	"	"	"	
2-Butanone	ND	50.0	"	"	"	"	"	"	
n-Butylbenzene	ND	2.00	"	"	"	"	"	"	
sec-Butylbenzene	ND	5.00	"	"	"	"	"	"	
tert-Butylbenzene	ND	5.00	"	"	"	"	"	"	
Carbon disulfide	ND	5.00	"	"	"	"	"	"	
Carbon tetrachloride	ND	5.00	"	"	"	"	"	"	
Chlorobenzene	ND	2.00	"	"	"	"	"	"	
Chlorodibromomethane	ND	2.00	"	"	"	"	"	"	
Chloroethane	ND	5.00	"	"	"	"	"	"	
2-Chloroethylvinyl ether	ND	5.00	"	"	"	"	"	"	
Chloroform	ND	2.00	"	"	"	"	"	"	
Chloromethane	ND	5.00	"	"	"	"	"	"	
2-Chlorotoluene	ND	5.00	"	"	"	"	"	"	
4-Chlorotoluene	ND	5.00	"	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	ND	5.00	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	2.00	"	"	"	"	"	"	
Dibromomethane	ND	2.00	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	2.00	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	2.00	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	2.00	"	"	"	"	"	"	
trans-1,4-Dichloro-2-butene	ND	5.00	"	"	"	"	"	"	
Dichlorodifluoromethane	ND	5.00	"	"	"	"	"	"	
1,1-Dichloroethane	ND	2.00	"	"	"	"	"	"	
1,2-Dichloroethane	ND	2.00	"	"	"	"	"	"	
1,1-Dichloroethene	ND	2.00	"	"	"	"	"	"	
cis-1,2-Dichloroethene	ND	2.00	"	"	"	"	"	"	
trans-1,2-Dichloroethene	ND	2.00	"	"	"	"	"	"	
1,2-Dichloropropane	ND	2.00	"	"	"	"	"	"	
1,3-Dichloropropane	ND	2.00	"	"	"	"	"	"	
2,2-Dichloropropane	ND	5.00	"	"	"	"	"	"	
1,1-Dichloropropene	ND	5.00	"	"	"	"	"	"	
cis-1,3-Dichloropropene	ND	2.00	"	"	"	"	"	"	

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Client Name: Kleinfelder, Inc.
Project Name: 44102-002

EMA Log #: 0501269

Volatile Organic Compounds by EPA Method 8260B

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
T1-7-2 (0501269-02) Soil Sampled: 01/25/05 09:55 Received: 01/25/05 16:45									
trans-1,3-Dichloropropene	ND	2.00	ug/kg	1	5012701	01/27/05	01/27/05	EPA 8260B	
Diethyl ether	ND	5.00	"	"	"	"	"	"	
Ethylbenzene	ND	2.00	"	"	"	"	"	"	
Hexachlorobutadiene	ND	2.00	"	"	"	"	"	"	
Hexachloroethane	ND	2.00	"	"	"	"	"	"	
2-Hexanone	ND	10.0	"	"	"	"	"	"	
Iodomethane	ND	2.00	"	"	"	"	"	"	
Isopropylbenzene	ND	2.00	"	"	"	"	"	"	
Methylene chloride	ND	5.00	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	2.00	"	"	"	"	"	"	
4-Methyl-2-pentanone	ND	25.0	"	"	"	"	"	"	
Naphthalene	ND	5.00	"	"	"	"	"	"	
n-Propylbenzene	ND	2.00	"	"	"	"	"	"	
Styrene	ND	2.00	"	"	"	"	"	"	
1,1,1,2-Tetrachloroethane	ND	2.00	"	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	ND	5.00	"	"	"	"	"	"	
Tetrachloroethene	ND	2.00	"	"	"	"	"	"	
Toluene	ND	2.00	"	"	"	"	"	"	
1,2,3-Trichlorobenzene	ND	2.00	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	2.00	"	"	"	"	"	"	
1,1,1-Trichloroethane	ND	2.00	"	"	"	"	"	"	
1,1,2-Trichloroethane	ND	5.00	"	"	"	"	"	"	
Trichloroethene	ND	2.00	"	"	"	"	"	"	
Trichlorofluoromethane	ND	5.00	"	"	"	"	"	"	
1,2,3-Trichloropropane	ND	5.00	"	"	"	"	"	"	
1,1,2-Trichlorotrifluoroethane	ND	10.0	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	**2.78**	2.00	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	2.00	"	"	"	"	"	"	
Vinyl acetate	ND	10.0	"	"	"	"	"	"	
Vinyl chloride	ND	5.00	"	"	"	"	"	"	
m,p-Xylene	ND	5.00	"	"	"	"	"	"	
o-Xylene	ND	2.00	"	"	"	"	"	"	
Surrogate: Dibromofluoromethane		*43 %*	*61-141*		"	"	"	"	*S-04*
Surrogate: 4-Bromofluorobenzene		*83 %*	*70-124*		"	"	"	"	
Surrogate: Toluene-d8		*96 %*	*80-121*		"	"	"	"	

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Client Name: Kleinfelder, Inc.
Project Name: 44102-002

EMA Log #: 0501269

Volatile Organic Compounds by EPA Method 8260B

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
T1-7-3 (0501269-03) Soil Sampled: 01/25/05 10:12 Received: 01/25/05 16:45									
Acetone	ND	50.0	ug/kg	1	5012701	01/27/05	01/27/05	EPA 8260B	
Acetonitrile	ND	50.0	"	"	"	"	"	"	
Acrolein	ND	100	"	"	"	"	"	"	
Acrylonitrile	ND	25.0	"	"	"	"	"	"	
Allyl chloride	ND	5.00	"	"	"	"	"	"	
Benzene	ND	2.00	"	"	"	"	"	"	
Bromobenzene	ND	2.00	"	"	"	"	"	"	
Bromochloromethane	ND	2.00	"	"	"	"	"	"	
Bromodichloromethane	ND	2.00	"	"	"	"	"	"	
Bromoform	ND	2.00	"	"	"	"	"	"	
Bromomethane	ND	5.00	"	"	"	"	"	"	
2-Butanone	ND	50.0	"	"	"	"	"	"	
n-Butylbenzene	ND	2.00	"	"	"	"	"	"	
sec-Butylbenzene	ND	5.00	"	"	"	"	"	"	
tert-Butylbenzene	ND	5.00	"	"	"	"	"	"	
Carbon disulfide	ND	5.00	"	"	"	"	"	"	
Carbon tetrachloride	ND	5.00	"	"	"	"	"	"	
Chlorobenzene	ND	2.00	"	"	"	"	"	"	
Chlorodibromomethane	ND	2.00	"	"	"	"	"	"	
Chloroethane	ND	5.00	"	"	"	"	"	"	
2-Chloroethylvinyl ether	ND	5.00	"	"	"	"	"	"	
Chloroform	ND	2.00	"	"	"	"	"	"	
Chloromethane	ND	5.00	"	"	"	"	"	"	
2-Chlorotoluene	ND	5.00	"	"	"	"	"	"	
4-Chlorotoluene	ND	5.00	"	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	ND	5.00	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	2.00	"	"	"	"	"	"	
Dibromomethane	ND	2.00	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	2.00	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	2.00	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	2.00	"	"	"	"	"	"	
trans-1,4-Dichloro-2-butene	ND	5.00	"	"	"	"	"	"	
Dichlorodifluoromethane	ND	5.00	"	"	"	"	"	"	
1,1-Dichloroethane	ND	2.00	"	"	"	"	"	"	
1,2-Dichloroethane	ND	2.00	"	"	"	"	"	"	
1,1-Dichloroethene	ND	2.00	"	"	"	"	"	"	
cis-1,2-Dichloroethene	ND	2.00	"	"	"	"	"	"	
trans-1,2-Dichloroethene	ND	2.00	"	"	"	"	"	"	
1,2-Dichloropropane	ND	2.00	"	"	"	"	"	"	
1,3-Dichloropropane	ND	2.00	"	"	"	"	"	"	
2,2-Dichloropropane	ND	5.00	"	"	"	"	"	"	
1,1-Dichloropropene	ND	5.00	"	"	"	"	"	"	
cis-1,3-Dichloropropene	ND	2.00	"	"	"	"	"	"	

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Client Name: Kleinfelder, Inc.
Project Name: 44102-002

EMA Log #: 0501269

Volatile Organic Compounds by EPA Method 8260B

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
T1-7-3 (0501269-03) Soil Sampled: 01/25/05 10:12 Received: 01/25/05 16:45									
trans-1,3-Dichloropropene	ND	2.00	ug/kg	1	5012701	01/27/05	01/27/05	EPA 8260B	
Diethyl ether	ND	5.00	"	"	"	"	"	"	
Ethylbenzene	ND	2.00	"	"	"	"	"	"	
Hexachlorobutadiene	ND	2.00	"	"	"	"	"	"	
Hexachloroethane	ND	2.00	"	"	"	"	"	"	
2-Hexanone	ND	10.0	"	"	"	"	"	"	
Iodomethane	ND	2.00	"	"	"	"	"	"	
Isopropylbenzene	ND	2.00	"	"	"	"	"	"	
Methylene chloride	ND	5.00	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	2.00	"	"	"	"	"	"	
4-Methyl-2-pentanone	ND	25.0	"	"	"	"	"	"	
Naphthalene	ND	5.00	"	"	"	"	"	"	
n-Propylbenzene	ND	2.00	"	"	"	"	"	"	
Styrene	ND	2.00	"	"	"	"	"	"	
1,1,1,2-Tetrachloroethane	ND	2.00	"	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	ND	5.00	"	"	"	"	"	"	
Tetrachloroethene	ND	2.00	"	"	"	"	"	"	
Toluene	ND	2.00	"	"	"	"	"	"	
1,2,3-Trichlorobenzene	ND	2.00	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	2.00	"	"	"	"	"	"	
1,1,1-Trichloroethane	ND	2.00	"	"	"	"	"	"	
1,1,2-Trichloroethane	ND	5.00	"	"	"	"	"	"	
Trichloroethene	ND	2.00	"	"	"	"	"	"	
Trichlorofluoromethane	ND	5.00	"	"	"	"	"	"	
1,2,3-Trichloropropane	ND	5.00	"	"	"	"	"	"	
1,1,2-Trichlorotrifluoroethane	ND	10.0	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	2.00	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	2.00	"	"	"	"	"	"	
Vinyl acetate	ND	10.0	"	"	"	"	"	"	
Vinyl chloride	ND	5.00	"	"	"	"	"	"	
m,p-Xylene	ND	5.00	"	"	"	"	"	"	
o-Xylene	ND	2.00	"	"	"	"	"	"	
Surrogate: Dibromofluoromethane		*98 %*	*61-141*		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*95 %*	*70-124*		"	"	"	"	
Surrogate: Toluene-d8		*101 %*	*80-121*		"	"	"	"	

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

ient Name: Kleinfelder, Inc.
Project Name: 44102-002

EMA Log #: 0501269

Volatile Organic Compounds by EPA Method 8260B

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
T1-8-1 (0501269-04) Soil Sampled: 01/25/05 10:38 Received: 01/25/05 16:45									**R-08**
Acetone	ND	100	ug/kg	2	5012701	01/27/05	01/27/05	EPA 8260B	
Acetonitrile	ND	100	"	"	"	"	"	"	
Acrolein	ND	200	"	"	"	"	"	"	
Acrylonitrile	ND	50.0	"	"	"	"	"	"	
Allyl chloride	ND	10.0	"	"	"	"	"	"	
Benzene	ND	4.00	"	"	"	"	"	"	
Bromobenzene	ND	4.00	"	"	"	"	"	"	
Bromochloromethane	ND	4.00	"	"	"	"	"	"	
Bromodichloromethane	ND	4.00	"	"	"	"	"	"	
Bromoform	ND	4.00	"	"	"	"	"	"	
Bromomethane	ND	10.0	"	"	"	"	"	"	
2-Butanone	ND	100	"	"	"	"	"	"	
n-Butylbenzene	ND	4.00	"	"	"	"	"	"	
sec-Butylbenzene	ND	10.0	"	"	"	"	"	"	
tert-Butylbenzene	ND	10.0	"	"	"	"	"	"	
Carbon disulfide	ND	10.0	"	"	"	"	"	"	
rbon tetrachloride	ND	10.0	"	"	"	"	"	"	
lorobenzene	ND	4.00	"	"	"	"	"	"	
Chlorodibromomethane	ND	4.00	"	"	"	"	"	"	
Chloroethane	ND	10.0	"	"	"	"	"	"	
2-Chloroethylvinyl ether	ND	10.0	"	"	"	"	"	"	
Chloroform	ND	4.00	"	"	"	"	"	"	
Chloromethane	ND	10.0	"	"	"	"	"	"	
2-Chlorotoluene	ND	10.0	"	"	"	"	"	"	
4-Chlorotoluene	ND	10.0	"	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	ND	10.0	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	4.00	"	"	"	"	"	"	
Dibromomethane	ND	4.00	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	4.00	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	4.00	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	4.00	"	"	"	"	"	"	
trans-1,4-Dichloro-2-butene	ND	10.0	"	"	"	"	"	"	
Dichlorodifluoromethane	ND	10.0	"	"	"	"	"	"	
1,1-Dichloroethane	ND	4.00	"	"	"	"	"	"	
1,2-Dichloroethane	ND	4.00	"	"	"	"	"	"	
1,1-Dichloroethene	ND	4.00	"	"	"	"	"	"	
cis-1,2-Dichloroethene	ND	4.00	"	"	"	"	"	"	
trans-1,2-Dichloroethene	ND	4.00	"	"	"	"	"	"	
1,2-Dichloropropane	ND	4.00	"	"	"	"	"	"	
1,3-Dichloropropane	ND	4.00	"	"	"	"	"	"	
2,2-Dichloropropane	ND	10.0	"	"	"	"	"	"	
1,1-Dichloropropene	ND	10.0	"	"	"	"	"	"	
cis-1,3-Dichloropropene	ND	4.00	"	"	"	"	"	"	

results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Client Name: Kleinfelder, Inc.
Project Name: 44102-002

EMA Log #: 0501269

Volatile Organic Compounds by EPA Method 8260B

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
T1-8-1 (0501269-04) Soil Sampled: 01/25/05 10:38 Received: 01/25/05 16:45									**R-08**
trans-1,3-Dichloropropene	ND	4.00	ug/kg	2	5012701	01/27/05	01/27/05	EPA 8260B	
Diethyl ether	ND	10.0	"	"	"	"	"	"	
Ethylbenzene	ND	4.00	"	"	"	"	"	"	
Hexachlorobutadiene	ND	4.00	"	"	"	"	"	"	
Hexachloroethane	ND	4.00	"	"	"	"	"	"	
2-Hexanone	ND	20.0	"	"	"	"	"	"	
Iodomethane	ND	4.00	"	"	"	"	"	"	
Isopropylbenzene	ND	4.00	"	"	"	"	"	"	
Methylene chloride	ND	10.0	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	4.00	"	"	"	"	"	"	
4-Methyl-2-pentanone	ND	50.0	"	"	"	"	"	"	
Naphthalene	ND	10.0	"	"	"	"	"	"	
n-Propylbenzene	ND	4.00	"	"	"	"	"	"	
Styrene	ND	4.00	"	"	"	"	"	"	
1,1,1,2-Tetrachloroethane	ND	4.00	"	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	ND	10.0	"	"	"	"	"	"	
Tetrachloroethene	ND	4.00	"	"	"	"	"	"	
Toluene	ND	4.00	"	"	"	"	"	"	
1,2,3-Trichlorobenzene	ND	4.00	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	4.00	"	"	"	"	"	"	
1,1,1-Trichloroethane	ND	4.00	"	"	"	"	"	"	
1,1,2-Trichloroethane	ND	10.0	"	"	"	"	"	"	
Trichloroethene	ND	4.00	"	"	"	"	"	"	
Trichlorofluoromethane	ND	10.0	"	"	"	"	"	"	
1,2,3-Trichloropropane	ND	10.0	"	"	"	"	"	"	
1,1,2-Trichlorotrifluoroethane	ND	20.0	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	4.00	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	4.00	"	"	"	"	"	"	
Vinyl acetate	ND	20.0	"	"	"	"	"	"	
Vinyl chloride	ND	10.0	"	"	"	"	"	"	
m,p-Xylene	ND	10.0	"	"	"	"	"	"	
o-Xylene	ND	4.00	"	"	"	"	"	"	
Surrogate: Dibromofluoromethane		*90 %*	*61-141*		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*93 %*	*70-124*		"	"	"	"	
Surrogate: Toluene-d8		*98 %*	*80-121*		"	"	"	"	

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Client Name: Kleinfelder, Inc.
Project Name: 44102-002

EMA Log #: 0501269

Volatile Organic Compounds by EPA Method 8260B

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
T1-8-2 (0501269-05) Soil Sampled: 01/25/05 10:45 Received: 01/25/05 16:45									
Acetone	**138**	50.0	ug/kg	1	5012701	01/27/05	01/27/05	EPA 8260B	
Acetonitrile	ND	50.0	"	"	"	"	"	"	
Acrolein	ND	100	"	"	"	"	"	"	
Acrylonitrile	ND	25.0	"	"	"	"	"	"	
Allyl chloride	ND	5.00	"	"	"	"	"	"	
Benzene	ND	2.00	"	"	"	"	"	"	
Bromobenzene	ND	2.00	"	"	"	"	"	"	
Bromochloromethane	ND	2.00	"	"	"	"	"	"	
Bromodichloromethane	ND	2.00	"	"	"	"	"	"	
Bromoform	ND	2.00	"	"	"	"	"	"	
Bromomethane	ND	5.00	"	"	"	"	"	"	
2-Butanone	ND	50.0	"	"	"	"	"	"	
n-Butylbenzene	ND	2.00	"	"	"	"	"	"	
sec-Butylbenzene	ND	5.00	"	"	"	"	"	"	
tert-Butylbenzene	ND	5.00	"	"	"	"	"	"	
Carbon disulfide	ND	5.00	"	"	"	"	"	"	
Carbon tetrachloride	ND	5.00	"	"	"	"	"	"	
Chlorobenzene	ND	2.00	"	"	"	"	"	"	
Chlorodibromomethane	ND	2.00	"	"	"	"	"	"	
Chloroethane	ND	5.00	"	"	"	"	"	"	
2-Chloroethylvinyl ether	ND	5.00	"	"	"	"	"	"	
Chloroform	ND	2.00	"	"	"	"	"	"	
Chloromethane	ND	5.00	"	"	"	"	"	"	
2-Chlorotoluene	ND	5.00	"	"	"	"	"	"	
4-Chlorotoluene	ND	5.00	"	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	ND	5.00	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	2.00	"	"	"	"	"	"	
Dibromomethane	ND	2.00	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	2.00	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	2.00	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	2.00	"	"	"	"	"	"	
trans-1,4-Dichloro-2-butene	ND	5.00	"	"	"	"	"	"	
Dichlorodifluoromethane	ND	5.00	"	"	"	"	"	"	
1,1-Dichloroethane	ND	2.00	"	"	"	"	"	"	
1,2-Dichloroethane	ND	2.00	"	"	"	"	"	"	
1,1-Dichloroethene	ND	2.00	"	"	"	"	"	"	
cis-1,2-Dichloroethene	ND	2.00	"	"	"	"	"	"	
trans-1,2-Dichloroethene	ND	2.00	"	"	"	"	"	"	
1,2-Dichloropropane	ND	2.00	"	"	"	"	"	"	
1,3-Dichloropropane	ND	2.00	"	"	"	"	"	"	
2,2-Dichloropropane	ND	5.00	"	"	"	"	"	"	
1,1-Dichloropropene	ND	5.00	"	"	"	"	"	"	
cis-1,3-Dichloropropene	ND	2.00	"	"	"	"	"	"	

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Client Name: Kleinfelder, Inc.
Project Name: 44102-002

EMA Log #: 0501269

Volatile Organic Compounds by EPA Method 8260B

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
T1-8-2 (0501269-05) Soil Sampled: 01/25/05 10:45 Received: 01/25/05 16:45									
trans-1,3-Dichloropropene	ND	2.00	ug/kg	1	5012701	01/27/05	01/27/05	EPA 8260B	
Diethyl ether	ND	5.00	"	"	"	"	"	"	
Ethylbenzene	ND	2.00	"	"	"	"	"	"	
Hexachlorobutadiene	ND	2.00	"	"	"	"	"	"	
Hexachloroethane	ND	2.00	"	"	"	"	"	"	
2-Hexanone	ND	10.0	"	"	"	"	"	"	
Iodomethane	ND	2.00	"	"	"	"	"	"	
Isopropylbenzene	ND	2.00	"	"	"	"	"	"	
Methylene chloride	ND	5.00	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	2.00	"	"	"	"	"	"	
4-Methyl-2-pentanone	ND	25.0	"	"	"	"	"	"	
Naphthalene	ND	5.00	"	"	"	"	"	"	
n-Propylbenzene	ND	2.00	"	"	"	"	"	"	
Styrene	ND	2.00	"	"	"	"	"	"	
1,1,1,2-Tetrachloroethane	ND	2.00	"	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	ND	5.00	"	"	"	"	"	"	
Tetrachloroethene	ND	2.00	"	"	"	"	"	"	
Toluene	ND	2.00	"	"	"	"	"	"	
1,2,3-Trichlorobenzene	ND	2.00	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	2.00	"	"	"	"	"	"	
1,1,1-Trichloroethane	ND	2.00	"	"	"	"	"	"	
1,1,2-Trichloroethane	ND	5.00	"	"	"	"	"	"	
Trichloroethene	ND	2.00	"	"	"	"	"	"	
Trichlorofluoromethane	ND	5.00	"	"	"	"	"	"	
1,2,3-Trichloropropane	ND	5.00	"	"	"	"	"	"	
1,1,2-Trichlorotrifluoroethane	ND	10.0	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	2.00	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	2.00	"	"	"	"	"	"	
Vinyl acetate	ND	10.0	"	"	"	"	"	"	
Vinyl chloride	ND	5.00	"	"	"	"	"	"	
m,p-Xylene	ND	5.00	"	"	"	"	"	"	
o-Xylene	ND	2.00	"	"	"	"	"	"	
Surrogate: Dibromofluoromethane		*91 %*	*61-141*		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*92 %*	*70-124*		"	"	"	"	
Surrogate: Toluene-d8		*102 %*	*80-121*		"	"	"	"	

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Client Name: Kleinfelder, Inc.
Project Name: 44102-002

EMA Log #: 0501269

Volatile Organic Compounds by EPA Method 8260B

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
T1-8-3 (0501269-06) Soil Sampled: 01/25/05 11:05 Received: 01/25/05 16:45									
Acetone	**60.6**	50.0	ug/kg	1	5012701	01/27/05	01/27/05	EPA 8260B	
Acetonitrile	ND	50.0	"	"	"	"	"	"	
Acrolein	ND	100	"	"	"	"	"	"	
Acrylonitrile	ND	25.0	"	"	"	"	"	"	
Allyl chloride	ND	5.00	"	"	"	"	"	"	
Benzene	ND	2.00	"	"	"	"	"	"	
Bromobenzene	ND	2.00	"	"	"	"	"	"	
Bromochloromethane	ND	2.00	"	"	"	"	"	"	
Bromodichloromethane	ND	2.00	"	"	"	"	"	"	
Bromoform	ND	2.00	"	"	"	"	"	"	
Bromomethane	ND	5.00	"	"	"	"	"	"	
2-Butanone	ND	50.0	"	"	"	"	"	"	
n-Butylbenzene	ND	2.00	"	"	"	"	"	"	
sec-Butylbenzene	ND	5.00	"	"	"	"	"	"	
tert-Butylbenzene	ND	5.00	"	"	"	"	"	"	
Carbon disulfide	ND	5.00	"	"	"	"	"	"	
Carbon tetrachloride	ND	5.00	"	"	"	"	"	"	
Chlorobenzene	ND	2.00	"	"	"	"	"	"	
Chlorodibromomethane	ND	2.00	"	"	"	"	"	"	
Chloroethane	ND	5.00	"	"	"	"	"	"	
2-Chloroethylvinyl ether	ND	5.00	"	"	"	"	"	"	
Chloroform	ND	2.00	"	"	"	"	"	"	
Chloromethane	ND	5.00	"	"	"	"	"	"	
2-Chlorotoluene	ND	5.00	"	"	"	"	"	"	
4-Chlorotoluene	ND	5.00	"	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	ND	5.00	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	2.00	"	"	"	"	"	"	
Dibromomethane	ND	2.00	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	2.00	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	2.00	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	2.00	"	"	"	"	"	"	
trans-1,4-Dichloro-2-butene	ND	5.00	"	"	"	"	"	"	
Dichlorodifluoromethane	ND	5.00	"	"	"	"	"	"	
1,1-Dichloroethane	ND	2.00	"	"	"	"	"	"	
1,2-Dichloroethane	ND	2.00	"	"	"	"	"	"	
1,1-Dichloroethene	ND	2.00	"	"	"	"	"	"	
cis-1,2-Dichloroethene	ND	2.00	"	"	"	"	"	"	
trans-1,2-Dichloroethene	ND	2.00	"	"	"	"	"	"	
1,2-Dichloropropane	ND	2.00	"	"	"	"	"	"	
1,3-Dichloropropane	ND	2.00	"	"	"	"	"	"	
2,2-Dichloropropane	ND	5.00	"	"	"	"	"	"	
1,1-Dichloropropene	ND	5.00	"	"	"	"	"	"	
cis-1,3-Dichloropropene	ND	2.00	"	"	"	"	"	"	

results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Client Name: Kleinfelder, Inc.
Project Name: 44102-002

EMA Log #: 0501269

Volatile Organic Compounds by EPA Method 8260B

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
T1-8-3 (0501269-06) Soil Sampled: 01/25/05 11:05 Received: 01/25/05 16:45									
trans-1,3-Dichloropropene	ND	2.00	ug/kg	1	5012701	01/27/05	01/27/05	EPA 8260B	
Diethyl ether	ND	5.00	"	"	"	"	"	"	
Ethylbenzene	ND	2.00	"	"	"	"	"	"	
Hexachlorobutadiene	ND	2.00	"	"	"	"	"	"	
Hexachloroethane	ND	2.00	"	"	"	"	"	"	
2-Hexanone	ND	10.0	"	"	"	"	"	"	
Iodomethane	ND	2.00	"	"	"	"	"	"	
Isopropylbenzene	ND	2.00	"	"	"	"	"	"	
Methylene chloride	ND	5.00	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	2.00	"	"	"	"	"	"	
4-Methyl-2-pentanone	ND	25.0	"	"	"	"	"	"	
Naphthalene	ND	5.00	"	"	"	"	"	"	
n-Propylbenzene	ND	2.00	"	"	"	"	"	"	
Styrene	ND	2.00	"	"	"	"	"	"	
1,1,1,2-Tetrachloroethane	ND	2.00	"	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	ND	5.00	"	"	"	"	"	"	
Tetrachloroethene	ND	2.00	"	"	"	"	"	"	
Toluene	ND	2.00	"	"	"	"	"	"	
1,2,3-Trichlorobenzene	ND	2.00	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	2.00	"	"	"	"	"	"	
1,1,1-Trichloroethane	ND	2.00	"	"	"	"	"	"	
1,1,2-Trichloroethane	ND	5.00	"	"	"	"	"	"	
Trichloroethene	ND	2.00	"	"	"	"	"	"	
Trichlorofluoromethane	ND	5.00	"	"	"	"	"	"	
1,2,3-Trichloropropane	ND	5.00	"	"	"	"	"	"	
1,1,2-Trichlorotrifluoroethane	ND	10.0	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	2.00	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	2.00	"	"	"	"	"	"	
Vinyl acetate	ND	10.0	"	"	"	"	"	"	
Vinyl chloride	ND	5.00	"	"	"	"	"	"	
m,p-Xylene	ND	5.00	"	"	"	"	"	"	
o-Xylene	ND	2.00	"	"	"	"	"	"	
Surrogate: Dibromofluoromethane		*92 %*	*61-141*		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*102 %*	*70-124*		"	"	"	"	
Surrogate: Toluene-d8		*103 %*	*80-121*		"	"	"	"	

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Client Name: Kleinfelder, Inc.
Project Name: 44102-002

EMA Log #: 0501269

Volatile Organic Compounds by EPA Method 8260B

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
T1-9-1 (0501269-07) Soil Sampled: 01/25/05 11:23 Received: 01/25/05 16:45									
Acetone	ND	50.0	ug/kg	1	5012701	01/27/05	01/27/05	EPA 8260B	
Acetonitrile	ND	50.0	"	"	"	"	"	"	
Acrolein	ND	100	"	"	"	"	"	"	
Acrylonitrile	ND	25.0	"	"	"	"	"	"	
Allyl chloride	ND	5.00	"	"	"	"	"	"	
Benzene	ND	2.00	"	"	"	"	"	"	
Bromobenzene	ND	2.00	"	"	"	"	"	"	
Bromochloromethane	ND	2.00	"	"	"	"	"	"	
Bromodichloromethane	ND	2.00	"	"	"	"	"	"	
Bromoform	ND	2.00	"	"	"	"	"	"	
Bromomethane	ND	5.00	"	"	"	"	"	"	
2-Butanone	ND	50.0	"	"	"	"	"	"	
n-Butylbenzene	ND	2.00	"	"	"	"	"	"	
sec-Butylbenzene	ND	5.00	"	"	"	"	"	"	
tert-Butylbenzene	ND	5.00	"	"	"	"	"	"	
Carbon disulfide	ND	5.00	"	"	"	"	"	"	
[illegible]bon tetrachloride	ND	5.00	"	"	"	"	"	"	
[illegible]lorobenzene	ND	2.00	"	"	"	"	"	"	
Chlorodibromomethane	ND	2.00	"	"	"	"	"	"	
Chloroethane	ND	5.00	"	"	"	"	"	"	
2-Chloroethylvinyl ether	ND	5.00	"	"	"	"	"	"	
Chloroform	ND	2.00	"	"	"	"	"	"	
Chloromethane	ND	5.00	"	"	"	"	"	"	
2-Chlorotoluene	ND	5.00	"	"	"	"	"	"	
4-Chlorotoluene	ND	5.00	"	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	ND	5.00	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	2.00	"	"	"	"	"	"	
Dibromomethane	ND	2.00	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	2.00	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	2.00	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	2.00	"	"	"	"	"	"	
trans-1,4-Dichloro-2-butene	ND	5.00	"	"	"	"	"	"	
Dichlorodifluoromethane	ND	5.00	"	"	"	"	"	"	
1,1-Dichloroethane	ND	2.00	"	"	"	"	"	"	
1,2-Dichloroethane	ND	2.00	"	"	"	"	"	"	
1,1-Dichloroethene	ND	2.00	"	"	"	"	"	"	
cis-1,2-Dichloroethene	ND	2.00	"	"	"	"	"	"	
trans-1,2-Dichloroethene	ND	2.00	"	"	"	"	"	"	
1,2-Dichloropropane	ND	2.00	"	"	"	"	"	"	
1,3-Dichloropropane	ND	2.00	"	"	"	"	"	"	
2,2-Dichloropropane	ND	5.00	"	"	"	"	"	"	
1,1-Dichloropropene	ND	5.00	"	"	"	"	"	"	
cis-1,3-Dichloropropene	ND	2.00	"	"	"	"	"	"	

[illegible] results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Client Name: Kleinfelder, Inc.
Project Name: 44102-002

EMA Log #: 0501269

Volatile Organic Compounds by EPA Method 8260B

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
T1-9-1 (0501269-07) Soil Sampled: 01/25/05 11:23 Received: 01/25/05 16:45									
trans-1,3-Dichloropropene	ND	2.00	ug/kg	1	5012701	01/27/05	01/27/05	EPA 8260B	
Diethyl ether	ND	5.00	"	"	"	"	"	"	
Ethylbenzene	ND	2.00	"	"	"	"	"	"	
Hexachlorobutadiene	ND	2.00	"	"	"	"	"	"	
Hexachloroethane	ND	2.00	"	"	"	"	"	"	
2-Hexanone	ND	10.0	"	"	"	"	"	"	
Iodomethane	ND	2.00	"	"	"	"	"	"	
Isopropylbenzene	ND	2.00	"	"	"	"	"	"	
Methylene chloride	ND	5.00	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	2.00	"	"	"	"	"	"	
4-Methyl-2-pentanone	ND	25.0	"	"	"	"	"	"	
Naphthalene	ND	5.00	"	"	"	"	"	"	
n-Propylbenzene	ND	2.00	"	"	"	"	"	"	
Styrene	ND	2.00	"	"	"	"	"	"	
1,1,1,2-Tetrachloroethane	ND	2.00	"	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	ND	5.00	"	"	"	"	"	"	
Tetrachloroethene	ND	2.00	"	"	"	"	"	"	
Toluene	ND	2.00	"	"	"	"	"	"	
1,2,3-Trichlorobenzene	ND	2.00	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	2.00	"	"	"	"	"	"	
1,1,1-Trichloroethane	ND	2.00	"	"	"	"	"	"	
1,1,2-Trichloroethane	ND	5.00	"	"	"	"	"	"	
Trichloroethene	ND	2.00	"	"	"	"	"	"	
Trichlorofluoromethane	ND	5.00	"	"	"	"	"	"	
1,2,3-Trichloropropane	ND	5.00	"	"	"	"	"	"	
1,1,2-Trichlorotrifluoroethane	ND	10.0	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	2.00	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	2.00	"	"	"	"	"	"	
Vinyl acetate	ND	10.0	"	"	"	"	"	"	
Vinyl chloride	ND	5.00	"	"	"	"	"	"	
m,p-Xylene	ND	5.00	"	"	"	"	"	"	
o-Xylene	ND	2.00	"	"	"	"	"	"	
Surrogate: Dibromofluoromethane		*102 %*	*61-141*		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*82 %*	*70-124*		"	"	"	"	
Surrogate: Toluene-d8		*99 %*	*80-121*		"	"	"	"	

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Client Name: Kleinfelder, Inc.
Project Name: 44102-002

EMA Log #: 0501269

Volatile Organic Compounds by EPA Method 8260B

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
T1-9-2 (0501269-08) Soil Sampled: 01/25/05 11:30 Received: 01/25/05 16:45									
Acetone	**154**	50.0	ug/kg	1	5012701	01/27/05	01/27/05	EPA 8260B	
Acetonitrile	ND	50.0	"	"	"	"	"	"	
Acrolein	ND	100	"	"	"	"	"	"	
Acrylonitrile	ND	25.0	"	"	"	"	"	"	
Allyl chloride	ND	5.00	"	"	"	"	"	"	
Benzene	ND	2.00	"	"	"	"	"	"	
Bromobenzene	ND	2.00	"	"	"	"	"	"	
Bromochloromethane	ND	2.00	"	"	"	"	"	"	
Bromodichloromethane	ND	2.00	"	"	"	"	"	"	
Bromoform	ND	2.00	"	"	"	"	"	"	
Bromomethane	ND	5.00	"	"	"	"	"	"	
2-Butanone	ND	50.0	"	"	"	"	"	"	
n-Butylbenzene	ND	2.00	"	"	"	"	"	"	
sec-Butylbenzene	ND	5.00	"	"	"	"	"	"	
tert-Butylbenzene	ND	5.00	"	"	"	"	"	"	
Carbon disulfide	ND	5.00	"	"	"	"	"	"	
Carbon tetrachloride	ND	5.00	"	"	"	"	"	"	
Chlorobenzene	ND	2.00	"	"	"	"	"	"	
Chlorodibromomethane	ND	2.00	"	"	"	"	"	"	
Chloroethane	ND	5.00	"	"	"	"	"	"	
2-Chloroethylvinyl ether	ND	5.00	"	"	"	"	"	"	
Chloroform	ND	2.00	"	"	"	"	"	"	
Chloromethane	ND	5.00	"	"	"	"	"	"	
2-Chlorotoluene	ND	5.00	"	"	"	"	"	"	
4-Chlorotoluene	ND	5.00	"	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	ND	5.00	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	2.00	"	"	"	"	"	"	
Dibromomethane	ND	2.00	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	2.00	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	2.00	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	2.00	"	"	"	"	"	"	
trans-1,4-Dichloro-2-butene	ND	5.00	"	"	"	"	"	"	
Dichlorodifluoromethane	ND	5.00	"	"	"	"	"	"	
1,1-Dichloroethane	ND	2.00	"	"	"	"	"	"	
1,2-Dichloroethane	ND	2.00	"	"	"	"	"	"	
1,1-Dichloroethene	ND	2.00	"	"	"	"	"	"	
cis-1,2-Dichloroethene	ND	2.00	"	"	"	"	"	"	
trans-1,2-Dichloroethene	ND	2.00	"	"	"	"	"	"	
1,2-Dichloropropane	ND	2.00	"	"	"	"	"	"	
1,3-Dichloropropane	ND	2.00	"	"	"	"	"	"	
2,2-Dichloropropane	ND	5.00	"	"	"	"	"	"	
1,1-Dichloropropene	ND	5.00	"	"	"	"	"	"	
cis-1,3-Dichloropropene	ND	2.00	"	"	"	"	"	"	

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Client Name: Kleinfelder, Inc.
Project Name: 44102-002

EMA Log #: 0501269

Volatile Organic Compounds by EPA Method 8260B

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
T1-9-2 (0501269-08) Soil Sampled: 01/25/05 11:30 Received: 01/25/05 16:45									
trans-1,3-Dichloropropene	ND	2.00	ug/kg	1	5012701	01/27/05	01/27/05	EPA 8260B	
Diethyl ether	ND	5.00	"	"	"	"	"	"	
Ethylbenzene	ND	2.00	"	"	"	"	"	"	
Hexachlorobutadiene	ND	2.00	"	"	"	"	"	"	
Hexachloroethane	ND	2.00	"	"	"	"	"	"	
2-Hexanone	ND	10.0	"	"	"	"	"	"	
Iodomethane	ND	2.00	"	"	"	"	"	"	
Isopropylbenzene	ND	2.00	"	"	"	"	"	"	
Methylene chloride	ND	5.00	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	2.00	"	"	"	"	"	"	
4-Methyl-2-pentanone	ND	25.0	"	"	"	"	"	"	
Naphthalene	ND	5.00	"	"	"	"	"	"	
n-Propylbenzene	ND	2.00	"	"	"	"	"	"	
Styrene	ND	2.00	"	"	"	"	"	"	
1,1,1,2-Tetrachloroethane	ND	2.00	"	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	ND	5.00	"	"	"	"	"	"	
Tetrachloroethene	ND	2.00	"	"	"	"	"	"	
Toluene	ND	2.00	"	"	"	"	"	"	
1,2,3-Trichlorobenzene	ND	2.00	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	2.00	"	"	"	"	"	"	
1,1,1-Trichloroethane	ND	2.00	"	"	"	"	"	"	
1,1,2-Trichloroethane	ND	5.00	"	"	"	"	"	"	
Trichloroethene	ND	2.00	"	"	"	"	"	"	
Trichlorofluoromethane	ND	5.00	"	"	"	"	"	"	
1,2,3-Trichloropropane	ND	5.00	"	"	"	"	"	"	
1,1,2-Trichlorotrifluoroethane	ND	10.0	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	2.00	"	"	"	"	"	"	
I,3,5-Trimethylbenzene	ND	2.00	"	"	"	"	"	"	
Vinyl acetate	ND	10.0	"	"	"	"	"	"	
Vinyl chloride	ND	5.00	"	"	"	"	"	"	
m,p-Xylene	ND	5.00	"	"	"	"	"	"	
o-Xylene	ND	2.00	"	"	"	"	"	"	
Surrogate: Dibromofluoromethane		*4 %*	*61-141*		"	"	"	"	*S-04*
Surrogate: 4-Bromofluorobenzene		*83 %*	*70-124*		"	"	"	"	
Surrogate: Toluene-d8		*100 %*	*80-121*		"	"	"	"	

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ent Name: Kleinfelder, Inc.
Project Name: 44102-002

EMA Log #: 0501269

Volatile Organic Compounds by EPA Method 8260B

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
T1-9-3 (0501269-09) Soil Sampled: 01/25/05 12:05 Received: 01/25/05 16:45									
Acetone	**72.4**	50.0	ug/kg	1	5012701	01/27/05	01/27/05	EPA 8260B	
Acetonitrile	ND	50.0	"	"	"	"	"	"	
Acrolein	ND	100	"	"	"	"	"	"	
Acrylonitrile	ND	25.0	"	"	"	"	"	"	
Allyl chloride	ND	5.00	"	"	"	"	"	"	
Benzene	ND	2.00	"	"	"	"	"	"	
Bromobenzene	ND	2.00	"	"	"	"	"	"	
Bromochloromethane	ND	2.00	"	"	"	"	"	"	
Bromodichloromethane	ND	2.00	"	"	"	"	"	"	
Bromoform	ND	2.00	"	"	"	"	"	"	
Bromomethane	ND	5.00	"	"	"	"	"	"	
2-Butanone	ND	50.0	"	"	"	"	"	"	
n-Butylbenzene	ND	2.00	"	"	"	"	"	"	
sec-Butylbenzene	ND	5.00	"	"	"	"	"	"	
tert-Butylbenzene	ND	5.00	"	"	"	"	"	"	
Carbon disulfide	ND	5.00	"	"	"	"	"	"	
Carbon tetrachloride	ND	5.00	"	"	"	"	"	"	
Chlorobenzene	ND	2.00	"	"	"	"	"	"	
Chlorodibromomethane	ND	2.00	"	"	"	"	"	"	
Chloroethane	ND	5.00	"	"	"	"	"	"	
2-Chloroethylvinyl ether	ND	5.00	"	"	"	"	"	"	
Chloroform	ND	2.00	"	"	"	"	"	"	
Chloromethane	ND	5.00	"	"	"	"	"	"	
2-Chlorotoluene	ND	5.00	"	"	"	"	"	"	
4-Chlorotoluene	ND	5.00	"	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	ND	5.00	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	2.00	"	"	"	"	"	"	
Dibromomethane	ND	2.00	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	2.00	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	2.00	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	2.00	"	"	"	"	"	"	
trans-1,4-Dichloro-2-butene	ND	5.00	"	"	"	"	"	"	
Dichlorodifluoromethane	ND	5.00	"	"	"	"	"	"	
1,1-Dichloroethane	ND	2.00	"	"	"	"	"	"	
1,2-Dichloroethane	ND	2.00	"	"	"	"	"	"	
1,1-Dichloroethene	ND	2.00	"	"	"	"	"	"	
cis-1,2-Dichloroethene	ND	2.00	"	"	"	"	"	"	
trans-1,2-Dichloroethene	ND	2.00	"	"	"	"	"	"	
1,2-Dichloropropane	ND	2.00	"	"	"	"	"	"	
1,3-Dichloropropane	ND	2.00	"	"	"	"	"	"	
2,2-Dichloropropane	ND	5.00	"	"	"	"	"	"	
1,1-Dichloropropene	ND	5.00	"	"	"	"	"	"	
cis-1,3-Dichloropropene	ND	2.00	"	"	"	"	"	"	

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Client Name: Kleinfelder, Inc.
Project Name: 44102-002

EMA Log #: 0501269

Volatile Organic Compounds by EPA Method 8260B

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
T1-9-3 (0501269-09) Soil Sampled: 01/25/05 12:05 Received: 01/25/05 16:45									
trans-1,3-Dichloropropene	ND	2.00	ug/kg	1	5012701	01/27/05	01/27/05	EPA 8260B	
Diethyl ether	ND	5.00	"	"	"	"	"	"	
Ethylbenzene	ND	2.00	"	"	"	"	"	"	
Hexachlorobutadiene	ND	2.00	"	"	"	"	"	"	
Hexachloroethane	ND	2.00	"	"	"	"	"	"	
2-Hexanone	ND	10.0	"	"	"	"	"	"	
Iodomethane	ND	2.00	"	"	"	"	"	"	
Isopropylbenzene	ND	2.00	"	"	"	"	"	"	
Methylene chloride	ND	5.00	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	2.00	"	"	"	"	"	"	
4-Methyl-2-pentanone	ND	25.0	"	"	"	"	"	"	
Naphthalene	**6.02**	5.00	"	"	"	"	"	"	
n-Propylbenzene	ND	2.00	"	"	"	"	"	"	
Styrene	ND	2.00	"	"	"	"	"	"	
1,1,1,2-Tetrachloroethane	ND	2.00	"	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	ND	5.00	"	"	"	"	"	"	
Tetrachloroethene	ND	2.00	"	"	"	"	"	"	
Toluene	ND	2.00	"	"	"	"	"	"	
1,2,3-Trichlorobenzene	ND	2.00	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	2.00	"	"	"	"	"	"	
1,1,1-Trichloroethane	ND	2.00	"	"	"	"	"	"	
1,1,2-Trichloroethane	ND	5.00	"	"	"	"	"	"	
Trichloroethene	ND	2.00	"	"	"	"	"	"	
Trichlorofluoromethane	ND	5.00	"	"	"	"	"	"	
1,2,3-Trichloropropane	ND	5.00	"	"	"	"	"	"	
1,1,2-Trichlorotrifluoroethane	ND	10.0	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	**4.50**	2.00	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	2.00	"	"	"	"	"	"	
Vinyl acetate	ND	10.0	"	"	"	"	"	"	
Vinyl chloride	ND	5.00	"	"	"	"	"	"	
m,p-Xylene	ND	5.00	"	"	"	"	"	"	
o-Xylene	ND	2.00	"	"	"	"	"	"	
Surrogate: Dibromofluoromethane		*3 %*	*61-141*		"	"	"	"	*S-04*
Surrogate: 4-Bromofluorobenzene		*92 %*	*70-124*		"	"	"	"	
Surrogate: Toluene-d8		*97 %*	*80-121*		"	"	"	"	

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Client Name: Kleinfelder, Inc.
Project Name: 44102-002

EMA Log #: 0501269

Volatile Organic Compounds by EPA Method 8260B

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
T1-10-1 (0501269-10) Soil Sampled: 01/25/05 13:13 Received: 01/25/05 16:45									
Acetone	ND	50.0	ug/kg	1	5012715	01/27/05	01/28/05	EPA 8260B	
Acetonitrile	ND	50.0	"	"	"	"	"	"	
Acrolein	ND	100	"	"	"	"	"	"	
Acrylonitrile	ND	25.0	"	"	"	"	"	"	
Allyl chloride	ND	5.00	"	"	"	"	"	"	
Benzene	ND	2.00	"	"	"	"	"	"	
Bromobenzene	ND	2.00	"	"	"	"	"	"	
Bromochloromethane	ND	2.00	"	"	"	"	"	"	
Bromodichloromethane	ND	2.00	"	"	"	"	"	"	
Bromoform	ND	2.00	"	"	"	"	"	"	
Bromomethane	ND	5.00	"	"	"	"	"	"	
2-Butanone	ND	50.0	"	"	"	"	"	"	
n-Butylbenzene	ND	2.00	"	"	"	"	"	"	
sec-Butylbenzene	ND	5.00	"	"	"	"	"	"	
tert-Butylbenzene	ND	5.00	"	"	"	"	"	"	
Carbon disulfide	ND	5.00	"	"	"	"	"	"	
Carbon tetrachloride	ND	5.00	"	"	"	"	"	"	
Chlorobenzene	ND	2.00	"	"	"	"	"	"	
Chlorodibromomethane	ND	2.00	"	"	"	"	"	"	
Chloroethane	ND	5.00	"	"	"	"	"	"	
2-Chloroethylvinyl ether	ND	5.00	"	"	"	"	"	"	
Chloroform	ND	2.00	"	"	"	"	"	"	
Chloromethane	ND	5.00	"	"	"	"	"	"	
2-Chlorotoluene	ND	5.00	"	"	"	"	"	"	
4-Chlorotoluene	ND	5.00	"	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	ND	5.00	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	2.00	"	"	"	"	"	"	
Dibromomethane	ND	2.00	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	2.00	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	2.00	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	2.00	"	"	"	"	"	"	
trans-1,4-Dichloro-2-butene	ND	5.00	"	"	"	"	"	"	
Dichlorodifluoromethane	ND	5.00	"	"	"	"	"	"	
1,1-Dichloroethane	ND	2.00	"	"	"	"	"	"	
1,2-Dichloroethane	ND	2.00	"	"	"	"	"	"	
1,1-Dichloroethene	ND	2.00	"	"	"	"	"	"	
cis-1,2-Dichloroethene	ND	2.00	"	"	"	"	"	"	
trans-1,2-Dichloroethene	ND	2.00	"	"	"	"	"	"	
1,2-Dichloropropane	ND	2.00	"	"	"	"	"	"	
1,3-Dichloropropane	ND	2.00	"	"	"	"	"	"	
2,2-Dichloropropane	ND	5.00	"	"	"	"	"	"	
1,1-Dichloropropene	ND	5.00	"	"	"	"	"	"	
cis-1,3-Dichloropropene	ND	2.00	"	"	"	"	"	"	

Results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Client Name: Kleinfelder, Inc.
Project Name: 44102-002

EMA Log #: 0501269

Volatile Organic Compounds by EPA Method 8260B

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
T1-10-1 (0501269-10) Soil Sampled: 01/25/05 13:13 Received: 01/25/05 16:45									
trans-1,3-Dichloropropene	ND	2.00	ug/kg	1	5012715	01/27/05	01/28/05	EPA 8260B	
Diethyl ether	ND	5.00	"	"	"	"	"	"	
Ethylbenzene	ND	2.00	"	"	"	"	"	"	
Hexachlorobutadiene	ND	2.00	"	"	"	"	"	"	
Hexachloroethane	ND	2.00	"	"	"	"	"	"	
2-Hexanone	ND	10.0	"	"	"	"	"	"	
Iodomethane	ND	2.00	"	"	"	"	"	"	
Isopropylbenzene	ND	2.00	"	"	"	"	"	"	
Methylene chloride	ND	5.00	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	2.00	"	"	"	"	"	"	
4-Methyl-2-pentanone	ND	25.0	"	"	"	"	"	"	
Naphthalene	ND	5.00	"	"	"	"	"	"	
n-Propylbenzene	ND	2.00	"	"	"	"	"	"	
Styrene	ND	2.00	"	"	"	"	"	"	
1,1,1,2-Tetrachloroethane	ND	2.00	"	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	ND	5.00	"	"	"	"	"	"	
Tetrachloroethene	ND	2.00	"	"	"	"	"	"	
Toluene	ND	2.00	"	"	"	"	"	"	
1,2,3-Trichlorobenzene	ND	2.00	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	2.00	"	"	"	"	"	"	
1,1,1-Trichloroethane	ND	2.00	"	"	"	"	"	"	
1,1,2-Trichloroethane	ND	5.00	"	"	"	"	"	"	
Trichloroethene	ND	2.00	"	"	"	"	"	"	
Trichlorofluoromethane	ND	5.00	"	"	"	"	"	"	
1,2,3-Trichloropropane	ND	5.00	"	"	"	"	"	"	
1,1,2-Trichlorotrifluoroethane	ND	10.0	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	2.00	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	2.00	"	"	"	"	"	"	
Vinyl acetate	ND	10.0	"	"	"	"	"	"	
Vinyl chloride	ND	5.00	"	"	"	"	"	"	
m,p-Xylene	ND	5.00	"	"	"	"	"	"	
o-Xylene	ND	2.00	"	"	"	"	"	"	
Surrogate: Dibromofluoromethane		*114 %*	*61-141*		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*82 %*	*70-124*		"	"	"	"	
Surrogate: Toluene-d8		*90 %*	*80-121*		"	"	"	"	

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Client Name: Kleinfelder, Inc.
Project Name: 44102-002

EMA Log #: 0501269

Volatile Organic Compounds by EPA Method 8260B

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
T1-10-2 (0501269-11) Soil Sampled: 01/25/05 13:26 Received: 01/25/05 16:45									
Acetone	ND	50.0	ug/kg	1	5012715	01/27/05	01/28/05	EPA 8260B	
Acetonitrile	ND	50.0	"	"	"	"	"	"	
Acrolein	ND	100	"	"	"	"	"	"	
Acrylonitrile	ND	25.0	"	"	"	"	"	"	
Allyl chloride	ND	5.00	"	"	"	"	"	"	
Benzene	ND	2.00	"	"	"	"	"	"	
Bromobenzene	ND	2.00	"	"	"	"	"	"	
Bromochloromethane	ND	2.00	"	"	"	"	"	"	
Bromodichloromethane	ND	2.00	"	"	"	"	"	"	
Bromoform	ND	2.00	"	"	"	"	"	"	
Bromomethane	ND	5.00	"	"	"	"	"	"	
2-Butanone	ND	50.0	"	"	"	"	"	"	
n-Butylbenzene	ND	2.00	"	"	"	"	"	"	
sec-Butylbenzene	ND	5.00	"	"	"	"	"	"	
tert-Butylbenzene	ND	5.00	"	"	"	"	"	"	
Carbon disulfide	ND	5.00	"	"	"	"	"	"	
Carbon tetrachloride	ND	5.00	"	"	"	"	"	"	
Chlorobenzene	ND	2.00	"	"	"	"	"	"	
Chlorodibromomethane	ND	2.00	"	"	"	"	"	"	
Chloroethane	ND	5.00	"	"	"	"	"	"	
2-Chloroethylvinyl ether	ND	5.00	"	"	"	"	"	"	
Chloroform	ND	2.00	"	"	"	"	"	"	
Chloromethane	ND	5.00	"	"	"	"	"	"	
2-Chlorotoluene	ND	5.00	"	"	"	"	"	"	
4-Chlorotoluene	ND	5.00	"	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	ND	5.00	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	2.00	"	"	"	"	"	"	
Dibromomethane	ND	2.00	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	2.00	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	2.00	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	2.00	"	"	"	"	"	"	
trans-1,4-Dichloro-2-butene	ND	5.00	"	"	"	"	"	"	
Dichlorodifluoromethane	ND	5.00	"	"	"	"	"	"	
1,1-Dichloroethane	ND	2.00	"	"	"	"	"	"	
1,2-Dichloroethane	ND	2.00	"	"	"	"	"	"	
1,1-Dichloroethene	ND	2.00	"	"	"	"	"	"	
cis-1,2-Dichloroethene	ND	2.00	"	"	"	"	"	"	
trans-1,2-Dichloroethene	ND	2.00	"	"	"	"	"	"	
1,2-Dichloropropane	ND	2.00	"	"	"	"	"	"	
1,3-Dichloropropane	ND	2.00	"	"	"	"	"	"	
2,2-Dichloropropane	ND	5.00	"	"	"	"	"	"	
1,1-Dichloropropene	ND	5.00	"	"	"	"	"	"	
cis-1,3-Dichloropropene	ND	2.00	"	"	"	"	"	"	

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Client Name: Kleinfelder, Inc.
Project Name: 44102-002

EMA Log #: 0501269

Volatile Organic Compounds by EPA Method 8260B

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
T1-10-2 (0501269-11) Soil	**Sampled: 01/25/05 13:26**	**Received: 01/25/05 16:45**							
trans-1,3-Dichloropropene	ND	2.00	ug/kg	1	5012715	01/27/05	01/28/05	EPA 8260B	
Diethyl ether	ND	5.00	"	"	"	"	"	"	
Ethylbenzene	ND	2.00	"	"	"	"	"	"	
Hexachlorobutadiene	ND	2.00	"	"	"	"	"	"	
Hexachloroethane	ND	2.00	"	"	"	"	"	"	
2-Hexanone	ND	10.0	"	"	"	"	"	"	
Iodomethane	ND	2.00	"	"	"	"	"	"	
Isopropylbenzene	ND	2.00	"	"	"	"	"	"	
Methylene chloride	ND	5.00	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	2.00	"	"	"	"	"	"	
4-Methyl-2-pentanone	ND	25.0	"	"	"	"	"	"	
Naphthalene	**7.20**	5.00	"	"	"	"	"	"	
n-Propylbenzene	ND	2.00	"	"	"	"	"	"	
Styrene	ND	2.00	"	"	"	"	"	"	
1,1,1,2-Tetrachloroethane	ND	2.00	"	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	ND	5.00	"	"	"	"	"	"	
Tetrachloroethene	ND	2.00	"	"	"	"	"	"	
Toluene	ND	2.00	"	"	"	"	"	"	
1,2,3-Trichlorobenzene	ND	2.00	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	2.00	"	"	"	"	"	"	
1,1,1-Trichloroethane	ND	2.00	"	"	"	"	"	"	
1,1,2-Trichloroethane	ND	5.00	"	"	"	"	"	"	
Trichloroethene	ND	2.00	"	"	"	"	"	"	
Trichlorofluoromethane	ND	5.00	"	"	"	"	"	"	
1,2,3-Trichloropropane	ND	5.00	"	"	"	"	"	"	
1,1,2-Trichlorotrifluoroethane	ND	10.0	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	**7.38**	2.00	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	**3.80**	2.00	"	"	"	"	"	"	
Vinyl acetate	ND	10.0	"	"	"	"	"	"	
Vinyl chloride	ND	5.00	"	"	"	"	"	"	
m,p-Xylene	**8.45**	5.00	"	"	"	"	"	"	
o-Xylene	**5.00**	2.00	"	"	"	"	"	"	
Surrogate: Dibromofluoromethane		*8 %*	*61-141*		"	"	"	"	*S-04*
Surrogate: 4-Bromofluorobenzene		*80 %*	*70-124*		"	"	"	"	
Surrogate: Toluene-d8		*96 %*	*80-121*		"	"	"	"	

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Client Name: Kleinfelder, Inc.
Project Name: 44102-002

EMA Log #: 0501269

Volatile Organic Compounds by EPA Method 8260B

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
T1-10-3 (0501269-12) Soil Sampled: 01/25/05 13:45 Received: 01/25/05 16:45									
Acetone	ND	50.0	ug/kg	1	5012715	01/27/05	01/28/05	EPA 8260B	
Acetonitrile	ND	50.0	"	"	"	"	"	"	
Acrolein	ND	100	"	"	"	"	"	"	
Acrylonitrile	ND	25.0	"	"	"	"	"	"	
Allyl chloride	ND	5.00	"	"	"	"	"	"	
Benzene	ND	2.00	"	"	"	"	"	"	
Bromobenzene	ND	2.00	"	"	"	"	"	"	
Bromochloromethane	ND	2.00	"	"	"	"	"	"	
Bromodichloromethane	ND	2.00	"	"	"	"	"	"	
Bromoform	ND	2.00	"	"	"	"	"	"	
Bromomethane	ND	5.00	"	"	"	"	"	"	
2-Butanone	ND	50.0	"	"	"	"	"	"	
n-Butylbenzene	ND	2.00	"	"	"	"	"	"	
sec-Butylbenzene	ND	5.00	"	"	"	"	"	"	
tert-Butylbenzene	ND	5.00	"	"	"	"	"	"	
Carbon disulfide	ND	5.00	"	"	"	"	"	"	
Carbon tetrachloride	ND	5.00	"	"	"	"	"	"	
Chlorobenzene	ND	2.00	"	"	"	"	"	"	
Chlorodibromomethane	ND	2.00	"	"	"	"	"	"	
Chloroethane	ND	5.00	"	"	"	"	"	"	
2-Chloroethylvinyl ether	ND	5.00	"	"	"	"	"	"	
Chloroform	ND	2.00	"	"	"	"	"	"	
Chloromethane	ND	5.00	"	"	"	"	"	"	
2-Chlorotoluene	ND	5.00	"	"	"	"	"	"	
4-Chlorotoluene	ND	5.00	"	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	ND	5.00	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	2.00	"	"	"	"	"	"	
Dibromomethane	ND	2.00	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	2.00	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	2.00	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	2.00	"	"	"	"	"	"	
trans-1,4-Dichloro-2-butene	ND	5.00	"	"	"	"	"	"	
Dichlorodifluoromethane	ND	5.00	"	"	"	"	"	"	
1,1-Dichloroethane	ND	2.00	"	"	"	"	"	"	
1,2-Dichloroethane	ND	2.00	"	"	"	"	"	"	
1,1-Dichloroethene	ND	2.00	"	"	"	"	"	"	
cis-1,2-Dichloroethene	ND	2.00	"	"	"	"	"	"	
trans-1,2-Dichloroethene	ND	2.00	"	"	"	"	"	"	
1,2-Dichloropropane	ND	2.00	"	"	"	"	"	"	
1,3-Dichloropropane	ND	2.00	"	"	"	"	"	"	
2,2-Dichloropropane	ND	5.00	"	"	"	"	"	"	
1,1-Dichloropropene	ND	5.00	"	"	"	"	"	"	
cis-1,3-Dichloropropene	ND	2.00	"	"	"	"	"	"	

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Client Name: Kleinfelder, Inc.
Project Name: 44102-002

EMA Log #: 0501269

Volatile Organic Compounds by EPA Method 8260B

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
T1-10-3 (0501269-12) Soil Sampled: 01/25/05 13:45 Received: 01/25/05 16:45									
trans-1,3-Dichloropropene	ND	2.00	ug/kg	1	5012715	01/27/05	01/28/05	EPA 8260B	
Diethyl ether	ND	5.00	"	"	"	"	"	"	
Ethylbenzene	ND	2.00	"	"	"	"	"	"	
Hexachlorobutadiene	ND	2.00	"	"	"	"	"	"	
Hexachloroethane	ND	2.00	"	"	"	"	"	"	
2-Hexanone	ND	10.0	"	"	"	"	"	"	
Iodomethane	ND	2.00	"	"	"	"	"	"	
Isopropylbenzene	ND	2.00	"	"	"	"	"	"	
Methylene chloride	ND	5.00	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	2.00	"	"	"	"	"	"	
4-Methyl-2-pentanone	ND	25.0	"	"	"	"	"	"	
Naphthalene	**82.0**	5.00	"	"	"	"	"	"	
n-Propylbenzene	ND	2.00	"	"	"	"	"	"	
Styrene	ND	2.00	"	"	"	"	"	"	
1,1,1,2-Tetrachloroethane	ND	2.00	"	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	ND	5.00	"	"	"	"	"	"	
Tetrachloroethene	ND	2.00	"	"	"	"	"	"	
Toluene	ND	2.00	"	"	"	"	"	"	
1,2,3-Trichlorobenzene	ND	2.00	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	2.00	"	"	"	"	"	"	
1,1,1-Trichloroethane	ND	2.00	"	"	"	"	"	"	
1,1,2-Trichloroethane	ND	5.00	"	"	"	"	"	"	
Trichloroethene	ND	2.00	"	"	"	"	"	"	
Trichlorofluoromethane	ND	5.00	"	"	"	"	"	"	
1,2,3-Trichloropropane	ND	5.00	"	"	"	"	"	"	
1,1,2-Trichlorotrifluoroethane	ND	10.0	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	**3.65**	2.00	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	2.00	"	"	"	"	"	"	
Vinyl acetate	ND	10.0	"	"	"	"	"	"	
Vinyl chloride	ND	5.00	"	"	"	"	"	"	
m,p-Xylene	ND	5.00	"	"	"	"	"	"	
o-Xylene	ND	2.00	"	"	"	"	"	"	
Surrogate: Dibromofluoromethane		*87 %*	*61-141*		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*65 %*	*70-124*		"	"	"	"	*S-04*
Surrogate: Toluene-d8		*85 %*	*80-121*		"	"	"	"	

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ient Name: Kleinfelder, Inc.
Project Name: 44102-002

EMA Log #: 0501269

Volatile Organic Compounds by EPA Method 8260B

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
T1-11-1 (0501269-13) Soil Sampled: 01/25/05 14:07 Received: 01/25/05 16:45									
Acetone	ND	50.0	ug/kg	1	5012715	01/27/05	01/28/05	EPA 8260B	
Acetonitrile	ND	50.0	"	"	"	"	"	"	
Acrolein	ND	100	"	"	"	"	"	"	
Acrylonitrile	ND	25.0	"	"	"	"	"	"	
Allyl chloride	ND	5.00	"	"	"	"	"	"	
Benzene	ND	2.00	"	"	"	"	"	"	
Bromobenzene	ND	2.00	"	"	"	"	"	"	
Bromochloromethane	ND	2.00	"	"	"	"	"	"	
Bromodichloromethane	ND	2.00	"	"	"	"	"	"	
Bromoform	ND	2.00	"	"	"	"	"	"	
Bromomethane	ND	5.00	"	"	"	"	"	"	
2-Butanone	ND	50.0	"	"	"	"	"	"	
n-Butylbenzene	ND	2.00	"	"	"	"	"	"	
sec-Butylbenzene	ND	5.00	"	"	"	"	"	"	
tert-Butylbenzene	ND	5.00	"	"	"	"	"	"	
Carbon disulfide	ND	5.00	"	"	"	"	"	"	
[C]arbon tetrachloride	ND	5.00	"	"	"	"	"	"	
[C]hlorobenzene	ND	2.00	"	"	"	"	"	"	
Chlorodibromomethane	ND	2.00	"	"	"	"	"	"	
Chloroethane	ND	5.00	"	"	"	"	"	"	
2-Chloroethylvinyl ether	ND	5.00	"	"	"	"	"	"	
Chloroform	ND	2.00	"	"	"	"	"	"	
Chloromethane	ND	5.00	"	"	"	"	"	"	
2-Chlorotoluene	ND	5.00	"	"	"	"	"	"	
4-Chlorotoluene	ND	5.00	"	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	ND	5.00	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	2.00	"	"	"	"	"	"	
Dibromomethane	ND	2.00	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	2.00	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	2.00	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	2.00	"	"	"	"	"	"	
trans-1,4-Dichloro-2-butene	ND	5.00	"	"	"	"	"	"	
Dichlorodifluoromethane	ND	5.00	"	"	"	"	"	"	
1,1-Dichloroethane	ND	2.00	"	"	"	"	"	"	
1,2-Dichloroethane	ND	2.00	"	"	"	"	"	"	
1,1-Dichloroethene	ND	2.00	"	"	"	"	"	"	
cis-1,2-Dichloroethene	ND	2.00	"	"	"	"	"	"	
trans-1,2-Dichloroethene	ND	2.00	"	"	"	"	"	"	
1,2-Dichloropropane	ND	2.00	"	"	"	"	"	"	
1,3-Dichloropropane	ND	2.00	"	"	"	"	"	"	
2,2-Dichloropropane	ND	5.00	"	"	"	"	"	"	
1,1-Dichloropropene	ND	5.00	"	"	"	"	"	"	
cis-1,3-Dichloropropene	ND	2.00	"	"	"	"	"	"	

[R]esults in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Client Name: Kleinfelder, Inc.
Project Name: 44102-002

EMA Log #: 0501269

Volatile Organic Compounds by EPA Method 8260B

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
T1-11-1 (0501269-13) Soil	**Sampled: 01/25/05 14:07**	**Received: 01/25/05 16:45**							
trans-1,3-Dichloropropene	ND	2.00	ug/kg	1	5012715	01/27/05	01/28/05	EPA 8260B	
Diethyl ether	ND	5.00	"	"	"	"	"	"	
Ethylbenzene	ND	2.00	"	"	"	"	"	"	
Hexachlorobutadiene	ND	2.00	"	"	"	"	"	"	
Hexachloroethane	ND	2.00	"	"	"	"	"	"	
2-Hexanone	ND	10.0	"	"	"	"	"	"	
Iodomethane	ND	2.00	"	"	"	"	"	"	
Isopropylbenzene	ND	2.00	"	"	"	"	"	"	
Methylene chloride	ND	5.00	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	2.00	"	"	"	"	"	"	
4-Methyl-2-pentanone	ND	25.0	"	"	"	"	"	"	
Naphthalene	ND	5.00	"	"	"	"	"	"	
n-Propylbenzene	ND	2.00	"	"	"	"	"	"	
Styrene	ND	2.00	"	"	"	"	"	"	
1,1,1,2-Tetrachloroethane	ND	2.00	"	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	ND	5.00	"	"	"	"	"	"	
Tetrachloroethene	ND	2.00	"	"	"	"	"	"	
Toluene	ND	2.00	"	"	"	"	"	"	
1,2,3-Trichlorobenzene	ND	2.00	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	2.00	"	"	"	"	"	"	
1,1,1-Trichloroethane	ND	2.00	"	"	"	"	"	"	
1,1,2-Trichloroethane	ND	5.00	"	"	"	"	"	"	
Trichloroethene	ND	2.00	"	"	"	"	"	"	
Trichlorofluoromethane	ND	5.00	"	"	"	"	"	"	
1,2,3-Trichloropropane	ND	5.00	"	"	"	"	"	"	
1,1,2-Trichlorotrifluoroethane	ND	10.0	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	2.00	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	2.00	"	"	"	"	"	"	
Vinyl acetate	ND	10.0	"	"	"	"	"	"	
Vinyl chloride	ND	5.00	"	"	"	"	"	"	
m,p-Xylene	ND	5.00	"	"	"	"	"	"	
o-Xylene	ND	2.00	"	"	"	"	"	"	
Surrogate: Dibromofluoromethane		*120 %*	*61-141*		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*74 %*	*70-124*		"	"	"	"	
Surrogate: Toluene-d8		*91 %*	*80-121*		"	"	"	"	

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Client Name: Kleinfelder, Inc.
Project Name: 44102-002

EMA Log #: 0501269

Volatile Organic Compounds by EPA Method 8260B

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
T1-11-2 (0501269-14) Soil Sampled: 01/25/05 14:25 Received: 01/25/05 16:45									
Acetone	**57.2**	50.0	ug/kg	1	5012715	01/27/05	01/28/05	EPA 8260B	
Acetonitrile	ND	50.0	"	"	"	"	"	"	
Acrolein	ND	100	"	"	"	"	"	"	
Acrylonitrile	ND	25.0	"	"	"	"	"	"	
Allyl chloride	ND	5.00	"	"	"	"	"	"	
Benzene	ND	2.00	"	"	"	"	"	"	
Bromobenzene	ND	2.00	"	"	"	"	"	"	
Bromochloromethane	ND	2.00	"	"	"	"	"	"	
Bromodichloromethane	ND	2.00	"	"	"	"	"	"	
Bromoform	ND	2.00	"	"	"	"	"	"	
Bromomethane	ND	5.00	"	"	"	"	"	"	
2-Butanone	ND	50.0	"	"	"	"	"	"	
n-Butylbenzene	ND	2.00	"	"	"	"	"	"	
sec-Butylbenzene	ND	5.00	"	"	"	"	"	"	
tert-Butylbenzene	ND	5.00	"	"	"	"	"	"	
Carbon disulfide	ND	5.00	"	"	"	"	"	"	
Carbon tetrachloride	ND	5.00	"	"	"	"	"	"	
Chlorobenzene	ND	2.00	"	"	"	"	"	"	
Chlorodibromomethane	ND	2.00	"	"	"	"	"	"	
Chloroethane	ND	5.00	"	"	"	"	"	"	
2-Chloroethylvinyl ether	ND	5.00	"	"	"	"	"	"	
Chloroform	ND	2.00	"	"	"	"	"	"	
Chloromethane	ND	5.00	"	"	"	"	"	"	
2-Chlorotoluene	ND	5.00	"	"	"	"	"	"	
4-Chlorotoluene	ND	5.00	"	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	ND	5.00	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	2.00	"	"	"	"	"	"	
Dibromomethane	ND	2.00	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	2.00	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	2.00	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	2.00	"	"	"	"	"	"	
trans-1,4-Dichloro-2-butene	ND	5.00	"	"	"	"	"	"	
Dichlorodifluoromethane	ND	5.00	"	"	"	"	"	"	
1,1-Dichloroethane	ND	2.00	"	"	"	"	"	"	
1,2-Dichloroethane	ND	2.00	"	"	"	"	"	"	
1,1-Dichloroethene	ND	2.00	"	"	"	"	"	"	
cis-1,2-Dichloroethene	ND	2.00	"	"	"	"	"	"	
trans-1,2-Dichloroethene	ND	2.00	"	"	"	"	"	"	
1,2-Dichloropropane	ND	2.00	"	"	"	"	"	"	
1,3-Dichloropropane	ND	2.00	"	"	"	"	"	"	
2,2-Dichloropropane	ND	5.00	"	"	"	"	"	"	
1,1-Dichloropropene	ND	5.00	"	"	"	"	"	"	
cis-1,3-Dichloropropene	ND	2.00	"	"	"	"	"	"	

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Client Name: Kleinfelder, Inc.
Project Name: 44102-002

EMA Log #: 0501269

Volatile Organic Compounds by EPA Method 8260B

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
T1-11-2 (0501269-14) Soil	**Sampled: 01/25/05 14:25**	**Received: 01/25/05 16:45**							
trans-1,3-Dichloropropene	ND	2.00	ug/kg	1	5012715	01/27/05	01/28/05	EPA 8260B	
Diethyl ether	ND	5.00	"	"	"	"	"	"	
Ethylbenzene	ND	2.00	"	"	"	"	"	"	
Hexachlorobutadiene	ND	2.00	"	"	"	"	"	"	
Hexachloroethane	ND	2.00	"	"	"	"	"	"	
2-Hexanone	ND	10.0	"	"	"	"	"	"	
Iodomethane	ND	2.00	"	"	"	"	"	"	
Isopropylbenzene	ND	2.00	"	"	"	"	"	"	
Methylene chloride	ND	5.00	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	2.00	"	"	"	"	"	"	
4-Methyl-2-pentanone	ND	25.0	"	"	"	"	"	"	
Naphthalene	ND	5.00	"	"	"	"	"	"	
n-Propylbenzene	ND	2.00	"	"	"	"	"	"	
Styrene	ND	2.00	"	"	"	"	"	"	
1,1,1,2-Tetrachloroethane	ND	2.00	"	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	ND	5.00	"	"	"	"	"	"	
Tetrachloroethene	ND	2.00	"	"	"	"	"	"	
Toluene	ND	2.00	"	"	"	"	"	"	
1,2,3-Trichlorobenzene	ND	2.00	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	2.00	"	"	"	"	"	"	
1,1,1-Trichloroethane	ND	2.00	"	"	"	"	"	"	
1,1,2-Trichloroethane	ND	5.00	"	"	"	"	"	"	
Trichloroethene	ND	2.00	"	"	"	"	"	"	
Trichlorofluoromethane	ND	5.00	"	"	"	"	"	"	
1,2,3-Trichloropropane	ND	5.00	"	"	"	"	"	"	
1,1,2-Trichlorotrifluoroethane	ND	10.0	"	"	"	"	"	"	
1,2,4-Trimethylhenzene	ND	2.00	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	2.00	"	"	"	"	"	"	
Vinyl acetate	ND	10.0	"	"	"	"	"	"	
Vinyl chloride	ND	5.00	"	"	"	"	"	"	
m,p-Xylene	ND	5.00	"	"	"	"	"	"	
o-Xylene	ND	2.00	"	"	"	"	"	"	
Surrogate: Dibromofluoromethane		*110 %*	*61-141*		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*90 %*	*70-124*		"	"	"	"	
Surrogate: Toluene-d8		*100 %*	*80-121*		"	"	"	"	

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ient Name: Kleinfelder, Inc.
Project Name: 44102-002

EMA Log #: 0501269

Volatile Organic Compounds by EPA Method 8260B

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
T1-11-3 (0501269-15) Soil Sampled: 01/25/05 14:40 Received: 01/25/05 16:45									
Acetone	**63.2**	50.0	ug/kg	1	5012715	01/27/05	01/28/05	EPA 8260B	
Acetonitrile	ND	50.0	"	"	"	"	"	"	
Acrolein	ND	100	"	"	"	"	"	"	
Acrylonitrile	ND	25.0	"	"	"	"	"	"	
Allyl chloride	ND	5.00	"	"	"	"	"	"	
Benzene	ND	2.00	"	"	"	"	"	"	
Bromobenzene	ND	2.00	"	"	"	"	"	"	
Bromochloromethane	ND	2.00	"	"	"	"	"	"	
Bromodichloromethane	ND	2.00	"	"	"	"	"	"	
Bromoform	ND	2.00	"	"	"	"	"	"	
Bromomethane	ND	5.00	"	"	"	"	"	"	
2-Butanone	ND	50.0	"	"	"	"	"	"	
n-Butylbenzene	ND	2.00	"	"	"	"	"	"	
sec-Butylbenzene	ND	5.00	"	"	"	"	"	"	
tert-Butylbenzene	ND	5.00	"	"	"	"	"	"	
Carbon disulfide	ND	5.00	"	"	"	"	"	"	
Carbon tetrachloride	ND	5.00	"	"	"	"	"	"	
Chlorobenzene	ND	2.00	"	"	"	"	"	"	
Chlorodibromomethane	ND	2.00	"	"	"	"	"	"	
Chloroethane	ND	5.00	"	"	"	"	"	"	
2-Chloroethylvinyl ether	ND	5.00	"	"	"	"	"	"	
Chloroform	ND	2.00	"	"	"	"	"	"	
Chloromethane	ND	5.00	"	"	"	"	"	"	
2-Chlorotoluene	ND	5.00	"	"	"	"	"	"	
4-Chlorotoluene	ND	5.00	"	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	ND	5.00	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	2.00	"	"	"	"	"	"	
Dibromomethane	ND	2.00	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	2.00	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	2.00	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	2.00	"	"	"	"	"	"	
trans-1,4-Dichloro-2-butene	ND	5.00	"	"	"	"	"	"	
Dichlorodifluoromethane	ND	5.00	"	"	"	"	"	"	
1,1-Dichloroethane	ND	2.00	"	"	"	"	"	"	
1,2-Dichloroethane	ND	2.00	"	"	"	"	"	"	
1,1-Dichloroethene	ND	2.00	"	"	"	"	"	"	
cis-1,2-Dichloroethene	ND	2.00	"	"	"	"	"	"	
trans-1,2-Dichloroethene	ND	2.00	"	"	"	"	"	"	
1,2-Dichloropropane	ND	2.00	"	"	"	"	"	"	
1,3-Dichloropropane	ND	2.00	"	"	"	"	"	"	
2,2-Dichloropropane	ND	5.00	"	"	"	"	"	"	
1,1-Dichloropropene	ND	5.00	"	"	"	"	"	"	
cis-1,3-Dichloropropene	ND	2.00	"	"	"	"	"	"	

results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Client Name: Kleinfelder, Inc.
Project Name: 44102-002

EMA Log #: 0501269

Volatile Organic Compounds by EPA Method 8260B

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
T1-11-3 (0501269-15) Soil Sampled: 01/25/05 14:40 Received: 01/25/05 16:45									
trans-1,3-Dichloropropene	ND	2.00	ug/kg	1	5012715	01/27/05	01/28/05	EPA 8260B	
Diethyl ether	ND	5.00	"	"	"	"	"	"	
Ethylbenzene	ND	2.00	"	"	"	"	"	"	
Hexachlorobutadiene	ND	2.00	"	"	"	"	"	"	
Hexachloroethane	ND	2.00	"	"	"	"	"	"	
2-Hexanone	ND	10.0	"	"	"	"	"	"	
Iodomethane	ND	2.00	"	"	"	"	"	"	
Isopropylbenzene	ND	2.00	"	"	"	"	"	"	
Methylene chloride	ND	5.00	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	2.00	"	"	"	"	"	"	
4-Methyl-2-pentanone	ND	25.0	"	"	"	"	"	"	
Naphthalene	ND	5.00	"	"	"	"	"	"	
n-Propylbenzene	ND	2.00	"	"	"	"	"	"	
Styrene	ND	2.00	"	"	"	"	"	"	
1,1,1,2-Tetrachloroethane	ND	2.00	"	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	ND	5.00	"	"	"	"	"	"	
Tetrachloroethene	ND	2.00	"	"	"	"	"	"	
Toluene	ND	2.00	"	"	"	"	"	"	
1,2,3-Trichlorobenzene	ND	2.00	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	2.00	"	"	"	"	"	"	
1,1,1-Trichloroethane	ND	2.00	"	"	"	"	"	"	
1,1,2-Trichloroethane	ND	5.00	"	"	"	"	"	"	
Trichloroethene	ND	2.00	"	"	"	"	"	"	
Trichlorofluoromethane	ND	5.00	"	"	"	"	"	"	
1,2,3-Trichloropropane	ND	5.00	"	"	"	"	"	"	
1,1,2-Trichlorotrifluoroethane	ND	10.0	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	2.00	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	2.00	"	"	"	"	"	"	
Vinyl acetate	ND	10.0	"	"	"	"	"	"	
Vinyl chloride	ND	5.00	"	"	"	"	"	"	
m,p-Xylene	ND	5.00	"	"	"	"	"	"	
o-Xylene	ND	2.00	"	"	"	"	"	"	
Surrogate: Dibromofluoromethane		*77 %*	*61-141*		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*68 %*	*70-124*		"	"	"	"	*S-04*
Surrogate: Toluene-d8		*79 %*	*80-121*		"	"	"	"	*S-04*

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Client Name: Kleinfelder, Inc.
Project Name: 44102-002

EMA Log #: 0501269

Volatile Organic Compounds by EPA Method 8260B

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
T1-12-1 (0501269-16) Soil Sampled: 01/25/05 15:00 Received: 01/25/05 16:45									
Acetone	ND	50.0	ug/kg	1	5012715	01/27/05	01/28/05	EPA 8260B	
Acetonitrile	ND	50.0	"	"	"	"	"	"	
Acrolein	ND	100	"	"	"	"	"	"	
Acrylonitrile	ND	25.0	"	"	"	"	"	"	
Allyl chloride	ND	5.00	"	"	"	"	"	"	
Benzene	ND	2.00	"	"	"	"	"	"	
Bromobenzene	ND	2.00	"	"	"	"	"	"	
Bromochloromethane	ND	2.00	"	"	"	"	"	"	
Bromodichloromethane	ND	2.00	"	"	"	"	"	"	
Bromoform	ND	2.00	"	"	"	"	"	"	
Bromomethane	ND	5.00	"	"	"	"	"	"	
2-Butanone	ND	50.0	"	"	"	"	"	"	
n-Butylbenzene	ND	2.00	"	"	"	"	"	"	
sec-Butylbenzene	ND	5.00	"	"	"	"	"	"	
tert-Butylbenzene	ND	5.00	"	"	"	"	"	"	
Carbon disulfide	ND	5.00	"	"	"	"	"	"	
Carbon tetrachloride	ND	5.00	"	"	"	"	"	"	
Chlorobenzene	ND	2.00	"	"	"	"	"	"	
Chlorodibromomethane	ND	2.00	"	"	"	"	"	"	
Chloroethane	ND	5.00	"	"	"	"	"	"	
2-Chloroethylvinyl ether	ND	5.00	"	"	"	"	"	"	
Chloroform	ND	2.00	"	"	"	"	"	"	
Chloromethane	ND	5.00	"	"	"	"	"	"	
2-Chlorotoluene	ND	5.00	"	"	"	"	"	"	
4-Chlorotoluene	ND	5.00	"	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	ND	5.00	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	2.00	"	"	"	"	"	"	
Dibromomethane	ND	2.00	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	2.00	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	2.00	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	2.00	"	"	"	"	"	"	
trans-1,4-Dichloro-2-butene	ND	5.00	"	"	"	"	"	"	
Dichlorodifluoromethane	ND	5.00	"	"	"	"	"	"	
1,1-Dichloroethane	ND	2.00	"	"	"	"	"	"	
1,2-Dichloroethane	ND	2.00	"	"	"	"	"	"	
1,1-Dichloroethene	ND	2.00	"	"	"	"	"	"	
cis-1,2-Dichloroethene	ND	2.00	"	"	"	"	"	"	
trans-1,2-Dichloroethene	ND	2.00	"	"	"	"	"	"	
1,2-Dichloropropane	ND	2.00	"	"	"	"	"	"	
1,3-Dichloropropane	ND	2.00	"	"	"	"	"	"	
2,2-Dichloropropane	ND	5.00	"	"	"	"	"	"	
1,1-Dichloropropene	ND	5.00	"	"	"	"	"	"	
cis-1,3-Dichloropropene	ND	2.00	"	"	"	"	"	"	

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Client Name: Kleinfelder, Inc.
Project Name: 44102-002

EMA Log #: 0501269

Volatile Organic Compounds by EPA Method 8260B

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
T1-12-1 (0501269-16) Soil Sampled: 01/25/05 15:00 Received: 01/25/05 16:45									
trans-1,3-Dichloropropene	ND	2.00	ug/kg	1	5012715	01/27/05	01/28/05	EPA 8260B	
Diethyl ether	ND	5.00	"	"	"	"	"	"	
Ethylbenzene	ND	2.00	"	"	"	"	"	"	
Hexachlorobutadiene	ND	2.00	"	"	"	"	"	"	
Hexachloroethane	ND	2.00	"	"	"	"	"	"	
2-Hexanone	ND	10.0	"	"	"	"	"	"	
Iodomethane	ND	2.00	"	"	"	"	"	"	
Isopropylbenzene	ND	2.00	"	"	"	"	"	"	
Methylene chloride	ND	5.00	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	2.00	"	"	"	"	"	"	
4-Methyl-2-pentanone	ND	25.0	"	"	"	"	"	"	
Naphthalene	ND	5.00	"	"	"	"	"	"	
n-Propylbenzene	ND	2.00	"	"	"	"	"	"	
Styrene	ND	2.00	"	"	"	"	"	"	
1,1,1,2-Tetrachloroethane	ND	2.00	"	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	ND	5.00	"	"	"	"	"	"	
Tetrachloroethene	ND	2.00	"	"	"	"	"	"	
Toluene	ND	2.00	"	"	"	"	"	"	
1,2,3-Trichlorobenzene	ND	2.00	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	2.00	"	"	"	"	"	"	
1,1,1-Trichloroethane	ND	2.00	"	"	"	"	"	"	
1,1,2-Trichloroethane	ND	5.00	"	"	"	"	"	"	
Trichloroethene	ND	2.00	"	"	"	"	"	"	
Trichlorofluoromethane	ND	5.00	"	"	"	"	"	"	
1,2,3-Trichloropropane	ND	5.00	"	"	"	"	"	"	
1,1,2-Trichlorotrifluoroethane	ND	10.0	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	2.00	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	2.00	"	"	"	"	"	"	
Vinyl acetate	ND	10.0	"	"	"	"	"	"	
Vinyl chloride	ND	5.00	"	"	"	"	"	"	
m,p-Xylene	ND	5.00	"	"	"	"	"	"	
o-Xylene	ND	2.00	"	"	"	"	"	"	
Surrogate: Dibromofluoromethane		*114 %*	*61-141*		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*78 %*	*70-124*		"	"	"	"	
Surrogate: Toluene-d8		*93 %*	*80-121*		"	"	"	"	

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Client Name: Kleinfelder, Inc.
Project Name: 44102-002

EMA Log #: 0501269

Volatile Organic Compounds by EPA Method 8260B

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
T1-12-2 (0501269-17) Soil Sampled: 01/25/05 15:07 Received: 01/25/05 16:45									
Acetone	79.5	50.0	ug/kg	1	5012715	01/27/05	01/28/05	EPA 8260B	
Acetonitrile	ND	50.0	"	"	"	"	"	"	
Acrolein	ND	100	"	"	"	"	"	"	
Acrylonitrile	ND	25.0	"	"	"	"	"	"	
Allyl chloride	ND	5.00	"	"	"	"	"	"	
Benzene	ND	2.00	"	"	"	"	"	"	
Bromobenzene	ND	2.00	"	"	"	"	"	"	
Bromochloromethane	ND	2.00	"	"	"	"	"	"	
Bromodichloromethane	ND	2.00	"	"	"	"	"	"	
Bromoform	ND	2.00	"	"	"	"	"	"	
Bromomethane	ND	5.00	"	"	"	"	"	"	
2-Butanone	ND	50.0	"	"	"	"	"	"	
n-Butylbenzene	ND	2.00	"	"	"	"	"	"	
sec-Butylbenzene	ND	5.00	"	"	"	"	"	"	
tert-Butylbenzene	ND	5.00	"	"	"	"	"	"	
Carbon disulfide	ND	5.00	"	"	"	"	"	"	
[illegible]bon tetrachloride	ND	5.00	"	"	"	"	"	"	
[illegible]lorobenzene	ND	2.00	"	"	"	"	"	"	
Chlorodibromomethane	ND	2.00	"	"	"	"	"	"	
Chloroethane	ND	5.00	"	"	"	"	"	"	
2-Chloroethylvinyl ether	ND	5.00	"	"	"	"	"	"	
Chloroform	ND	2.00	"	"	"	"	"	"	
Chloromethane	ND	5.00	"	"	"	"	"	"	
2-Chlorotoluene	ND	5.00	"	"	"	"	"	"	
4-Chlorotoluene	ND	5.00	"	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	ND	5.00	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	2.00	"	"	"	"	"	"	
Dibromomethane	ND	2.00	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	2.00	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	2.00	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	2.00	"	"	"	"	"	"	
trans-1,4-Dichloro-2-butene	ND	5.00	"	"	"	"	"	"	
Dichlorodifluoromethane	ND	5.00	"	"	"	"	"	"	
1,1-Dichloroethane	ND	2.00	"	"	"	"	"	"	
1,2-Dichloroethane	ND	2.00	"	"	"	"	"	"	
1,1-Dichloroethene	ND	2.00	"	"	"	"	"	"	
cis-1,2-Dichloroethene	ND	2.00	"	"	"	"	"	"	
trans-1,2-Dichloroethene	ND	2.00	"	"	"	"	"	"	
1,2-Dichloropropane	ND	2.00	"	"	"	"	"	"	
1,3-Dichloropropane	ND	2.00	"	"	"	"	"	"	
2,2-Dichloropropane	ND	5.00	"	"	"	"	"	"	
1,1-Dichloropropene	ND	5.00	"	"	"	"	"	"	
cis-1,3-Dichloropropene	ND	2.00	"	"	"	"	"	"	

[illegible] results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Client Name: Kleinfelder, Inc.
Project Name: 44102-002

EMA Log #: 0501269

Volatile Organic Compounds by EPA Method 8260B

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
T1-12-2 (0501269-17) Soil Sampled: 01/25/05 15:07 Received: 01/25/05 16:45									
trans-1,3-Dichloropropene	ND	2.00	ug/kg	1	5012715	01/27/05	01/28/05	EPA 8260B	
Diethyl ether	ND	5.00	"	"	"	"	"	"	
Ethylbenzene	ND	2.00	"	"	"	"	"	"	
Hexachlorobutadiene	ND	2.00	"	"	"	"	"	"	
Hexachloroethane	ND	2.00	"	"	"	"	"	"	
2-Hexanone	ND	10.0	"	"	"	"	"	"	
Iodomethane	ND	2.00	"	"	"	"	"	"	
Isopropylbenzene	ND	2.00	"	"	"	"	"	"	
Methylene chloride	ND	5.00	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	2.00	"	"	"	"	"	"	
4-Methyl-2-pentanone	ND	25.0	"	"	"	"	"	"	
Naphthalene	ND	5.00	"	"	"	"	"	"	
n-Propylbenzene	ND	2.00	"	"	"	"	"	"	
Styrene	ND	2.00	"	"	"	"	"	"	
1,1,1,2-Tetrachloroethane	ND	2.00	"	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	ND	5.00	"	"	"	"	"	"	
Tetrachloroethene	ND	2.00	"	"	"	"	"	"	
Toluene	ND	2.00	"	"	"	"	"	"	
1,2,3-Trichlorobenzene	ND	2.00	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	2.00	"	"	"	"	"	"	
1,1,1-Trichloroethane	ND	2.00	"	"	"	"	"	"	
1,1,2-Trichloroethane	ND	5.00	"	"	"	"	"	"	
Trichloroethene	ND	2.00	"	"	"	"	"	"	
Trichlorofluoromethane	ND	5.00	"	"	"	"	"	"	
1,2,3-Trichloropropane	ND	5.00	"	"	"	"	"	"	
1,1,2-Trichlorotrifluoroethane	ND	10.0	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	2.00	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	2.00	"	"	"	"	"	"	
Vinyl acetate	ND	10.0	"	"	"	"	"	"	
Vinyl chloride	ND	5.00	"	"	"	"	"	"	
m,p-Xylene	ND	5.00	"	"	"	"	"	"	
o-Xylene	ND	2.00	"	"	"	"	"	"	
Surrogate: Dibromofluoromethane		*113 %*	*61-141*		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*82 %*	*70-124*		"	"	"	"	
Surrogate: Toluene-d8		*86 %*	*80-121*		"	"	"	"	

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ient Name: Kleinfelder, Inc.
roject Name: 44102-002

EMA Log #: 0501269

Volatile Organic Compounds by EPA Method 8260B

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
T1-12-3 (0501269-18) Soil Sampled: 01/25/05 15:10 Received: 01/25/05 16:45									
Acetone	**61.1**	50.0	ug/kg	1	5012715	01/27/05	01/28/05	EPA 8260B	
Acetonitrile	ND	50.0	"	"	"	"	"	"	
Acrolein	ND	100	"	"	"	"	"	"	
Acrylonitrile	ND	25.0	"	"	"	"	"	"	
Allyl chloride	ND	5.00	"	"	"	"	"	"	
Benzene	ND	2.00	"	"	"	"	"	"	
Bromobenzene	ND	2.00	"	"	"	"	"	"	
Bromochloromethane	ND	2.00	"	"	"	"	"	"	
Bromodichloromethane	ND	2.00	"	"	"	"	"	"	
Bromoform	ND	2.00	"	"	"	"	"	"	
Bromomethane	ND	5.00	"	"	"	"	"	"	
2-Butanone	ND	50.0	"	"	"	"	"	"	
n-Butylbenzene	ND	2.00	"	"	"	"	"	"	
sec-Butylbenzene	ND	5.00	"	"	"	"	"	"	
tert-Butylbenzene	ND	5.00	"	"	"	"	"	"	
Carbon disulfide	ND	5.00	"	"	"	"	"	"	
bon tetrachloride	ND	5.00	"	"	"	"	"	"	
orobenzene	ND	2.00	"	"	"	"	"	"	
Chlorodibromomethane	ND	2.00	"	"	"	"	"	"	
Chloroethane	ND	5.00	"	"	"	"	"	"	
2-Chloroethylvinyl ether	ND	5.00	"	"	"	"	"	"	
Chloroform	ND	2.00	"	"	"	"	"	"	
Chloromethane	ND	5.00	"	"	"	"	"	"	
2-Chlorotoluene	ND	5.00	"	"	"	"	"	"	
4-Chlorotoluene	ND	5.00	"	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	ND	5.00	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	2.00	"	"	"	"	"	"	
Dibromomethane	ND	2.00	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	2.00	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	2.00	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	2.00	"	"	"	"	"	"	
trans-1,4-Dichloro-2-butene	ND	5.00	"	"	"	"	"	"	
Dichlorodifluoromethane	ND	5.00	"	"	"	"	"	"	
1,1-Dichloroethane	ND	2.00	"	"	"	"	"	"	
1,2-Dichloroethane	ND	2.00	"	"	"	"	"	"	
1,1-Dichloroethene	ND	2.00	"	"	"	"	"	"	
cis-1,2-Dichloroethene	ND	2.00	"	"	"	"	"	"	
trans-1,2-Dichloroethene	ND	2.00	"	"	"	"	"	"	
1,2-Dichloropropane	ND	2.00	"	"	"	"	"	"	
1,3-Dichloropropane	ND	2.00	"	"	"	"	"	"	
2,2-Dichloropropane	ND	5.00	"	"	"	"	"	"	
1,1-Dichloropropene	ND	5.00	"	"	"	"	"	"	
cis-1,3-Dichloropropene	ND	2.00	"	"	"	"	"	"	

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Client Name: Kleinfelder, Inc.
Project Name: 44102-002

EMA Log #: 0501269

Volatile Organic Compounds by EPA Method 8260B

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
T1-12-3 (0501269-18) Soil Sampled: 01/25/05 15:10 Received: 01/25/05 16:45									
trans-1,3-Dichloropropene	ND	2.00	ug/kg	1	5012715	01/27/05	01/28/05	EPA 8260B	
Diethyl ether	ND	5.00	"	"	"	"	"	"	
Ethylbenzene	ND	2.00	"	"	"	"	"	"	
Hexachlorobutadiene	ND	2.00	"	"	"	"	"	"	
Hexachloroethane	ND	2.00	"	"	"	"	"	"	
2-Hexanone	ND	10.0	"	"	"	"	"	"	
Iodomethane	ND	2.00	"	"	"	"	"	"	
Isopropylbenzene	ND	2.00	"	"	"	"	"	"	
Methylene chloride	ND	5.00	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	2.00	"	"	"	"	"	"	
4-Methyl-2-pentanone	ND	25.0	"	"	"	"	"	"	
Naphthalene	ND	5.00	"	"	"	"	"	"	
n-Propylbenzene	ND	2.00	"	"	"	"	"	"	
Styrene	ND	2.00	"	"	"	"	"	"	
1,1,1,2-Tetrachloroethane	ND	2.00	"	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	ND	5.00	"	"	"	"	"	"	
Tetrachloroethene	ND	2.00	"	"	"	"	"	"	
Toluene	ND	2.00	"	"	"	"	"	"	
1,2,3-Trichlorobenzene	ND	2.00	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	2.00	"	"	"	"	"	"	
1,1,1-Trichloroethane	ND	2.00	"	"	"	"	"	"	
1,1,2-Trichloroethane	ND	5.00	"	"	"	"	"	"	
Trichloroethene	ND	2.00	"	"	"	"	"	"	
Trichlorofluoromethane	ND	5.00	"	"	"	"	"	"	
1,2,3-Trichloropropane	ND	5.00	"	"	"	"	"	"	
1,1,2-Trichlorotrifluoroethane	ND	10.0	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	2.00	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	2.00	"	"	"	"	"	"	
Vinyl acetate	ND	10.0	"	"	"	"	"	"	
Vinyl chloride	ND	5.00	"	"	"	"	"	"	
m,p-Xylene	ND	5.00	"	"	"	"	"	"	
o-Xylene	ND	2.00	"	"	"	"	"	"	
Surrogate: Dibromofluoromethane		*81 %*	*61-141*		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*90 %*	*70-124*		"	"	"	"	
Surrogate: Toluene-d8		*98 %*	*80-121*		"	"	"	"	

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Client Name: Kleinfelder, Inc.
Project Name: 44102-002

EMA Log #: 0501269

Semivolatile Organic Compounds by EPA Method 8270C

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
T1-7-1 (0501269-01) Soil Sampled: 01/25/05 09:44 Received: 01/25/05 16:45									**R-05**
Acenaphthene	ND	1000	ug/kg	50	5012702	01/27/05	02/07/05	EPA 8270C	
Acenaphthylene	ND	1000	"	"	"	"	"	"	
Anthracene	ND	1000	"	"	"	"	"	"	
Benzidine	ND	7500	"	"	"	"	"	"	
Benzo (a) anthracene	ND	1000	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	1000	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	1000	"	"	"	"	"	"	
Benzo (g,h,i) perylene	ND	2000	"	"	"	"	"	"	
Benzo (a) pyrene	ND	1000	"	"	"	"	"	"	
Benzyl alcohol	ND	3750	"	"	"	"	"	"	
Bis(2-chloroethoxy)methane	ND	1000	"	"	"	"	"	"	
Bis(2-chloroethyl)ether	ND	1250	"	"	"	"	"	"	
Bis(2-chloroisopropyl)ether	ND	1250	"	"	"	"	"	"	
Bis(2-ethylhexyl)phthalate	ND	2250	"	"	"	"	"	"	
4-Bromophenyl phenyl ether	ND	1000	"	"	"	"	"	"	
Butyl benzyl phthalate	ND	2000	"	"	"	"	"	"	
Carbazole	ND	3000	"	"	"	"	"	"	
4-Chloroaniline	ND	5000	"	"	"	"	"	"	
4-Chloro-3-methylphenol	ND	1000	"	"	"	"	"	"	
2-Chloronaphthalene	ND	1000	"	"	"	"	"	"	
2-Chlorophenol	ND	1000	"	"	"	"	"	"	
4-Chlorophenyl phenyl ether	ND	1000	"	"	"	"	"	"	
Chrysene	ND	1000	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	2000	"	"	"	"	"	"	
Dibenzofuran	ND	1000	"	"	"	"	"	"	
Di-n-butyl phthalate	ND	2000	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	1000	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	1000	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	1000	"	"	"	"	"	"	
3,3'-Dichlorobenzidine	ND	7500	"	"	"	"	"	"	
2,4-Dichlorophenol	ND	1000	"	"	"	"	"	"	
Diethyl phthalate	ND	1000	"	"	"	"	"	"	
2,4-Dimethylphenol	ND	4000	"	"	"	"	"	"	
Dimethyl phthalate	ND	1000	"	"	"	"	"	"	
4,6-Dinitro-2-methylphenol	ND	2500	"	"	"	"	"	"	
2,4-Dinitrophenol	ND	5000	"	"	"	"	"	"	
2,4-Dinitrotoluene	ND	1000	"	"	"	"	"	"	
2,6-Dinitrotoluene	ND	1000	"	"	"	"	"	"	
Di-n-octyl phthalate	ND	2000	"	"	"	"	"	"	
Fluoranthene	ND	1000	"	"	"	"	"	"	
Fluorene	ND	1000	"	"	"	"	"	"	
Hexachlorobenzene	ND	1000	"	"	"	"	"	"	
Hexachlorobutadiene	ND	1000	"	"	"	"	"	"	

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Client Name: Kleinfelder, Inc.
Project Name: 44102-002

EMA Log #: 0501269

Semivolatile Organic Compounds by EPA Method 8270C

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
T1-7-1 (0501269-01) Soil Sampled: 01/25/05 09:44 Received: 01/25/05 16:45									**R-05**
Hexachlorocyclopentadiene	ND	2500	ug/kg	50	5012702	01/27/05	02/07/05	EPA 8270C	
Hexachloroethane	ND	1000	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	1500	"	"	"	"	"	"	
Isophorone	ND	1000	"	"	"	"	"	"	
2-Methylnaphthalene	ND	1000	"	"	"	"	"	"	
2-Methylphenol	ND	1000	"	"	"	"	"	"	
4-Methylphenol (3-Methylphenol)	ND	2000	"	"	"	"	"	"	
Naphthalene	ND	1000	"	"	"	"	"	"	
2-Nitroaniline	ND	2500	"	"	"	"	"	"	
3-Nitroaniline	ND	5000	"	"	"	"	"	"	
4-Nitroaniline	ND	3500	"	"	"	"	"	"	
Nitrobenzene	ND	1000	"	"	"	"	"	"	
2-Nitrophenol	ND	1000	"	"	"	"	"	"	
4-Nitrophenol	ND	3500	"	"	"	"	"	"	
N-Nitrosodimethylamine	ND	1000	"	"	"	"	"	"	
N-Nitrosodiphenylamine	ND	1750	"	"	"	"	"	"	
N-Nitrosodi-n-propylamine	ND	1500	"	"	"	"	"	"	
Pentachlorophenol	ND	2000	"	"	"	"	"	"	
Phenanthrene	ND	1000	"	"	"	"	"	"	
Phenol	ND	1500	"	"	"	"	"	"	
Pyrene	ND	1000	"	"	"	"	"	"	
Pyridine	ND	5000	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	1000	"	"	"	"	"	"	
2,4,5-Trichlorophenol	ND	1500	"	"	"	"	"	"	
2,4,6-Trichlorophenol	ND	1500	"	"	"	"	"	"	
Surrogate: 2-Fluorophenol		*56 %*	*25-121*		"	"	"	"	
Surrogate: Phenol-d6		*%*	*24-113*		"	"	"	"	*S-08*
Surrogate: Nitrobenzene-d5		*86 %*	*23-120*		"	"	"	"	
Surrogate: 2-Fluorobiphenyl		*95 %*	*30-115*		"	"	"	"	
Surrogate: 2,4,6-Tribromophenol		*%*	*19-122*		"	"	"	"	*S-08*
Surrogate: Terphenyl-dl4		*117 %*	*18-137*		"	"	"	"	

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

[redacted]ient Name: Kleinfelder, Inc.
[redacted]oject Name: 44102-002

EMA Log #: 0501269

Semivolatile Organic Compounds by EPA Method 8270C

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
T1-7-2 (0501269-02) Soil Sampled: 01/25/05 09:55 Received: 01/25/05 16:45									
Acenaphthene	ND	1000	ug/kg	50	5012702	01/27/05	02/07/05	EPA 8270C	
Acenaphthylene	ND	1000	"	"	"	"	"	"	
Anthracene	ND	1000	"	"	"	"	"	"	
Benzidine	ND	7500	"	"	"	"	"	"	
Benzo (a) anthracene	ND	1000	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	1000	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	1000	"	"	"	"	"	"	
Benzo (g,h,i) perylene	ND	2000	"	"	"	"	"	"	
Benzo (a) pyrene	ND	1000	"	"	"	"	"	"	
Benzyl alcohol	ND	3750	"	"	"	"	"	"	
Bis(2-chloroethoxy)methane	ND	1000	"	"	"	"	"	"	
Bis(2-chloroethyl)ether	ND	1250	"	"	"	"	"	"	
Bis(2-chloroisopropyl)ether	ND	1250	"	"	"	"	"	"	
Bis(2-ethylhexyl)phthalate	**5400**	2250	"	"	"	"	"	"	
4-Bromophenyl phenyl ether	ND	1000	"	"	"	"	"	"	
Butyl benzyl phthalate	ND	2000	"	"	"	"	"	"	
[redacted]rbazole	ND	3000	"	"	"	"	"	"	
[redacted]loroaniline	ND	5000	"	"	"	"	"	"	
4-Chloro-3-methylphenol	ND	1000	"	"	"	"	"	"	
2-Chloronaphthalene	ND	1000	"	"	"	"	"	"	
2-Chlorophenol	ND	1000	"	"	"	"	"	"	
4-Chlorophenyl phenyl ether	ND	1000	"	"	"	"	"	"	
Chrysene	ND	1000	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	2000	"	"	"	"	"	"	
Dibenzofuran	ND	1000	"	"	"	"	"	"	
Di-n-butyl phthalate	ND	2000	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	1000	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	1000	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	1000	"	"	"	"	"	"	
3,3'-Dichlorobenzidine	ND	7500	"	"	"	"	"	"	
2,4-Dichlorophenol	ND	1000	"	"	"	"	"	"	
Diethyl phthalate	ND	1000	"	"	"	"	"	"	
2,4-Dimethylphenol	ND	4000	"	"	"	"	"	"	
Dimethyl phthalate	ND	1000	"	"	"	"	"	"	
4,6-Dinitro-2-methylphenol	ND	2500	"	"	"	"	"	"	
2,4-Dinitrophenol	ND	5000	"	"	"	"	"	"	
2,4-Dinitrotoluene	ND	1000	"	"	"	"	"	"	
2,6-Dinitrotoluene	ND	1000	"	"	"	"	"	"	
Di-n-octyl phthalate	ND	2000	"	"	"	"	"	"	
Fluoranthene	ND	1000	"	"	"	"	"	"	
Fluorene	ND	1000	"	"	"	"	"	"	
Hexachlorobenzene	ND	1000	"	"	"	"	"	"	
Hexachlorobutadiene	ND	1000	"	"	"	"	"	"	

[redacted]ults in this report apply to the samples analyzed in accordance with the chain of [redacted]y document. This analytical report must be reproduced in its entirety.

Client Name: Kleinfelder, Inc.
Project Name: 44102-002

EMA Log #: 0501269

Semivolatile Organic Compounds by EPA Method 8270C

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
T1-7-2 (0501269-02) Soil Sampled: 01/25/05 09:55 Received: 01/25/05 16:45									
Hexachlorocyclopentadiene	ND	2500	ug/kg	50	5012702	01/27/05	02/07/05	EPA 8270C	
Hexachloroethane	ND	1000	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	1500	"	"	"	"	"	"	
Isophorone	ND	1000	"	"	"	"	"	"	
2-Methylnaphthalene	ND	1000	"	"	"	"	"	"	
2-Methylphenol	ND	1000	"	"	"	"	"	"	
4-Methylphenol (3-Methylphenol)	ND	2000	"	"	"	"	"	"	
Naphthalene	ND	1000	"	"	"	"	"	"	
2-Nitroaniline	ND	2500	"	"	"	"	"	"	
3-Nitroaniline	ND	5000	"	"	"	"	"	"	
4-Nitroaniline	ND	3500	"	"	"	"	"	"	
Nitrobenzene	ND	1000	"	"	"	"	"	"	
2-Nitrophenol	ND	1000	"	"	"	"	"	"	
4-Nitrophenol	ND	3500	"	"	"	"	"	"	
N-Nitrosodimethylamine	ND	1000	"	"	"	"	"	"	
N-Nitrosodiphenylamine	ND	1750	"	"	"	"	"	"	
N-Nitrosodi-n-propylamine	ND	1500	"	"	"	"	"	"	
Pentachlorophenol	ND	2000	"	"	"	"	"	"	
Phenanthrene	ND	1000	"	"	"	"	"	"	
Phenol	ND	1500	"	"	"	"	"	"	
Pyrene	ND	1000	"	"	"	"	"	"	
Pyridine	ND	5000	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	1000	"	"	"	"	"	"	
2,4,5-Trichlorophenol	ND	1500	"	"	"	"	"	"	
2,4,6-Trichlorophenol	ND	1500	"	"	"	"	"	"	
Surrogate: 2-Fluorophenol		*81 %*	*25-121*		"	"	"	"	
Surrogate: Phenol-d6		*26 %*	*24-113*		"	"	"	"	
Surrogate: Nitrobenzene-d5		*136 %*	*23-120*		"	"	"	"	*S-08*
Surrogate: 2-Fluorobiphenyl		*116 %*	*30-115*		"	"	"	"	*S-08*
Surrogate: 2,4,6-Tribromophenol		*%*	*19-122*		"	"	"	"	*S-08*
Surrogate: Terphenyl-dl4		*117 %*	*18-137*		"	"	"	"	

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

ient Name: Kleinfelder, Inc.
oject Name: 44102-002

EMA Log #: 0501269

Semivolatile Organic Compounds by EPA Method 8270C

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
T1-7-3 (0501269-03) Soil Sampled: 01/25/05 10:12 Received: 01/25/05 16:45									**R-05**
Acenaphthene	ND	100	ug/kg	5	5012702	01/27/05	02/07/05	EPA 8270C	
Acenaphthylene	ND	100	"	"	"	"	"	"	
Anthracene	ND	100	"	"	"	"	"	"	
Benzidine	ND	750	"	"	"	"	"	"	
Benzo (a) anthracene	ND	100	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	100	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	100	"	"	"	"	"	"	
Benzo (g,h,i) perylene	ND	200	"	"	"	"	"	"	
Benzo (a) pyrene	ND	100	"	"	"	"	"	"	
Benzyl alcohol	ND	375	"	"	"	"	"	"	
Bis(2-chloroethoxy)methane	ND	100	"	"	"	"	"	"	
Bis(2-chloroethyl)ether	ND	125	"	"	"	"	"	"	
Bis(2-chloroisopropyl)ether	ND	125	"	"	"	"	"	"	
Bis(2-ethylhexyl)phthalate	ND	225	"	"	"	"	"	"	
4-Bromophenyl phenyl ether	ND	100	"	"	"	"	"	"	
Butyl benzyl phthalate	ND	200	"	"	"	"	"	"	
bazole	ND	300	"	"	"	"	"	"	
loroaniline	ND	500	"	"	"	"	"	"	
4-Chloro-3-methylphenol	ND	100	"	"	"	"	"	"	
2-Chloronaphthalene	ND	100	"	"	"	"	"	"	
2-Chlorophenol	ND	100	"	"	"	"	"	"	
4-Chlorophenyl phenyl ether	ND	100	"	"	"	"	"	"	
Chrysene	ND	100	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	200	"	"	"	"	"	"	
Dibenzofuran	ND	100	"	"	"	"	"	"	
Di-n-butyl phthalate	ND	200	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	100	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	100	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	100	"	"	"	"	"	"	
3,3'-Dichlorobenzidine	ND	750	"	"	"	"	"	"	
2,4-Dichlorophenol	ND	100	"	"	"	"	"	"	
Diethyl phthalate	ND	100	"	"	"	"	"	"	
2,4-Dimethylphenol	ND	400	"	"	"	"	"	"	
Dimethyl phthalate	ND	100	"	"	"	"	"	"	
4,6-Dinitro-2-methylphenol	ND	250	"	"	"	"	"	"	
2,4-Dinitrophenol	ND	500	"	"	"	"	"	"	
2,4-Dinitrotoluene	ND	100	"	"	"	"	"	"	
2,6-Dinitrotoluene	ND	100	"	"	"	"	"	"	
Di-n-octyl phthalate	ND	200	"	"	"	"	"	"	
Fluoranthene	ND	100	"	"	"	"	"	"	
Fluorene	ND	100	"	"	"	"	"	"	
Hexachlorobenzene	ND	100	"	"	"	"	"	"	
Hexachlorobutadiene	ND	100	"	"	"	"	"	"	

ults in this report apply to the samples analyzed in accordance with the chain of
y document. This analytical report must be reproduced in its entirety.

Client Name: Kleinfelder, Inc.
Project Name: 44102-002

EMA Log #: 0501269

Semivolatile Organic Compounds by EPA Method 8270C

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
T1-7-3 (0501269-03) Soil Sampled: 01/25/05 10:12 Received: 01/25/05 16:45									**R-05**
Hexachlorocyclopentadiene	ND	250	ug/kg	5	5012702	01/27/05	02/07/05	EPA 8270C	
Hexachloroethane	ND	100	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	150	"	"	"	"	"	"	
Isophorone	ND	100	"	"	"	"	"	"	
2-Methylnaphthalene	ND	100	"	"	"	"	"	"	
2-Methylphenol	ND	100	"	"	"	"	"	"	
4-Methylphenol (3-Methylphenol)	ND	200	"	"	"	"	"	"	
Naphthalene	ND	100	"	"	"	"	"	"	
2-Nitroaniline	ND	250	"	"	"	"	"	"	
3-Nitroaniline	ND	500	"	"	"	"	"	"	
4-Nitroaniline	ND	350	"	"	"	"	"	"	
Nitrobenzene	ND	100	"	"	"	"	"	"	
2-Nitrophenol	ND	100	"	"	"	"	"	"	
4-Nitrophenol	ND	350	"	"	"	"	"	"	
N-Nitrosodimethylamine	ND	100	"	"	"	"	"	"	
N-Nitrosodiphenylamine	ND	175	"	"	"	"	"	"	
N-Nitrosodi-n-propylamine	ND	150	"	"	"	"	"	"	
Pentachlorophenol	ND	200	"	"	"	"	"	"	
Phenanthrene	ND	100	"	"	"	"	"	"	
Phenol	ND	150	"	"	"	"	"	"	
Pyrene	ND	100	"	"	"	"	"	"	
Pyridine	ND	500	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	100	"	"	"	"	"	"	
2,4,5-Trichlorophenol	ND	150	"	"	"	"	"	"	
2,4,6-Trichlorophenol	ND	150	"	"	"	"	"	"	
Surrogate: 2-Fluorophenol		*95 %*	*25-121*		"	"	"	"	
Surrogate: Phenol-d6		*101 %*	*24-113*		"	"	"	"	
Surrogate: Nitrobenzene-d5		*92 %*	*23-120*		"	"	"	"	
Surrogate: 2-Fluorobiphenyl		*105 %*	*30-115*		"	"	"	"	
Surrogate: 2,4,6-Tribromophenol		*69 %*	*19-122*		"	"	"	"	
Surrogate: Terphenyl-dl4		*116 %*	*18-137*		"	"	"	"	

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Client Name: Kleinfelder, Inc.
Project Name: 44102-002

EMA Log #: 0501269

Semivolatile Organic Compounds by EPA Method 8270C

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
T1-8-1 (0501269-04) Soil Sampled: 01/25/05 10:38 Received: 01/25/05 16:45									**R-05**
Acenaphthene	ND	1000	ug/kg	50	5012702	01/27/05	02/07/05	EPA 8270C	
Acenaphthylene	ND	1000	"	"	"	"	"	"	
Anthracene	ND	1000	"	"	"	"	"	"	
Benzidine	ND	7500	"	"	"	"	"	"	
Benzo (a) anthracene	ND	1000	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	1000	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	1000	"	"	"	"	"	"	
Benzo (g,h,i) perylene	ND	2000	"	"	"	"	"	"	
Benzo (a) pyrene	ND	1000	"	"	"	"	"	"	
Benzyl alcohol	ND	3750	"	"	"	"	"	"	
Bis(2-chloroethoxy)methane	ND	1000	"	"	"	"	"	"	
Bis(2-chloroethyl)ether	ND	1250	"	"	"	"	"	"	
Bis(2-chloroisopropyl)ether	ND	1250	"	"	"	"	"	"	
Bis(2-ethylhexyl)phthalate	ND	2250	"	"	"	"	"	"	
4-Bromophenyl phenyl ether	ND	1000	"	"	"	"	"	"	
Butyl benzyl phthalate	ND	2000	"	"	"	"	"	"	
[illegible]bazole	ND	3000	"	"	"	"	"	"	
[illegible]loroaniline	ND	5000	"	"	"	"	"	"	
4-Chloro-3-methylphenol	ND	1000	"	"	"	"	"	"	
2-Chloronaphthalene	ND	1000	"	"	"	"	"	"	
2-Chlorophenol	ND	1000	"	"	"	"	"	"	
4-Chlorophenyl phenyl ether	ND	1000	"	"	"	"	"	"	
Chrysene	ND	1000	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	2000	"	"	"	"	"	"	
Dibenzofuran	ND	1000	"	"	"	"	"	"	
Di-n-butyl phthalate	ND	2000	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	1000	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	1000	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	1000	"	"	"	"	"	"	
3,3'-Dichlorobenzidine	ND	7500	"	"	"	"	"	"	
2,4-Dichlorophenol	ND	1000	"	"	"	"	"	"	
Diethyl phthalate	ND	1000	"	"	"	"	"	"	
2,4-Dimethylphenol	ND	4000	"	"	"	"	"	"	
Dimethyl phthalate	ND	1000	"	"	"	"	"	"	
4,6-Dinitro-2-methylphenol	ND	2500	"	"	"	"	"	"	
2,4-Dinitrophenol	ND	5000	"	"	"	"	"	"	
2,4-Dinitrotoluene	ND	1000	"	"	"	"	"	"	
2,6-Dinitrotoluene	ND	1000	"	"	"	"	"	"	
Di-n-octyl phthalate	ND	2000	"	"	"	"	"	"	
Fluoranthene	ND	1000	"	"	"	"	"	"	
Fluorene	ND	1000	"	"	"	"	"	"	
Hexachlorobenzene	ND	1000	"	"	"	"	"	"	
Hexachlorobutadiene	ND	1000	"	"	"	"	"	"	

[illegible]sults in this report apply to the samples analyzed in accordance with the chain of [illegible]dy document. This analytical report must be reproduced in its entirety.

Client Name: Kleinfelder, Inc.
Project Name: 44102-002

EMA Log #: 0501269

Semivolatile Organic Compounds by EPA Method 8270C

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
T1-8-1 (0501269-04) Soil Sampled: 01/25/05 10:38 Received: 01/25/05 16:45									**R-05**
Hexachlorocyclopentadiene	ND	2500	ug/kg	50	5012702	01/27/05	02/07/05	EPA 8270C	
Hexachloroethane	ND	1000	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	1500	"	"	"	"	"	"	
Isophorone	ND	1000	"	"	"	"	"	"	
2-Methylnaphthalene	ND	1000	"	"	"	"	"	"	
2-Methylphenol	ND	1000	"	"	"	"	"	"	
4-Methylphenol (3-Methylphenol)	ND	2000	"	"	"	"	"	"	
Naphthalene	ND	1000	"	"	"	"	"	"	
2-Nitroaniline	ND	2500	"	"	"	"	"	"	
3-Nitroaniline	ND	5000	"	"	"	"	"	"	
4-Nitroaniline	ND	3500	"	"	"	"	"	"	
Nitrobenzene	ND	1000	"	"	"	"	"	"	
2-Nitrophenol	ND	1000	"	"	"	"	"	"	
4-Nitrophenol	ND	3500	"	"	"	"	"	"	
N-Nitrosodimethylamine	ND	1000	"	"	"	"	"	"	
N-Nitrosodiphenylamine	ND	1750	"	"	"	"	"	"	
N-Nitrosodi-n-propylamine	ND	1500	"	"	"	"	"	"	
Pentachlorophenol	ND	2000	"	"	"	"	"	"	
Phenanthrene	ND	1000	"	"	"	"	"	"	
Phenol	ND	1500	"	"	"	"	"	"	
Pyrene	ND	1000	"	"	"	"	"	"	
Pyridine	ND	5000	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	1000	"	"	"	"	"	"	
2,4,5-Trichlorophenol	ND	1500	"	"	"	"	"	"	
2,4,6-Trichlorophenol	ND	1500	"	"	"	"	"	"	
Surrogate: 2-Fluorophenol		*64 %*	*25-121*		"	"	"	"	
Surrogate: Phenol-d6		*%*	*24-113*		"	"	"	"	*S-08*
Surrogate: Nitrobenzene-d5		*88 %*	*23-120*		"	"	"	"	
Surrogate: 2-Fluorobiphenyl		*94 %*	*30-115*		"	"	"	"	
Surrogate: 2,4,6-Tribromophenol		*%*	*19-122*		"	"	"	"	*S-08*
Surrogate: Terphenyl-dl4		*117 %*	*18-137*		"	"	"	"	

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Client Name: Kleinfelder, Inc.
Project Name: 44102-002

EMA Log #: 0501269

Semivolatile Organic Compounds by EPA Method 8270C

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
T1-8-2 (0501269-05) Soil Sampled: 01/25/05 10:45 Received: 01/25/05 16:45									**R-05**
Acenaphthene	ND	1000	ug/kg	50	5012702	01/27/05	02/07/05	EPA 8270C	
Acenaphthylene	ND	1000	"	"	"	"	"	"	
Anthracene	ND	1000	"	"	"	"	"	"	
Benzidine	ND	7500	"	"	"	"	"	"	
Benzo (a) anthracene	ND	1000	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	1000	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	1000	"	"	"	"	"	"	
Benzo (g,h,i) perylene	ND	2000	"	"	"	"	"	"	
Benzo (a) pyrene	ND	1000	"	"	"	"	"	"	
Benzyl alcohol	ND	3750	"	"	"	"	"	"	
Bis(2-chloroethoxy)methane	ND	1000	"	"	"	"	"	"	
Bis(2-chloroethyl)ether	ND	1250	"	"	"	"	"	"	
Bis(2-chloroisopropyl)ether	ND	1250	"	"	"	"	"	"	
Bis(2-ethylhexyl)phthalate	ND	2250	"	"	"	"	"	"	
4-Bromophenyl phenyl ether	ND	1000	"	"	"	"	"	"	
Butyl benzyl phthalate	ND	2000	"	"	"	"	"	"	
[illegible]bazole	ND	3000	"	"	"	"	"	"	
[illegible]hloroaniline	ND	5000	"	"	"	"	"	"	
4-Chloro-3-methylphenol	ND	1000	"	"	"	"	"	"	
2-Chloronaphthalene	ND	1000	"	"	"	"	"	"	
2-Chlorophenol	ND	1000	"	"	"	"	"	"	
4-Chlorophenyl phenyl ether	ND	1000	"	"	"	"	"	"	
Chrysene	ND	1000	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	2000	"	"	"	"	"	"	
Dibenzofuran	ND	1000	"	"	"	"	"	"	
Di-n-butyl phthalate	ND	2000	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	1000	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	1000	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	1000	"	"	"	"	"	"	
3,3'-Dichlorobenzidine	ND	7500	"	"	"	"	"	"	
2,4-Dichlorophenol	ND	1000	"	"	"	"	"	"	
Diethyl phthalate	ND	1000	"	"	"	"	"	"	
2,4-Dimethylphenol	ND	4000	"	"	"	"	"	"	
Dimethyl phthalate	ND	1000	"	"	"	"	"	"	
4,6-Dinitro-2-methylphenol	ND	2500	"	"	"	"	"	"	
2,4-Dinitrophenol	ND	5000	"	"	"	"	"	"	
2,4-Dinitrotoluene	ND	1000	"	"	"	"	"	"	
2,6-Dinitrotoluene	ND	1000	"	"	"	"	"	"	
Di-n-octyl phthalate	ND	2000	"	"	"	"	"	"	
Fluoranthene	ND	1000	"	"	"	"	"	"	
Fluorene	ND	1000	"	"	"	"	"	"	
Hexachlorobenzene	ND	1000	"	"	"	"	"	"	
Hexachlorobutadiene	ND	1000	"	"	"	"	"	"	

[illegible]esults in this report apply to the samples analyzed in accordance with the chain of [illegible]ody document. This analytical report must be reproduced in its entirety.

Client Name: Kleinfelder, Inc.
Project Name: 44102-002

EMA Log #: 0501269

Semivolatile Organic Compounds by EPA Method 8270C

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
T1-8-2 (0501269-05) Soil Sampled: 01/25/05 10:45 Received: 01/25/05 16:45									**R-05**
Hexachlorocyclopentadiene	ND	2500	ug/kg	50	5012702	01/27/05	02/07/05	EPA 8270C	
Hexachloroethane	ND	1000	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	1500	"	"	"	"	"	"	
Isophorone	ND	1000	"	"	"	"	"	"	
2-Methylnaphthalene	ND	1000	"	"	"	"	"	"	
2-Methylphenol	ND	1000	"	"	"	"	"	"	
4-Methylphenol (3-Methylphenol)	ND	2000	"	"	"	"	"	"	
Naphthalene	ND	1000	"	"	"	"	"	"	
2-Nitroaniline	ND	2500	"	"	"	"	"	"	
3-Nitroaniline	ND	5000	"	"	"	"	"	"	
4-Nitroaniline	ND	3500	"	"	"	"	"	"	
Nitrobenzene	ND	1000	"	"	"	"	"	"	
2-Nitrophenol	ND	1000	"	"	"	"	"	"	
4-Nitrophenol	ND	3500	"	"	"	"	"	"	
N-Nitrosodimethylamine	ND	1000	"	"	"	"	"	"	
N-Nitrosodiphenylamine	ND	1750	"	"	"	"	"	"	
N-Nitrosodi-n-propylamine	ND	1500	"	"	"	"	"	"	
Pentachlorophenol	ND	2000	"	"	"	"	"	"	
Phenanthrene	ND	1000	"	"	"	"	"	"	
Phenol	ND	1500	"	"	"	"	"	"	
Pyrene	ND	1000	"	"	"	"	"	"	
Pyridine	ND	5000	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	1000	"	"	"	"	"	"	
2,4,5-Trichlorophenol	ND	1500	"	"	"	"	"	"	
2,4,6-Trichlorophenol	ND	1500	"	"	"	"	"	"	
Surrogate: 2-Fluorophenol		*62 %*	*25-121*		"	"	"	"	
Surrogate: Phenol-d6		*19 %*	*24-113*		"	"	"	"	*S-08*
Surrogate: Nitrobenzene-d5		*97 %*	*23-120*		"	"	"	"	
Surrogate: 2-Fluorobiphenyl		*111 %*	*30-115*		"	"	"	"	
Surrogate: 2,4,6-Tribromophenol		*%*	*19-122*		"	"	"	"	*S-08*
Surrogate: Terphenyl-dl4		*138 %*	*18-137*		"	"	"	"	*S-04*

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Client Name: Kleinfelder, Inc.
Project Name: 44102-002

EMA Log #: 0501269

Semivolatile Organic Compounds by EPA Method 8270C

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
T1-8-3 (0501269-06) Soil Sampled: 01/25/05 11:05 Received: 01/25/05 16:45									
Acenaphthene	ND	100	ug/kg	5	5012702	01/27/05	02/07/05	EPA 8270C	
Acenaphthylene	ND	100	"	"	"	"	"	"	
Anthracene	ND	100	"	"	"	"	"	"	
Benzidine	ND	750	"	"	"	"	"	"	
Benzo (a) anthracene	ND	100	"	"	"	"	"	"	
Benzo (b) fluoranthene	**184**	100	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	100	"	"	"	"	"	"	
Benzo (g,h,i) perylene	ND	200	"	"	"	"	"	"	
Benzo (a) pyrene	ND	100	"	"	"	"	"	"	
Benzyl alcohol	ND	375	"	"	"	"	"	"	
Bis(2-chloroethoxy)methane	ND	100	"	"	"	"	"	"	
Bis(2-chloroethyl)ether	ND	125	"	"	"	"	"	"	
Bis(2-chloroisopropyl)ether	ND	125	"	"	"	"	"	"	
Bis(2-ethylhexyl)phthalate	ND	225	"	"	"	"	"	"	
4-Bromophenyl phenyl ether	ND	100	"	"	"	"	"	"	
Butyl benzyl phthalate	ND	200	"	"	"	"	"	"	
[illegible]bazole	ND	300	"	"	"	"	"	"	
[illegible]hloroaniline	ND	500	"	"	"	"	"	"	
4-Chloro-3-methylphenol	ND	100	"	"	"	"	"	"	
2-Chloronaphthalene	ND	100	"	"	"	"	"	"	
2-Chlorophenol	ND	100	"	"	"	"	"	"	
4-Chlorophenyl phenyl ether	ND	100	"	"	"	"	"	"	
Chrysene	**121**	100	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	200	"	"	"	"	"	"	
Dibenzofuran	ND	100	"	"	"	"	"	"	
Di-n-butyl phthalate	ND	200	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	100	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	100	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	100	"	"	"	"	"	"	
3,3'-Dichlorobenzidine	ND	750	"	"	"	"	"	"	
2,4-Dichlorophenol	ND	100	"	"	"	"	"	"	
Diethyl phthalate	ND	100	"	"	"	"	"	"	
2,4-Dimethylphenol	ND	400	"	"	"	"	"	"	
Dimethyl phthalate	ND	100	"	"	"	"	"	"	
4,6-Dinitro-2-methylphenol	ND	250	"	"	"	"	"	"	
2,4-Dinitrophenol	ND	500	"	"	"	"	"	"	
2,4-Dinitrotoluene	ND	100	"	"	"	"	"	"	
2,6-Dinitrotoluene	ND	100	"	"	"	"	"	"	
Di-n-octyl phthalate	ND	200	"	"	"	"	"	"	
Fluoranthene	**279**	100	"	"	"	"	"	"	
Fluorene	ND	100	"	"	"	"	"	"	
Hexachlorobenzene	ND	100	"	"	"	"	"	"	
Hexachlorobutadiene	ND	100	"	"	"	"	"	"	

[illegible]sults in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Client Name: Kleinfelder, Inc.
Project Name: 44102-002

EMA Log #: 0501269

Semivolatile Organic Compounds by EPA Method 8270C

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
T1-8-3 (0501269-06) Soil Sampled: 01/25/05 11:05 Received: 01/25/05 16:45									
Hexachlorocyclopentadiene	ND	250	ug/kg	5	5012702	01/27/05	02/07/05	EPA 8270C	
Hexachloroethane	ND	100	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	150	"	"	"	"	"	"	
Isophorone	ND	100	"	"	"	"	"	"	
2-Methylnaphthalene	ND	100	"	"	"	"	"	"	
2-Methylphenol	ND	100	"	"	"	"	"	"	
4-Methylphenol (3-Methylphenol)	ND	200	"	"	"	"	"	"	
Naphthalene	ND	100	"	"	"	"	"	"	
2-Nitroaniline	ND	250	"	"	"	"	"	"	
3-Nitroaniline	ND	500	"	"	"	"	"	"	
4-Nitroaniline	ND	350	"	"	"	"	"	"	
Nitrobenzene	ND	100	"	"	"	"	"	"	
2-Nitrophenol	ND	100	"	"	"	"	"	"	
4-Nitrophenol	ND	350	"	"	"	"	"	"	
N-Nitrosodimethylamine	ND	100	"	"	"	"	"	"	
N-Nitrosodiphenylamine	ND	175	"	"	"	"	"	"	
N-Nitrosodi-n-propylamine	ND	150	"	"	"	"	"	"	
Pentachlorophenol	ND	200	"	"	"	"	"	"	
Phenanthrene	**192**	100	"	"	"	"	"	"	
Phenol	ND	150	"	"	"	"	"	"	
Pyrene	**282**	100	"	"	"	"	"	"	
Pyridine	ND	500	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	100	"	"	"	"	"	"	
2,4,5-Trichlorophenol	ND	150	"	"	"	"	"	"	
2,4,6-Trichlorophenol	ND	150	"	"	"	"	"	"	
Surrogate: 2-Fluorophenol		*99 %*	*25-121*		"	"	"	"	
Surrogate: Phenol-d6		*101 %*	*24-113*		"	"	"	"	
Surrogate: Nitrobenzene-d5		*88 %*	*23-120*		"	"	"	"	
Surrogate: 2-Fluorobiphenyl		*108 %*	*30-115*		"	"	"	"	
Surrogate: 2,4,6-Tribromophenol		*62 %*	*19-122*		"	"	"	"	
Surrogate: Terphenyl-dl4		*131 %*	*18-137*		"	"	"	"	

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Client Name: Kleinfelder, Inc.
Project Name: 44102-002

EMA Log #: 0501269

Semivolatile Organic Compounds by EPA Method 8270C

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
T1-9-1 (0501269-07) Soil Sampled: 01/25/05 11:23 Received: 01/25/05 16:45									**R-05**
Acenaphthene	ND	100	ug/kg	5	5012702	01/27/05	02/07/05	EPA 8270C	
Acenaphthylene	ND	100	"	"	"	"	"	"	
Anthracene	ND	100	"	"	"	"	"	"	
Benzidine	ND	750	"	"	"	"	"	"	
Benzo (a) anthracene	ND	100	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	100	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	100	"	"	"	"	"	"	
Benzo (g,h,i) perylene	ND	200	"	"	"	"	"	"	
Benzo (a) pyrene	ND	100	"	"	"	"	"	"	
Benzyl alcohol	ND	375	"	"	"	"	"	"	
Bis(2-chloroethoxy)methane	ND	100	"	"	"	"	"	"	
Bis(2-chloroethyl)ether	ND	125	"	"	"	"	"	"	
Bis(2-chloroisopropyl)ether	ND	125	"	"	"	"	"	"	
Bis(2-ethylhexyl)phthalate	ND	225	"	"	"	"	"	"	
4-Bromophenyl phenyl ether	ND	100	"	"	"	"	"	"	
Butyl benzyl phthalate	ND	200	"	"	"	"	"	"	
[illegible]bazole	ND	300	"	"	"	"	"	"	
[illegible]hloroaniline	ND	500	"	"	"	"	"	"	
4-Chloro-3-methylphenol	ND	100	"	"	"	"	"	"	
2-Chloronaphthalene	ND	100	"	"	"	"	"	"	
2-Chlorophenol	ND	100	"	"	"	"	"	"	
4-Chlorophenyl phenyl ether	ND	100	"	"	"	"	"	"	
Chrysene	ND	100	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	200	"	"	"	"	"	"	
Dibenzofuran	ND	100	"	"	"	"	"	"	
Di-n-butyl phthalate	ND	200	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	100	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	100	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	100	"	"	"	"	"	"	
3,3'-Dichlorobenzidine	ND	750	"	"	"	"	"	"	
2,4-Dichlorophenol	ND	100	"	"	"	"	"	"	
Diethyl phthalate	ND	100	"	"	"	"	"	"	
2,4-Dimethylphenol	ND	400	"	"	"	"	"	"	
Dimethyl phthalate	ND	100	"	"	"	"	"	"	
4,6-Dinitro-2-methylphenol	ND	250	"	"	"	"	"	"	
2,4-Dinitrophenol	ND	500	"	"	"	"	"	"	
2,4-Dinitrotoluene	ND	100	"	"	"	"	"	"	
2,6-Dinitrotoluene	ND	100	"	"	"	"	"	"	
Di-n-octyl phthalate	ND	200	"	"	"	"	"	"	
Fluoranthene	ND	100	"	"	"	"	"	"	
Fluorene	ND	100	"	"	"	"	"	"	
Hexachlorobenzene	ND	100	"	"	"	"	"	"	
Hexachlorobutadiene	ND	100	"	"	"	"	"	"	

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Client Name: Kleinfelder, Inc.
Project Name: 44102-002

EMA Log #: 0501269

Semivolatile Organic Compounds by EPA Method 8270C

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
T1-9-1 (0501269-07) Soil Sampled: 01/25/05 11:23 Received: 01/25/05 16:45									**R-05**
Hexachlorocyclopentadiene	ND	250	ug/kg	5	5012702	01/27/05	02/07/05	EPA 8270C	
Hexachloroethane	ND	100	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	150	"	"	"	"	"	"	
Isophorone	ND	100	"	"	"	"	"	"	
2-Methylnaphthalene	ND	100	"	"	"	"	"	"	
2-Methylphenol	ND	100	"	"	"	"	"	"	
4-Methylphenol (3-Methylphenol)	ND	200	"	"	"	"	"	"	
Naphthalene	ND	100	"	"	"	"	"	"	
2-Nitroaniline	ND	250	"	"	"	"	"	"	
3-Nitroaniline	ND	500	"	"	"	"	"	"	
4-Nitroaniline	ND	350	"	"	"	"	"	"	
Nitrobenzene	ND	100	"	"	"	"	"	"	
2-Nitrophenol	ND	100	"	"	"	"	"	"	
4-Nitrophenol	ND	350	"	"	"	"	"	"	
N-Nitrosodimethylamine	ND	100	"	"	"	"	"	"	
N-Nitrosodiphenylamine	ND	175	"	"	"	"	"	"	
N-Nitrosodi-n-propylamine	ND	150	"	"	"	"	"	"	
Pentachlorophenol	ND	200	"	"	"	"	"	"	
Phenanthrene	ND	100	"	"	"	"	"	"	
Phenol	ND	150	"	"	"	"	"	"	
Pyrene	ND	100	"	"	"	"	"	"	
Pyridine	ND	500	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	100	"	"	"	"	"	"	
2,4,5-Trichlorophenol	ND	150	"	"	"	"	"	"	
2,4,6-Trichlorophenol	ND	150	"	"	"	"	"	"	
Surrogate: 2-Fluorophenol		*82 %*	*25-121*		"	"	"	"	
Surrogate: Phenol-d6		*93 %*	*24-113*		"	"	"	"	
Surrogate: Nitrobenzene-d5		*73 %*	*23-120*		"	"	"	"	
Surrogate: 2-Fluorobiphenyl		*92 %*	*30-115*		"	"	"	"	
Surrogate: 2,4,6-Tribromophenol		*69 %*	*19-122*		"	"	"	"	
Surrogate: Terphenyl-dl4		*98 %*	*18-137*		"	"	"	"	

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Client Name: Kleinfelder, Inc.
Project Name: 44102-002

EMA Log #: 0501269

Semivolatile Organic Compounds by EPA Method 8270C

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
T1-9-2 (0501269-08) Soil Sampled: 01/25/05 11:30 Received: 01/25/05 16:45									
Acenaphthene	ND	100	ug/kg	5	5012702	01/27/05	02/07/05	EPA 8270C	
Acenaphthylene	ND	100	"	"	"	"	"	"	
Anthracene	ND	100	"	"	"	"	"	"	
Benzidine	ND	750	"	"	"	"	"	"	
Benzo (a) anthracene	ND	100	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	100	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	100	"	"	"	"	"	"	
Benzo (g,h,i) perylene	ND	200	"	"	"	"	"	"	
Benzo (a) pyrene	ND	100	"	"	"	"	"	"	
Benzyl alcohol	ND	375	"	"	"	"	"	"	
Bis(2-chloroethoxy)methane	ND	100	"	"	"	"	"	"	
Bis(2-chloroethyl)ether	ND	125	"	"	"	"	"	"	
Bis(2-chloroisopropyl)ether	ND	125	"	"	"	"	"	"	
Bis(2-ethylhexyl)phthalate	ND	225	"	"	"	"	"	"	
4-Bromophenyl phenyl ether	ND	100	"	"	"	"	"	"	
Butyl benzyl phthalate	ND	200	"	"	"	"	"	"	
[illegible]bazole	ND	300	"	"	"	"	"	"	
[illegible]Chloroaniline	ND	500	"	"	"	"	"	"	
4-Chloro-3-methylphenol	ND	100	"	"	"	"	"	"	
2-Chloronaphthalene	ND	100	"	"	"	"	"	"	
2-Chlorophenol	ND	100	"	"	"	"	"	"	
4-Chlorophenyl phenyl ether	ND	100	"	"	"	"	"	"	
Chrysene	**107**	100	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	200	"	"	"	"	"	"	
Dibenzofuran	ND	100	"	"	"	"	"	"	
Di-n-butyl phthalate	ND	200	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	100	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	100	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	100	"	"	"	"	"	"	
3,3'-Dichlorobenzidine	ND	750	"	"	"	"	"	"	
2,4-Dichlorophenol	ND	100	"	"	"	"	"	"	
Diethyl phthalate	ND	100	"	"	"	"	"	"	
2,4-Dimethylphenol	ND	400	"	"	"	"	"	"	
Dimethyl phthalate	ND	100	"	"	"	"	"	"	
4,6-Dinitro-2-methylphenol	ND	250	"	"	"	"	"	"	
2,4-Dinitrophenol	ND	500	"	"	"	"	"	"	
2,4-Dinitrotoluene	ND	100	"	"	"	"	"	"	
2,6-Dinitrotoluene	ND	100	"	"	"	"	"	"	
Di-n-octyl phthalate	ND	200	"	"	"	"	"	"	
Fluoranthene	**152**	100	"	"	"	"	"	"	
Fluorene	ND	100	"	"	"	"	"	"	
Hexachlorobenzene	ND	100	"	"	"	"	"	"	
Hexachlorobutadiene	ND	100	"	"	"	"	"	"	

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Client Name: Kleinfelder, Inc.
Project Name: 44102-002

EMA Log #: 0501269

Semivolatile Organic Compounds by EPA Method 8270C

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
T1-9-2 (0501269-08) Soil Sampled: 01/25/05 11:30 Received: 01/25/05 16:45									
Hexachlorocyclopentadiene	ND	250	ug/kg	5	5012702	01/27/05	02/07/05	EPA 8270C	
Hexachloroethane	ND	100	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	150	"	"	"	"	"	"	
Isophorone	ND	100	"	"	"	"	"	"	
2-Methylnaphthalene	ND	100	"	"	"	"	"	"	
2-Methylphenol	ND	100	"	"	"	"	"	"	
4-Methylphenol (3-Methylphenol)	ND	200	"	"	"	"	"	"	
Naphthalene	ND	100	"	"	"	"	"	"	
2-Nitroaniline	ND	250	"	"	"	"	"	"	
3-Nitroaniline	ND	500	"	"	"	"	"	"	
4-Nitroaniline	ND	350	"	"	"	"	"	"	
Nitrobenzene	ND	100	"	"	"	"	"	"	
2-Nitrophenol	ND	100	"	"	"	"	"	"	
4-Nitrophenol	ND	350	"	"	"	"	"	"	
N-Nitrosodimethylamine	ND	100	"	"	"	"	"	"	
N-Nitrosodiphenylamine	ND	175	"	"	"	"	"	"	
N-Nitrosodi-n-propylamine	ND	150	"	"	"	"	"	"	
Pentachlorophenol	ND	200	"	"	"	"	"	"	
Phenanthrene	**155**	100	"	"	"	"	"	"	
Phenol	ND	150	"	"	"	"	"	"	
Pyrene	**172**	100	"	"	"	"	"	"	
Pyridine	ND	500	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	100	"	"	"	"	"	"	
2,4,5-Trichlorophenol	ND	150	"	"	"	"	"	"	
2,4,6-Trichlorophenol	ND	150	"	"	"	"	"	"	
Surrogate: 2-Fluorophenol		*89 %*	*25-121*		"	"	"	"	
Surrogate: Phenol-d6		*98 %*	*24-113*		"	"	"	"	
Surrogate: Nitrobenzene-d5		*74 %*	*23-120*		"	"	"	"	
Surrogate: 2-Fluorobiphenyl		*108 %*	*30-115*		"	"	"	"	
Surrogate: 2,4,6-Tribromophenol		*62 %*	*19-122*		"	"	"	"	
Surrogate: Terphenyl-dl4		*130 %*	*18-137*		"	"	"	"	

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Client Name: Kleinfelder, Inc.
Project Name: 44102-002

EMA Log #: 0501269

Semivolatile Organic Compounds by EPA Method 8270C

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
T1-9-3 (0501269-09) Soil Sampled: 01/25/05 12:05 Received: 01/25/05 16:45									
Acenaphthene	ND	100	ug/kg	5	5012702	01/27/05	02/07/05	EPA 8270C	
Acenaphthylene	ND	100	"	"	"	"	"	"	
Anthracene	ND	100	"	"	"	"	"	"	
Benzidine	ND	750	"	"	"	"	"	"	
Benzo (a) anthracene	**207**	100	"	"	"	"	"	"	
Benzo (b) fluoranthene	**373**	100	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	100	"	"	"	"	"	"	
Benzo (g,h,i) perylene	ND	200	"	"	"	"	"	"	
Benzo (a) pyrene	**254**	100	"	"	"	"	"	"	
Benzyl alcohol	ND	375	"	"	"	"	"	"	
Bis(2-chloroethoxy)methane	ND	100	"	"	"	"	"	"	
Bis(2-chloroethyl)ether	ND	125	"	"	"	"	"	"	
Bis(2-chloroisopropyl)ether	ND	125	"	"	"	"	"	"	
Bis(2-ethylhexyl)phthalate	ND	225	"	"	"	"	"	"	
4-Bromophenyl phenyl ether	ND	100	"	"	"	"	"	"	
Butyl benzyl phthalate	ND	200	"	"	"	"	"	"	
Carbazole	ND	300	"	"	"	"	"	"	
4-Chloroaniline	ND	500	"	"	"	"	"	"	
4-Chloro-3-methylphenol	ND	100	"	"	"	"	"	"	
2-Chloronaphthalene	ND	100	"	"	"	"	"	"	
2-Chlorophenol	ND	100	"	"	"	"	"	"	
4-Chlorophenyl phenyl ether	ND	100	"	"	"	"	"	"	
Chrysene	**355**	100	"	"	"	"	"	"	
Dibenz (a,h) anthracene	**218**	200	"	"	"	"	"	"	
Dibenzofuran	ND	100	"	"	"	"	"	"	
Di-n-butyl phthalate	ND	200	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	100	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	100	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	100	"	"	"	"	"	"	
3,3'-Dichlorobenzidine	ND	750	"	"	"	"	"	"	
2,4-Dichlorophenol	ND	100	"	"	"	"	"	"	
Diethyl phthalate	ND	100	"	"	"	"	"	"	
2,4-Dimethylphenol	ND	400	"	"	"	"	"	"	
Dimethyl phthalate	ND	100	"	"	"	"	"	"	
4,6-Dinitro-2-methylphenol	ND	250	"	"	"	"	"	"	
2,4-Dinitrophenol	ND	500	"	"	"	"	"	"	
2,4-Dinitrotoluene	ND	100	"	"	"	"	"	"	
2,6-Dinitrotoluene	ND	100	"	"	"	"	"	"	
Di-n-octyl phthalate	ND	200	"	"	"	"	"	"	
Fluoranthene	**627**	100	"	"	"	"	"	"	
Fluorene	ND	100	"	"	"	"	"	"	
Hexachlorobenzene	ND	100	"	"	"	"	"	"	

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Client Name: Kleinfelder, Inc.
Project Name: 44102-002

EMA Log #: 0501269

Semivolatile Organic Compounds by EPA Method 8270C

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
T1-9-3 (0501269-09) Soil Sampled: 01/25/05 12:05 Received: 01/25/05 16:45									
Hexachlorobutadiene	ND	100	ug/kg	5	5012702	01/27/05	02/07/05	EPA 8270C	
Hexachlorocyclopentadiene	ND	250	"	"	"	"	"	"	
Hexachloroethane	ND	100	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	**231**	150	"	"	"	"	"	"	
Isophorone	ND	100	"	"	"	"	"	"	
2-Methylnaphthalene	ND	100	"	"	"	"	"	"	
2-Methylphenol	ND	100	"	"	"	"	"	"	
4-Methylphenol (3-Methylphenol)	ND	200	"	"	"	"	"	"	
Naphthalene	ND	100	"	"	"	"	"	"	
2-Nitroaniline	ND	250	"	"	"	"	"	"	
3-Nitroaniline	ND	500	"	"	"	"	"	"	
4-Nitroaniline	ND	350	"	"	"	"	"	"	
Nitrobenzene	ND	100	"	"	"	"	"	"	
2-Nitrophenol	ND	100	"	"	"	"	"	"	
4-Nitrophenol	ND	350	"	"	"	"	"	"	
N-Nitrosodimethylamine	ND	100	"	"	"	"	"	"	
N-Nitrosodiphenylamine	ND	175	"	"	"	"	"	"	
N-Nitrosodi-n-propylamine	ND	150	"	"	"	"	"	"	
Pentachlorophenol	ND	200	"	"	"	"	"	"	
Phenanthrene	**472**	100	"	"	"	"	"	"	
Phenol	ND	150	"	"	"	"	"	"	
Pyrene	**637**	100	"	"	"	"	"	"	
Pyridine	ND	500	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	100	"	"	"	"	"	"	
2,4,5-Trichlorophenol	ND	150	"	"	"	"	"	"	
2,4,6-Trichlorophenol	ND	150	"	"	"	"	"	"	
Surrogate: 2-Fluorophenol		*88 %*	*25-121*		"	"	"	"	
Surrogate: Phenol-d6		*99 %*	*24-113*		"	"	"	"	
Surrogate: Nitrobenzene-d5		*90 %*	*23-120*		"	"	"	"	
Surrogate: 2-Fluorobiphenyl		*108 %*	*30-115*		"	"	"	"	
Surrogate: 2,4,6-Tribromophenol		*31 %*	*19-122*		"	"	"	"	
Surrogate: Terphenyl-dl4		*123 %*	*18-137*		"	"	"	"	

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Client Name: Kleinfelder, Inc.
Project Name: 44102-002

EMA Log #: 0501269

Semivolatile Organic Compounds by EPA Method 8270C

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
T1-10-1 (0501269-10) Soil Sampled: 01/25/05 13:13 Received: 01/25/05 16:45									
Acenaphthene	ND	100	ug/kg	5	5012702	01/27/05	02/08/05	EPA 8270C	
Acenaphthylene	ND	100	"	"	"	"	"	"	
Anthracene	ND	100	"	"	"	"	"	"	
Benzidine	ND	750	"	"	"	"	"	"	
Benzo (a) anthracene	ND	100	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	100	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	100	"	"	"	"	"	"	
Benzo (g,h,i) perylene	ND	200	"	"	"	"	"	"	
Benzo (a) pyrene	ND	100	"	"	"	"	"	"	
Benzyl alcohol	ND	375	"	"	"	"	"	"	
Bis(2-chloroethoxy)methane	ND	100	"	"	"	"	"	"	
Bis(2-chloroethyl)ether	ND	125	"	"	"	"	"	"	
Bis(2-chloroisopropyl)ether	ND	125	"	"	"	"	"	"	
Bis(2-ethylhexyl)phthalate	ND	225	"	"	"	"	"	"	
4-Bromophenyl phenyl ether	ND	100	"	"	"	"	"	"	
Butyl benzyl phthalate	ND	200	"	"	"	"	"	"	
[illegible]bazole	ND	300	"	"	"	"	"	"	
[illegible]hloroaniline	ND	500	"	"	"	"	"	"	
4-Chloro-3-methylphenol	ND	100	"	"	"	"	"	"	
2-Chloronaphthalene	ND	100	"	"	"	"	"	"	
2-Chlorophenol	ND	100	"	"	"	"	"	"	
4-Chlorophenyl phenyl ether	ND	100	"	"	"	"	"	"	
Chrysene	ND	100	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	200	"	"	"	"	"	"	
Dibenzofuran	ND	100	"	"	"	"	"	"	
Di-n-butyl phthalate	ND	200	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	100	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	100	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	100	"	"	"	"	"	"	
3,3'-Dichlorobenzidine	ND	750	"	"	"	"	"	"	
2,4-Dichlorophenol	ND	100	"	"	"	"	"	"	
Diethyl phthalate	ND	100	"	"	"	"	"	"	
2,4-Dimethylphenol	ND	400	"	"	"	"	"	"	
Dimethyl phthalate	ND	100	"	"	"	"	"	"	
4,6-Dinitro-2-methylphenol	ND	250	"	"	"	"	"	"	
2,4-Dinitrophenol	ND	500	"	"	"	"	"	"	
2,4-Dinitrotoluene	ND	100	"	"	"	"	"	"	
2,6-Dinitrotoluene	ND	100	"	"	"	"	"	"	
Di-n-octyl phthalate	ND	200	"	"	"	"	"	"	
Fluoranthene	ND	100	"	"	"	"	"	"	
Fluorene	ND	100	"	"	"	"	"	"	
Hexachlorobenzene	ND	100	"	"	"	"	"	"	
Hexachlorobutadiene	ND	100	"	"	"	"	"	"	

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Client Name: Kleinfelder, Inc.
Project Name: 44102-002

EMA Log #: 0501269

Semivolatile Organic Compounds by EPA Method 8270C

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
T1-10-1 (0501269-10) Soil Sampled: 01/25/05 13:13 Received: 01/25/05 16:45									
Hexachlorocyclopentadiene	ND	250	ug/kg	5	5012702	01/27/05	02/08/05	EPA 8270C	
Hexachloroethane	ND	100	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	150	"	"	"	"	"	"	
Isophorone	ND	100	"	"	"	"	"	"	
2-Methylnaphthalene	ND	100	"	"	"	"	"	"	
2-Methylphenol	ND	100	"	"	"	"	"	"	
4-Methylphenol (3-Methylphenol)	ND	200	"	"	"	"	"	"	
Naphthalene	ND	100	"	"	"	"	"	"	
2-Nitroaniline	ND	250	"	"	"	"	"	"	
3-Nitroaniline	ND	500	"	"	"	"	"	"	
4-Nitroaniline	ND	350	"	"	"	"	"	"	
Nitrobenzene	ND	100	"	"	"	"	"	"	
2-Nitrophenol	ND	100	"	"	"	"	"	"	
4-Nitrophenol	ND	350	"	"	"	"	"	"	
N-Nitrosodimethylamine	ND	100	"	"	"	"	"	"	
N-Nitrosodiphenylamine	ND	175	"	"	"	"	"	"	
N-Nitrosodi-n-propylamine	ND	150	"	"	"	"	"	"	
Pentachlorophenol	ND	200	"	"	"	"	"	"	
Phenanthrene	ND	100	"	"	"	"	"	"	
Phenol	ND	150	"	"	"	"	"	"	
Pyrene	**116**	100	"	"	"	"	"	"	
Pyridine	ND	500	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	100	"	"	"	"	"	"	
2,4,5-Trichlorophenol	ND	150	"	"	"	"	"	"	
2,4,6-Trichlorophenol	ND	150	"	"	"	"	"	"	
Surrogate: 2-Fluorophenol		*84 %*	*25-121*		"	"	"	"	
Surrogate: Phenol-d6		*97 %*	*24-113*		"	"	"	"	
Surrogate: Nitrobenzene-d5		*88 %*	*23-120*		"	"	"	"	
Surrogate: 2-Fluorobiphenyl		*101 %*	*30-115*		"	"	"	"	
Surrogate: 2,4,6-Tribromophenol		*66 %*	*19-122*		"	"	"	"	
Surrogate: Terphenyl-dl4		*133 %*	*18-137*		"	"	"	"	

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Client Name: Kleinfelder, Inc.
Project Name: 44102-002

EMA Log #: 0501269

Semivolatile Organic Compounds by EPA Method 8270C

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
T1-10-2 (0501269-11) Soil Sampled: 01/25/05 13:26 Received: 01/25/05 16:45									
Acenaphthene	ND	100	ug/kg	5	5012702	01/27/05	02/08/05	EPA 8270C	
Acenaphthylene	ND	100	"	"	"	"	"	"	
Anthracene	ND	100	"	"	"	"	"	"	
Benzidine	ND	750	"	"	"	"	"	"	
Benzo (a) anthracene	ND	100	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	100	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	100	"	"	"	"	"	"	
Benzo (g,h,i) perylene	ND	200	"	"	"	"	"	"	
Benzo (a) pyrene	ND	100	"	"	"	"	"	"	
Benzyl alcohol	ND	375	"	"	"	"	"	"	
Bis(2-chloroethoxy)methane	ND	100	"	"	"	"	"	"	
Bis(2-chloroethyl)ether	ND	125	"	"	"	"	"	"	
Bis(2-chloroisopropyl)ether	ND	125	"	"	"	"	"	"	
Bis(2-ethylhexyl)phthalate	ND	225	"	"	"	"	"	"	
4-Bromophenyl phenyl ether	ND	100	"	"	"	"	"	"	
Butyl benzyl phthalate	ND	200	"	"	"	"	"	"	
[illegible]rbazole	ND	300	"	"	"	"	"	"	
[illegible]Chloroaniline	ND	500	"	"	"	"	"	"	
4-Chloro-3-methylphenol	ND	100	"	"	"	"	"	"	
2-Chloronaphthalene	ND	100	"	"	"	"	"	"	
2-Chlorophenol	ND	100	"	"	"	"	"	"	
4-Chlorophenyl phenyl ether	ND	100	"	"	"	"	"	"	
Chrysene	**151**	100	"	"	"	"	"	"	
Dihenz (a,h) anthracene	ND	200	"	"	"	"	"	"	
Dibenzofuran	ND	100	"	"	"	"	"	"	
Di-n-butyl phthalate	ND	200	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	100	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	100	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	100	"	"	"	"	"	"	
3,3'-Dichlorobenzidine	ND	750	"	"	"	"	"	"	
2,4-Dichlorophenol	ND	100	"	"	"	"	"	"	
Diethyl phthalate	ND	100	"	"	"	"	"	"	
2,4-Dimethylphenol	ND	400	"	"	"	"	"	"	
Dimethyl phthalate	ND	100	"	"	"	"	"	"	
4,6-Dinitro-2-methylphenol	ND	250	"	"	"	"	"	"	
2,4-Dinitrophenol	ND	500	"	"	"	"	"	"	
2,4-Dinitrotoluene	ND	100	"	"	"	"	"	"	
2,6-Dinitrotoluene	ND	100	"	"	"	"	"	"	
Di-n-octyl phthalate	ND	200	"	"	"	"	"	"	
Fluoranthene	**189**	100	"	"	"	"	"	"	
Fluorene	ND	100	"	"	"	"	"	"	
Hexachlorobenzene	ND	100	"	"	"	"	"	"	
Hexachlorobutadiene	ND	100	"	"	"	"	"	"	

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Client Name: Kleinfelder, Inc.
Project Name: 44102-002

EMA Log #: 0501269

Semivolatile Organic Compounds by EPA Method 8270C

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
T1-10-2 (0501269-11) Soil Sampled: 01/25/05 13:26 Received: 01/25/05 16:45									
Hexachlorocyclopentadiene	ND	250	ug/kg	5	5012702	01/27/05	02/08/05	EPA 8270C	
Hexachloroethane	ND	100	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	150	"	"	"	"	"	"	
Isophorone	ND	100	"	"	"	"	"	"	
2-Methylnaphthalene	ND	100	"	"	"	"	"	"	
2-Methylphenol	ND	100	"	"	"	"	"	"	
4-Methylphenol (3-Methylphenol)	ND	200	"	"	"	"	"	"	
Naphthalene	ND	100	"	"	"	"	"	"	
2-Nitroaniline	ND	250	"	"	"	"	"	"	
3-Nitroaniline	ND	500	"	"	"	"	"	"	
4-Nitroaniline	ND	350	"	"	"	"	"	"	
Nitrobenzene	ND	100	"	"	"	"	"	"	
2-Nitrophenol	ND	100	"	"	"	"	"	"	
4-Nitrophenol	ND	350	"	"	"	"	"	"	
N-Nitrosodimethylamine	ND	100	"	"	"	"	"	"	
N-Nitrosodiphenylamine	ND	175	"	"	"	"	"	"	
N-Nitrosodi-n-propylamine	ND	150	"	"	"	"	"	"	
Pentachlorophenol	ND	200	"	"	"	"	"	"	
Phenanthrene	**255**	100	"	"	"	"	"	"	
Phenol	ND	150	"	"	"	"	"	"	
Pyrene	**262**	100	"	"	"	"	"	"	
Pyridine	ND	500	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	100	"	"	"	"	"	"	
2,4,5-Trichlorophenol	ND	150	"	"	"	"	"	"	
2,4,6-Trichlorophenol	ND	150	"	"	"	"	"	"	
Surrogate: 2-Fluorophenol		*94 %*	*25-121*		"	"	"	"	
Surrogate: Phenol-d6		*101 %*	*24-113*		"	"	"	"	
Surrogate: Nitrobenzene-d5		*83 %*	*23-120*		"	"	"	"	
Surrogate: 2-Fluorobiphenyl		*100 %*	*30-115*		"	"	"	"	
Surrogate: 2,4,6-Tribromophenol		*53 %*	*19-122*		"	"	"	"	
Surrogate: Terphenyl-dl4		*123 %*	*18-137*		"	"	"	"	

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Client Name: Kleinfelder, Inc.
Project Name: 44102-002

EMA Log #: 0501269

Semivolatile Organic Compounds by EPA Method 8270C

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
T1-10-3 (0501269-12) Soil Sampled: 01/25/05 13:45 Received: 01/25/05 16:45									
Acenaphthene	ND	1000	ug/kg	50	5012702	01/27/05	02/07/05	EPA 8270C	
Acenaphthylene	ND	1000	"	"	"	"	"	"	
Anthracene	ND	1000	"	"	"	"	"	"	
Benzidine	ND	7500	"	"	"	"	"	"	
Benzo (a) anthracene	**1080**	1000	"	"	"	"	"	"	
Benzo (b) fluoranthene	**1540**	1000	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	1000	"	"	"	"	"	"	
Benzo (g,h,i) perylene	ND	2000	"	"	"	"	"	"	
Benzo (a) pyrene	ND	1000	"	"	"	"	"	"	
Benzyl alcohol	ND	3750	"	"	"	"	"	"	
Bis(2-chloroethoxy)methane	ND	1000	"	"	"	"	"	"	
Bis(2-chloroethyl)ether	ND	1250	"	"	"	"	"	"	
Bis(2-chloroisopropyl)ether	ND	1250	"	"	"	"	"	"	
Bis(2-ethylhexyl)phthalate	ND	2250	"	"	"	"	"	"	
4-Bromophenyl phenyl ether	ND	1000	"	"	"	"	"	"	
Butyl benzyl phthalate	ND	2000	"	"	"	"	"	"	
[illegible]bazole	ND	3000	"	"	"	"	"	"	
[illegible]hloroaniline	ND	5000	"	"	"	"	"	"	
4-Chloro-3-methylphenol	ND	1000	"	"	"	"	"	"	
2-Chloronaphthalene	ND	1000	"	"	"	"	"	"	
2-Chlorophenol	ND	1000	"	"	"	"	"	"	
4-Chlorophenyl phenyl ether	ND	1000	"	"	"	"	"	"	
Chrysene	**1500**	1000	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	2000	"	"	"	"	"	"	
Dibenzofuran	ND	1000	"	"	"	"	"	"	
Di-n-butyl phthalate	ND	2000	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	1000	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	1000	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	1000	"	"	"	"	"	"	
3,3'-Dichlorobenzidine	ND	7500	"	"	"	"	"	"	
2,4-Dichlorophenol	ND	1000	"	"	"	"	"	"	
Diethyl phthalate	ND	1000	"	"	"	"	"	"	
2,4-Dimethylphenol	ND	4000	"	"	"	"	"	"	
Dimethyl phthalate	ND	1000	"	"	"	"	"	"	
4,6-Dinitro-2-methylphenol	ND	2500	"	"	"	"	"	"	
2,4-Dinitrophenol	ND	5000	"	"	"	"	"	"	
2,4-Dinitrotoluene	ND	1000	"	"	"	"	"	"	
2,6-Dinitrotoluene	ND	1000	"	"	"	"	"	"	
Di-n-octyl phthalate	ND	2000	"	"	"	"	"	"	
Fluoranthene	**2700**	1000	"	"	"	"	"	"	
Fluorene	ND	1000	"	"	"	"	"	"	
Hexachlorobenzene	ND	1000	"	"	"	"	"	"	
[illegible]exachlorobutadiene	ND	1000	"	"	"	"	"	"	

[illegible]esults in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Client Name: Kleinfelder, Inc.
Project Name: 44102-002

EMA Log #: 0501269

Semivolatile Organic Compounds by EPA Method 8270C

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
T1-10-3 (0501269-12) Soil	**Sampled: 01/25/05 13:45**	**Received: 01/25/05 16:45**							
Hexachlorocyclopentadiene	ND	2500	ug/kg	50	5012702	01/27/05	02/07/05	EPA 8270C	
Hexachloroethane	ND	1000	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	**1900**	1500	"	"	"	"	"	"	
Isophorone	ND	1000	"	"	"	"	"	"	
2-Methylnaphthalene	ND	1000	"	"	"	"	"	"	
2-Methylphenol	ND	1000	"	"	"	"	"	"	
4-Methylphenol (3-Methylphenol)	ND	2000	"	"	"	"	"	"	
Naphthalene	ND	1000	"	"	"	"	"	"	
2-Nitroaniline	ND	2500	"	"	"	"	"	"	
3-Nitroaniline	ND	5000	"	"	"	"	"	"	
4-Nitroaniline	ND	3500	"	"	"	"	"	"	
Nitrobenzene	ND	1000	"	"	"	"	"	"	
2-Nitrophenol	ND	1000	"	"	"	"	"	"	
4-Nitrophenol	ND	3500	"	"	"	"	"	"	
N-Nitrosodimethylamine	ND	1000	"	"	"	"	"	"	
N-Nitrosodiphenylamine	ND	1750	"	"	"	"	"	"	
N-Nitrosodi-n-propylamine	ND	1500	"	"	"	"	"	"	
Pentachlorophenol	ND	2000	"	"	"	"	"	"	
Phenanthrene	**1730**	1000	"	"	"	"	"	"	
Phenol	ND	1500	"	"	"	"	"	"	
Pyrene	**2790**	1000	"	"	"	"	"	"	
Pyridine	ND	5000	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	1000	"	"	"	"	"	"	
2,4,5-Trichlorophenol	ND	1500	"	"	"	"	"	"	
2,4,6-Trichlorophenol	ND	1500	"	"	"	"	"	"	
Surrogate: 2-Fluorophenol		*46 %*	*25-121*		"	"	"	"	
Surrogate: Phenol-d6		*%*	*24-113*		"	"	"	"	*S-08*
Surrogate: Nitrobenzene-d5		*81 %*	*23-120*		"	"	"	"	
Surrogate: 2-Fluorobiphenyl		*89 %*	*30-115*		"	"	"	"	
Surrogate: 2,4,6-Tribromophenol		*%*	*19-122*		"	"	"	"	*S-08*
Surrogate: Terphenyl-dl4		*104 %*	*18-137*		"	"	"	"	

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Client Name: Kleinfelder, Inc.
Project Name: 44102-002

EMA Log #: 0501269

Semivolatile Organic Compounds by EPA Method 8270C

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
T1-11-1 (0501269-13) Soil	**Sampled: 01/25/05 14:07**	**Received: 01/25/05 16:45**							
Acenaphthene	ND	1000	ug/kg	50	5012702	01/27/05	02/07/05	EPA 8270C	
Acenaphthylene	ND	1000	"	"	"	"	"	"	
Anthracene	ND	1000	"	"	"	"	"	"	
Benzidine	ND	7500	"	"	"	"	"	"	
Benzo (a) anthracene	**3710**	1000	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	1000	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	1000	"	"	"	"	"	"	
Benzo (g,h,i) perylene	**2870**	2000	"	"	"	"	"	"	
Benzo (a) pyrene	**3820**	1000	"	"	"	"	"	"	
Benzyl alcohol	ND	3750	"	"	"	"	"	"	
Bis(2-chloroethoxy)methane	ND	1000	"	"	"	"	"	"	
Bis(2-chloroethyl)ether	ND	1250	"	"	"	"	"	"	
Bis(2-chloroisopropyl)ether	ND	1250	"	"	"	"	"	"	
Bis(2-ethylhexyl)phthalate	ND	2250	"	"	"	"	"	"	
4-Bromophenyl phenyl ether	ND	1000	"	"	"	"	"	"	
Butyl benzyl phthalate	ND	2000	"	"	"	"	"	"	
Carbazole	ND	3000	"	"	"	"	"	"	
4-Chloroaniline	ND	5000	"	"	"	"	"	"	
4-Chloro-3-methylphenol	ND	1000	"	"	"	"	"	"	
2-Chloronaphthalene	ND	1000	"	"	"	"	"	"	
2-Chlorophenol	ND	1000	"	"	"	"	"	"	
4-Chlorophenyl phenyl ether	ND	1000	"	"	"	"	"	"	
Chrysene	**5390**	1000	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	2000	"	"	"	"	"	"	
Dibenzofuran	ND	1000	"	"	"	"	"	"	
Di-n-butyl phthalate	ND	2000	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	1000	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	1000	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	1000	"	"	"	"	"	"	
3,3'-Dichlorobenzidine	ND	7500	"	"	"	"	"	"	
2,4-Dichlorophenol	ND	1000	"	"	"	"	"	"	
Diethyl phthalate	ND	1000	"	"	"	"	"	"	
2,4-Dimethylphenol	ND	4000	"	"	"	"	"	"	
Dimethyl phthalate	ND	1000	"	"	"	"	"	"	
4,6-Dinitro-2-methylphenol	ND	2500	"	"	"	"	"	"	
2,4-Dinitrophenol	ND	5000	"	"	"	"	"	"	
2,4-Dinitrotoluene	ND	1000	"	"	"	"	"	"	
2,6-Dinitrotoluene	ND	1000	"	"	"	"	"	"	
Di-n-octyl phthalate	ND	2000	"	"	"	"	"	"	
Fluoranthene	**7960**	1000	"	"	"	"	"	"	
Fluorene	ND	1000	"	"	"	"	"	"	
Hexachlorobenzene	ND	1000	"	"	"	"	"	"	
Hexachlorobutadiene	ND	1000	"	"	"	"	"	"	

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Client Name: Kleinfelder, Inc.
Project Name: 44102-002

EMA Log #: 0501269

Semivolatile Organic Compounds by EPA Method 8270C

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
T1-11-1 (0501269-13) Soil Sampled: 01/25/05 14:07 Received: 01/25/05 16:45									
Hexachlorocyclopentadiene	ND	2500	ug/kg	50	5012702	01/27/05	02/07/05	EPA 8270C	
Hexachloroethane	ND	1000	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	**3180**	1500	"	"	"	"	"	"	
Isophorone	ND	1000	"	"	"	"	"	"	
2-Methylnaphthalene	ND	1000	"	"	"	"	"	"	
2-Methylphenol	ND	1000	"	"	"	"	"	"	
4-Methylphenol (3-Methylphenol)	ND	2000	"	"	"	"	"	"	
Naphthalene	ND	1000	"	"	"	"	"	"	
2-Nitroaniline	ND	2500	"	"	"	"	"	"	
3-Nitroaniline	ND	5000	"	"	"	"	"	"	
4-Nitroaniline	ND	3500	"	"	"	"	"	"	
Nitrobenzene	ND	1000	"	"	"	"	"	"	
2-Nitrophenol	ND	1000	"	"	"	"	"	"	
4-Nitrophenol	ND	3500	"	"	"	"	"	"	
N-Nitrosodimethylamine	ND	1000	"	"	"	"	"	"	
N-Nitrosodiphenylamine	ND	1750	"	"	"	"	"	"	
N-Nitrosodi-n-propylamine	ND	1500	"	"	"	"	"	"	
Pentachlorophenol	ND	2000	"	"	"	"	"	"	
Phenanthrene	**2140**	1000	"	"	"	"	"	"	
Phenol	ND	1500	"	"	"	"	"	"	
Pyrene	**9180**	1000	"	"	"	"	"	"	
Pyridine	ND	5000	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	1000	"	"	"	"	"	"	
2,4,5-Trichlorophenol	ND	1500	"	"	"	"	"	"	
2,4,6-Trichlorophenol	ND	1500	"	"	"	"	"	"	
Surrogate: 2-Fluorophenol		*55 %*	*25-121*		"	"	"	"	
Surrogate: Phenol-d6		*%*	*24-113*		"	"	"	"	*S-08*
Surrogate: Nitrobenzene-d5		*88 %*	*23-120*		"	"	"	"	
Surrogate: 2-Fluorobiphenyl		*95 %*	*30-115*		"	"	"	"	
Surrogate: 2,4,6-Tribromophenol		*%*	*19-122*		"	"	"	"	*S-08*
Surrogate: Terphenyl-dl4		*112 %*	*18-137*		"	"	"	"	

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Client Name: Kleinfelder, Inc.
Project Name: 44102-002

EMA Log #: 0501269

Semivolatile Organic Compounds by EPA Method 8270C

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
T1-11-2 (0501269-14) Soil Sampled: 01/25/05 14:25 Received: 01/25/05 16:45									
Acenaphthene	ND	1000	ug/kg	50	5012702	01/27/05	02/07/05	EPA 8270C	
Acenaphthylene	ND	1000	"	"	"	"	"	"	
Anthracene	ND	1000	"	"	"	"	"	"	
Benzidine	ND	7500	"	"	"	"	"	"	
Benzo (a) anthracene	**2680**	1000	"	"	"	"	"	"	
Benzo (b) fluoranthene	**5710**	1000	"	"	"	"	"	"	
Benzo (k) fluoranthene	**2280**	1000	"	"	"	"	"	"	
Benzo (g,h,i) perylene	**5800**	2000	"	"	"	"	"	"	
Benzo (a) pyrene	**4740**	1000	"	"	"	"	"	"	
Benzyl alcohol	ND	3750	"	"	"	"	"	"	
Bis(2-chloroethoxy)methane	ND	1000	"	"	"	"	"	"	
Bis(2-chloroethyl)ether	ND	1250	"	"	"	"	"	"	
Bis(2-chloroisopropyl)ether	ND	1250	"	"	"	"	"	"	
Bis(2-ethylhexyl)phthalate	ND	2250	"	"	"	"	"	"	
4-Bromophenyl phenyl ether	ND	1000	"	"	"	"	"	"	
Butyl benzyl phthalate	ND	2000	"	"	"	"	"	"	
Carbazole	ND	3000	"	"	"	"	"	"	
4-Chloroaniline	ND	5000	"	"	"	"	"	"	
4-Chloro-3-methylphenol	ND	1000	"	"	"	"	"	"	
2-Chloronaphthalene	ND	1000	"	"	"	"	"	"	
2-Chlorophenol	ND	1000	"	"	"	"	"	"	
4-Chlorophenyl phenyl ether	ND	1000	"	"	"	"	"	"	
Chrysene	**3850**	1000	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	2000	"	"	"	"	"	"	
Dibenzofuran	ND	1000	"	"	"	"	"	"	
Di-n-butyl phthalate	ND	2000	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	1000	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	1000	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	1000	"	"	"	"	"	"	
3,3'-Dichlorobenzidine	ND	7500	"	"	"	"	"	"	
2,4-Dichlorophenol	ND	1000	"	"	"	"	"	"	
Diethyl phthalate	ND	1000	"	"	"	"	"	"	
2,4-Dimethylphenol	ND	4000	"	"	"	"	"	"	
Dimethyl phthalate	ND	1000	"	"	"	"	"	"	
4,6-Dinitro-2-methylphenol	ND	2500	"	"	"	"	"	"	
2,4-Dinitrophenol	ND	5000	"	"	"	"	"	"	
2,4-Dinitrotoluene	ND	1000	"	"	"	"	"	"	
2,6-Dinitrotoluene	ND	1000	"	"	"	"	"	"	
Di-n-octyl phthalate	ND	2000	"	"	"	"	"	"	
Fluoranthene	**3590**	1000	"	"	"	"	"	"	
Fluorene	ND	1000	"	"	"	"	"	"	
Hexachlorobenzene	ND	1000	"	"	"	"	"	"	

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Client Name: Kleinfelder, Inc.
Project Name: 44102-002

EMA Log #: 0501269

Semivolatile Organic Compounds by EPA Method 8270C

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
T1-11-2 (0501269-14) Soil Sampled: 01/25/05 14:25 Received: 01/25/05 16:45									
Hexachlorobutadiene	ND	1000	ug/kg	50	5012702	01/27/05	02/07/05	EPA 8270C	
Hexachlorocyclopentadiene	ND	2500	"	"	"	"	"	"	
Hexachloroethane	ND	1000	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	**6110**	1500	"	"	"	"	"	"	
Isophorone	ND	1000	"	"	"	"	"	"	
2-Methylnaphthalene	ND	1000	"	"	"	"	"	"	
2-Methylphenol	ND	1000	"	"	"	"	"	"	
4-Methylphenol (3-Methylphenol)	ND	2000	"	"	"	"	"	"	
Naphthalene	ND	1000	"	"	"	"	"	"	
2-Nitroaniline	ND	2500	"	"	"	"	"	"	
3-Nitroaniline	ND	5000	"	"	"	"	"	"	
4-Nitroaniline	ND	3500	"	"	"	"	"	"	
Nitrobenzene	ND	1000	"	"	"	"	"	"	
2-Nitrophenol	ND	1000	"	"	"	"	"	"	
4-Nitrophenol	ND	3500	"	"	"	"	"	"	
N-Nitrosodimethylamine	ND	1000	"	"	"	"	"	"	
N-Nitrosodiphenylamine	ND	1750	"	"	"	"	"	"	
N-Nitrosodi-n-propylamine	ND	1500	"	"	"	"	"	"	
Pentachlorophenol	ND	2000	"	"	"	"	"	"	
Phenanthrene	ND	1000	"	"	"	"	"	"	
Phenol	ND	1500	"	"	"	"	"	"	
Pyrene	**4860**	1000	"	"	"	"	"	"	
Pyridine	ND	5000	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	1000	"	"	"	"	"	"	
2,4,5-Trichlorophenol	ND	1500	"	"	"	"	"	"	
2,4,6-Trichlorophenol	ND	1500	"	"	"	"	"	"	
Surrogate: 2-Fluorophenol		*50 %*	*25-121*		"	"	"	"	
Surrogate: Phenol-d6		*%*	*24-113*		"	"	"	"	*S-08*
Surrogate: Nitrobenzene-d5		*92 %*	*23-120*		"	"	"	"	
Surrogate: 2-Fluorobiphenyl		*88 %*	*30-115*		"	"	"	"	
Surrogate: 2,4,6-Tribromophenol		*%*	*19-122*		"	"	"	"	*S-08*
Surrogate: Terphenyl-dl4		*88 %*	*18-137*		"	"	"	"	

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Client Name: Kleinfelder, Inc.
Project Name: 44102-002

EMA Log #: 0501269

Semivolatile Organic Compounds by EPA Method 8270C

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
T1-11-3 (0501269-15) Soil Sampled: 01/25/05 14:40 Received: 01/25/05 16:45									
Acenaphthene	ND	100	ug/kg	5	5012702	01/27/05	02/08/05	EPA 8270C	
Acenaphthylene	ND	100	"	"	"	"	"	"	
Anthracene	ND	100	"	"	"	"	"	"	
Benzidine	ND	750	"	"	"	"	"	"	
Benzo (a) anthracene	ND	100	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	100	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	100	"	"	"	"	"	"	
Benzo (g,h,i) perylene	ND	200	"	"	"	"	"	"	
Benzo (a) pyrene	ND	100	"	"	"	"	"	"	
Benzyl alcohol	ND	375	"	"	"	"	"	"	
Bis(2-chloroethoxy)methane	ND	100	"	"	"	"	"	"	
Bis(2-chloroethyl)ether	ND	125	"	"	"	"	"	"	
Bis(2-chloroisopropyl)ether	ND	125	"	"	"	"	"	"	
Bis(2-ethylhexyl)phthalate	**273**	225	"	"	"	"	"	"	
4-Bromophenyl phenyl ether	ND	100	"	"	"	"	"	"	
Butyl benzyl phthalate	ND	200	"	"	"	"	"	"	
[illegible]bazole	ND	300	"	"	"	"	"	"	
[illegible]Chloroaniline	ND	500	"	"	"	"	"	"	
4-Chloro-3-methylphenol	ND	100	"	"	"	"	"	"	
2-Chloronaphthalene	ND	100	"	"	"	"	"	"	
2-Chlorophenol	ND	100	"	"	"	"	"	"	
4-Chlorophenyl phenyl ether	ND	100	"	"	"	"	"	"	
Chrysene	**193**	100	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	200	"	"	"	"	"	"	
Dibenzofuran	ND	100	"	"	"	"	"	"	
Di-n-butyl phthalate	ND	200	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	100	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	100	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	100	"	"	"	"	"	"	
3,3'-Dichlorobenzidine	ND	750	"	"	"	"	"	"	
2,4-Dichlorophenol	ND	100	"	"	"	"	"	"	
Diethyl phthalate	ND	100	"	"	"	"	"	"	
2,4-Dimethylphenol	ND	400	"	"	"	"	"	"	
Dimethyl phthalate	ND	100	"	"	"	"	"	"	
4,6-Dinitro-2-methylphenol	ND	250	"	"	"	"	"	"	
2,4-Dinitrophenol	ND	500	"	"	"	"	"	"	
2,4-Dinitrotoluene	ND	100	"	"	"	"	"	"	
2,6-Dinitrotoluene	ND	100	"	"	"	"	"	"	
Di-n-octyl phthalate	ND	200	"	"	"	"	"	"	
Fluoranthene	**229**	100	"	"	"	"	"	"	
Fluorene	ND	100	"	"	"	"	"	"	
Hexachlorobenzene	ND	100	"	"	"	"	"	"	
[illegible]exachlorobutadiene	ND	100	"	"	"	"	"	"	

[illegible]esults in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Client Name: Kleinfelder, Inc.
Project Name: 44102-002

EMA Log #: 0501269

Semivolatile Organic Compounds by EPA Method 8270C

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
T1-11-3 (0501269-15) Soil Sampled: 01/25/05 14:40 Received: 01/25/05 16:45									
Hexachlorocyclopentadiene	ND	250	ug/kg	5	5012702	01/27/05	02/08/05	EPA 8270C	
Hexachloroethane	ND	100	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	150	"	"	"	"	"	"	
Isophorone	ND	100	"	"	"	"	"	"	
2-Methylnaphthalene	ND	100	"	"	"	"	"	"	
2-Methylphenol	ND	100	"	"	"	"	"	"	
4-Methylphenol (3-Methylphenol)	ND	200	"	"	"	"	"	"	
Naphthalene	ND	100	"	"	"	"	"	"	
2-Nitroaniline	ND	250	"	"	"	"	"	"	
3-Nitroaniline	ND	500	"	"	"	"	"	"	
4-Nitroaniline	ND	350	"	"	"	"	"	"	
Nitrobenzene	ND	100	"	"	"	"	"	"	
2-Nitrophenol	ND	100	"	"	"	"	"	"	
4-Nitrophenol	ND	350	"	"	"	"	"	"	
N-Nitrosodimethylamine	ND	100	"	"	"	"	"	"	
N-Nitrosodiphenylamine	ND	175	"	"	"	"	"	"	
N-Nitrosodi-n-propylamine	ND	150	"	"	"	"	"	"	
Pentachlorophenol	ND	200	"	"	"	"	"	"	
Phenanthrene	**294**	100	"	"	"	"	"	"	
Phenol	ND	150	"	"	"	"	"	"	
Pyrene	**296**	100	"	"	"	"	"	"	
Pyridine	ND	500	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	100	"	"	"	"	"	"	
2,4,5-Trichlorophenol	ND	150	"	"	"	"	"	"	
2,4,6-Trichlorophenol	ND	150	"	"	"	"	"	"	
Surrogate: 2-Fluorophenol		*94 %*	*25-121*		"	"	"	"	
Surrogate: Phenol-d6		*101 %*	*24-113*		"	"	"	"	
Surrogate: Nitrobenzene-d5		*84 %*	*23-120*		"	"	"	"	
Surrogate: 2-Fluorobiphenyl		*102 %*	*30-115*		"	"	"	"	
Surrogate: 2,4,6-Tribromophenol		*89 %*	*19-122*		"	"	"	"	
Surrogate: Terphenyl-dl4		*121 %*	*18-137*		"	"	"	"	

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Client Name: Kleinfelder, Inc.
Project Name: 44102-002

EMA Log #: 0501269

Semivolatile Organic Compounds by EPA Method 8270C

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
T1-12-1 (0501269-16) Soil Sampled: 01/25/05 15:00 Received: 01/25/05 16:45									**R-05**
Acenaphthene	ND	1000	ug/kg	50	5012702	01/27/05	02/08/05	EPA 8270C	
Acenaphthylene	ND	1000	"	"	"	"	"	"	
Anthracene	ND	1000	"	"	"	"	"	"	
Benzidine	ND	7500	"	"	"	"	"	"	
Benzo (a) anthracene	ND	1000	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	1000	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	1000	"	"	"	"	"	"	
Benzo (g,h,i) perylene	ND	2000	"	"	"	"	"	"	
Benzo (a) pyrene	ND	1000	"	"	"	"	"	"	
Benzyl alcohol	ND	3750	"	"	"	"	"	"	
Bis(2-chloroethoxy)methane	ND	1000	"	"	"	"	"	"	
Bis(2-chloroethyl)ether	ND	1250	"	"	"	"	"	"	
Bis(2-chloroisopropyl)ether	ND	1250	"	"	"	"	"	"	
Bis(2-ethylhexyl)phthalate	ND	2250	"	"	"	"	"	"	
4-Bromophenyl phenyl ether	ND	1000	"	"	"	"	"	"	
Butyl benzyl phthalate	ND	2000	"	"	"	"	"	"	
[illegible]bazole	ND	3000	"	"	"	"	"	"	
[illegible]Chloroaniline	ND	5000	"	"	"	"	"	"	
4-Chloro-3-methylphenol	ND	1000	"	"	"	"	"	"	
2-Chloronaphthalene	ND	1000	"	"	"	"	"	"	
2-Chlorophenol	ND	1000	"	"	"	"	"	"	
4-Chlorophenyl phenyl ether	ND	1000	"	"	"	"	"	"	
Chrysene	ND	1000	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	2000	"	"	"	"	"	"	
Dibenzofuran	ND	1000	"	"	"	"	"	"	
Di-n-butyl phthalate	ND	2000	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	1000	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	1000	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	1000	"	"	"	"	"	"	
3,3'-Dichlorobenzidine	ND	7500	"	"	"	"	"	"	
2,4-Dichlorophenol	ND	1000	"	"	"	"	"	"	
Diethyl phthalate	ND	1000	"	"	"	"	"	"	
2,4-Dimethylphenol	ND	4000	"	"	"	"	"	"	
Dimethyl phthalate	ND	1000	"	"	"	"	"	"	
4,6-Dinitro-2-methylphenol	ND	2500	"	"	"	"	"	"	
2,4-Dinitrophenol	ND	5000	"	"	"	"	"	"	
2,4-Dinitrotoluene	ND	1000	"	"	"	"	"	"	
2,6-Dinitrotoluene	ND	1000	"	"	"	"	"	"	
Di-n-octyl phthalate	ND	2000	"	"	"	"	"	"	
Fluoranthene	ND	1000	"	"	"	"	"	"	
Fluorene	ND	1000	"	"	"	"	"	"	
Hexachlorobenzene	ND	1000	"	"	"	"	"	"	
Hexachlorobutadiene	ND	1000	"	"	"	"	"	"	

[illegible]results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Client Name: Kleinfelder, Inc.
Project Name: 44102-002

EMA Log #: 0501269

Semivolatile Organic Compounds by EPA Method 8270C

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
T1-12-1 (0501269-16) Soil	**Sampled: 01/25/05 15:00**	**Received: 01/25/05 16:45**							**R-05**
Hexachlorocyclopentadiene	ND	2500	ug/kg	50	5012702	01/27/05	02/08/05	EPA 8270C	
Hexachloroethane	ND	1000	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	1500	"	"	"	"	"	"	
Isophorone	ND	1000	"	"	"	"	"	"	
2-Methylnaphthalene	ND	1000	"	"	"	"	"	"	
2-Methylphenol	ND	1000	"	"	"	"	"	"	
4-Methylphenol (3-Methylphenol)	ND	2000	"	"	"	"	"	"	
Naphthalene	ND	1000	"	"	"	"	"	"	
2-Nitroaniline	ND	2500	"	"	"	"	"	"	
3-Nitroaniline	ND	5000	"	"	"	"	"	"	
4-Nitroaniline	ND	3500	"	"	"	"	"	"	
Nitrobenzene	ND	1000	"	"	"	"	"	"	
2-Nitrophenol	ND	1000	"	"	"	"	"	"	
4-Nitrophenol	ND	3500	"	"	"	"	"	"	
N-Nitrosodimethylamine	ND	1000	"	"	"	"	"	"	
N-Nitrosodiphenylamine	ND	1750	"	"	"	"	"	"	
N-Nitrosodi-n-propylamine	ND	1500	"	"	"	"	"	"	
Pentachlorophenol	ND	2000	"	"	"	"	"	"	
Phenanthrene	ND	1000	"	"	"	"	"	"	
Phenol	ND	1500	"	"	"	"	"	"	
Pyrene	ND	1000	"	"	"	"	"	"	
Pyridine	ND	5000	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	1000	"	"	"	"	"	"	
2,4,5-Trichlorophenol	ND	1500	"	"	"	"	"	"	
2,4,6-Trichlorophenol	ND	1500	"	"	"	"	"	"	
Surrogate: 2-Fluorophenol		*84 %*	*25-121*		"	"	"	"	
Surrogate: Phenol-d6		*90 %*	*24-113*		"	"	"	"	
Surrogate: Nitrobenzene-d5		*87 %*	*23-120*		"	"	"	"	
Surrogate: 2-Fluorobiphenyl		*97 %*	*30-115*		"	"	"	"	
Surrogate: 2,4,6-Tribromophenol		*45 %*	*19-122*		"	"	"	"	
Surrogate: Terphenyl-dl4		*107 %*	*18-137*		"	"	"	"	

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Client Name: Kleinfelder, Inc.
Project Name: 44102-002

EMA Log #: 0501269

Semivolatile Organic Compounds by EPA Method 8270C

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
T1-12-2 (0501269-17) Soil Sampled: 01/25/05 15:07 Received: 01/25/05 16:45									**R-05**
Acenaphthene	ND	1000	ug/kg	50	5012702	01/27/05	02/07/05	EPA 8270C	
Acenaphthylene	ND	1000	"	"	"	"	"	"	
Anthracene	ND	1000	"	"	"	"	"	"	
Benzidine	ND	7500	"	"	"	"	"	"	
Benzo (a) anthracene	ND	1000	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	1000	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	1000	"	"	"	"	"	"	
Benzo (g,h,i) perylene	ND	2000	"	"	"	"	"	"	
Benzo (a) pyrene	ND	1000	"	"	"	"	"	"	
Benzyl alcohol	ND	3750	"	"	"	"	"	"	
Bis(2-chloroethoxy)methane	ND	1000	"	"	"	"	"	"	
Bis(2-chloroethyl)ether	ND	1250	"	"	"	"	"	"	
Bis(2-chloroisopropyl)ether	ND	1250	"	"	"	"	"	"	
Bis(2-ethylhexyl)phthalate	ND	2250	"	"	"	"	"	"	
4-Bromophenyl phenyl ether	ND	1000	"	"	"	"	"	"	
Butyl benzyl phthalate	ND	2000	"	"	"	"	"	"	
Carbazole	ND	3000	"	"	"	"	"	"	
4-Chloroaniline	ND	5000	"	"	"	"	"	"	
4-Chloro-3-methylphenol	ND	1000	"	"	"	"	"	"	
2-Chloronaphthalene	ND	1000	"	"	"	"	"	"	
2-Chlorophenol	ND	1000	"	"	"	"	"	"	
4-Chlorophenyl phenyl ether	ND	1000	"	"	"	"	"	"	
Chrysene	ND	1000	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	2000	"	"	"	"	"	"	
Dibenzofuran	ND	1000	"	"	"	"	"	"	
Di-n-butyl phthalate	ND	2000	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	1000	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	1000	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	1000	"	"	"	"	"	"	
3,3'-Dichlorobenzidine	ND	7500	"	"	"	"	"	"	
2,4-Dichlorophenol	ND	1000	"	"	"	"	"	"	
Diethyl phthalate	ND	1000	"	"	"	"	"	"	
2,4-Dimethylphenol	ND	4000	"	"	"	"	"	"	
Dimethyl phthalate	ND	1000	"	"	"	"	"	"	
4,6-Dinitro-2-methylphenol	ND	2500	"	"	"	"	"	"	
2,4-Dinitrophenol	ND	5000	"	"	"	"	"	"	
2,4-Dinitrotoluene	ND	1000	"	"	"	"	"	"	
2,6-Dinitrotoluene	ND	1000	"	"	"	"	"	"	
Di-n-octyl phthalate	ND	2000	"	"	"	"	"	"	
Fluoranthene	ND	1000	"	"	"	"	"	"	
Fluorene	ND	1000	"	"	"	"	"	"	
Hexachlorobenzene	ND	1000	"	"	"	"	"	"	
Hexachlorobutadiene	ND	1000	"	"	"	"	"	"	

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Client Name: Kleinfelder, Inc.
Project Name: 44102-002

EMA Log #: 0501269

Semivolatile Organic Compounds by EPA Method 8270C

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
T1-12-2 (0501269-17) Soil Sampled: 01/25/05 15:07 Received: 01/25/05 16:45									**R-05**
Hexachlorocyclopentadiene	ND	2500	ug/kg	50	5012702	01/27/05	02/07/05	EPA 8270C	
Hexachloroethane	ND	1000	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	1500	"	"	"	"	"	"	
Isophorone	ND	1000	"	"	"	"	"	"	
2-Methylnaphthalene	ND	1000	"	"	"	"	"	"	
2-Methylphenol	ND	1000	"	"	"	"	"	"	
4-Methylphenol (3-Methylphenol)	ND	2000	"	"	"	"	"	"	
Naphthalene	ND	1000	"	"	"	"	"	"	
2-Nitroaniline	ND	2500	"	"	"	"	"	"	
3-Nitroaniline	ND	5000	"	"	"	"	"	"	
4-Nitroaniline	ND	3500	"	"	"	"	"	"	
Nitrobenzene	ND	1000	"	"	"	"	"	"	
2-Nitrophenol	ND	1000	"	"	"	"	"	"	
4-Nitrophenol	ND	3500	"	"	"	"	"	"	
N-Nitrosodimethylamine	ND	1000	"	"	"	"	"	"	
N-Nitrosodiphenylamine	ND	1750	"	"	"	"	"	"	
N-Nitrosodi-n-propylamine	ND	1500	"	"	"	"	"	"	
Pentachlorophenol	ND	2000	"	"	"	"	"	"	
Phenanthrene	ND	1000	"	"	"	"	"	"	
Phenol	ND	1500	"	"	"	"	"	"	
Pyrene	ND	1000	"	"	"	"	"	"	
Pyridine	ND	5000	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	1000	"	"	"	"	"	"	
2,4,5-Trichlorophenol	ND	1500	"	"	"	"	"	"	
2,4,6-Trichlorophenol	ND	1500	"	"	"	"	"	"	
Surrogate: 2-Fluorophenol		*71 %*	*25-121*		"	"	"	"	
Surrogate: Phenol-d6		*36 %*	*24-113*		"	"	"	"	
Surrogate: Nitrobenzene-d5		*87 %*	*23-120*		"	"	"	"	
Surrogate: 2-Fluorobiphenyl		*91 %*	*30-115*		"	"	"	"	
Surrogate: 2,4,6-Tribromophenol		*%*	*19-122*		"	"	"	"	*S-08*
Surrogate: Terphenyl-dl4		*74 %*	*18-137*		"	"	"	"	

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ient Name: Kleinfelder, Inc.
Project Name: 44102-002

EMA Log #: 0501269

Semivolatile Organic Compounds by EPA Method 8270C

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
T1-12-3 (0501269-18) Soil Sampled: 01/25/05 15:10 Received: 01/25/05 16:45									**R-05**
Acenaphthene	ND	100	ug/kg	5	5012702	01/27/05	02/07/05	EPA 8270C	
Acenaphthylene	ND	100	"	"	"	"	"	"	
Anthracene	ND	100	"	"	"	"	"	"	
Benzidine	ND	750	"	"	"	"	"	"	
Benzo (a) anthracene	ND	100	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	100	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	100	"	"	"	"	"	"	
Benzo (g,h,i) perylene	ND	200	"	"	"	"	"	"	
Benzo (a) pyrene	ND	100	"	"	"	"	"	"	
Benzyl alcohol	ND	375	"	"	"	"	"	"	
Bis(2-chloroethoxy)methane	ND	100	"	"	"	"	"	"	
Bis(2-chloroethyl)ether	ND	125	"	"	"	"	"	"	
Bis(2-chloroisopropyl)ether	ND	125	"	"	"	"	"	"	
Bis(2-ethylhexyl)phthalate	ND	225	"	"	"	"	"	"	
4-Bromophenyl phenyl ether	ND	100	"	"	"	"	"	"	
Butyl benzyl phthalate	ND	200	"	"	"	"	"	"	
Carbazole	ND	300	"	"	"	"	"	"	
4-Chloroaniline	ND	500	"	"	"	"	"	"	
4-Chloro-3-methylphenol	ND	100	"	"	"	"	"	"	
2-Chloronaphthalene	ND	100	"	"	"	"	"	"	
2-Chlorophenol	ND	100	"	"	"	"	"	"	
4-Chlorophenyl phenyl ether	ND	100	"	"	"	"	"	"	
Chrysene	ND	100	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	200	"	"	"	"	"	"	
Dibenzofuran	ND	100	"	"	"	"	"	"	
Di-n-butyl phthalate	ND	200	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	100	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	100	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	100	"	"	"	"	"	"	
3,3'-Dichlorobenzidine	ND	750	"	"	"	"	"	"	
2,4-Dichlorophenol	ND	100	"	"	"	"	"	"	
Diethyl phthalate	ND	100	"	"	"	"	"	"	
2,4-Dimethylphenol	ND	400	"	"	"	"	"	"	
Dimethyl phthalate	ND	100	"	"	"	"	"	"	
4,6-Dinitro-2-methylphenol	ND	250	"	"	"	"	"	"	
2,4-Dinitrophenol	ND	500	"	"	"	"	"	"	
2,4-Dinitrotoluene	ND	100	"	"	"	"	"	"	
2,6-Dinitrotoluene	ND	100	"	"	"	"	"	"	
Di-n-octyl phthalate	ND	200	"	"	"	"	"	"	
Fluoranthene	ND	100	"	"	"	"	"	"	
Fluorene	ND	100	"	"	"	"	"	"	
Hexachlorobenzene	ND	100	"	"	"	"	"	"	
Hexachlorobutadiene	ND	100	"	"	"	"	"	"	

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Client Name: Kleinfelder, Inc.
Project Name: 44102-002

EMA Log #: 0501269

Semivolatile Organic Compounds by EPA Method 8270C

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
T1-12-3 (0501269-18) Soil Sampled: 01/25/05 15:10 Received: 01/25/05 16:45									**R-05**
Hexachlorocyclopentadiene	ND	250	ug/kg	5	5012702	01/27/05	02/07/05	EPA 8270C	
Hexachloroethane	ND	100	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	150	"	"	"	"	"	"	
Isophorone	ND	100	"	"	"	"	"	"	
2-Methylnaphthalene	ND	100	"	"	"	"	"	"	
2-Methylphenol	ND	100	"	"	"	"	"	"	
4-Methylphenol (3-Methylphenol)	ND	200	"	"	"	"	"	"	
Naphthalene	ND	100	"	"	"	"	"	"	
2-Nitroaniline	ND	250	"	"	"	"	"	"	
3-Nitroaniline	ND	500	"	"	"	"	"	"	
4-Nitroaniline	ND	350	"	"	"	"	"	"	
Nitrobenzene	ND	100	"	"	"	"	"	"	
2-Nitrophenol	ND	100	"	"	"	"	"	"	
4-Nitrophenol	ND	350	"	"	"	"	"	"	
N-Nitrosodimethylamine	ND	100	"	"	"	"	"	"	
N-Nitrosodiphenylamine	ND	175	"	"	"	"	"	"	
N-Nitrosodi-n-propylamine	ND	150	"	"	"	"	"	"	
Pentachlorophenol	ND	200	"	"	"	"	"	"	
Phenanthrene	ND	100	"	"	"	"	"	"	
Phenol	ND	150	"	"	"	"	"	"	
Pyrene	ND	100	"	"	"	"	"	"	
Pyridine	ND	500	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	100	"	"	"	"	"	"	
2,4,5-Trichlorophenol	ND	150	"	"	"	"	"	"	
2,4,6-Trichlorophenol	ND	150	"	"	"	"	"	"	
Surrogate: 2-Fluorophenol		*88 %*	*25-121*		"	"	"	"	
Surrogate: Phenol-d6		*98 %*	*24-113*		"	"	"	"	
Surrogate: Nitrobenzene-d5		*80 %*	*23-120*		"	"	"	"	
Surrogate: 2-Fluorobiphenyl		*100 %*	*30-115*		"	"	"	"	
Surrogate: 2,4,6-Tribromophenol		*72 %*	*19-122*		"	"	"	"	
Surrogate: Terphenyl-dl4		*118 %*	*18-137*		"	"	"	"	

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Client Name: Kleinfelder, Inc.
Project Name: 44102-002

EMA Log #: 0501269

TPH by EPA 8015B

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
T1-7-1 (0501269-01) Soil Sampled: 01/25/05 09:44 Received: 01/25/05 16:45									
Gasoline (C6-C10)	ND	10.0	mg/kg	1	5012616	01/26/05	01/29/05	EPA 8015 M	
Diesel (C10-C28)	ND	10.0	"	"	"	"	"	"	D-09
Extended Range HC (C28-C40)	**1410**	10.0	"	"	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*102 %*	*75-129*		"	"	"	"	
T1-7-2 (0501269-02) Soil Sampled: 01/25/05 09:55 Received: 01/25/05 16:45									
Gasoline (C6-C10)	ND	10.0	mg/kg	1	5012616	01/26/05	01/29/05	EPA 8015 M	
Diesel (C10-C28)	**448**	10.0	"	"	"	"	"	"	D-09
Extended Range HC (C28-C40)	**837**	10.0	"	"	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*104 %*	*75-129*		"	"	"	"	
T1-7-3 (0501269-03) Soil Sampled: 01/25/05 10:12 Received: 01/25/05 16:45									
Gasoline (C6-C10)	ND	10.0	mg/kg	1	5012616	01/26/05	01/29/05	EPA 8015 M	
Diesel (C10-C28)	ND	10.0	"	"	"	"	"	"	
Extended Range HC (C28-C40)	ND	10.0	"	"	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*104 %*	*75-129*		"	"	"	"	
T1-8-1 (0501269-04) Soil Sampled: 01/25/05 10:38 Received: 01/25/05 16:45									
Gasoline (C6-C10)	ND	10.0	mg/kg	1	5012616	01/26/05	01/29/05	EPA 8015 M	
Diesel (C10-C28)	ND	10.0	"	"	"	"	"	"	D-09
Extended Range HC (C28-C40)	**1040**	10.0	"	"	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*101 %*	*75-129*		"	"	"	"	
T1-8-2 (0501269-05) Soil Sampled: 01/25/05 10:45 Received: 01/25/05 16:45									
Gasoline (C6-C10)	ND	10.0	mg/kg	1	5012616	01/26/05	01/29/05	EPA 8015 M	
Diesel (C10-C28)	ND	10.0	"	"	"	"	"	"	D-09
Extended Range HC (C28-C40)	**789**	10.0	"	"	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*104 %*	*75-129*		"	"	"	"	

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Client Name: Kleinfelder, Inc.
Project Name: 44102-002

EMA Log #: 0501269

TPH by EPA 8015B

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
T1-8-3 (0501269-06) Soil Sampled: 01/25/05 11:05 Received: 01/25/05 16:45									
Gasoline (C6-C10)	ND	10.0	mg/kg	1	5012616	01/26/05	01/30/05	EPA 8015 M	D-09
Diesel (C10-C28)	ND	10.0	"	"	"	"	"	"	
Extended Range HC (C28-C40)	**277**	10.0	"	"	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*103 %*	*75-129*		"	"	"	"	
T1-9-1 (0501269-07) Soil Sampled: 01/25/05 11:23 Received: 01/25/05 16:45									
Gasoline (C6-C10)	ND	10.0	mg/kg	1	5012616	01/26/05	01/30/05	EPA 8015 M	D-09
Diesel (C10-C28)	ND	10.0	"	"	"	"	"	"	
Extended Range HC (C28-C40)	**820**	10.0	"	"	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*103 %*	*75-129*		"	"	"	"	
T1-9-2 (0501269-08) Soil Sampled: 01/25/05 11:30 Received: 01/25/05 16:45									
Gasoline (C6-C10)	ND	10.0	mg/kg	1	5012616	01/26/05	01/30/05	EPA 8015 M	D-09
Diesel (C10-C28)	**325**	10.0	"	"	"	"	"	"	
Extended Range HC (C28-C40)	**585**	10.0	"	"	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*106 %*	*75-129*		"	"	"	"	
T1-9-3 (0501269-09) Soil Sampled: 01/25/05 12:05 Received: 01/25/05 16:45									
Gasoline (C6-C10)	ND	10.0	mg/kg	1	5012616	01/26/05	01/30/05	EPA 8015 M	D-09, D-40
Diesel (C10-C28)	ND	10.0	"	"	"	"	"	"	
Extended Range HC (C28-C40)	**290**	10.0	"	"	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*99 %*	*75-129*		"	"	"	"	
T1-10-1 (0501269-10) Soil Sampled: 01/25/05 13:13 Received: 01/25/05 16:45									
Gasoline (C6-C10)	ND	10.0	mg/kg	1	5012616	01/26/05	01/30/05	EPA 8015 M	D-09
Diesel (C10-C28)	ND	10.0	"	"	"	"	"	"	
Extended Range HC (C28-C40)	**442**	10.0	"	"	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*108 %*	*75-129*		"	"	"	"	

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Client Name: Kleinfelder, Inc.
Project Name: 44102-002

EMA Log #: 0501269

TPH by EPA 8015B

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
T1-10-2 (0501269-11) Soil Sampled: 01/25/05 13:26 Received: 01/25/05 16:45									
Gasoline (C6-C10)	ND	10.0	mg/kg	1	5012616	01/26/05	01/30/05	EPA 8015 M	
Diesel (C10-C28)	**197**	10.0	"	"	"	"	"	"	
Extended Range HC (C28-C40)	**702**	10.0	"	"	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*103 %*	*75-129*		"	"	"	"	
T1-10-3 (0501269-12) Soil Sampled: 01/25/05 13:45 Received: 01/25/05 16:45									
Gasoline (C6-C10)	ND	10.0	mg/kg	1	5012616	01/26/05	01/30/05	EPA 8015 M	
Diesel (C10-C28)	**666**	10.0	"	"	"	"	"	"	D-09
Extended Range HC (C28-C40)	**1430**	10.0	"	"	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*108 %*	*75-129*		"	"	"	"	
T1-11-1 (0501269-13) Soil Sampled: 01/25/05 14:07 Received: 01/25/05 16:45									
Gasoline (C6-C10)	ND	10.0	mg/kg	1	5012616	01/26/05	01/30/05	EPA 8015 M	
Diesel (C10-C28)	ND	10.0	"	"	"	"	"	"	D-40
Extended Range HC (C28-C40)	**843**	10.0	"	"	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*98 %*	*75-129*		"	"	"	"	
T1-11-2 (0501269-14) Soil Sampled: 01/25/05 14:25 Received: 01/25/05 16:45									
Gasoline (C6-C10)	ND	10.0	mg/kg	1	5012616	01/26/05	01/30/05	EPA 8015 M	
Diesel (C10-C28)	ND	10.0	"	"	"	"	"	"	D-40
Extended Range HC (C28-C40)	**604**	10.0	"	"	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*107 %*	*75-129*		"	"	"	"	
T1-11-3 (0501269-15) Soil Sampled: 01/25/05 14:40 Received: 01/25/05 16:45									
Gasoline (C6-C10)	ND	10.0	mg/kg	1	5012616	01/26/05	01/30/05	EPA 8015 M	
Diesel (C10-C28)	**533**	10.0	"	"	"	"	"	"	D-09
Extended Range HC (C28-C40)	**841**	10.0	"	"	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*103 %*	*75-129*		"	"	"	"	

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Client Name: Kleinfelder, Inc.
Project Name: 44102-002

EMA Log #: 0501269

TPH by EPA 8015B

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
T1-12-1 (0501269-16) Soil Sampled: 01/25/05 15:00 Received: 01/25/05 16:45									
Gasoline (C6-C10)	ND	10.0	mg/kg	1	5012616	01/26/05	01/30/05	EPA 8015 M	
Diesel (C10-C28)	ND	10.0	"	"	"	"	"	"	D-40
Extended Range HC (C28-C40)	**530**	10.0	"	"	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*106 %*	*75-129*		"	"	"	"	
T1-12-2 (0501269-17) Soil Sampled: 01/25/05 15:07 Received: 01/25/05 16:45									
Gasoline (C6-C10)	ND	10.0	mg/kg	1	5012616	01/26/05	01/30/05	EPA 8015 M	
Diesel (C10-C28)	ND	10.0	"	"	"	"	"	"	
Extended Range HC (C28-C40)	ND	10.0	"	"	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*107 %*	*75-129*		"	"	"	"	
T1-12-3 (0501269-18) Soil Sampled: 01/25/05 15:10 Received: 01/25/05 16:45									
Gasoline (C6-C10)	ND	10.0	mg/kg	1	5012616	01/26/05	01/30/05	EPA 8015 M	
Diesel (C10-C28)	**155**	10.0	"	"	"	"	"	"	D-09
Extended Range HC (C28-C40)	**208**	10.0	"	"	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*107 %*	*75-129*		"	"	"	"	

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Client Name: Kleinfelder, Inc.
Project Name: 44102-002

EMA Log #: 0501269

TPH Extended Range by ASTM D2887

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
T1-7-1 (0501269-01) Soil Sampled: 01/25/05 09:44 Received: 01/25/05 16:45									
HC (C7 - C8)	ND	3.00	mg/kg	1	5012616	01/26/05	01/29/05	ASTM D2887	
HC (C8 - C9)	ND	3.00	"	"	"	"	"	"	
HC (C9 - C10)	ND	3.00	"	"	"	"	"	"	
HC (C10 - C11)	ND	1.25	"	"	"	"	"	"	
HC (C11 - C12)	ND	1.25	"	"	"	"	"	"	
HC (C12 - C14)	ND	1.25	"	"	"	"	"	"	
HC (C14 - C16)	ND	1.25	"	"	"	"	"	"	
HC (C16 - C18)	ND	1.25	"	"	"	"	"	"	
HC (C18 - C20)	ND	1.25	"	"	"	"	"	"	
HC (C20 - C24)	**2.97**	1.25	"	"	"	"	"	"	
HC (C24 - C28)	**62.9**	1.25	"	"	"	"	"	"	
HC (C28 - C32)	**233**	2.50	"	"	"	"	"	"	
HC (C32 - C36)	**167**	2.50	"	"	"	"	"	"	
HC (C36 - C40)	**191**	2.50	"	"	"	"	"	"	
HC (C>40)	ND	2.50	"	"	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*102 %*	*77-135*		"	"	"	"	
T1-7-2 (0501269-02) Soil Sampled: 01/25/05 09:55 Received: 01/25/05 16:45									
HC (C7 - C8)	ND	3.00	mg/kg	1	5012616	01/26/05	01/29/05	ASTM D2887	
HC (C8 - C9)	ND	3.00	"	"	"	"	"	"	
HC (C9 - C10)	ND	3.00	"	"	"	"	"	"	
HC (C10 - C11)	ND	1.25	"	"	"	"	"	"	
HC (C11 - C12)	ND	1.25	"	"	"	"	"	"	
HC (C12 - C14)	ND	1.25	"	"	"	"	"	"	
HC (C14 - C16)	ND	1.25	"	"	"	"	"	"	
HC (C16 - C18)	ND	1.25	"	"	"	"	"	"	
HC (C18 - C20)	ND	1.25	"	"	"	"	"	"	
HC (C20 - C24)	**11.2**	1.25	"	"	"	"	"	"	
HC (C24 - C28)	**28.4**	1.25	"	"	"	"	"	"	
HC (C28 - C32)	**57.9**	2.50	"	"	"	"	"	"	
HC (C32 - C36)	**89.8**	2.50	"	"	"	"	"	"	
HC (C36 - C40)	**114**	2.50	"	"	"	"	"	"	
HC (C>40)	ND	2.50	"	"	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*104 %*	*77-135*		"	"	"	"	

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Client Name: Kleinfelder, Inc.
Project Name: 44102-002

EMA Log #: 0501269

TPH Extended Range by ASTM D2887

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
T1-7-3 (0501269-03) Soil Sampled: 01/25/05 10:12 Received: 01/25/05 16:45									
HC (C7 - C8)	ND	3.00	mg/kg	1	5012616	01/26/05	01/29/05	ASTM D2887	
HC (C8 - C9)	ND	3.00	"	"	"	"	"	"	
HC (C9 - C10)	ND	3.00	"	"	"	"	"	"	
HC (C10 - C11)	ND	1.25	"	"	"	"	"	"	
HC (C11 - C12)	ND	1.25	"	"	"	"	"	"	
HC (C12 - C14)	ND	1.25	"	"	"	"	"	"	
HC (C14 - C16)	ND	1.25	"	"	"	"	"	"	
HC (C16 - C18)	ND	1.25	"	"	"	"	"	"	
HC (C18 - C20)	ND	1.25	"	"	"	"	"	"	
HC (C20 - C24)	ND	1.25	"	"	"	"	"	"	
HC (C24 - C28)	ND	1.25	"	"	"	"	"	"	
HC (C28 - C32)	ND	2.50	"	"	"	"	"	"	
HC (C32 - C36)	ND	2.50	"	"	"	"	"	"	
HC (C36 - C40)	**6.47**	2.50	"	"	"	"	"	"	
HC (C>40)	ND	2.50	"	"	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*104 %*	*77-135*		"	"	"	"	
T1-8-1 (0501269-04) Soil Sampled: 01/25/05 10:38 Received: 01/25/05 16:45									
HC (C7 - C8)	ND	3.00	mg/kg	1	5012616	01/26/05	01/29/05	ASTM D2887	
HC (C8 - C9)	ND	3.00	"	"	"	"	"	"	
HC (C9 - C10)	ND	3.00	"	"	"	"	"	"	
HC (C10 - C11)	ND	1.25	"	"	"	"	"	"	
HC (C11 - C12)	ND	1.25	"	"	"	"	"	"	
HC (C12 - C14)	ND	1.25	"	"	"	"	"	"	
HC (C14 - C16)	ND	1.25	"	"	"	"	"	"	
HC (C16 - C18)	ND	1.25	"	"	"	"	"	"	
HC (C18 - C20)	ND	1.25	"	"	"	"	"	"	
HC (C20 - C24)	ND	1.25	"	"	"	"	"	"	
HC (C24 - C28)	**40.6**	1.25	"	"	"	"	"	"	
HC (C28 - C32)	**130**	2.50	"	"	"	"	"	"	
HC (C32 - C36)	**112**	2.50	"	"	"	"	"	"	
HC (C36 - C40)	**155**	2.50	"	"	"	"	"	"	
HC (C>40)	ND	2.50	"	"	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*101 %*	*77-135*		"	"	"	"	

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Client Name: Kleinfelder, Inc.
Project Name: 44102-002

EMA Log #: 0501269

TPH Extended Range by ASTM D2887

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
T1-8-2 (0501269-05) Soil Sampled: 01/25/05 10:45 Received: 01/25/05 16:45									
HC (C7 - C8)	ND	3.00	mg/kg	1	5012616	01/26/05	01/29/05	ASTM D2887	
HC (C8 - C9)	ND	3.00	"	"	"	"	"	"	
HC (C9 - C10)	ND	3.00	"	"	"	"	"	"	
HC (C10 - C11)	ND	1.25	"	"	"	"	"	"	
HC (C11 - C12)	ND	1.25	"	"	"	"	"	"	
HC (C12 - C14)	ND	1.25	"	"	"	"	"	"	
HC (C14 - C16)	ND	1.25	"	"	"	"	"	"	
HC (C16 - C18)	ND	1.25	"	"	"	"	"	"	
HC (C18 - C20)	ND	1.25	"	"	"	"	"	"	
HC (C20 - C24)	**4.00**	1.25	"	"	"	"	"	"	
HC (C24 - C28)	**36.2**	1.25	"	"	"	"	"	"	
HC (C28 - C32)	**58.7**	2.50	"	"	"	"	"	"	
HC (C32 - C36)	**73.8**	2.50	"	"	"	"	"	"	
HC (C36 - C40)	**106**	2.50	"	"	"	"	"	"	
HC (C>40)	ND	2.50	"	"	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*104 %*	*77-135*		"	"	"	"	
T1-8-3 (0501269-06) Soil Sampled: 01/25/05 11:05 Received: 01/25/05 16:45									
HC (C7 - C8)	ND	3.00	mg/kg	1	5012616	01/26/05	01/30/05	ASTM D2887	
HC (C8 - C9)	ND	3.00	"	"	"	"	"	"	
HC (C9 - C10)	ND	3.00	"	"	"	"	"	"	
HC (C10 - C11)	ND	1.25	"	"	"	"	"	"	
HC (C11 - C12)	ND	1.25	"	"	"	"	"	"	
HC (C12 - C14)	ND	1.25	"	"	"	"	"	"	
HC (C14 - C16)	ND	1.25	"	"	"	"	"	"	
HC (C16 - C18)	ND	1.25	"	"	"	"	"	"	
HC (C18 - C20)	ND	1.25	"	"	"	"	"	"	
HC (C20 - C24)	ND	1.25	"	"	"	"	"	"	
HC (C24 - C28)	**2.54**	1.25	"	"	"	"	"	"	
HC (C28 - C32)	ND	2.50	"	"	"	"	"	"	
HC (C32 - C36)	**12.7**	2.50	"	"	"	"	"	"	
HC (C36 - C40)	**29.6**	2.50	"	"	"	"	"	"	
HC (C>40)	ND	2.50	"	"	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*103 %*	*77-135*		"	"	"	"	

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Client Name: Kleinfelder, Inc.
Project Name: 44102-002

EMA Log #: 0501269

TPH Extended Range by ASTM D2887

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
T1-9-1 (0501269-07) Soil Sampled: 01/25/05 11:23 Received: 01/25/05 16:45									
HC (C7 - C8)	ND	3.00	mg/kg	1	5012616	01/26/05	01/30/05	ASTM D2887	
HC (C8 - C9)	ND	3.00	"	"	"	"	"	"	
HC (C9 - C10)	ND	3.00	"	"	"	"	"	"	
HC (C10 - C11)	ND	1.25	"	"	"	"	"	"	
HC (C11 - C12)	ND	1.25	"	"	"	"	"	"	
HC (C12 - C14)	ND	1.25	"	"	"	"	"	"	
HC (C14 - C16)	ND	1.25	"	"	"	"	"	"	
HC (C16 - C18)	ND	1.25	"	"	"	"	"	"	
HC (C18 - C20)	ND	1.25	"	"	"	"	"	"	
HC (C20 - C24)	ND	1.25	"	"	"	"	"	"	
HC (C24 - C28)	**36.6**	1.25	"	"	"	"	"	"	
HC (C28 - C32)	**78.7**	2.50	"	"	"	"	"	"	
HC (C32 - C36)	**81.9**	2.50	"	"	"	"	"	"	
HC (C36 - C40)	**110**	2.50	"	"	"	"	"	"	
HC (C>40)	ND	2.50	"	"	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*103 %*	*77-135*		"	"	"	"	
T1-9-2 (0501269-08) Soil Sampled: 01/25/05 11:30 Received: 01/25/05 16:45									
HC (C7 - C8)	ND	3.00	mg/kg	1	5012616	01/26/05	01/30/05	ASTM D2887	
HC (C8 - C9)	ND	3.00	"	"	"	"	"	"	
HC (C9 - C10)	ND	3.00	"	"	"	"	"	"	
HC (C10 - C11)	ND	1.25	"	"	"	"	"	"	
HC (C11 - C12)	ND	1.25	"	"	"	"	"	"	
HC (C12 - C14)	ND	1.25	"	"	"	"	"	"	
HC (C14 - C16)	ND	1.25	"	"	"	"	"	"	
HC (C16 - C18)	ND	1.25	"	"	"	"	"	"	
HC (C18 - C20)	ND	1.25	"	"	"	"	"	"	
HC (C20 - C24)	ND	1.25	"	"	"	"	"	"	
HC (C24 - C28)	**16.2**	1.25	"	"	"	"	"	"	
HC (C28 - C32)	**33.0**	2.50	"	"	"	"	"	"	
HC (C32 - C36)	**50.7**	2.50	"	"	"	"	"	"	
HC (C36 - C40)	**61.4**	2.50	"	"	"	"	"	"	
HC (C>40)	ND	2.50	"	"	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*106 %*	*77-135*		"	"	"	"	

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Client Name: Kleinfelder, Inc.
Project Name: 44102-002

EMA Log #: 0501269

TPH Extended Range by ASTM D2887

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
T1-9-3 (0501269-09) Soil Sampled: 01/25/05 12:05 Received: 01/25/05 16:45									
HC (C7 - C8)	ND	3.00	mg/kg	1	5012616	01/26/05	01/30/05	ASTM D2887	
HC (C8 - C9)	ND	3.00	"	"	"	"	"	"	
HC (C9 - C10)	ND	3.00	"	"	"	"	"	"	
HC (C10 - C11)	ND	1.25	"	"	"	"	"	"	
HC (C11 - C12)	ND	1.25	"	"	"	"	"	"	
HC (C12 - C14)	ND	1.25	"	"	"	"	"	"	
HC (C14 - C16)	ND	1.25	"	"	"	"	"	"	
HC (C16 - C18)	ND	1.25	"	"	"	"	"	"	
HC (C18 - C20)	ND	1.25	"	"	"	"	"	"	
HC (C20 - C24)	ND	1.25	"	"	"	"	"	"	
HC (C24 - C28)	ND	1.25	"	"	"	"	"	"	
HC (C28 - C32)	ND	2.50	"	"	"	"	"	"	
HC (C32 - C36)	**6.67**	2.50	"	"	"	"	"	"	
HC (C36 - C40)	**28.2**	2.50	"	"	"	"	"	"	
HC (C>40)	ND	2.50	"	"	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*99 %*	*77-135*		"	"	"	"	
T1-10-1 (0501269-10) Soil Sampled: 01/25/05 13:13 Received: 01/25/05 16:45									
HC (C7 - C8)	ND	3.00	mg/kg	1	5012616	01/26/05	01/30/05	ASTM D2887	
HC (C8 - C9)	ND	3.00	"	"	"	"	"	"	
HC (C9 - C10)	ND	3.00	"	"	"	"	"	"	
HC (C10 - C11)	ND	1.25	"	"	"	"	"	"	
HC (C11 - C12)	ND	1.25	"	"	"	"	"	"	
HC (C12 - C14)	ND	1.25	"	"	"	"	"	"	
HC (C14 - C16)	ND	1.25	"	"	"	"	"	"	
HC (C16 - C18)	ND	1.25	"	"	"	"	"	"	
HC (C18 - C20)	ND	1.25	"	"	"	"	"	"	
HC (C20 - C24)	ND	1.25	"	"	"	"	"	"	
HC (C24 - C28)	**8.76**	1.25	"	"	"	"	"	"	
HC (C28 - C32)	**32.9**	2.50	"	"	"	"	"	"	
HC (C32 - C36)	**22.3**	2.50	"	"	"	"	"	"	
HC (C36 - C40)	**52.2**	2.50	"	"	"	"	"	"	
HC (C>40)	ND	2.50	"	"	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*108 %*	*77-135*		"	"	"	"	

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Client Name: Kleinfelder, Inc.
Project Name: 44102-002

EMA Log #: 0501269

TPH Extended Range by ASTM D2887

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
T1-10-2 (0501269-11) Soil Sampled: 01/25/05 13:26 Received: 01/25/05 16:45									
HC (C7 - C8)	ND	3.00	mg/kg	1	5012616	01/26/05	01/30/05	ASTM D2887	
HC (C8 - C9)	ND	3.00	"	"	"	"	"	"	
HC (C9 - C10)	ND	3.00	"	"	"	"	"	"	
HC (C10 - C11)	ND	1.25	"	"	"	"	"	"	
HC (C11 - C12)	ND	1.25	"	"	"	"	"	"	
HC (C12 - C14)	ND	1.25	"	"	"	"	"	"	
HC (C14 - C16)	ND	1.25	"	"	"	"	"	"	
HC (C16 - C18)	**3.42**	1.25	"	"	"	"	"	"	
HC (C18 - C20)	ND	1.25	"	"	"	"	"	"	
HC (C20 - C24)	ND	1.25	"	"	"	"	"	"	
HC (C24 - C28)	**18.7**	1.25	"	"	"	"	"	"	
HC (C28 - C32)	**64.9**	2.50	"	"	"	"	"	"	
HC (C32 - C36)	**67.5**	2.50	"	"	"	"	"	"	
HC (C36 - C40)	**84.0**	2.50	"	"	"	"	"	"	
HC (C>40)	ND	2.50	"	"	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*103 %*	*77-135*		"	"	"	"	
T1-10-3 (0501269-12) Soil Sampled: 01/25/05 13:45 Received: 01/25/05 16:45									
HC (C7 - C8)	ND	3.00	mg/kg	1	5012616	01/26/05	01/30/05	ASTM D2887	
HC (C8 - C9)	ND	3.00	"	"	"	"	"	"	
HC (C9 - C10)	ND	3.00	"	"	"	"	"	"	
HC (C10 - C11)	ND	1.25	"	"	"	"	"	"	
HC (C11 - C12)	ND	1.25	"	"	"	"	"	"	
HC (C12 - C14)	ND	1.25	"	"	"	"	"	"	
HC (C14 - C16)	ND	1.25	"	"	"	"	"	"	
HC (C16 - C18)	ND	1.25	"	"	"	"	"	"	
HC (C18 - C20)	ND	1.25	"	"	"	"	"	"	
HC (C20 - C24)	**32.6**	1.25	"	"	"	"	"	"	
HC (C24 - C28)	**73.4**	1.25	"	"	"	"	"	"	
HC (C28 - C32)	**159**	2.50	"	"	"	"	"	"	
HC (C32 - C36)	**178**	2.50	"	"	"	"	"	"	
HC (C36 - C40)	**193**	2.50	"	"	"	"	"	"	
HC (C>40)	ND	2.50	"	"	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*108 %*	*77-135*		"	"	"	"	

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Client Name: Kleinfelder, Inc.
Project Name: 44102-002

EMA Log #: 0501269

TPH Extended Range by ASTM D2887

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
T1-11-1 (0501269-13) Soil Sampled: 01/25/05 14:07 Received: 01/25/05 16:45									
HC (C7 - C8)	ND	3.00	mg/kg	1	5012616	01/26/05	01/30/05	ASTM D2887	
HC (C8 - C9)	ND	3.00	"	"	"	"	"	"	
HC (C9 - C10)	ND	3.00	"	"	"	"	"	"	
HC (C10 - C11)	ND	1.25	"	"	"	"	"	"	
HC (C11 - C12)	ND	1.25	"	"	"	"	"	"	
HC (C12 - C14)	ND	1.25	"	"	"	"	"	"	
HC (C14 - C16)	ND	1.25	"	"	"	"	"	"	
HC (C16 - C18)	ND	1.25	"	"	"	"	"	"	
HC (C18 - C20)	ND	1.25	"	"	"	"	"	"	
HC (C20 - C24)	**21.6**	1.25	"	"	"	"	"	"	
HC (C24 - C28)	**48.8**	1.25	"	"	"	"	"	"	
HC (C28 - C32)	**82.6**	2.50	"	"	"	"	"	"	
HC (C32 - C36)	**81.1**	2.50	"	"	"	"	"	"	
HC (C36 - C40)	**107**	2.50	"	"	"	"	"	"	
HC (C>40)	ND	2.50	"	"	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*98 %*	*77-135*		"	"	"	"	
T1-11-2 (0501269-14) Soil Sampled: 01/25/05 14:25 Received: 01/25/05 16:45									
HC (C7 - C8)	ND	3.00	mg/kg	1	5012616	01/26/05	01/30/05	ASTM D2887	
HC (C8 - C9)	ND	3.00	"	"	"	"	"	"	
HC (C9 - C10)	ND	3.00	"	"	"	"	"	"	
HC (C10 - C11)	ND	1.25	"	"	"	"	"	"	
HC (C11 - C12)	ND	1.25	"	"	"	"	"	"	
HC (C12 - C14)	ND	1.25	"	"	"	"	"	"	
HC (C14 - C16)	ND	1.25	"	"	"	"	"	"	
HC (C16 - C18)	ND	1.25	"	"	"	"	"	"	
HC (C18 - C20)	ND	1.25	"	"	"	"	"	"	
HC (C20 - C24)	**14.3**	1.25	"	"	"	"	"	"	
HC (C24 - C28)	**40.8**	1.25	"	"	"	"	"	"	
HC (C28 - C32)	**56.1**	2.50	"	"	"	"	"	"	
HC (C32 - C36)	**54.1**	2.50	"	"	"	"	"	"	
HC (C36 - C40)	**61.4**	2.50	"	"	"	"	"	"	
HC (C>40)	ND	2.50	"	"	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*107 %*	*77-135*		"	"	"	"	

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Client Name: Kleinfelder, Inc.
Project Name: 44102-002

EMA Log #: 0501269

TPH Extended Range by ASTM D2887

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
T1-11-3 (0501269-15) Soil Sampled: 01/25/05 14:40 Received: 01/25/05 16:45									
HC (C7 - C8)	ND	3.00	mg/kg	1	5012616	01/26/05	01/30/05	ASTM D2887	
HC (C8 - C9)	ND	3.00	"	"	"	"	"	"	
HC (C9 - C10)	ND	3.00	"	"	"	"	"	"	
HC (C10 - C11)	ND	1.25	"	"	"	"	"	"	
HC (C11 - C12)	ND	1.25	"	"	"	"	"	"	
HC (C12 - C14)	ND	1.25	"	"	"	"	"	"	
HC (C14 - C16)	ND	1.25	"	"	"	"	"	"	
HC (C16 - C18)	ND	1.25	"	"	"	"	"	"	
HC (C18 - C20)	ND	1.25	"	"	"	"	"	"	
HC (C20 - C24)	**17.5**	1.25	"	"	"	"	"	"	
HC (C24 - C28)	**26.7**	1.25	"	"	"	"	"	"	
HC (C28 - C32)	**76.8**	2.50	"	"	"	"	"	"	
HC (C32 - C36)	**82.0**	2.50	"	"	"	"	"	"	
HC (C36 - C40)	**88.3**	2.50	"	"	"	"	"	"	
HC (C>40)	ND	2.50	"	"	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*103 %*	*77-135*		"	"	"	"	
T1-12-1 (0501269-16) Soil Sampled: 01/25/05 15:00 Received: 01/25/05 16:45									
HC (C7 - C8)	ND	3.00	mg/kg	1	5012616	01/26/05	01/30/05	ASTM D2887	
HC (C8 - C9)	ND	3.00	"	"	"	"	"	"	
HC (C9 - C10)	ND	3.00	"	"	"	"	"	"	
HC (C10 - C11)	ND	1.25	"	"	"	"	"	"	
HC (C11 - C12)	ND	1.25	"	"	"	"	"	"	
HC (C12 - C14)	ND	1.25	"	"	"	"	"	"	
HC (C14 - C16)	ND	1.25	"	"	"	"	"	"	
HC (C16 - C18)	ND	1.25	"	"	"	"	"	"	
HC (C18 - C20)	ND	1.25	"	"	"	"	"	"	
HC (C20 - C24)	ND	1.25	"	"	"	"	"	"	
HC (C24 - C28)	**11.6**	1.25	"	"	"	"	"	"	
HC (C28 - C32)	**18.1**	2.50	"	"	"	"	"	"	
HC (C32 - C36)	**38.1**	2.50	"	"	"	"	"	"	
HC (C36 - C40)	**64.2**	2.50	"	"	"	"	"	"	
HC (C>40)	ND	2.50	"	"	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*106 %*	*77-135*		"	"	"	"	

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Client Name: Kleinfelder, Inc.
Project Name: 44102-002

EMA Log #: 0501269

TPH Extended Range by ASTM D2887

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
T1-12-2 (0501269-17) Soil Sampled: 01/25/05 15:07 Received: 01/25/05 16:45									
HC (C7 - C8)	ND	3.00	mg/kg	1	5012616	01/26/05	01/30/05	ASTM D2887	
HC (C8 - C9)	ND	3.00	"	"	"	"	"	"	
HC (C9 - C10)	ND	3.00	"	"	"	"	"	"	
HC (C10 - C11)	ND	1.25	"	"	"	"	"	"	
HC (C11 - C12)	ND	1.25	"	"	"	"	"	"	
HC (C12 - C14)	ND	1.25	"	"	"	"	"	"	
HC (C14 - C16)	ND	1.25	"	"	"	"	"	"	
HC (C16 - C18)	ND	1.25	"	"	"	"	"	"	
HC (C18 - C20)	ND	1.25	"	"	"	"	"	"	
HC (C20 - C24)	ND	1.25	"	"	"	"	"	"	
HC (C24 - C28)	ND	1.25	"	"	"	"	"	"	
HC (C28 - C32)	ND	2.50	"	"	"	"	"	"	
HC (C32 - C36)	ND	2.50	"	"	"	"	"	"	
HC (C36 - C40)	ND	2.50	"	"	"	"	"	"	
HC (C>40)	ND	2.50	"	"	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*107 %*	*77-135*		"	"	"	"	
T1-12-3 (0501269-18) Soil Sampled: 01/25/05 15:10 Received: 01/25/05 16:45									
HC (C7 - C8)	ND	3.00	mg/kg	1	5012616	01/26/05	01/30/05	ASTM D2887	
HC (C8 - C9)	ND	3.00	"	"	"	"	"	"	
HC (C9 - C10)	ND	3.00	"	"	"	"	"	"	
HC (C10 - C11)	ND	1.25	"	"	"	"	"	"	
HC (C11 - C12)	ND	1.25	"	"	"	"	"	"	
HC (C12 - C14)	ND	1.25	"	"	"	"	"	"	
HC (C14 - C16)	ND	1.25	"	"	"	"	"	"	
HC (C16 - C18)	ND	1.25	"	"	"	"	"	"	
HC (C18 - C20)	ND	1.25	"	"	"	"	"	"	
HC (C20 - C24)	ND	1.25	"	"	"	"	"	"	
HC (C24 - C28)	ND	1.25	"	"	"	"	"	"	
HC (C28 - C32)	ND	2.50	"	"	"	"	"	"	
HC (C32 - C36)	ND	2.50	"	"	"	"	"	"	
HC (C36 - C40)	**17.7**	2.50	"	"	"	"	"	"	
HC (C>40)	ND	2.50	"	"	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*107 %*	*77-135*		"	"	"	"	

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Client Name: Kleinfelder, Inc.
Project Name: 44102-002

EMA Log #: 0501269

Total Metals by EPA 6000/7000 Series Methods - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 5012610										
Blank (5012610-BLK1)				Prepared & Analyzed: 01/26/05						
Antimony	ND	10.0	mg/kg							
Barium	ND	1.00	"							
Beryllium	ND	1.00	"							
Cadmium	ND	1.00	"							
Chromium	ND	1.00	"							
Cobalt	ND	1.00	"							
Copper	ND	1.00	"							
Lead	ND	10.0	"							
Molybdenum	ND	5.00	"							
Nickel	ND	1.00	"							
Vanadium	ND	1.00	"							
Zinc	ND	1.00	"							
LCS (5012610-BS1)				Prepared & Analyzed: 01/26/05						
Antimony	470	10.0	mg/kg	500		94	75-125			
Barium	455	1.00	"	500		91	75-125			
Beryllium	93.6	1.00	"	100		94	75-125			
Cadmium	447	1.00	"	500		89	75-125			
Chromium	460	1.00	"	500		92	75-125			
Cobalt	447	1.00	"	500		89	75-125			
Copper	454	1.00	"	500		91	75-125			
Lead	447	10.0	"	500		89	75-125			
Molybdenum	469	5.00	"	500		94	75-125			
Nickel	440	1.00	"	500		88	75-125			
Vanadium	484	1.00	"	500		97	75-125			
Zinc	446	1.00	"	500		89	75-125			
LCS Dup (5012610-BSD1)				Prepared & Analyzed: 01/26/05						
Antimony	477	10.0	mg/kg	500		95	75-125	1	20	
Barium	458	1.00	"	500		92	75-125	0.7	20	
Beryllium	95.4	1.00	"	100		95	75-125	2	20	
Cadmium	450	1.00	"	500		90	75-125	0.7	20	
Chromium	466	1.00	"	500		93	75-125	1	20	
Cobalt	447	1.00	"	500		89	75-125	0	20	
Copper	459	1.00	"	500		92	75-125	1	20	
Lead	453	10.0	"	500		91	75-125	1	20	
Molybdenum	478	5.00	"	500		96	75-125	2	20	
Nickel	442	1.00	"	500		88	75-125	0.5	20	

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Client Name: Kleinfelder, Inc.
Project Name: 44102-002

EMA Log #: 0501269

Total Metals by EPA 6000/7000 Series Methods - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 5012610										
LCS Dup (5012610-BSD1)				Prepared & Analyzed: 01/26/05						
Vanadium	492	1.00	mg/kg	500		98	75-125	2	20	
Zinc	452	1.00	"	500		90	75-125	1	20	
Duplicate (5012610-DUP1)		Source: 0501269-18		Prepared & Analyzed: 01/26/05						
Antimony	ND	10.0	mg/kg		9.20			4	20	
Barium	118	1.00	"		131			10	20	
Beryllium	ND	1.00	"		0.26			4	20	
Cadmium	ND	1.00	"		0.10			82	20	QR-04
Chromium	66.0	1.00	"		63.6			4	20	
Cobalt	1.32	1.00	"		0.94			34	20	QR-02
Copper	14.9	1.00	"		16.5			10	20	
Lead	ND	10.0	"		6.42			25	20	QR-04
Molybdenum	ND	5.00	"		1.25			7	20	
Nickel	6.55	1.00	"		6.17			6	20	
Vanadium	36.1	1.00	"		38.2			6	20	
Zinc	35.7	1.00	"		32.9			8	20	
Matrix Spike (5012610-MS1)		Source: 0501269-18		Prepared & Analyzed: 01/26/05						
Antimony	231	10.0	mg/kg	417	9.20	53	75-125			QM-01
Barium	484	1.00	"	417	131	85	75-125			
Beryllium	78.2	1.00	"	83.3	0.26	94	75-125			
Cadmium	365	1.00	"	417	0.10	88	75-125			
Chromium	438	1.00	"	417	63.6	90	75-125			
Cobalt	374	1.00	"	417	0.94	89	75-125			
Copper	402	1.00	"	417	16.5	92	75-125			
Lead	366	10.0	"	417	6.42	86	75-125			
Molybdenum	375	5.00	"	417	1.25	90	75-125			
Nickel	366	1.00	"	417	6.17	86	75-125			
Vanadium	428	1.00	"	417	38.2	93	75-125			
Zinc	406	1.00	"	417	32.9	89	75-125			

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Client Name: Kleinfelder, Inc.
Project Name: 44102-002

EMA Log #: 0501269

Total Metals by EPA 6000/7000 Series Methods - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 5012610										
Matrix Spike Dup (5012610-MSD1)		**Source: 0501269-18**		Prepared & Analyzed: 01/26/05						
Antimony	246	10.0	mg/kg	417	9.20	57	75-125	6	20	QM-01
Barium	466	1.00	"	417	131	80	75-125	4	20	
Beryllium	79.5	1.00	"	83.3	0.26	95	75-125	2	20	
Cadmium	366	1.00	"	417	0.10	88	75-125	0.3	20	
Chromium	437	1.00	"	417	63.6	90	75-125	0.2	20	
Cobalt	366	1.00	"	417	0.94	88	75-125	2	20	
Copper	399	1.00	"	417	16.5	92	75-125	0.7	20	
Lead	384	10.0	"	417	6.42	91	75-125	5	20	
Molybdenum	378	5.00	"	417	1.25	90	75-125	0.8	20	
Nickel	364	1.00	"	417	6.17	86	75-125	0.5	20	
Vanadium	427	1.00	"	417	38.2	93	75-125	0.2	20	
Zinc	404	1.00	"	417	32.9	89	75-125	0.5	20	
Batch 5012611										
Blank (5012611-BLK1)				Prepared & Analyzed: 01/26/05						
Arsenic	ND	0.500	mg/kg							
Selenium	ND	1.00	"							
Silver	ND	0.100	"							
Thallium	ND	0.500	"							
LCS (5012611-BS1)				Prepared & Analyzed: 01/26/05						
Arsenic	9.00	0.500	mg/kg	10.0		90	75-125			
Selenium	8.86	1.00	"	10.0		89	75-125			
Silver	9.17	0.100	"	10.0		92	75-125			
Thallium	8.88	0.500	"	10.0		89	75-125			

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Client Name: Kleinfelder, Inc.
Project Name: 44102-002

EMA Log #: 0501269

Total Metals by EPA 6000/7000 Series Methods - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 5012611										
LCS Dup (5012611-BSD1)				Prepared & Analyzed: 01/26/05						
Arsenic	9.32	0.500	mg/kg	10.0		93	75-125	3	20	
Selenium	9.87	1.00	"	10.0		99	75-125	11	20	
Silver	9.21	0.100	"	10.0		92	75-125	0.4	20	
Thallium	9.14	0.500	"	10.0		91	75-125	3	20	
Duplicate (5012611-DUP1)		Source: 0501269-18		Prepared & Analyzed: 01/26/05						
Arsenic	3.99	0.500	mg/kg		3.95			1	20	
Selenium	ND	1.00	"		ND				20	
Silver	ND	0.100	"		ND				20	
Thallium	ND	0.500	"		ND				20	
Matrix Spike (5012611-MS1)		Source: 0501269-18		Prepared & Analyzed: 01/26/05						
Arsenic	11.5	0.500	mg/kg	8.62	3.95	88	75-125			
Selenium	7.15	1.00	"	8.62	ND	83	75-125			
Silver	7.82	0.100	"	8.62	ND	91	75-125			
Thallium	8.21	0.500	"	8.62	ND	95	75-125			
Matrix Spike Dup (5012611-MSD1)		Source: 0501269-18		Prepared & Analyzed: 01/26/05						
Arsenic	12.9	0.500	mg/kg	8.62	3.95	104	75-125	11	20	
Selenium	7.81	1.00	"	8.62	ND	91	75-125	9	20	
Silver	8.05	0.100	"	8.62	ND	93	75-125	3	20	
Thallium	8.38	0.500	"	8.62	ND	97	75-125	2	20	
Batch 5020102										
Blank (5020102-BLK1)				Prepared & Analyzed: 02/01/05						
Mercury	ND	0.05	mg/kg							

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Client Name: Kleinfelder, Inc.
Project Name: 44102-002

EMA Log #: 0501269

Total Metals by EPA 6000/7000 Series Methods - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 5020102										
LCS (5020102-BS1)				Prepared & Analyzed: 02/01/05						
Mercury	0.50	0.05	mg/kg	0.500		100	75-125			
LCS Dup (5020102-BSD1)				Prepared & Analyzed: 02/01/05						
Mercury	0.52	0.05	mg/kg	0.500		104	75-125	4	20	
Duplicate (5020102-DUP1)		Source: 0501269-18		Prepared & Analyzed: 02/01/05						
Mercury	ND	0.02	mg/kg		0.03			108	20	QR-02
Matrix Spike (5020102-MS1)		Source: 0501269-18		Prepared & Analyzed: 02/01/05						
Mercury	0.18	0.02	mg/kg	0.167	0.03	90	75-125			
Matrix Spike Dup (5020102-MSD1)		Source: 0501269-18		Prepared & Analyzed: 02/01/05						
Mercury	0.18	0.02	mg/kg	0.167	0.03	90	75-125	0	20	

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Client Name: Kleinfelder, Inc.
Project Name: 44102-002

EMA Log #: 0501269

Volatile Organic Compounds by EPA Method 8260B - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 5012701										
Blank (5012701-BLK1)				Prepared & Analyzed: 01/27/05						
Acetone	ND	50.0	ug/kg							
Acetonitrile	ND	50.0	"							
Acrolein	ND	100	"							
Acrylonitrile	ND	25.0	"							
Allyl chloride	ND	5.00	"							
Benzene	ND	2.00	"							
Bromobenzene	ND	2.00	"							
Bromochloromethane	ND	2.00	"							
Bromodichloromethane	ND	2.00	"							
Bromoform	ND	2.00	"							
Bromomethane	ND	5.00	"							
2-Butanone	ND	50.0	"							
n-Butylbenzene	ND	2.00	"							
sec-Butylbenzene	ND	5.00	"							
tert-Butylbenzene	ND	5.00	"							
Carbon disulfide	ND	5.00	"							
Carbon tetrachloride	ND	5.00	"							
Chlorobenzene	ND	2.00	"							
Chlorodibromomethane	ND	2.00	"							
Chloroethane	ND	5.00	"							
2-Chloroethylvinyl ether	ND	5.00	"							
Chloroform	ND	2.00	"							
Chloromethane	ND	5.00	"							
2-Chlorotoluene	ND	5.00	"							
4-Chlorotoluene	ND	5.00	"							
1,2-Dibromo-3-chloropropane	ND	5.00	"							
1,2-Dibromoethane (EDB)	ND	2.00	"							
Dibromomethane	ND	2.00	"							
1,2-Dichlorobenzene	ND	2.00	"							
1,3-Dichlorobenzene	ND	2.00	"							
1,4-Dichlorobenzene	ND	2.00	"							
trans-1,4-Dichloro-2-butene	ND	5.00	"							
Dichlorodifluoromethane	ND	5.00	"							
1,1-Dichloroethane	ND	2.00	"							
1,2-Dichloroethane	ND	2.00	"							
1,1-Dichloroethene	ND	2.00	"							
cis-1,2-Dichloroethene	ND	2.00	"							
trans-1,2-Dichloroethene	ND	2.00	"							

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Client Name: Kleinfelder, Inc.
Project Name: 44102-002

EMA Log #: 0501269

Volatile Organic Compounds by EPA Method 8260B - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 5012701										
Blank (5012701-BLK1)				Prepared & Analyzed: 01/27/05						
1,2-Dichloropropane	ND	2.00	ug/kg							
1,3-Dichloropropane	ND	2.00	"							
2,2-Dichloropropane	ND	5.00	"							
1,1-Dichloropropene	ND	5.00	"							
cis-1,3-Dichloropropene	ND	2.00	"							
trans-1,3-Dichloropropene	ND	2.00	"							
Diethyl ether	ND	5.00	"							
Ethylbenzene	ND	2.00	"							
Hexachlorobutadiene	ND	2.00	"							
Hexachloroethane	ND	2.00	"							
2-Hexanone	ND	10.0	"							
Iodomethane	ND	2.00	"							
Isopropylbenzene	ND	2.00	"							
Methylene chloride	ND	5.00	"							
Methyl tert-butyl ether	ND	2.00	"							
4-Methyl-2-pentanone	ND	25.0	"							
Naphthalene	ND	5.00	"							
n-Propylbenzene	ND	2.00	"							
Styrene	ND	2.00	"							
1,1,1,2-Tetrachloroethane	ND	2.00	"							
1,1,2,2-Tetrachloroethane	ND	5.00	"							
Tetrachloroethene	ND	2.00	"							
Toluene	ND	2.00	"							
1,2,3-Trichlorobenzene	ND	2.00	"							
1,2,4-Trichlorobenzene	ND	2.00	"							
1,1,1-Trichloroethane	ND	2.00	"							
1,1,2-Trichloroethane	ND	5.00	"							
Trichloroethene	ND	2.00	"							
Trichlorofluoromethane	ND	5.00	"							
1,2,3-Trichloropropane	ND	5.00	"							
1,1,2-Trichlorotrifluoroethane	ND	10.0	"							
1,2,4-Trimethylbenzene	ND	2.00	"							
1,3,5-Trimethylbenzene	ND	2.00	"							
Vinyl acetate	ND	10.0	"							
Vinyl chloride	ND	5.00	"							
m,p-Xylene	ND	5.00	"							
o-Xylene	ND	2.00	"							
Surrogate: Dibromofluoromethane	*126*		"	*125*		*101*	*61-141*			

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Volatile Organic Compounds by EPA Method 8260B - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 5012701										
Blank (5012701-BLK1)				Prepared & Analyzed: 01/27/05						
Surrogate: 4-Bromofluorobenzene	*137*		*ug/kg*	*125*		*110*	*70-124*			
Surrogate: Toluene-d8	*129*		*"*	*125*		*103*	*80-121*			
LCS (5012701-BS1)				Prepared & Analyzed: 01/27/05						
Benzene	116	2.00	ug/kg	125		93	76-116			
Chlorobenzene	125	2.00	"	125		100	82-106			
1,1-Dichloroethene	114	2.00	"	125		91	67-116			
Toluene	125	2.00	"	125		100	78-112			
Trichloroethene	124	2.00	"	125		99	79-108			
Surrogate: Dibromofluoromethane	*136*		*"*	*125*		*109*	*61-141*			
Surrogate: 4-Bromofluorobenzene	*125*		*"*	*125*		*100*	*70-124*			
Surrogate: Toluene-d8	*128*		*"*	*125*		*102*	*80-121*			
[illegible]plicate (5012701-DUP1)		Source: 0501269-09		Prepared & Analyzed: 01/27/05						
[illegible]etone	60.7	50.0	ug/kg		72.4			18	30	
Acetonitrile	ND	50.0	"		ND				30	
Acrolein	ND	100	"		ND				30	
Acrylonitrile	ND	25.0	"		ND				30	
Allyl chloride	ND	5.00	"		ND				30	
Benzene	ND	2.00	"		ND				30	
Bromobenzene	ND	2.00	"		ND				30	
Bromochloromethane	ND	2.00	"		ND				30	
Bromodichloromethane	ND	2.00	"		ND				30	
Bromoform	ND	2.00	"		ND				30	
Bromomethane	ND	5.00	"		ND				30	
2-Butanone	ND	50.0	"		ND				30	
n-Butylbenzene	ND	2.00	"		ND				30	
sec-Butylbenzene	ND	5.00	"		ND				30	
tert-Butylbenzene	ND	5.00	"		ND				30	
Carbon disulfide	ND	5.00	"		2.22			2	30	
Carbon tetrachloride	ND	5.00	"		ND				30	
Chlorobenzene	ND	2.00	"		ND				30	
Chlorodibromomethane	ND	2.00	"		ND				30	
Chloroethane	ND	5.00	"		ND				30	
2-Chloroethylvinyl ether	ND	5.00	"		ND				30	
Chloroform	ND	2.00	"		ND				30	
Chloromethane	ND	5.00	"		ND				30	
2-Chlorotoluene	ND	5.00	"		ND				30	

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Client Name: Kleinfelder, Inc.
Project Name: 44102-002

EMA Log #: 0501269

Volatile Organic Compounds by EPA Method 8260B - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 5012701										
Duplicate (5012701-DUP1)		**Source: 0501269-09**		Prepared & Analyzed: 01/27/05						
4-Chlorotoluene	ND	5.00	ug/kg		ND				30	
1,2-Dibromo-3-chloropropane	ND	5.00	"		ND				30	
1,2-Dibromoethane (EDB)	ND	2.00	"		ND				30	
Dibromomethane	ND	2.00	"		ND				30	
1,2-Dichlorobenzene	ND	2.00	"		ND				30	
1,3-Dichlorobenzene	ND	2.00	"		ND				30	
1,4-Dichlorobenzene	ND	2.00	"		ND				30	
trans-1,4-Dichloro-2-butene	ND	5.00	"		ND				30	
Dichlorodifluoromethane	ND	5.00	"		ND				30	
1,1-Dichloroethane	ND	2.00	"		ND				30	
1,2-Dichloroethane	ND	2.00	"		ND				30	
1,1-Dichloroethene	ND	2.00	"		ND				30	
cis-1,2-Dichloroethene	ND	2.00	"		ND				30	
trans-1,2-Dichloroethene	ND	2.00	"		ND				30	
1,2-Dichloropropane	ND	2.00	"		ND				30	
1,3-Dichloropropane	ND	2.00	"		ND				30	
2,2-Dichloropropane	ND	5.00	"		ND				30	
1,1-Dichloropropene	ND	5.00	"		ND				30	
cis-1,3-Dichloropropene	ND	2.00	"		ND				30	
trans-1,3-Dichloropropene	ND	2.00	"		ND				30	
Diethyl ether	ND	5.00	"		ND				30	
Ethylbenzene	ND	2.00	"		ND				30	
Hexachlorobutadiene	ND	2.00	"		ND				30	
Hexachloroethane	ND	2.00	"		ND				30	
2-Hexanone	ND	10.0	"		ND				30	
Iodomethane	ND	2.00	"		ND				30	
Isopropylbenzene	ND	2.00	"		ND				30	
Methylene chloride	ND	5.00	"		ND				30	
Methyl tert-butyl ether	ND	2.00	"		ND				30	
4-Methyl-2-pentanone	ND	25.0	"		2.55				30	
Naphthalene	5.18	5.00	"		6.02			15	30	
n-Propylbenzene	ND	2.00	"		ND				30	
Styrene	ND	2.00	"		ND				30	
1,1,1,2-Tetrachloroethane	ND	2.00	"		ND				30	
1,1,2,2-Tetrachloroethane	ND	5.00	"		ND				30	
Tetrachloroethene	ND	2.00	"		ND				30	
Toluene	ND	2.00	"		ND				30	
1,2,3-Trichlorobenzene	ND	2.00	"		ND				30	

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Client Name: Kleinfelder, Inc. **EMA Log #: 0501269**
Project Name: 44102-002

Volatile Organic Compounds by EPA Method 8260B - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 5012701										
Duplicate (5012701-DUP1)		**Source: 0501269-09**		Prepared & Analyzed: 01/27/05						
1,2,4-Trichlorobenzene	ND	2.00	ug/kg		ND				30	
1,1,1-Trichloroethane	ND	2.00	"		ND				30	
1,1,2-Trichloroethane	ND	5.00	"		ND				30	
Trichloroethene	ND	2.00	"		ND				30	
Trichlorofluoromethane	ND	5.00	"		ND				30	
1,2,3-Trichloropropane	ND	5.00	"		ND				30	
1,1,2-Trichlorotrifluoroethane	ND	10.0	"		ND				30	
1,2,4-Trimethylbenzene	3.62	2.00	"		4.50			22	30	
1,3,5-Trimethylbenzene	ND	2.00	"		1.48			9	30	
Vinyl acetate	ND	10.0	"		ND				30	
Vinyl chloride	ND	5.00	"		ND				30	
m,p-Xylene	ND	5.00	"		ND				30	
o-Xylene	ND	2.00	"		1.02			31	30	QR-04
Surrogate: Dibromofluoromethane	*ND*		"	*125*			*61-141*			*S-04*
Surrogate: 4-Bromofluorobenzene	*109*		"	*125*		*87*	*70-124*			
Surrogate: Toluene-d8	*119*		"	*125*		*95*	*80-121*			
Matrix Spike (5012701-MS1)		**Source: 0501269-01**		Prepared & Analyzed: 01/27/05						
Benzene	119	2.00	ug/kg	125	ND	95	77-127			
Chlorobenzene	126	2.00	"	125	ND	101	84-114			
1,1-Dichloroethene	122	2.00	"	125	ND	98	61-129			
Toluene	122	2.00	"	125	ND	98	66-139			
Trichloroethene	118	2.00	"	125	ND	94	83-113			
Surrogate: Dibromofluoromethane	*141*		"	*125*		*113*	*61-141*			
Surrogate: 4-Bromofluorobenzene	*98.9*		"	*125*		*79*	*70-124*			
Surrogate: Toluene-d8	*122*		"	*125*		*98*	*80-121*			
Matrix Spike Dup (5012701-MSD1)		**Source: 0501269-01**		Prepared & Analyzed: 01/27/05						
Benzene	120	2.00	ug/kg	125	ND	96	77-127	0.8	30	
Chlorobenzene	126	2.00	"	125	ND	101	84-114	0	30	
1,1-Dichloroethene	150	2.00	"	125	ND	120	61-129	21	30	
Toluene	129	2.00	"	125	ND	103	66-139	6	30	
Trichloroethene	124	2.00	"	125	ND	99	83-113	5	30	
Surrogate: Dibromofluoromethane	*137*		"	*125*		*110*	*61-141*			
Surrogate: 4-Bromofluorobenzene	*110*		"	*125*		*88*	*70-124*			
Surrogate: Toluene-d8	*122*		"	*125*		*98*	*80-121*			

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Client Name: Kleinfelder, Inc.
Project Name: 44102-002

EMA Log #: 0501269

Volatile Organic Compounds by EPA Method 8260B - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 5012715										
Blank (5012715-BLK1)				Prepared: 01/27/05 Analyzed: 01/28/05						
Acetone	ND	50.0	ug/kg							
Acetonitrile	ND	50.0	"							
Acrolein	ND	100	"							
Acrylonitrile	ND	25.0	"							
Allyl chloride	ND	5.00	"							
Benzene	ND	2.00	"							
Bromobenzene	ND	2.00	"							
Bromochloromethane	ND	2.00	"							
Bromodichloromethane	ND	2.00	"							
Bromoform	ND	2.00	"							
Bromomethane	ND	5.00	"							
2-Butanone	ND	50.0	"							
n-Butylbenzene	ND	2.00	"							
sec-Butylbenzene	ND	5.00	"							
tert-Butylbenzene	ND	5.00	"							
Carbon disulfide	ND	5.00	"							
Carbon tetrachloride	ND	5.00	"							
Chlorobenzene	ND	2.00	"							
Chlorodibromomethane	ND	2.00	"							
Chloroethane	ND	5.00	"							
2-Chloroethylvinyl ether	ND	5.00	"							
Chloroform	ND	2.00	"							
Chloromethane	ND	5.00	"							
2-Chlorotoluene	ND	5.00	"							
4-Chlorotoluene	ND	5.00	"							
1,2-Dibromo-3-chloropropane	ND	5.00	"							
1,2-Dibromoethane (EDB)	ND	2.00	"							
Dibromomethane	ND	2.00	"							
1,2-Dichlorobenzene	ND	2.00	"							
1,3-Dichlorobenzene	ND	2.00	"							
1,4-Dichlorobenzene	ND	2.00	"							
trans-1,4-Dichloro-2-butene	ND	5.00	"							
Dichlorodifluoromethane	ND	5.00	"							
1,1-Dichloroethane	ND	2.00	"							
1,2-Dichloroethane	ND	2.00	"							
1,1-Dichloroethene	ND	2.00	"							
cis-1,2-Dichloroethene	ND	2.00	"							
trans-1,2-Dichloroethene	ND	2.00	"							

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Volatile Organic Compounds by EPA Method 8260B - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 5012715										
Blank (5012715-BLK1)				Prepared: 01/27/05 Analyzed: 01/28/05						
1,2-Dichloropropane	ND	2.00	ug/kg							
1,3-Dichloropropane	ND	2.00	"							
2,2-Dichloropropane	ND	5.00	"							
1,1-Dichloropropene	ND	5.00	"							
cis-1,3-Dichloropropene	ND	2.00	"							
trans-1,3-Dichloropropene	ND	2.00	"							
Diethyl ether	ND	5.00	"							
Ethylbenzene	ND	2.00	"							
Hexachlorobutadiene	ND	2.00	"							
Hexachloroethane	ND	2.00	"							
2-Hexanone	ND	10.0	"							
Iodomethane	ND	2.00	"							
Isopropylbenzene	ND	2.00	"							
Methylene chloride	ND	5.00	"							
Methyl tert-butyl ether	ND	2.00	"							
4-Methyl-2-pentanone	ND	25.0	"							
Naphthalene	ND	5.00	"							
n-Propylbenzene	ND	2.00	"							
Styrene	ND	2.00	"							
1,1,1,2-Tetrachloroethane	ND	2.00	"							
1,1,2,2-Tetrachloroethane	ND	5.00	"							
Tetrachloroethene	ND	2.00	"							
Toluene	ND	2.00	"							
1,2,3-Trichlorobenzene	ND	2.00	"							
1,2,4-Trichlorobenzene	ND	2.00	"							
1,1,1-Trichloroethane	ND	2.00	"							
1,1,2-Trichloroethane	ND	5.00	"							
Trichloroethene	ND	2.00	"							
Trichlorofluoromethane	ND	5.00	"							
1,2,3-Trichloropropane	ND	5.00	"							
1,1,2-Trichlorotrifluoroethane	ND	10.0	"							
1,2,4-Trimethylbenzene	ND	2.00	"							
1,3,5-Trimethylbenzene	ND	2.00	"							
Vinyl acetate	ND	10.0	"							
Vinyl chloride	ND	5.00	"							
m,p-Xylene	ND	5.00	"							
o-Xylene	ND	2.00	"							
Surrogate: Dibromofluoromethane	*137*		"	*125*		*110*	*61-141*			

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Client Name: Kleinfelder, Inc.
Project Name: 44102-002

EMA Log #: 0501269

Volatile Organic Compounds by EPA Method 8260B - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 5012715										
Blank (5012715-BLK1)				Prepared: 01/27/05 Analyzed: 01/28/05						
Surrogate: 4-Bromofluorobenzene	*129*		*ug/kg*	*125*		*103*	*70-124*			
Surrogate: Toluene-d8	*122*		*"*	*125*		*98*	*80-121*			
LCS (5012715-BS1)				Prepared & Analyzed: 01/27/05						
Benzene	119	2.00	ug/kg	125		95	76-116			
Chlorobenzene	124	2.00	"	125		99	82-106			
1,1-Dichloroethene	95.6	2.00	"	125		76	67-116			
Toluene	102	2.00	"	125		82	78-112			
Trichloroethene	120	2.00	"	125		96	79-108			
Surrogate: Dibromofluoromethane	*132*		*"*	*125*		*106*	*61-141*			
Surrogate: 4-Bromofluorobenzene	*114*		*"*	*125*		*91*	*70-124*			
Surrogate: Toluene-d8	*106*		*"*	*125*		*85*	*80-121*			
Duplicate (5012715-DUP1)		**Source: 0501269-18**		Prepared: 01/27/05 Analyzed: 01/28/05						
Acetone	60.0	50.0	ug/kg		61.1			2	30	
Acetonitrile	ND	50.0	"		ND				30	
Acrolein	ND	100	"		ND				30	
Acrylonitrile	ND	25.0	"		ND				30	
Allyl chloride	ND	5.00	"		ND				30	
Benzene	ND	2.00	"		ND				30	
Bromobenzene	ND	2.00	"		ND				30	
Bromochloromethane	ND	2.00	"		ND				30	
Bromodichloromethane	ND	2.00	"		ND				30	
Bromoform	ND	2.00	"		ND				30	
Bromomethane	ND	5.00	"		ND				30	
2-Butanone	ND	50.0	"		ND				30	
n-Butylbenzene	ND	2.00	"		ND				30	
sec-Butylbenzene	ND	5.00	"		ND				30	
tert-Butylbenzene	ND	5.00	"		ND				30	
Carbon disulfide	ND	5.00	"		2.22			7	30	
Carbon tetrachloride	ND	5.00	"		ND				30	
Chlorobenzene	ND	2.00	"		ND				30	
Chlorodibromomethane	ND	2.00	"		ND				30	
Chloroethane	ND	5.00	"		ND				30	
2-Chloroethylvinyl ether	ND	5.00	"		ND				30	
Chloroform	ND	2.00	"		ND				30	
Chloromethane	ND	5.00	"		ND				30	
2-Chlorotoluene	ND	5.00	"		ND				30	

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ent Name: Kleinfelder, Inc.
Project Name: 44102-002

EMA Log #: 0501269

Volatile Organic Compounds by EPA Method 8260B - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 5012715										
Duplicate (5012715-DUP1)		**Source: 0501269-18**		Prepared: 01/27/05 Analyzed: 01/28/05						
4-Chlorotoluene	ND	5.00	ug/kg		ND				30	
1,2-Dibromo-3-chloropropane	ND	5.00	"		ND				30	
1,2-Dibromoethane (EDB)	ND	2.00	"		ND				30	
Dibromomethane	ND	2.00	"		ND				30	
1,2-Dichlorobenzene	ND	2.00	"		ND				30	
1,3-Dichlorobenzene	ND	2.00	"		ND				30	
1,4-Dichlorobenzene	ND	2.00	"		ND				30	
trans-1,4-Dichloro-2-butene	ND	5.00	"		ND				30	
Dichlorodifluoromethane	ND	5.00	"		ND				30	
1,1-Dichloroethane	ND	2.00	"		ND				30	
1,2-Dichloroethane	ND	2.00	"		ND				30	
1,1-Dichloroethene	ND	2.00	"		ND				30	
cis-1,2-Dichloroethene	ND	2.00	"		ND				30	
-1,2-Dichloroethene	ND	2.00	"		ND				30	
1,2-Dichloropropane	ND	2.00	"		ND				30	
1,3-Dichloropropane	ND	2.00	"		ND				30	
2,2-Dichloropropane	ND	5.00	"		ND				30	
1,1-Dichloropropene	ND	5.00	"		ND				30	
cis-1,3-Dichloropropene	ND	2.00	"		ND				30	
trans-1,3-Dichloropropene	ND	2.00	"		ND				30	
Diethyl ether	ND	5.00	"		ND				30	
Ethylbenzene	ND	2.00	"		ND				30	
Hexachlorobutadiene	ND	2.00	"		ND				30	
Hexachloroethane	ND	2.00	"		ND				30	
2-Hexanone	ND	10.0	"		ND				30	
Iodomethane	ND	2.00	"		ND				30	
Isopropylbenzene	ND	2.00	"		ND				30	
Methylene chloride	ND	5.00	"		ND				30	
Methyl tert-butyl ether	ND	2.00	"		ND				30	
4-Methyl-2-pentanone	ND	25.0	"		ND				30	
Naphthalene	ND	5.00	"		ND				30	
n-Propylbenzene	ND	2.00	"		ND				30	
Styrene	ND	2.00	"		ND				30	
1,1,1,2-Tetrachloroethane	ND	2.00	"		ND				30	
1,1,2,2-Tetrachloroethane	ND	5.00	"		ND				30	
Tetrachloroethene	ND	2.00	"		ND				30	
Toluene	ND	2.00	"		ND				30	
1,2,3-Trichlorobenzene	ND	2.00	"		ND				30	

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Client Name: Kleinfelder, Inc.
Project Name: 44102-002

EMA Log #: 0501269

Volatile Organic Compounds by EPA Method 8260B - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 5012715										
Duplicate (5012715-DUP1)		**Source: 0501269-18**		Prepared: 01/27/05 Analyzed: 01/28/05						
1,2,4-Trichlorobenzene	ND	2.00	ug/kg		ND				30	
1,1,1-Trichloroethane	ND	2.00	"		ND				30	
1,1,2-Trichloroethane	ND	5.00	"		ND				30	
Trichloroethene	ND	2.00	"		ND				30	
Trichlorofluoromethane	ND	5.00	"		ND				30	
1,2,3-Trichloropropane	ND	5.00	"		ND				30	
1,1,2-Trichlorotrifluoroethane	ND	10.0	"		ND				30	
1,2,4-Trimethylbenzene	ND	2.00	"		ND				30	
1,3,5-Trimethylbenzene	ND	2.00	"		ND				30	
Vinyl acetate	ND	10.0	"		ND				30	
Vinyl chloride	ND	5.00	"		ND				30	
m,p-Xylene	ND	5.00	"		ND				30	
o-Xylene	ND	2.00	"		ND				30	
Surrogate: Dibromofluoromethane	*106*		"	*125*		*85*	*61-141*			
Surrogate: 4-Bromofluorobenzene	*117*		"	*125*		*94*	*70-124*			
Surrogate: Toluene-d8	*124*		"	*125*		*99*	*80-121*			
Matrix Spike (5012715-MS1)		**Source: 0501269-10**		Prepared & Analyzed: 01/27/05						
Benzene	121	2.00	ug/kg	125	ND	97	77-127			
Chlorobenzene	127	2.00	"	125	ND	102	84-114			
1,1-Dichloroethene	108	2.00	"	125	ND	86	61-129			
Toluene	118	2.00	"	125	ND	94	66-139			
Trichloroethene	119	2.00	"	125	ND	95	83-113			
Surrogate: Dibromofluoromethane	*143*		"	*125*		*114*	*61-141*			
Surrogate: 4-Bromofluorobenzene	*111*		"	*125*		*89*	*70-124*			
Surrogate: Toluene-d8	*120*		"	*125*		*96*	*80-121*			
Matrix Spike Dup (5012715-MSD1)		**Source: 0501269-10**		Prepared & Analyzed: 01/27/05						
Benzene	144	2.00	ug/kg	125	ND	115	77-127	17	30	
Chlorobenzene	125	2.00	"	125	ND	100	84-114	2	30	
1,1-Dichloroethene	102	2.00	"	125	ND	82	61-129	6	30	
Toluene	122	2.00	"	125	ND	98	66-139	3	30	
Trichloroethene	120	2.00	"	125	ND	96	83-113	0.8	30	
Surrogate: Dibromofluoromethane	*139*		"	*125*		*111*	*61-141*			
Surrogate: 4-Bromofluorobenzene	*113*		"	*125*		*90*	*70-124*			
Surrogate: Toluene-d8	*124*		"	*125*		*99*	*80-121*			

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Client Name: Kleinfelder, Inc.
Project Name: 44102-002

EMA Log #: 0501269

Semivolatile Organic Compounds by EPA Method 8270C - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 5012702										
Blank (5012702-BLK1)				Prepared: 01/27/05 Analyzed: 02/02/05						
Acenaphthene	ND	20.0	ug/kg							
Acenaphthylene	ND	20.0	"							
Anthracene	ND	20.0	"							
Benzidine	ND	150	"							
Benzo (a) anthracene	ND	20.0	"							
Benzo (b) fluoranthene	ND	20.0	"							
Benzo (k) fluoranthene	ND	20.0	"							
Benzo (g,h,i) perylene	ND	40.0	"							
Benzo (a) pyrene	ND	20.0	"							
Benzyl alcohol	ND	75.0	"							
Bis(2-chloroethoxy)methane	ND	20.0	"							
Bis(2-chloroethyl)ether	ND	25.0	"							
Bis(2-chloroisopropyl)ether	ND	25.0	"							
[illegible]2-ethylhexyl)phthalate	ND	45.0	"							
[illegible]phenyl phenyl ether	ND	20.0	"							
[illegible]yl phthalate	ND	40.0	"							
[illegible]	ND	60.0	"							
4-Ch[illegible]ine	ND	100	"							
4-Chloro-3-methylphenol	ND	20.0	"							
[illegible]hloronaphthalene	ND	20.0	"							
[illegible]-Chlorophenol	ND	20.0	"							
4-Ch[illegible]phenyl phenyl ether	ND	20.0	"							
Chrysene	ND	20.0	"							
Dibenz (a,h) anthracene	ND	40.0	"							
Dibenzofuran	ND	20.0	"							
Di-n-butyl phthalate	50.6	40.0	"							QB-02
1,2-Dichlorobenzene	ND	20.0	"							
1,3-Dichlorobenzene	ND	20.0	"							
1,4-Dichlorobenzene	ND	20.0	"							
3,3'-Dichlorobenzidine	ND	150	"							
2,4-Dichlorophenol	ND	20.0	"							
Diethyl phthalate	ND	20.0	"							
2,4-Dimethylphenol	ND	80.0	"							
Dimethyl phthalate	ND	20.0	"							
4,6-Dinitro-2-methylphenol	ND	50.0	"							
2,4-Dinitrophenol	ND	100	"							
2,4-Dinitrotoluene	ND	20.0	"							
2,6-Dinitrotoluene	ND	20.0	"							

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Client Name: Kleinfelder, Inc.
Project Name: 44102-002

EMA Log #: 0501269

Semivolatile Organic Compounds by EPA Method 8270C - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 5012702										
Blank (5012702-BLK1)				Prepared: 01/27/05 Analyzed: 02/02/05						
Di-n-octyl phthalate	ND	40.0	ug/kg							
Fluoranthene	ND	20.0	"							
Fluorene	ND	20.0	"							
Hexachlorobenzene	ND	20.0	"							
Hexachlorobutadiene	ND	20.0	"							
Hexachlorocyclopentadiene	ND	50.0	"							
Hexachloroethane	ND	20.0	"							
Indeno (1,2,3-cd) pyrene	ND	30.0	"							
Isophorone	ND	20.0	"							
2-Methylnaphthalene	ND	20.0	"							
2-Methylphenol	ND	20.0	"							
4-Methylphenol (3-Methylphenol)	ND	40.0	"							
Naphthalene	ND	20.0	"							
2-Nitroaniline	ND	50.0	"							
3-Nitroaniline	ND	100	"							
4-Nitroaniline	ND	70.0	"							
Nitrobenzene	ND	20.0	"							
2-Nitrophenol	ND	20.0	"							
4-Nitrophenol	ND	70.0	"							
N-Nitrosodimethylamine	ND	20.0	"							
N-Nitrosodiphenylamine	ND	35.0	"							
N-Nitrosodi-n-propylamine	ND	30.0	"							
Pentachlorophenol	ND	40.0	"							
Phenanthrene	ND	20.0	"							
Phenol	ND	30.0	"							
Pyrene	ND	20.0	"							
Pyridine	ND	100	"							
1,2,4-Trichlorobenzene	ND	20.0	"							
2,4,5-Trichlorophenol	ND	30.0	"							
2,4,6-Trichlorophenol	ND	30.0	"							
Surrogate: 2-Fluorophenol	*537*		"	*568*		*95*	*25-121*			
Surrogate: Phenol-d6	*559*		"	*568*		*98*	*24-113*			
Surrogate: Nitrobenzene-d5	*449*		"	*568*		*79*	*23-120*			
Surrogate: 2-Fluorobiphenyl	*429*		"	*568*		*76*	*30-115*			
Surrogate: 2,4,6-Tribromophenol	*280*		"	*568*		*49*	*19-122*			
Surrogate: Terphenyl-dl4	*522*		"	*568*		*92*	*18-137*			

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Client Name: Kleinfelder, Inc.
Project Name: 44102-002

EMA Log #: 0501269

Semivolatile Organic Compounds by EPA Method 8270C - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 5012702										
LCS (5012702-BS1)				Prepared: 01/27/05 Analyzed: 02/02/05						
Acenaphthene	443	20.0	ug/kg	568		78	50-135			
4-Chloro-3-methylphenol	568	20.0	"	568		100	34-142			
2-Chlorophenol	597	20.0	"	568		105	38-125			
Di-n-butyl phthalate	548	40.0	"	568		96	44-152			
1,4-Dichlorobenzene	364	20.0	"	568		64	48-125			
2,4-Dinitrotoluene	446	20.0	"	568		79	41-144			
4-Nitrophenol	457	70.0	"	568		80	10-155			
N-Nitrosodi-n-propylamine	585	30.0	"	568		103	28-156			
Pentachlorophenol	165	40.0	"	568		29	21-133			
Phenol	642	30.0	"	568		113	35-120			
Pyrene	507	20.0	"	568		89	40-152			
1,2,4-Trichlorobenzene	379	20.0	"	568		67	47-125			
Surrogate: 2-Fluorophenol	*540*		"	*568*		*95*	*25-121*			
Surrogate: Phenol-d6	*610*		"	*568*		*107*	*24-113*			
Surrogate: Nitrobenzene-d5	*485*		"	*568*		*85*	*23-120*			
Surrogate: 2-Fluorobiphenyl	*452*		"	*568*		*80*	*30-115*			
Surrogate: 2,4,6-Tribromophenol	*553*		"	*568*		*97*	*19-122*			
Surrogate: Terphenyl-dl4	*550*		"	*568*		*97*	*18-137*			
LCS Dup (5012702-BSD1)				Prepared: 01/27/05 Analyzed: 02/02/05						
Acenaphthene	459	20.0	ug/kg	568		81	50-135	4	30	
4-Chloro-3-methylphenol	558	20.0	"	568		98	34-142	2	30	
2-Chlorophenol	602	20.0	"	568		106	38-125	0.8	30	
Di-n-butyl phthalate	556	40.0	"	568		98	44-152	1	30	
1,4-Dichlorobenzene	360	20.0	"	568		63	48-125	1	30	
2,4-Dinitrotoluene	460	20.0	"	568		81	41-144	3	30	
4-Nitrophenol	338	70.0	"	568		60	10-155	30	30	
N-Nitrosodi-n-propylamine	579	30.0	"	568		102	28-156	1	30	
Pentachlorophenol	221	40.0	"	568		39	21-133	29	30	
Phenol	627	30.0	"	568		110	35-120	2	30	
Pyrene	465	20.0	"	568		82	40-152	9	30	
1,2,4-Trichlorobenzene	388	20.0	"	568		68	47-125	2	30	
Surrogate: 2-Fluorophenol	*530*		"	*568*		*93*	*25-121*			
Surrogate: Phenol-d6	*570*		"	*568*		*100*	*24-113*			
Surrogate: Nitrobenzene-d5	*484*		"	*568*		*85*	*23-120*			
Surrogate: 2-Fluorobiphenyl	*456*		"	*568*		*80*	*30-115*			
Surrogate: 2,4,6-Tribromophenol	*531*		"	*568*		*93*	*19-122*			
Surrogate: Terphenyl-dl4	*535*		"	*568*		*94*	*18-137*			

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Client Name: Kleinfelder, Inc.
Project Name: 44102-002

EMA Log #: 0501269

Semivolatile Organic Compounds by EPA Method 8270C - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 5012702										
Duplicate (5012702-DUP1)		**Source: 0501269-03**		Prepared: 01/27/05 Analyzed: 02/02/05						
Acenaphthene	ND	100	ug/kg		ND				30	
Acenaphthylene	ND	100	"		ND				30	
Anthracene	ND	100	"		17.5			4	30	
Benzidine	ND	750	"		ND				30	
Benzo (a) anthracene	ND	100	"		52.0			5	30	
Benzo (b) fluoranthene	ND	100	"		38.8				30	
Benzo (k) fluoranthene	ND	100	"		ND				30	
Benzo (g,h,i) perylene	ND	200	"		37.4				30	
Benzo (a) pyrene	ND	100	"		25.0				30	
Benzyl alcohol	ND	375	"		ND				30	
Bis(2-chloroethoxy)methane	ND	100	"		ND				30	
Bis(2-chloroethyl)ether	ND	125	"		ND				30	
Bis(2-chloroisopropyl)ether	ND	125	"		ND				30	
Bis(2-ethylhexyl)phthalate	ND	225	"		61.6				30	
4-Bromophenyl phenyl ether	ND	100	"		ND				30	
Butyl benzyl phthalate	ND	200	"		ND				30	
Carbazole	ND	300	"		ND				30	
4-Chloroaniline	ND	500	"		ND				30	
4-Chloro-3-methylphenol	ND	100	"		ND				30	
2-Chloronaphthalene	ND	100	"		ND				30	
2-Chlorophenol	ND	100	"		ND				30	
4-Chlorophenyl phenyl ether	ND	100	"		ND				30	
Chrysene	ND	100	"		ND				30	
Dibenz (a,h) anthracene	ND	200	"		187				30	
Dibenzofuran	ND	100	"		ND				30	
Di-n-butyl phthalate	ND	200	"		114			39	30	QR-02
1,2-Dichlorobenzene	ND	100	"		ND				30	
1,3-Dichlorobenzene	ND	100	"		ND				30	
1,4-Dichlorobenzene	ND	100	"		ND				30	
3,3'-Dichlorobenzidine	ND	750	"		ND				30	
2,4-Dichlorophenol	ND	100	"		ND				30	
Diethyl phthalate	ND	100	"		ND				30	
2,4-Dimethylphenol	ND	400	"		ND				30	
Dimethyl phthalate	ND	100	"		ND				30	
4,6-Dinitro-2-methylphenol	ND	250	"		ND				30	
2,4-Dinitrophenol	ND	500	"		ND				30	
2,4-Dinitrotoluene	ND	100	"		ND				30	
2,6-Dinitrotoluene	ND	100	"		ND				30	

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Semivolatile Organic Compounds by EPA Method 8270C - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 5012702										
Duplicate (5012702-DUP1)		**Source: 0501269-03**		Prepared: 01/27/05 Analyzed: 02/02/05						
Di-n-octyl phthalate	ND	200	ug/kg		ND				30	
Fluoranthene	ND	100	"		97.6			47	30	QR-02
Fluorene	ND	100	"		ND				30	
Hexachlorobenzene	ND	100	"		ND				30	
Hexachlorobutadiene	ND	100	"		ND				30	
Hexachlorocyclopentadiene	ND	250	"		ND				30	
Hexachloroethane	ND	100	"		ND				30	
Indeno (1,2,3-cd) pyrene	ND	150	"		125				30	
Isophorone	ND	100	"		ND				30	
2-Methylnaphthalene	ND	100	"		ND				30	
2-Methylphenol	ND	100	"		ND				30	
4-Methylphenol (3-Methylphenol)	ND	200	"		ND				30	
Naphthalene	ND	100	"		ND				30	
itroaniline	ND	250	"		ND				30	
3-Nitroaniline	ND	500	"		ND				30	
4-Nitroaniline	ND	350	"		ND				30	
Nitrobenzene	ND	100	"		ND				30	
2-Nitrophenol	ND	100	"		ND				30	
4-Nitrophenol	ND	350	"		ND				30	
N-Nitrosodimethylamine	ND	100	"		ND				200	
N-Nitrosodiphenylamine	ND	175	"		ND				30	
N-Nitrosodi-n-propylamine	ND	150	"		ND				30	
Pentachlorophenol	ND	200	"		ND				30	
Phenanthrene	ND	100	"		51.7			12	30	
Phenol	ND	150	"		ND				30	
Pyrene	ND	100	"		95.0			14	30	
Pyridine	ND	500	"		ND				30	
1,2,4-Trichlorobenzene	ND	100	"		ND				30	
2,4,5-Trichlorophenol	ND	150	"		ND				30	
2,4,6-Trichlorophenol	ND	150	"		ND				30	
Surrogate: 2-Fluorophenol	*466*		"	*568*		*82*	*25-121*			
Surrogate: Phenol-d6	*391*		"	*568*		*69*	*24-113*			
Surrogate: Nitrobenzene-d5	*378*		"	*568*		*67*	*23-120*			
Surrogate: 2-Fluorobiphenyl	*425*		"	*568*		*75*	*30-115*			
Surrogate: 2,4,6-Tribromophenol	*960*		"	*568*		*169*	*19-122*			*S-04*
Surrogate: Terphenyl-dl4	*498*		"	*568*		*88*	*18-137*			

results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Client Name: Kleinfelder, Inc.
Project Name: 44102-002

EMA Log #: 0501269

Semivolatile Organic Compounds by EPA Method 8270C - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 5012702										
Matrix Spike (5012702-MS1)		**Source: 0501269-03**		Prepared: 01/27/05 Analyzed: 02/02/05						
Acenaphthene	402	100	ug/kg	568	ND	71	46-140			
4-Chloro-3-methylphenol	370	100	"	568	ND	65	42-139			
2-Chlorophenol	469	100	"	568	ND	83	30-135			
Di-n-butyl phthalate	474	200	"	568	114	63	24-152			
1,4-Dichlorobenzene	343	100	"	568	ND	60	36-137			
2,4-Dinitrotoluene	294	100	"	568	ND	52	28-145			
4-Nitrophenol	708	350	"	568	ND	125	23-150			
N-Nitrosodi-n-propylamine	391	150	"	568	ND	69	31-161			
Pentachlorophenol	ND	200	"	568	ND		3-159			QM-01
Phenol	403	150	"	568	ND	71	31-138			
Pyrene	507	100	"	568	95.0	73	30-152			
1,2,4-Trichlorobenzene	328	100	"	568	ND	58	39-134			
Surrogate: 2-Fluorophenol	*413*		"	*568*		*73*	*25-121*			
Surrogate: Phenol-d6	*386*		"	*568*		*68*	*24-113*			
Surrogate: Nitrobenzene-d5	*373*		"	*568*		*66*	*23-120*			
Surrogate: 2-Fluorobiphenyl	*390*		"	*568*		*69*	*30-115*			
Surrogate: 2,4,6-Tribromophenol	*978*		"	*568*		*172*	*19-122*			*S-04*
Surrogate: Terphenyl-dl4	*503*		"	*568*		*89*	*18-137*			
Matrix Spike Dup (5012702-MSD1)		**Source: 0501269-03**		Prepared: 01/27/05 Analyzed: 02/03/05						
Acenaphthene	418	100	ug/kg	568	ND	74	46-140	4	30	
4-Chloro-3-methylphenol	352	100	"	568	ND	62	42-139	5	30	
2-Chlorophenol	459	100	"	568	ND	81	30-135	2	30	
Di-n-butyl phthalate	471	200	"	568	114	63	24-152	0.6	30	
1,4-Dichlorobenzene	306	100	"	568	ND	54	36-137	11	30	
2,4-Dinitrotoluene	294	100	"	568	ND	52	28-145	0	30	
4-Nitrophenol	689	350	"	568	ND	121	23-150	3	30	
N-Nitrosodi-n-propylamine	428	150	"	568	ND	75	31-161	9	30	
Pentachlorophenol	ND	200	"	568	ND		3-159		30	QM-01
Phenol	373	150	"	568	ND	66	31-138	8	30	
Pyrene	455	100	"	568	95.0	63	30-152	11	30	
1,2,4-Trichlorobenzene	326	100	"	568	ND	57	39-134	0.6	30	
Surrogate: 2-Fluorophenol	*407*		"	*568*		*72*	*25-121*			
Surrogate: Phenol-d6	*352*		"	*568*		*62*	*24-113*			
Surrogate: Nitrobenzene-d5	*377*		"	*568*		*66*	*23-120*			
Surrogate: 2-Fluorobiphenyl	*378*		"	*568*		*67*	*30-115*			
Surrogate: 2,4,6-Tribromophenol	*952*		"	*568*		*168*	*19-122*			*S-04*
Surrogate: Terphenyl-dl4	*449*		"	*568*		*79*	*18-137*			

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Client Name: Kleinfelder, Inc.
Project Name: 44102-002

EMA Log #: 0501269

TPH by EPA 8015B - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 5012616										
Blank (5012616-BLK1)				Prepared: 01/26/05 Analyzed: 01/29/05						
Gasoline (C6-C10)	ND	10.0	mg/kg							
Diesel (C10-C28)	ND	10.0	"							
Extended Range HC (C28-C40)	ND	10.0	"							
Surrogate: 4-Bromofluorobenzene	*47.4*		"	*50.0*		*95*	*75-129*			
LCS (5012616-BS1)				Prepared: 01/26/05 Analyzed: 01/29/05						
Gasoline (C6-C10)	298	10.0	mg/kg	196		152	75-125			QL-08
Diesel (C10-C28)	510	10.0	"	504		101	75-125			
Surrogate: 4-Bromofluorobenzene	*48.5*		"	*50.0*		*97*	*75-129*			
LCS Dup (5012616-BSD1)				Prepared: 01/26/05 Analyzed: 01/29/05						
Gasoline (C6-C10)	316	10.0	mg/kg	196		161	75-125	6	30	QL-08
Diesel (C10-C28)	506	10.0	"	504		100	75-125	0.8	30	
Surrogate: 4-Bromofluorobenzene	*52.0*		"	*50.0*		*104*	*75-129*			
Duplicate (5012616-DUP1)		**Source: 0501269-09**		Prepared: 01/26/05 Analyzed: 01/29/05						
Gasoline (C6-C10)	ND	10.0	mg/kg		ND				30	
Diesel (C10-C28)	279	10.0	"		ND				30	D-09, QR-02
Extended Range HC (C28-C40)	410	10.0	"		290			34	30	QR-02
Surrogate: 4-Bromofluorobenzene	*50.0*		"	*50.0*		*100*	*75-129*			
Matrix Spike (5012616-MS1)		**Source: 0501269-09**		Prepared: 01/26/05 Analyzed: 01/29/05						
Gasoline (C6-C10)	266	10.0	mg/kg	196	ND	136	75-125			QM-01
Diesel (C10-C28)	540	10.0	"	504	ND	107	75-125			
Surrogate: 4-Bromofluorobenzene	*51.9*		"	*50.0*		*104*	*75-129*			
Matrix Spike Dup (5012616-MSD1)		**Source: 0501269-09**		Prepared: 01/26/05 Analyzed: 01/29/05						
Gasoline (C6-C10)	282	10.0	mg/kg	196	ND	144	75-125	6	30	QM-01
Diesel (C10-C28)	494	10.0	"	504	ND	98	75-125	9	30	
Surrogate: 4-Bromofluorobenzene	*52.2*		"	*50.0*		*104*	*75-129*			

Results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Client Name: Kleinfelder, Inc.
Project Name: 44102-002

EMA Log #: 0501269

TPH Extended Range by ASTM D2887 - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 5012616										
Blank (5012616-BLK1)				Prepared: 01/26/05 Analyzed: 01/29/05						
HC (C7 - C8)	ND	3.00	mg/kg							
HC (C8 - C9)	ND	3.00	"							
HC (C9 - C10)	ND	3.00	"							
HC (C10 - C11)	ND	1.25	"							
HC (C11 - C12)	ND	1.25	"							
HC (C12 - C14)	ND	1.25	"							
HC (C14 - C16)	ND	1.25	"							
HC (C16 - C18)	ND	1.25	"							
HC (C18 - C20)	ND	1.25	"							
HC (C20 - C24)	ND	1.25	"							
HC (C24 - C28)	ND	1.25	"							
HC (C28 - C32)	ND	2.50	"							
HC (C32 - C36)	ND	2.50	"							
HC (C36 - C40)	ND	2.50	"							
HC (C>40)	ND	2.50	"							
Surrogate: 4-Bromofluorobenzene	*47.4*		"	*50.0*		*95*	*77-135*			
LCS (5012616-BS1)				Prepared: 01/26/05 Analyzed: 01/29/05						
Diesel (C10-C28)	510	10.0	mg/kg	504		101	75-125			
Gasoline (C6-C10)	298	10.0	"	196		152	75-125			QL-08
Surrogate: 4-Bromofluorobenzene	*48.5*		"	*50.0*		*97*	*77-135*			
LCS Dup (5012616-BSD1)				Prepared: 01/26/05 Analyzed: 01/29/05						
Diesel (C10-C28)	506	10.0	mg/kg	504		100	75-125	0.8	30	
Gasoline (C6-C10)	316	10.0	"	196		161	75-125	6	30	QL-08
Surrogate: 4-Bromofluorobenzene	*52.0*		"	*50.0*		*104*	*77-135*			
Duplicate (5012616-DUP1)		**Source: 0501269-09**		Prepared: 01/26/05 Analyzed: 01/29/05						
HC (C7 - C8)	ND	3.00	mg/kg		ND				30	
HC (C8 - C9)	ND	3.00	"		ND				30	
HC (C9 - C10)	ND	3.00	"		ND				30	
HC (C10 - C11)	ND	1.25	"		ND				30	
HC (C11 - C12)	ND	1.25	"		ND				30	
HC (C12 - C14)	ND	1.25	"		ND				30	
HC (C14 - C16)	ND	1.25	"		ND				30	
HC (C16 - C18)	ND	1.25	"		ND				30	
HC (C18 - C20)	ND	1.25	"		ND				30	
HC (C20 - C24)	ND	1.25	"		ND				30	
HC (C24 - C28)	5.54	1.25	"		ND				30	

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Client Name: Kleinfelder, Inc.
Project Name: 44102-002

EMA Log #: 0501269

TPH Extended Range by ASTM D2887 - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 5012616										
Duplicate (5012616-DUP1)		**Source: 0501269-09**		Prepared: 01/26/05 Analyzed: 01/29/05						
HC (C28 - C32)	7.09	2.50	mg/kg		ND				30	
HC (C32 - C36)	24.7	2.50	"		6.67			115	30	QR-02
HC (C36 - C40)	42.4	2.50	"		28.2			40	30	QR-02
HC (C>40)	ND	2.50	"		ND				30	
Diesel (C10-C28)	279	10.0	"		ND				30	D-09, QR-02
Gasoline (C6-C10)	ND	10.0	"		ND				30	
Extended Range HC (C28-C40)	410	10.0	"		290			34	30	QR-02
Surrogate: 4-Bromofluorobenzene	*50.0*		"	*50.0*		*100*	*77-135*			
Matrix Spike (5012616-MS1)		**Source: 0501269-09**		Prepared: 01/26/05 Analyzed: 01/29/05						
Diesel (C10-C28)	540	10.0	mg/kg	504	ND	107	75-125			
Gasoline (C6-C10)	266	10.0	"	196	ND	136	75-125			QM-01
Surrogate: 4-Bromofluorobenzene	*51.9*		"	*50.0*		*104*	*77-135*			
Matrix Spike Dup (5012616-MSD1)		**Source: 0501269-09**		Prepared: 01/26/05 Analyzed: 01/29/05						
Diesel (C10-C28)	494	10.0	mg/kg	504	ND	98	75-125	9	30	
Gasoline (C6-C10)	282	10.0	"	196	ND	144	75-125	6	30	QM-01
Surrogate: 4-Bromofluorobenzene	*52.2*		"	*50.0*		*104*	*77-135*			

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Client Name: Kleinfelder, Inc.
Project Name: 44102-002

EMA Log #: 0501269

Notes and Definitions

D-09	Results in the diesel organics range are primarily due to overlap from a heavy oil range product.
D-40	Diesel Range Organics (DRO) present but do not match diesel fuel pattern.
QB-02	Analyte detected in associated method blank, however all samples in batch are non-detect for this analyte.
QL-08	The LCS and/or LCSD was above the upper control limit suggesting the results are biased high. All samples were non-detect for this analyte in this batch. Data released without further qualification.
QM-01	The spike recovery for this QC sample is outside of established control limits due to sample matrix interference.
QR-02	The RPD result exceeded the QC limits due to non-homogeneity of sample.
QR-04	The RPD between the sample and sample duplicate is not valid since both results are below the reporting limit for this analyte.
R-05	The sample was diluted due to the presence of high levels of non-target analytes resulting in elevated reporting limits.
R-08	Sample was diluted in the sample preparation step to eliminate problems with the matrix. This resulted in elevated reporting limits.
S-04	The surrogate recovery for this sample is outside of established control limits due to a sample matrix effect.
S-08	Poor or no surrogate recovery reportable due to necessary sample dilution.
ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not Reported
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference

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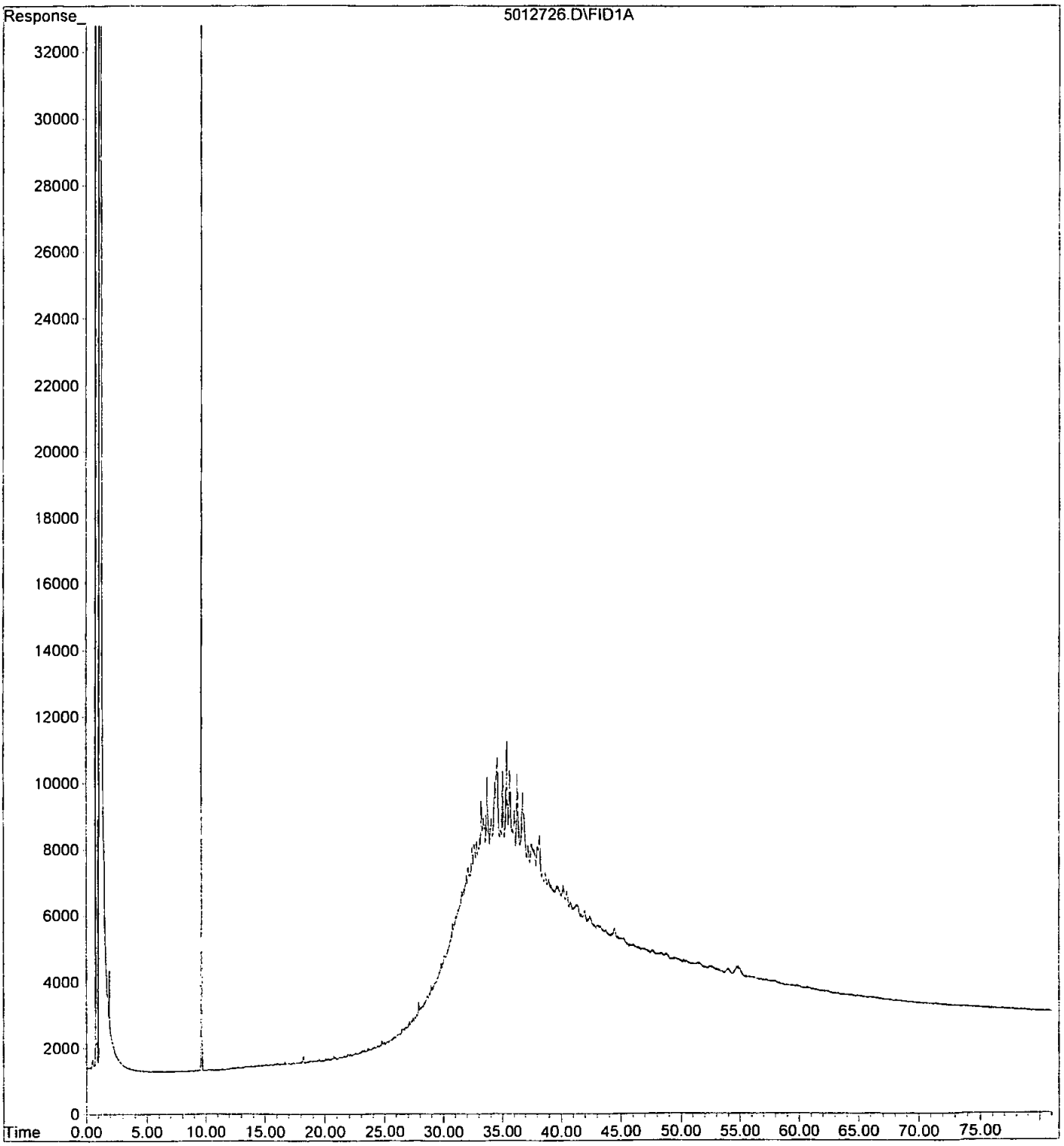
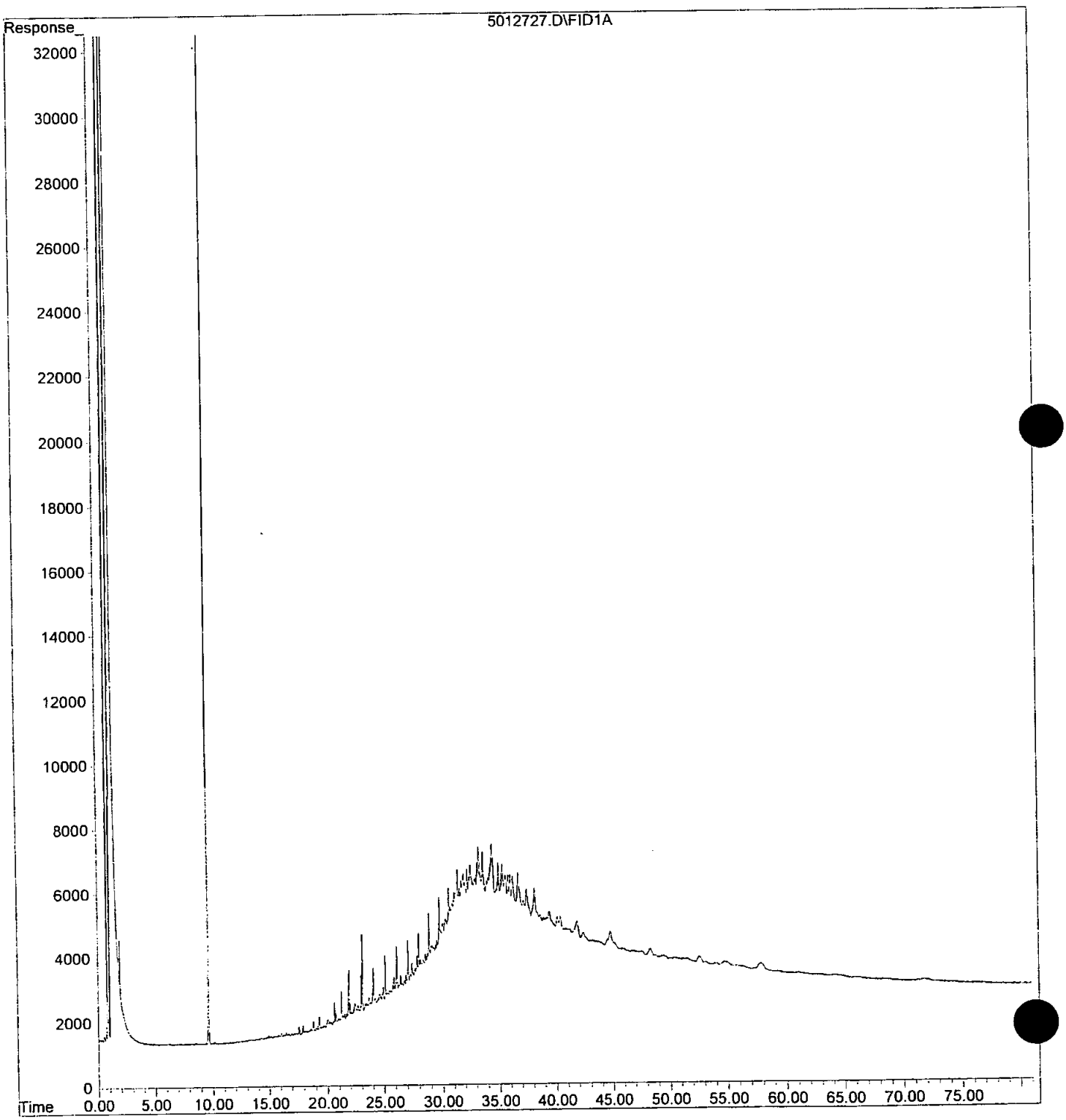
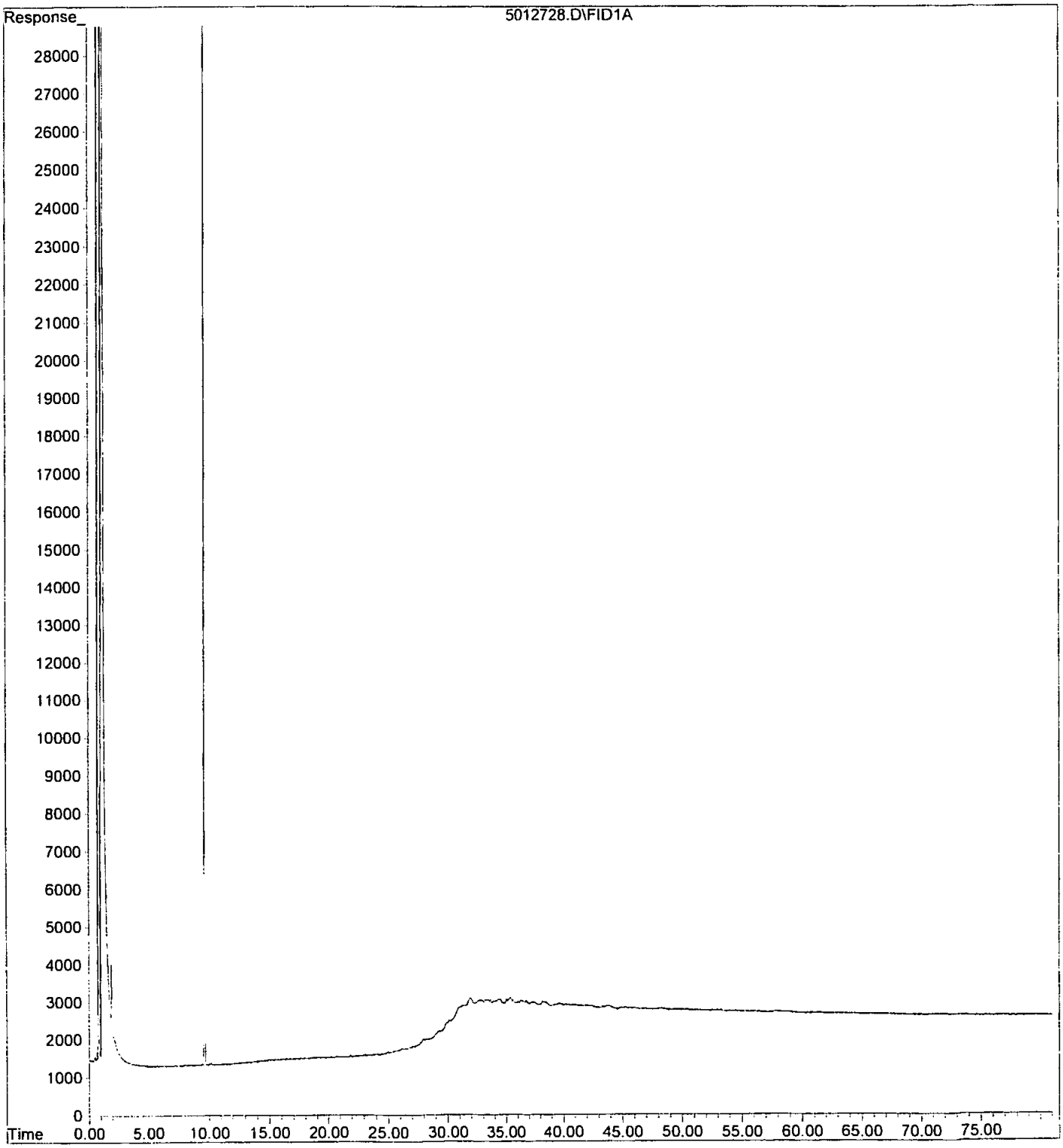
File : C:\HPCHEM\1\DATA\5012701.S\5012726.D
Operator :
Acquired : 29 Jan 20105 4:41 pm using AcqMethod ASTM.M
Instrument : TPH
Sample Name: 0501269-01
Misc Info :
Vial Number: 26



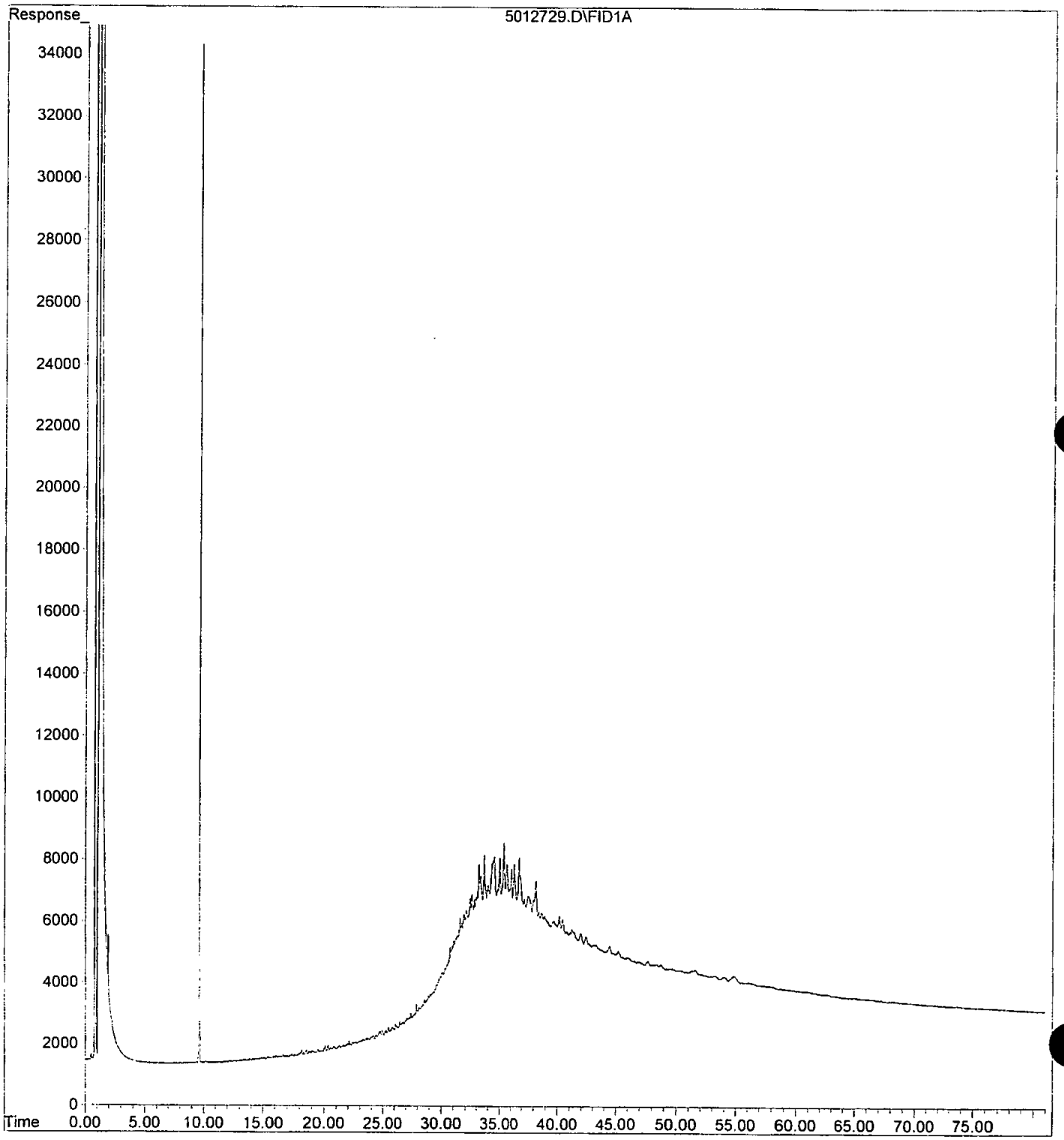
File : C:\HPCHEM\1\DATA\5012701.S\5012727.D
Operator :
Acquired : 29 Jan 20105 6:13 pm using AcqMethod ASTM.M
Instrument : TPH
Sample Name: 0501269-02
Misc Info :
Vial Number: 27



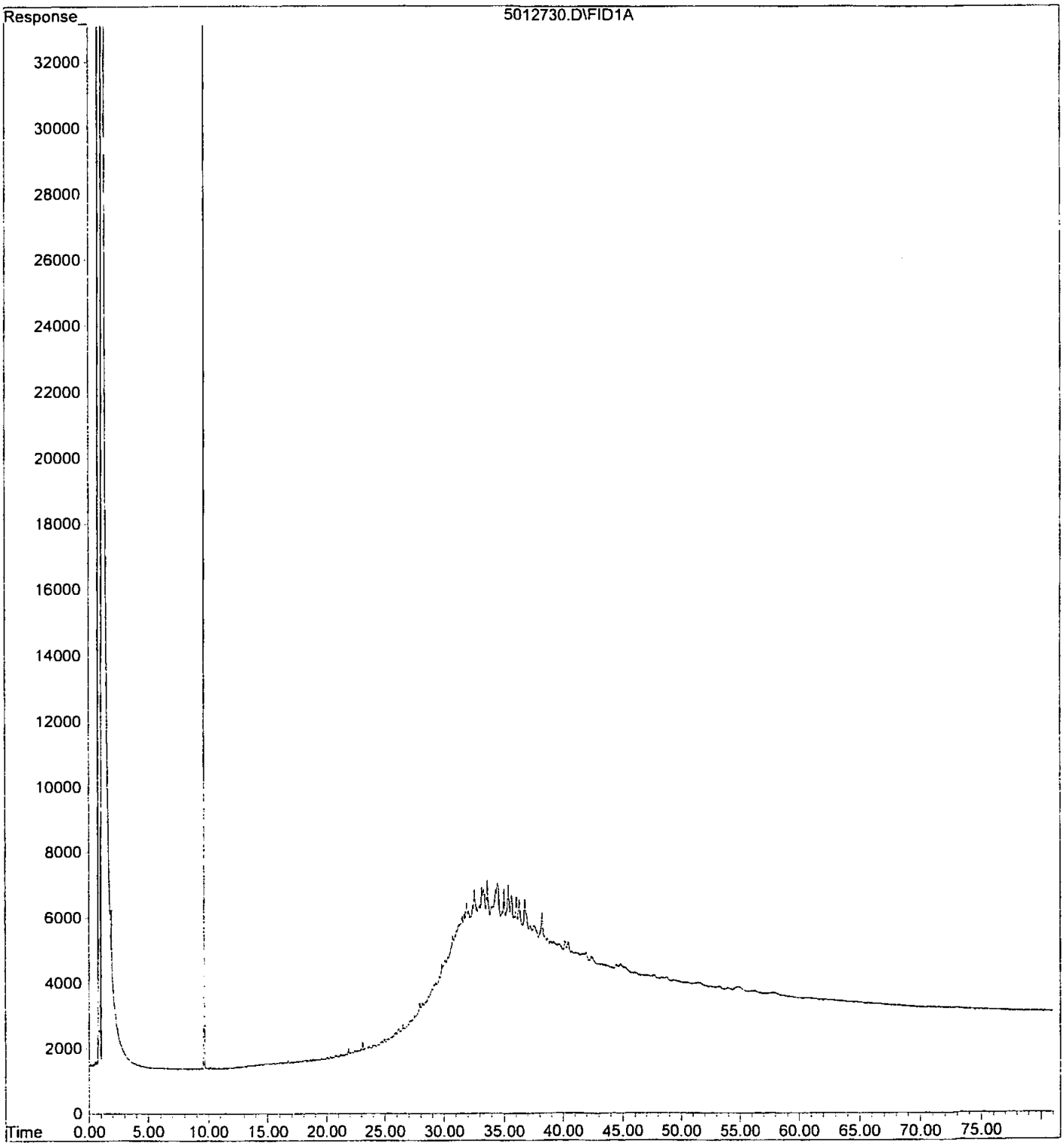
File : C:\HPCHEM\1\DATA\5012701.S\5012728.D
Operator :
Acquired : 29 Jan 20105 7:46 pm using AcqMethod ASTM.M
Instrument : TPH
Sample Name: 0501269-03
Misc Info :
Vial Number: 28



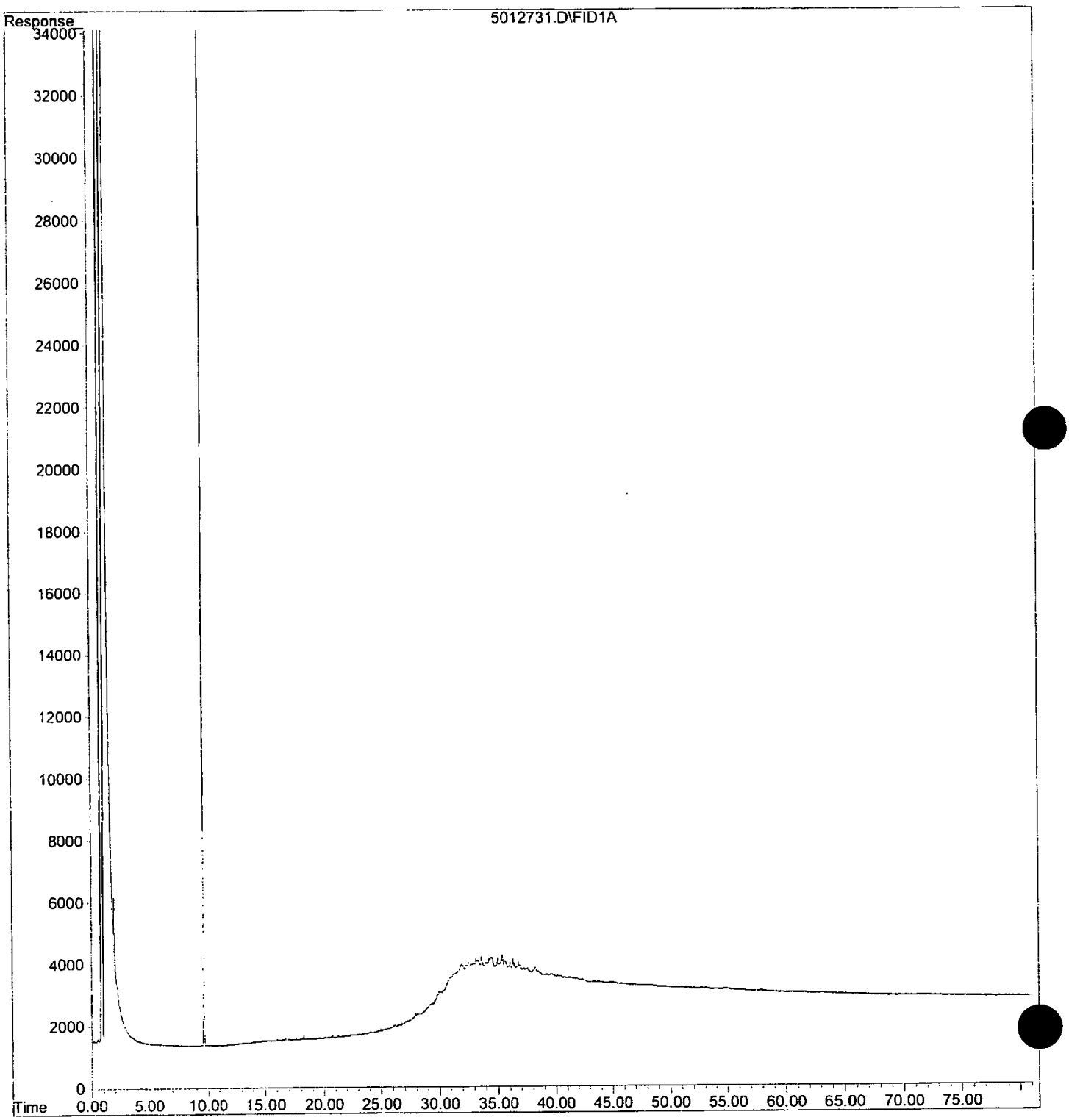
File : C:\HPCHEM\1\DATA\5012701.S\5012729.D
Operator :
Acquired : 29 Jan 20105 9:19 pm using AcqMethod ASTM.M
Instrument : TPH
Sample Name: 0501269-04
Misc Info :
Vial Number: 29



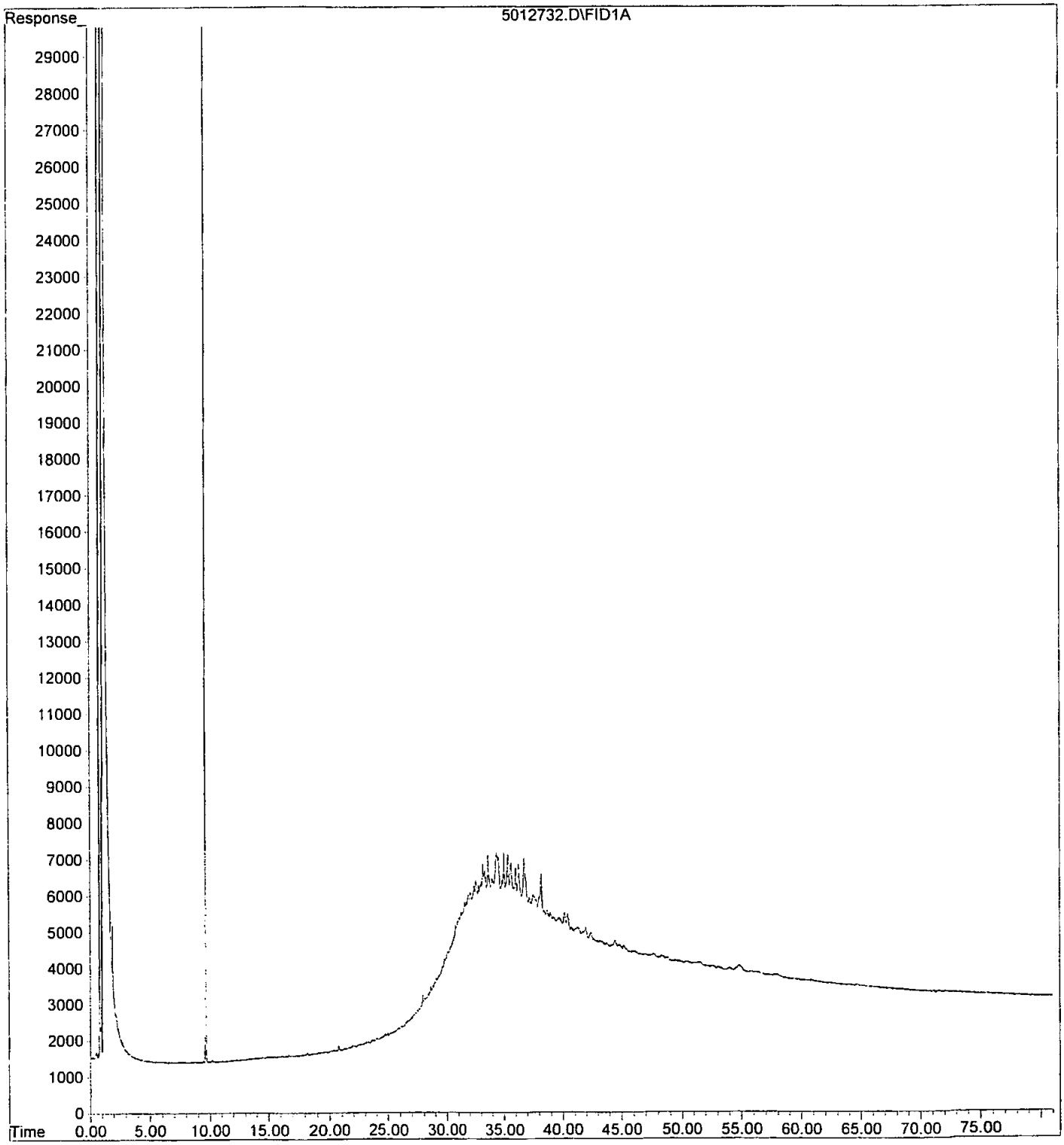
File : C:\HPCHEM\1\DATA\5012701.S\5012730.D
Operator :
Acquired : 29 Jan 20105 10:51 pm using AcqMethod ASTM.M
Instrument : TPH
Sample Name: 0501269-05
Misc Info :
Vial Number: 30



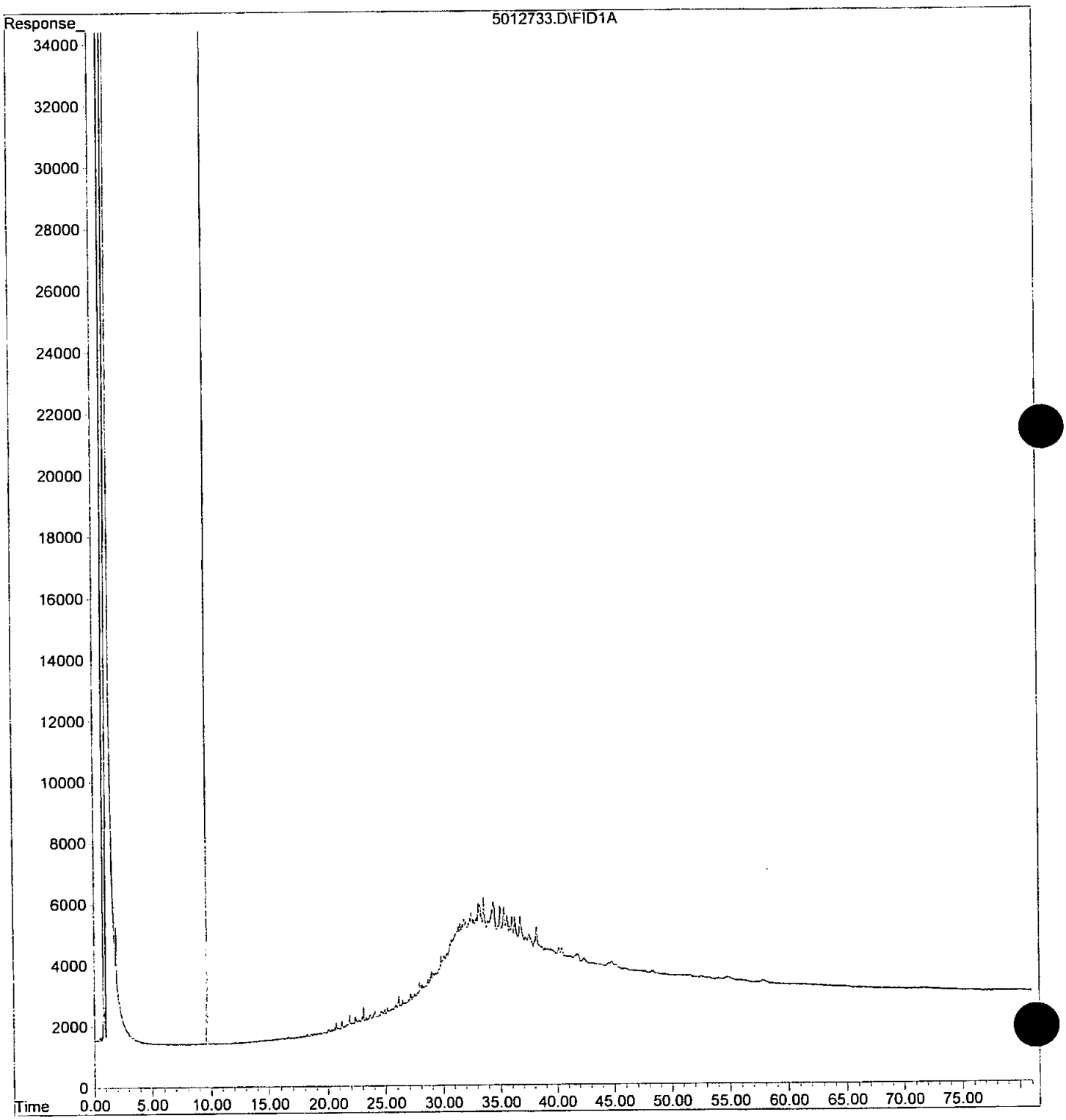
File : C:\HPCHEM\1\DATA\5012701.S\5012731.D
Operator :
Acquired : 30 Jan 20105 12:23 am using AcqMethod ASTM.M
Instrument : TPH
Sample Name: 0501269-06
Misc Info :
Vial Number: 31



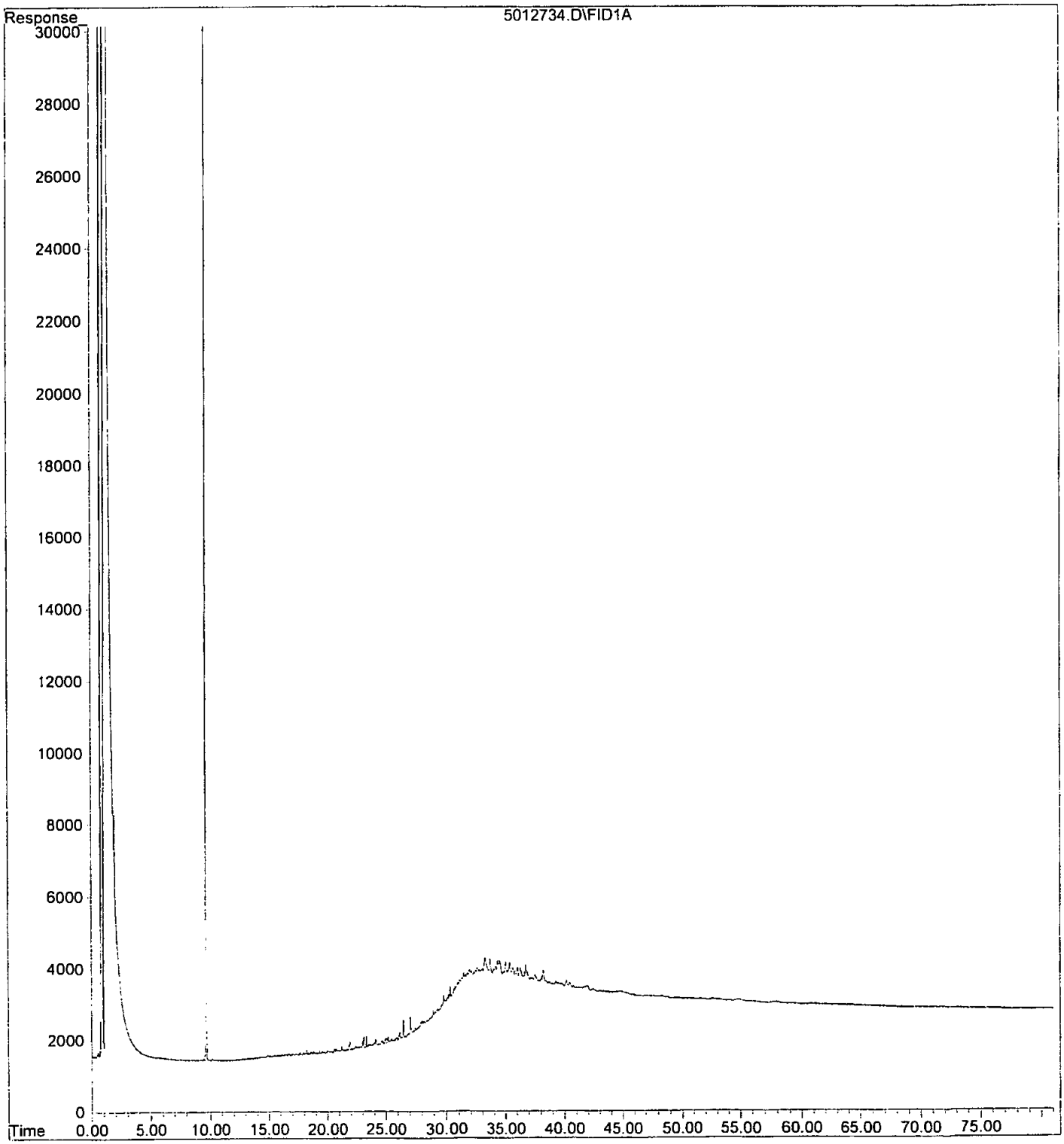
File : C:\HPCHEM\1\DATA\5012701.S\5012732.D
Operator :
Acquired : 30 Jan 20105 1:56 am using AcqMethod ASTM.M
Instrument : TPH
Sample Name: 0501269-07
Misc Info :
Vial Number: 32



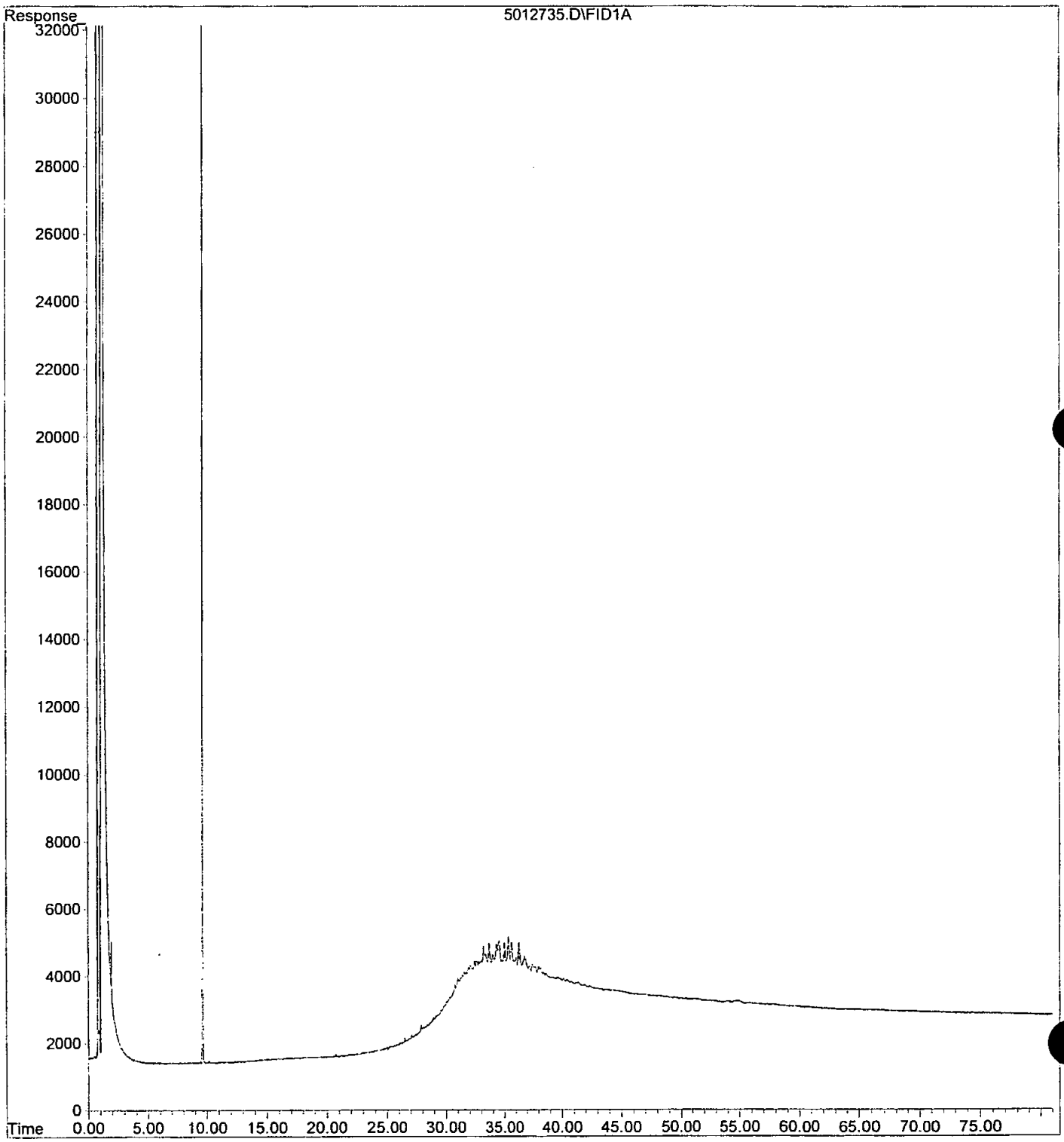
File : C:\HPCHEM\1\DATA\5012701.S\5012733.D
Operator :
Acquired : 30 Jan 20105 3:27 am using AcqMethod ASTM.M
Instrument : TPH
Sample Name: 0501269-08
Misc Info :
Vial Number: 33



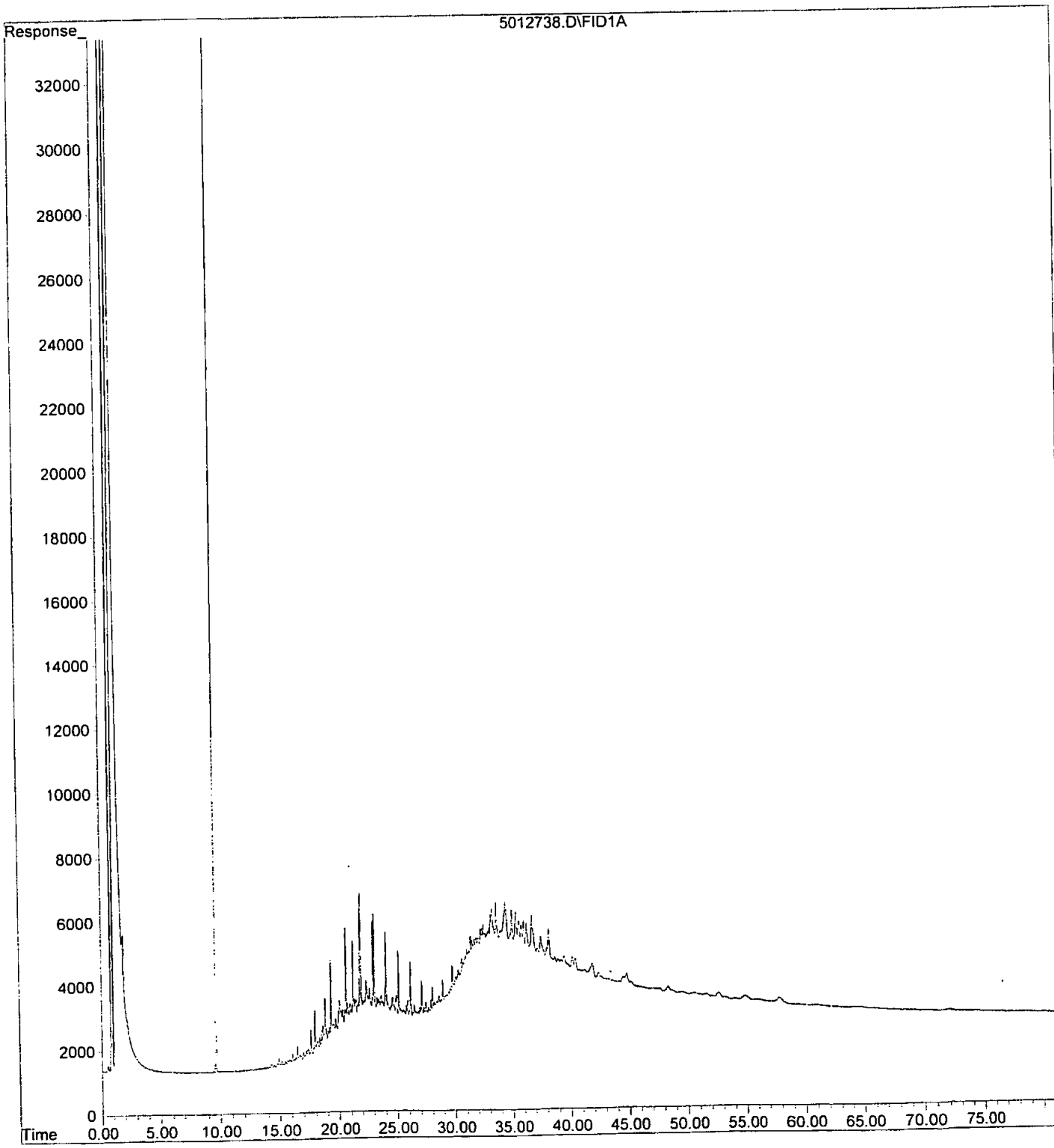
File : C:\HPCHEM\1\DATA\5012701.S\5012734.D
Operator :
Acquired : 30 Jan 20105 4:59 am using AcqMethod ASTM.M
Instrument : TPH
Sample Name: 0501269-09
Misc Info :
Vial Number: 34



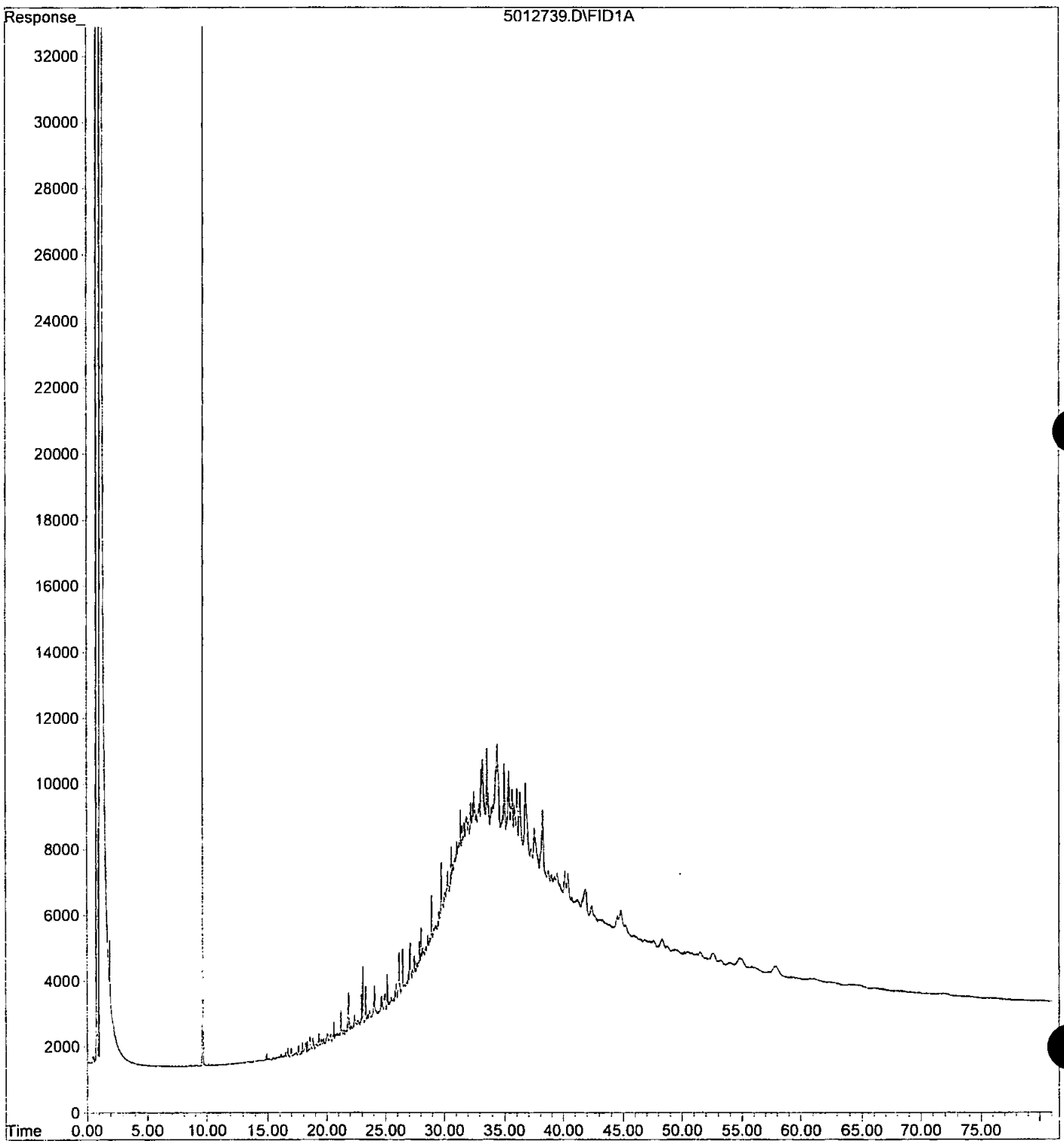
File : C:\HPCHEM\1\DATA\5012701.S\5012735.D
Operator :
Acquired : 30 Jan 20105 6:31 am using AcqMethod ASTM.M
Instrument : TPH
Sample Name: 0501269-10
Misc Info :
Vial Number: 35



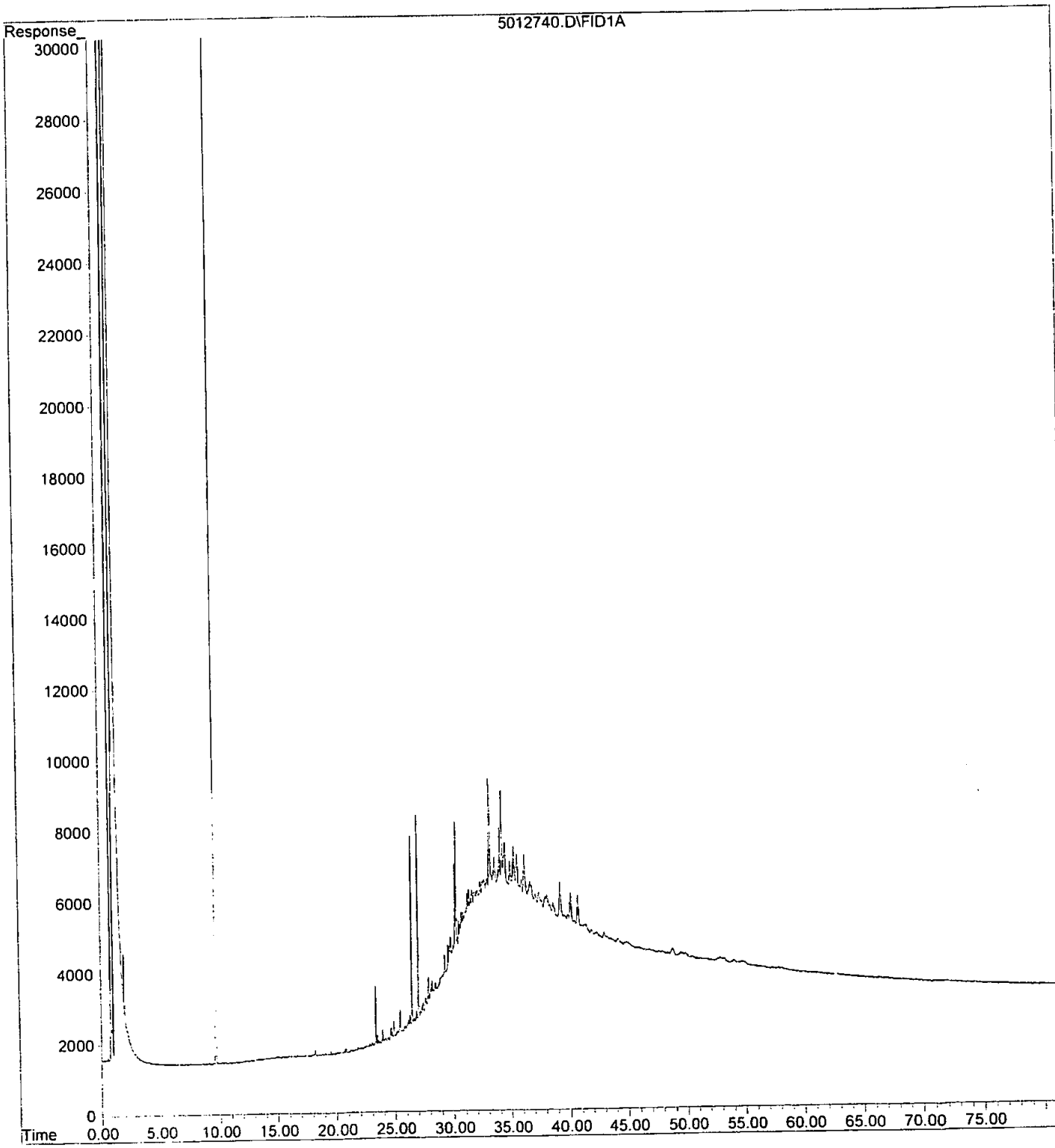
File : C:\HPCHEM\1\DATA\5012701.S\5012738.D
Operator :
Acquired : 30 Jan 20105 9:45 am using AcqMethod ASTM.M
Instrument : TPH
Sample Name: 0501269-11
Misc Info :
Vial Number: 38



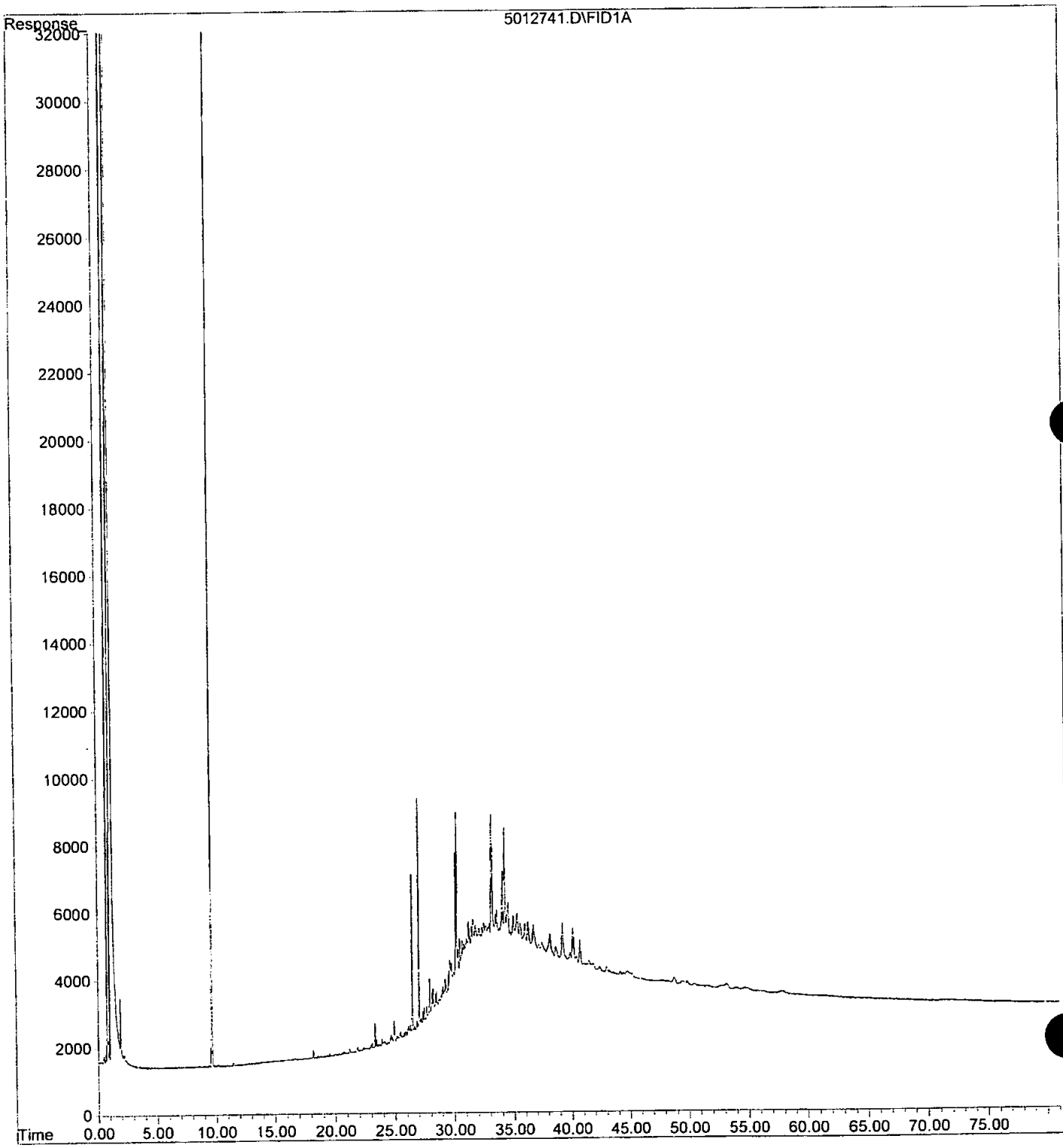
File : C:\HPCHEM\1\DATA\5012701.S\5012739.D
Operator :
Acquired : 30 Jan 20105 11:18 am using AcqMethod ASTM.M
Instrument : TPH
Sample Name: 0501269-12
Misc Info :
Vial Number: 39



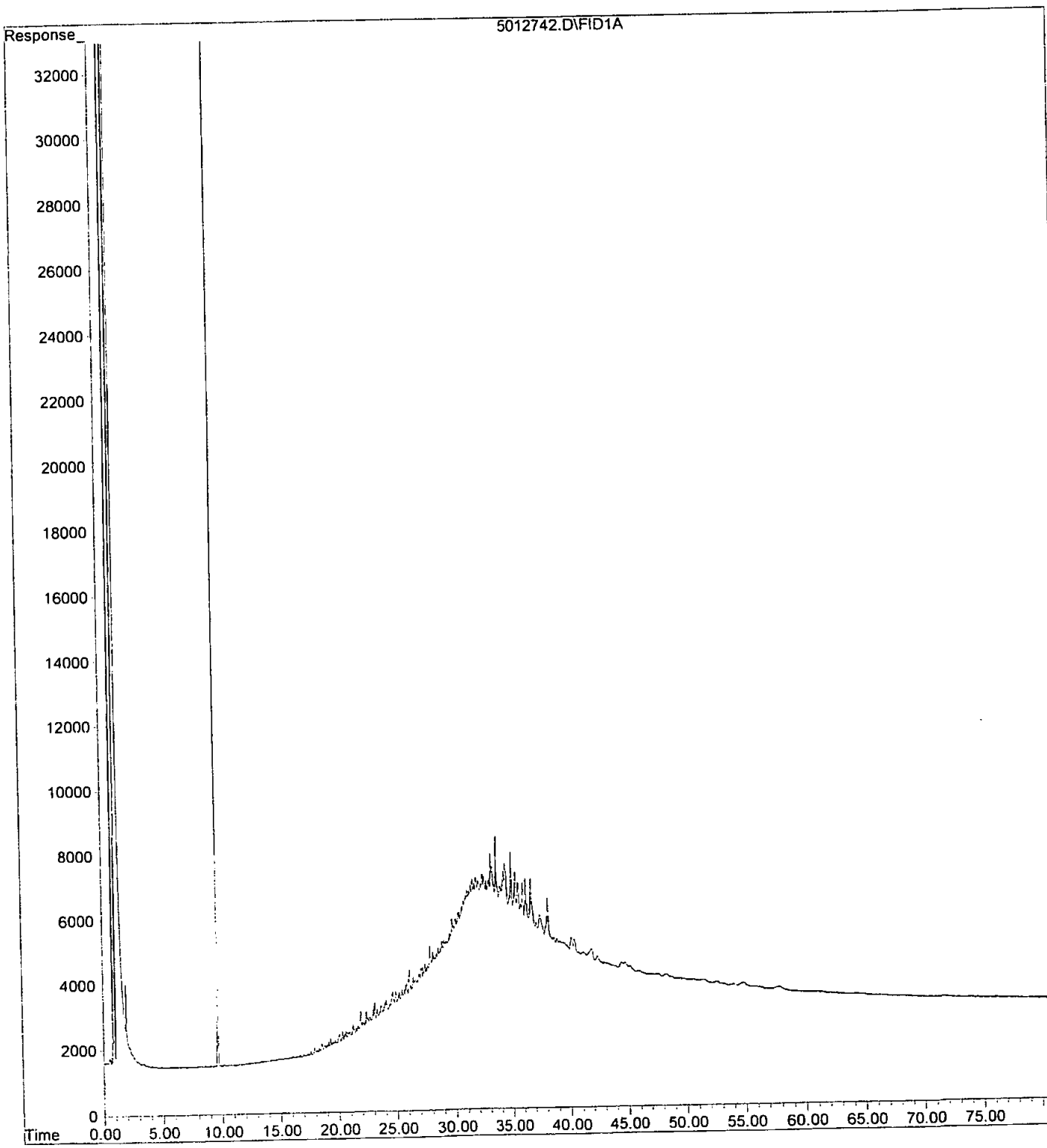
File : C:\HPCHEM\1\DATA\5012701.S\5012740.D
Operator :
Acquired : 30 Jan 20105 12:51 pm using AcqMethod ASTM.M
Instrument : TPH
Sample Name: 0501269-13
Misc Info :
Vial Number: 40



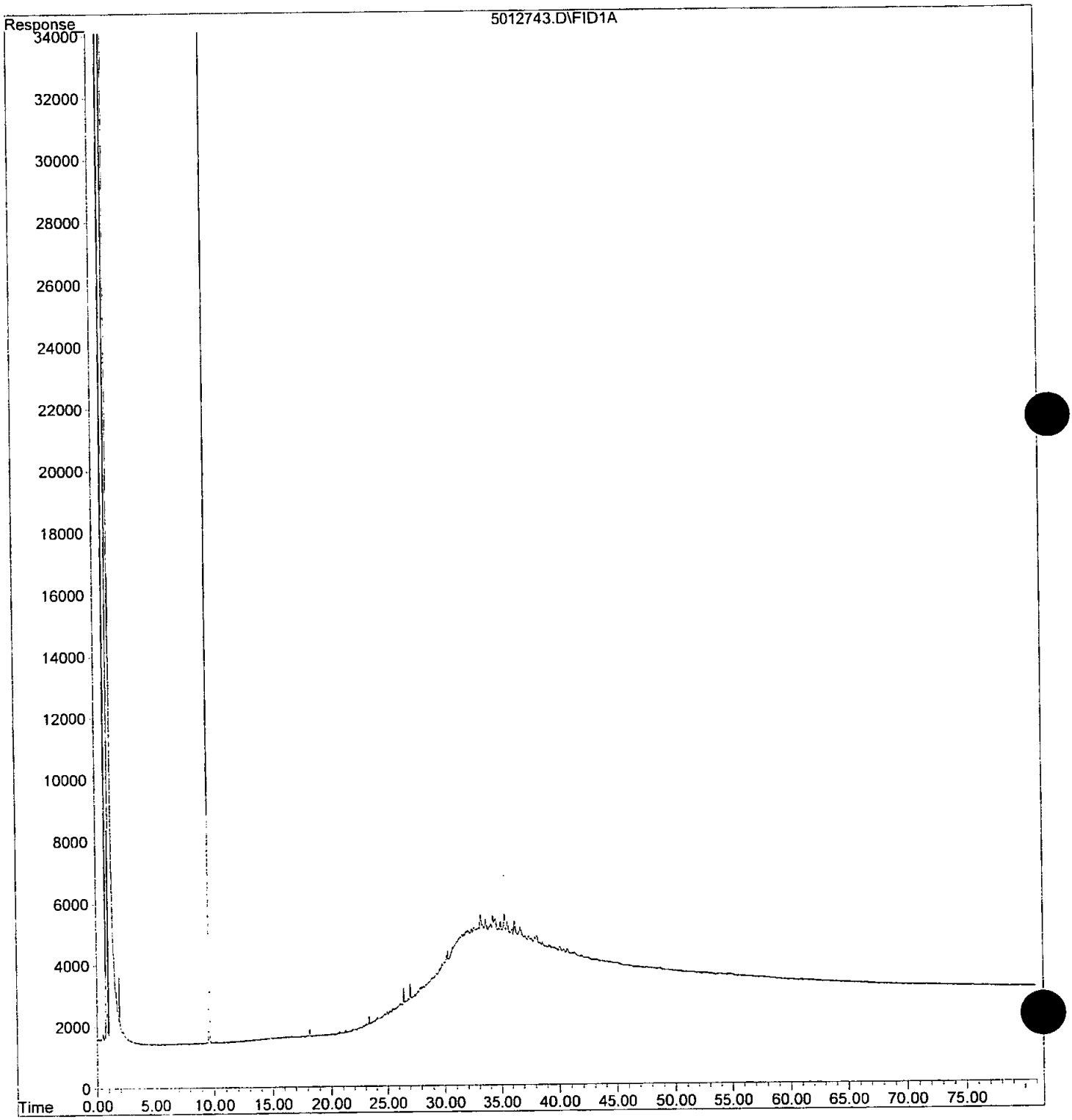
File : C:\HPCHEM\1\DATA\5012701.S\5012741.D
Operator :
Acquired : 30 Jan 20105 2:25 pm using AcqMethod ASTM.M
Instrument : TPH
Sample Name: 0501269-14
Misc Info :
Vial Number: 41



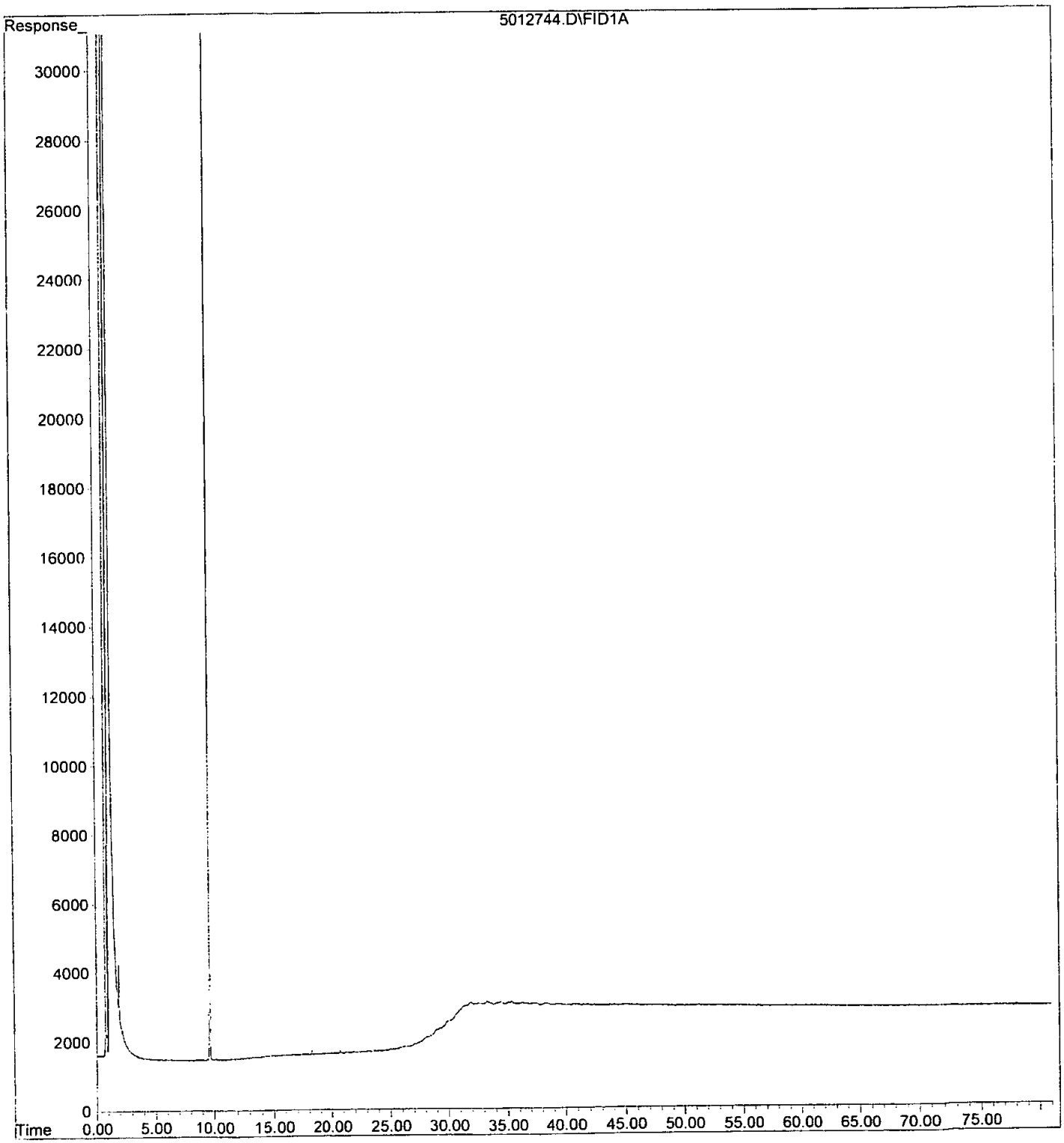
File : C:\HPCHEM\1\DATA\5012701.S\5012742.D
Operator :
Acquired : 30 Jan 20105 3:58 pm using AcqMethod ASTM.M
Instrument : TPH
Sample Name: 0501269-15
Misc Info :
Vial Number: 42



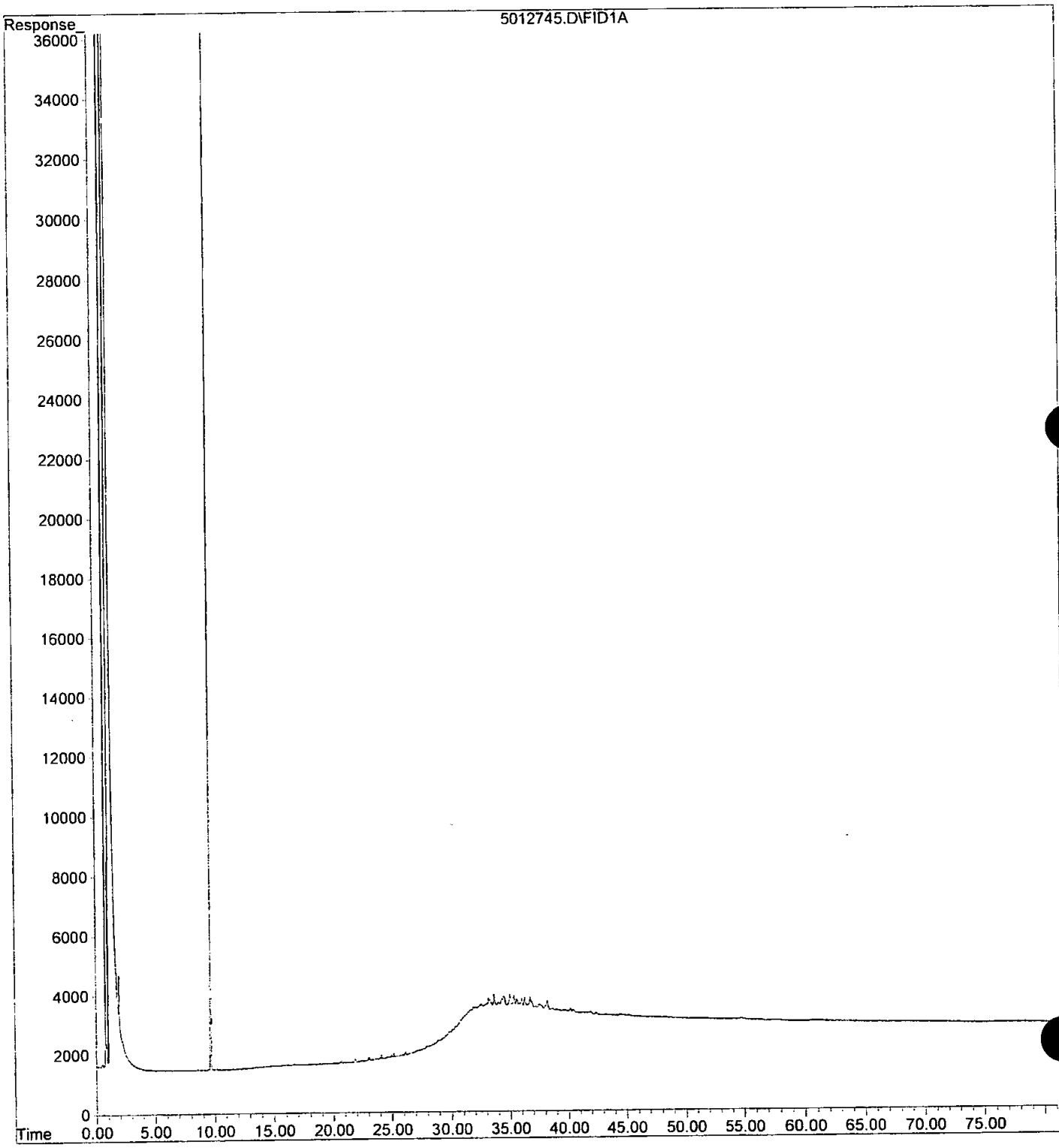
File : C:\HPCHEM\1\DATA\5012701.S\5012743.D
Operator :
Acquired : 30 Jan 20105 5:31 pm using AcqMethod ASTM.M
Instrument : TPH
Sample Name: 0501269-16
Misc Info :
Vial Number: 43



File : C:\HPCHEM\1\DATA\5012701.S\5012744.D
Operator :
Acquired : 30 Jan 20105 7:03 pm using AcqMethod ASTM.M
Instrument : TPH
Sample Name: 0501269-17
Misc Info :
Vial Number: 44



File : C:\HPCHEM\1\DATA\5012701.S\5012745.D
Operator :
Acquired : 30 Jan 20105 8:35 pm using AcqMethod ASTM.M
Instrument : TPH
Sample Name: 0501269-18
Misc Info :
Vial Number: 45



CHAIN-OF-CUSTODY RECORD

EnviroMatrix EMA Analytical, Inc.
4340 Viewridge Ave., Ste. A • San Diego, CA 92123 • Phone (858) 560-7717 • Fax (858) 560-7763

1 of 2

EMA LOG #:

EMA DATE/TIME STAMP

Client:

Address:

Attn: Phone:

Sampled by: Fax:

Billing Address:

Project: PO #:

REQUESTED ANALYSIS

EMA ID #	Client Sample ID	Sample Date	Sample Time	Sample Matrix	Container(s) #	Container(s) Type*	418.1 (TRPH)	Oil & Grease 413.1___ 413.2___ 1664___	TPH (8015B) Gas___ Diesel___	TPH-Extended 8015B X ASTM D2887___	602 / 8021 BTXE___ MTBE___	601 / 8021 (Purgeable Halocarbons)	608 / 8081 (Pesticides)	608 / 8082 (PCB's)	624 / 8260 (Volatile Organics)	625 / 8270 (Semi Volatile Organics)	TTLC Metals (CAC Title 22)	STLC Metals (CAC Title 22)	TCLP (RCRA) Metals___ Organics___	Cd Cr Cu Pb Ni Ag Zn	pH EC TSS TDS
1	T1-7-1									X					X	X	X				
2	T1-9-2									X					X	X	X				
3	T1-9-3									X					X	X	X				
4	T1-8-1									X					X	X	X				
5	T1-8-2									X					X	X	X				
6	T1-8-3									X					X	X	X				
7	T1-9-1									X					X	X	X				
8	T1-9-2									X					X	X	X				
9	T1-9-3									X					X	X	X				
10																					

*Container Types: B=Brass Tube; V=VOA; G=Glass; P=Plastic; O=Other (list)

Tamper-Proof Seals Intact: Yes No N/A | Correct Containers: Yes No

Sample(s): Cold Ambient Warm | VOAs w/ZHS. Yes No N/A

All Samples Properly Preserved: Yes No N/A

Disposal: N/C (aqueous) *EMA (@$5.00/sample) Return Hold

Turnaround Time: 24 hr 48 hr 3 day 4 day 5 day Normal

Comments:

RELINQUISHED BY	DATE/TIME	RECEIVED BY
Signature		Signature
Print		Print
Company:		Company:
Signature		Signature
Print		Print
Company:		Company:
Signature		Signature
Print		Print
Company:		Company:

*EMA reserves the right to return samples that do not match our waste profile.

White - EMA Canary - Accounting Pink - Client (w/Report) Goldenrod - Client (Relinquished Samples)

CHAIN-OF-CUSTODY RECORD

EnviroMatrix Analytical, Inc.
4340 Viewridge Ave., Ste. A • San Diego, CA 92123 • Phone (858) 560-7717 • Fax (858) 560-7763

2 of 2

EMA LOG #: C00386

EMA DATE/TIME STAMP

Client:

Address:

Attn: Phone:

Sampled by: Fax:

Billing Address:

Project: PO #:

REQUESTED ANALYSIS

EMA ID #	Client Sample ID	Sample Date	Sample Time	Sample Matrix	Container(s) #	Container(s) Type*	418.1 (TRPH)	Oil & Grease 413.1___ 413.2___ 1664___	TPH (8015B) Gas___ Diesel___	TPH-Extended 8015B ___ ASTM D2887___	602 / 8021 BTXE___ MTBE___	601 / 8021 (Purgeable Halocarbons)	608 / 8081 (Pesticides)	608 / 8082 (PCB's)	624 / 8260 (Volatile Organics)	625 / 8270 (Semi Volatile Organics)	TTLC Metals (CAC Title 22)	STLC Metals (CAC Title 22)	TCLP (RCRA) Metals___ Organics___	Cd Cr Cu Pb Ni Ag Zn	pH EC TSS TDS									
1	T1-10-1	1/28/05	1313	Soil	1	Sleeve				X					X	X	X													
2	T1-10-2	"	1326	"	1	"				X					X	X	X													
3	T1-10-3	"	1345	"	1	"				X					X	X	X													
4	T1-11-1	"	1407	"	1	"				X					X	X	X													
5	T1-11-2	"	1425	"	1	"				X					X	X	X													
6	T1-11-3	"	1440	"	1	"				X					X	X	X													
7	T1-12-1	"	1500	"	1	"				X					X	X	X													
8	T1-12-2	"	1517	"	1	"				X					X	X	X													
9	T1-12-3	V	1540	V	1	V				X					X	X	X													
10																														

*Container Types: B=Brass Tube; V=VOA; G=Glass; P=Plastic; O=Other (list)

	RELINQUISHED BY	DATE/TIME	RECEIVED BY
Tamper-Proof Seals Intact: Yes No N/A / Correct Containers: Yes No	Signature	1/28/05	Signature
Sample(s): Cold Ambient Warm / VOAs w/ZHS: Yes No N/A	Print	1545	Print
All Samples Properly Preserved: Yes No N/A	Company:		Company:
Disposal: N/C (aqueous) *EMA (@$5.00/sample) Return Hold	Signature		Signature
Turnaround Time: 24 hr 48 hr 3 day 4 day 5 day Normal	Print		Print
Comments:	Company:		Company:
	Signature		Signature
	Print		Print
	Company:		Company:

*EMA reserves the right to return samples that do not match our waste profile.

White - EMA Canary - Accounting Pink - Client (w/Report) Goldenrod - Client (Relinquish Samples)

EnviroMatrix Analytical, Inc.

22 February 2005

Kleinfelder, Inc.
Attn: Jacques Lord
5015 Shoreham Place
San Diego, CA 92122

EMA Log #: 0502124

Project Name: 44102

Enclosed are the results of analyses for samples received by the laboratory on 01/26/05 14:17. Samples were analyzed pursuant to client request utilizing EPA or other ELAP approved methodologies. I certify that this data is in compliance both technically and for completeness.

Dan Verdon
Laboratory Director

CA ELAP Certification #: 2564

Client Name: Kleinfelder, Inc.
Project Name: 44102

EMA Log #: 0502124

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
T2-13-3	0502124-01	Soil	01/26/05 09:45	01/26/05 14:17

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety

Client Name: Kleinfelder, Inc.
Project Name: 44102

EMA Log #: 0502124

TCLP Organics - TPH by EPA 1311/8015m

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
T2-13-3 (0502124-01) Soil Sampled: 01/26/05 09:45 Received: 01/26/05 14:17									**HT-07**
Diesel (C10-C28)	ND	500	ug/l	1	5021410	02/14/05	02/18/05	EPA 8015m	
Extended Range HC (C28-C40)	ND	500	"	"	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*114 %*	*69-139*		"	"	"	"	
Gasoline (C6-C10)	ND	1000	"	5	5021802	02/18/05	02/18/05	EPA 8015 B	SD-01
Surrogate: 4-Bromofluorobenzene		*98 %*	*77-135*		"	"	"	"	

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Client Name: Kleinfelder, Inc.
Project Name: 44102

EMA Log #: 0502124

STLC Organics - TPH Extended Range

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
T2-13-3 (0502124-01) Soil Sampled: 01/26/05 09:45 Received: 01/26/05 14:17									**HT-07**
Diesel (C10-C28)	ND	500	ug/l	1	5021710	02/17/05	02/18/05	EPA 8015m	
Extended Range HC (C28-C40)	ND	500	"	"	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*113 %*	*69-139*		"	"	"	"	
Gasoline (C6-C10)	ND	1000	"	5	5021804	02/18/05	02/18/05	"	A-01
Surrogate: 4-Bromofluorobenzene		*88 %*	*77-135*		"	"	"	"	

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Client Name: Kleinfelder, Inc.
Project Name: 44102

EMA Log #: 0502124

TCLP Organics - TPH by EPA 1311/8015m - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 5021410										
Blank (5021410-BLK1)				Prepared: 02/14/05 Analyzed: 02/18/05						
Diesel (C10-C28)	ND	500	ug/l							
Extended Range HC (C28-C40)	ND	500	"							
Surrogate: 4-Bromofluorobenzene	*3760*		"	*3330*		*113*	*69-139*			
LCS (5021410-BS1)				Prepared: 02/14/05 Analyzed: 02/18/05						
Diesel (C10-C28)	4280	500	ug/l	5040		85	75-125			
Surrogate: 4-Bromofluorobenzene	*4240*		"	*3330*		*127*	*69-139*			
LCS Dup (5021410-BSD1)				Prepared: 02/14/05 Analyzed: 02/18/05						
Diesel (C10-C28)	5210	500	ug/l	5040		103	75-125	20	30	
Surrogate: 4-Bromofluorobenzene	*3680*		"	*3330*		*111*	*69-139*			
Duplicate (5021410-DUP1)		**Source: 0502124-01**		Prepared: 02/14/05 Analyzed: 02/18/05						
Diesel (C10-C28)	ND	500	ug/l		ND				30	
Surrogate: 4-Bromofluorobenzene	*3520*		"	*3330*		*106*	*69-139*			
Batch 5021802										
Blank (5021802-BLK1)				Prepared & Analyzed: 02/18/05						
Gasoline (C6-C10)	ND	1000	ug/l							SD-01
Surrogate: 4-Bromofluorobenzene	*24.6*		"	*25.0*		*98*	*77-135*			
LCS (5021802-BS1)				Prepared & Analyzed: 02/18/05						
Gasoline (C6-C10)	205	200	ug/l	196		105	75-125			
Surrogate: 4-Bromofluorobenzene	*23.5*		"	*25.0*		*94*	*77-135*			
LCS Dup (5021802-BSD1)				Prepared & Analyzed: 02/18/05						
Gasoline (C6-C10)	ND	200	ug/l	196		93	75-125	12	30	
Surrogate: 4-Bromofluorobenzene	*23.1*		"	*25.0*		*92*	*77-135*			

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Client Name: Kleinfelder, Inc.
Project Name: 44102

EMA Log #: 0502124

STLC Organics - TPH Extended Range - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 5021710										
Blank (5021710-BLK1)				Prepared: 02/17/05 Analyzed: 02/18/05						
Diesel (C10-C28)	ND	500	ug/l							
Extended Range HC (C28-C40)	ND	500	"							
Surrogate: 4-Bromofluorobenzene	*3330*		"	*3330*		*100*	*69-139*			
LCS (5021710-BS1)				Prepared: 02/17/05 Analyzed: 02/18/05						
Diesel (C10-C28)	5360	500	ug/l	5040		106	75-125			
Surrogate: 4-Bromofluorobenzene	*3550*		"	*3330*		*107*	*69-139*			
LCS Dup (5021710-BSD1)				Prepared: 02/17/05 Analyzed: 02/18/05						
Diesel (C10-C28)	5450	500	ug/l	5040		108	75-125	2	30	
Surrogate: 4-Bromofluorobenzene	*3490*		"	*3330*		*105*	*69-139*			
Duplicate (5021710-DUP1)		**Source: 0502124-01**		Prepared: 02/17/05 Analyzed: 02/18/05						
Diesel (C10-C28)	ND	500	ug/l		ND				30	
Extended Range HC (C28-C40)	ND	500	"		ND				30	
Surrogate: 4-Bromofluorobenzene	*3660*		"	*3330*		*110*	*69-139*			
Batch 5021804										
Blank (5021804-BLK1)				Prepared & Analyzed: 02/18/05						
Gasoline (C6-C10)	ND	1000	ug/l							A-01
Surrogate: 4-Bromofluorobenzene	*20.6*		"	*25.0*		*82*	*77-135*			
LCS (5021804-BS1)				Prepared & Analyzed: 02/18/05						
Gasoline (C6-C10)	205	200	ug/l	196		105	75-125			
Surrogate: 4-Bromofluorobenzene	*23.5*		"	*25.0*		*94*	*77-135*			

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Client Name: Kleinfelder, Inc.
Project Name: 44102

EMA Log #: 0502124

STLC Organics - TPH Extended Range - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 5021804										
LCS Dup (5021804-BSD1)				Prepared & Analyzed: 02/18/05						
Gasoline (C6-C10)	ND	200	ug/l	196		93	75-125	12	30	
Surrogate: 4-Bromofluorobenzene	*23.1*		"	*25.0*		*92*	*77-135*			

results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Client Name: Kleinfelder, Inc.
Project Name: 44102

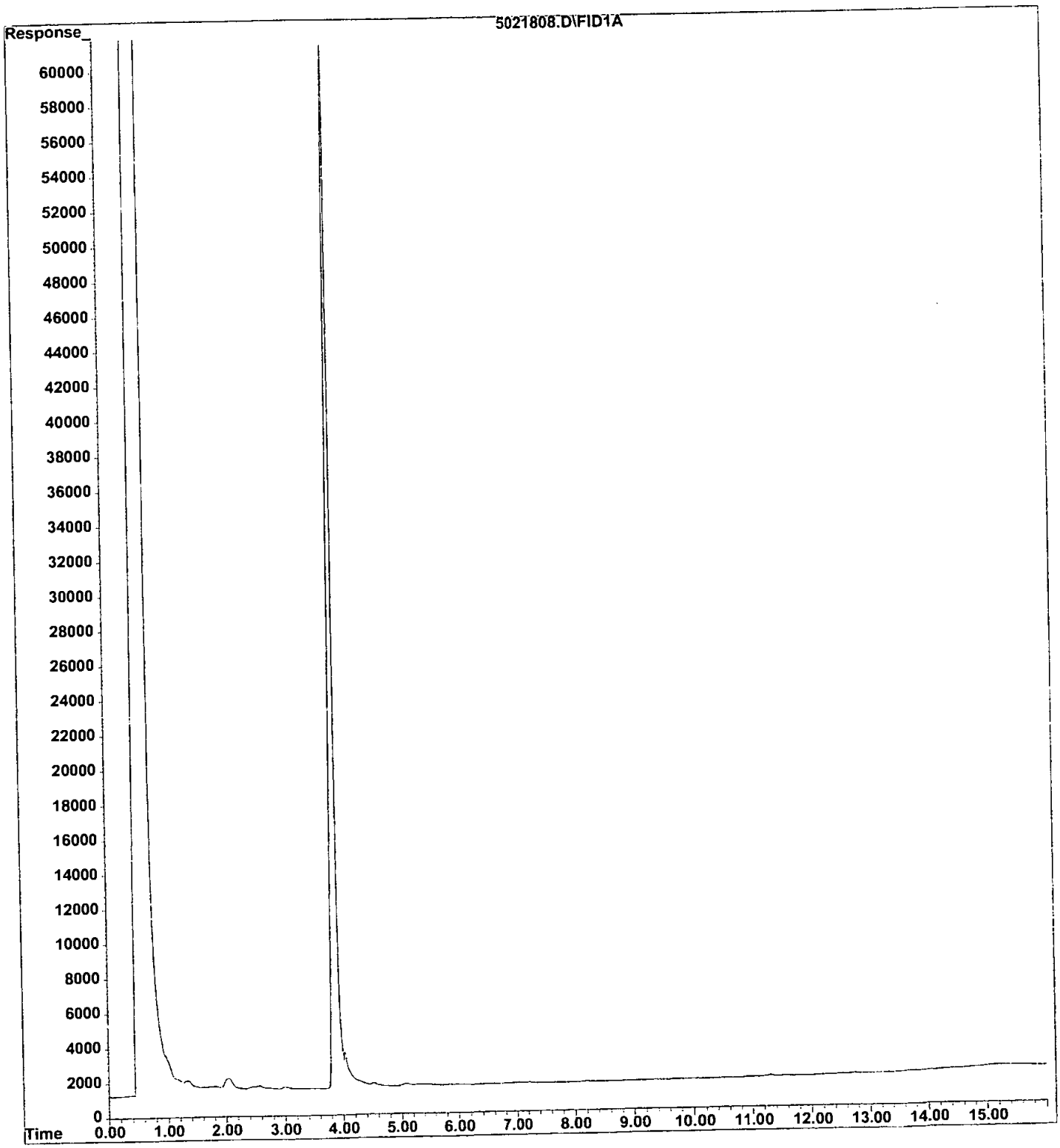
EMA Log #: 0502124

Notes and Definitions

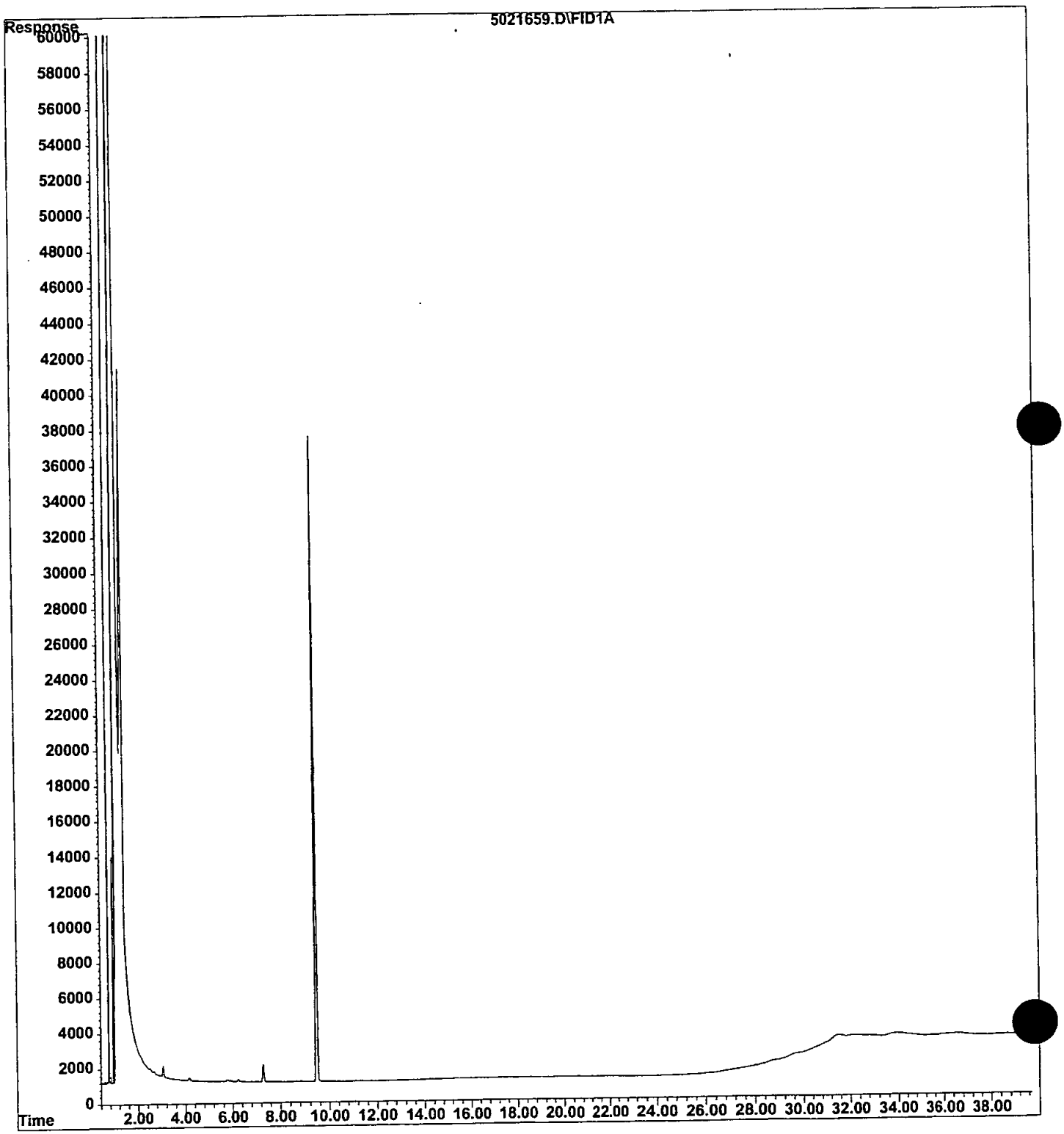
A-01	Sample dilution required due to acidic nature of STLC extract
HT-07	This sample was analyzed outside of the method recommended holding time due to the analysis request being made after the holding time had expired.
SD-01	Sample dilution required due to acidic nature of TCLP extract.
ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not Reported
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

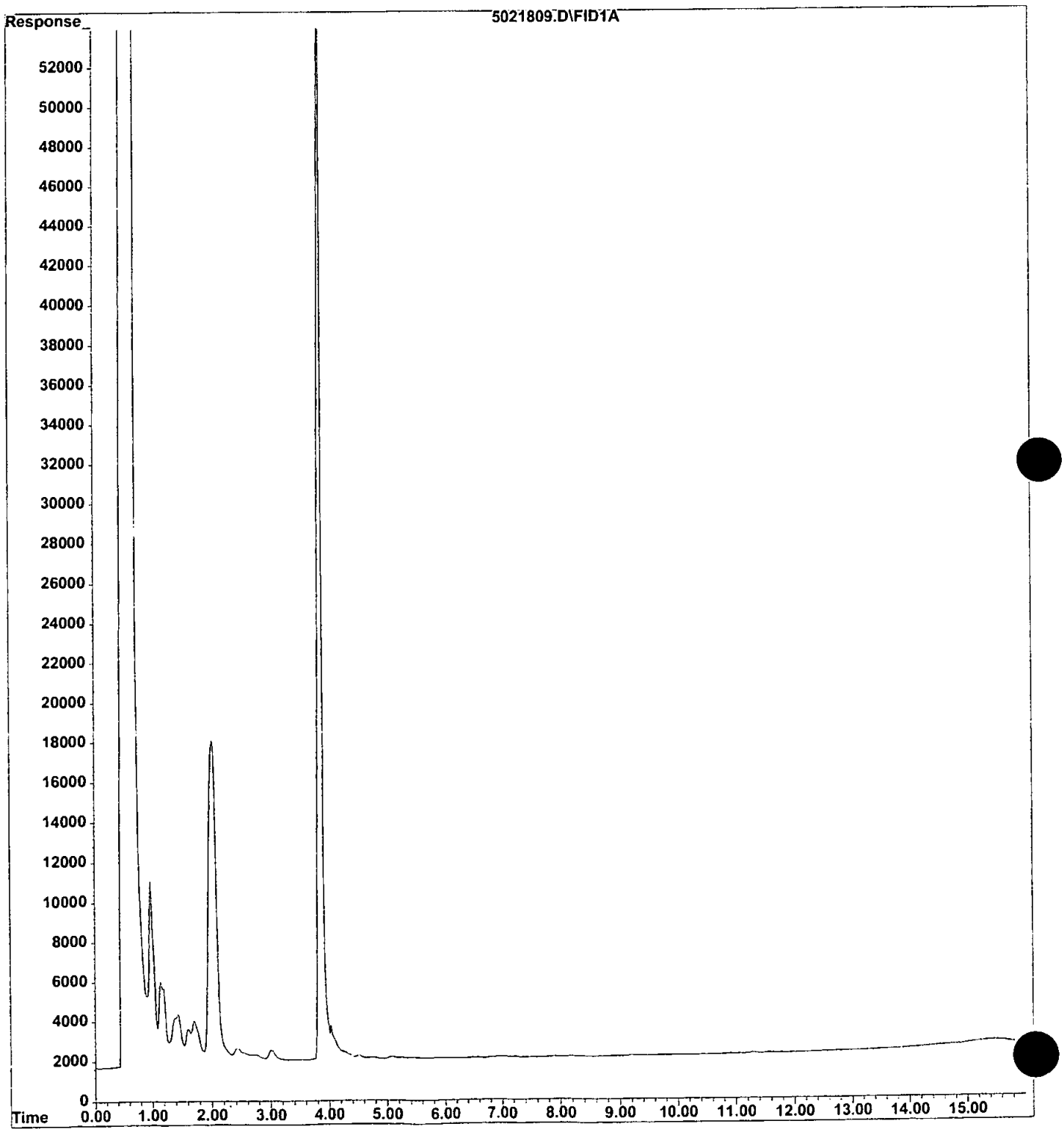
File : C:\HPCHEM\2\DATA\5021801.S\5021808.D
Operator :
Acquired : 18 Feb 20105 12:44 pm using AcqMethod TPHPT.M
Instrument : VOLATILES
Sample Name: 0502124-01@df=5 STLC
Misc Info :
Vial Number: 8



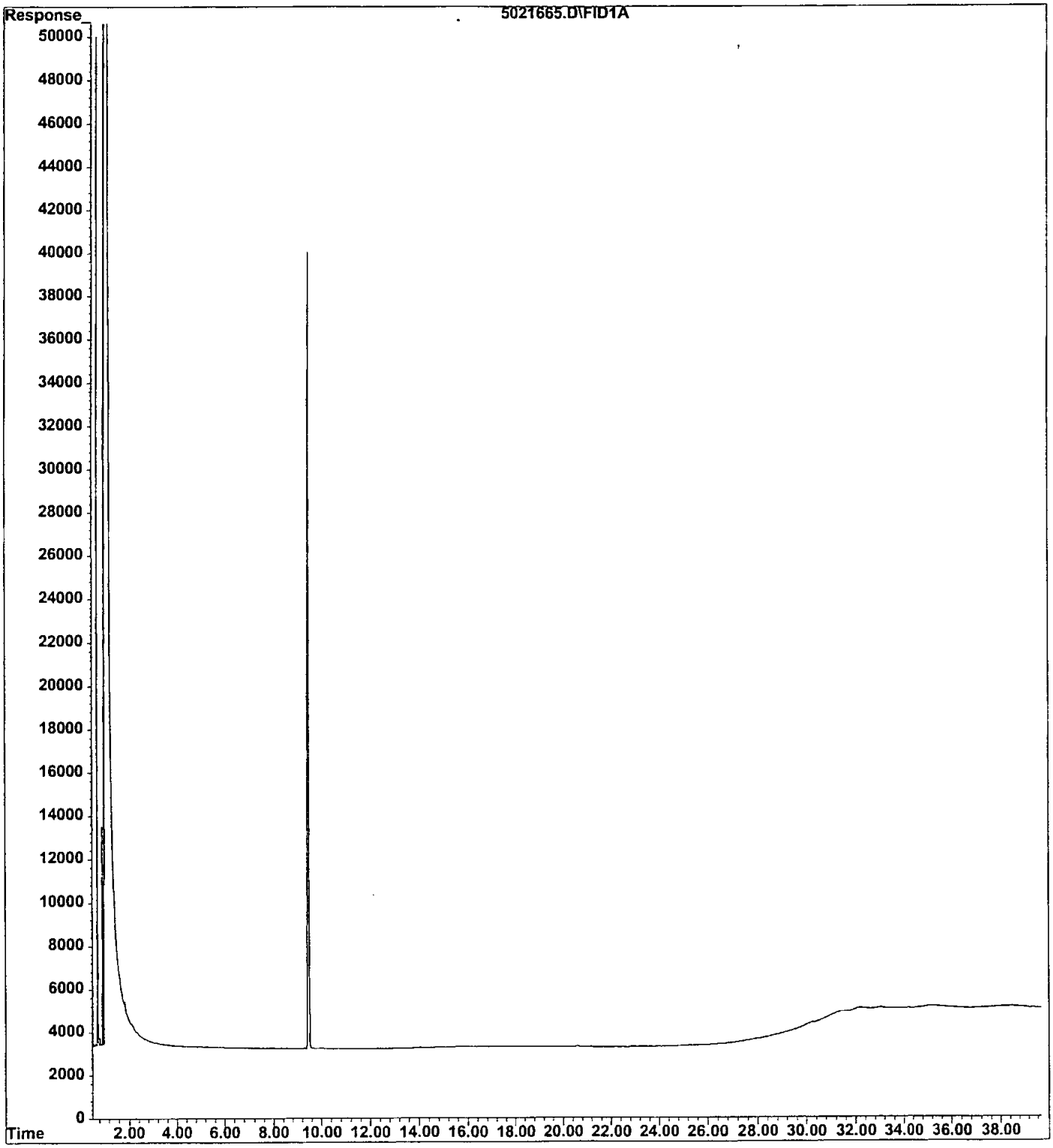
File : C:\HPCHEM\1\DATA\5021601.S\5021659.D
Operator :
Acquired : 18 Feb 20105 11:45 am using AcqMethod TPHEXT.M
Instrument : TPH
Sample Name: 0502124-01@STLC
Misc Info :
Vial Number: 22



File : C:\HPCHEM\2\DATA\5021801.S\5021809.D
Operator :
Acquired : 18 Feb 20105 1:11 pm using AcqMethod TPHPT.M
Instrument : VOLATILES
Sample Name: 0502124-01@df=5 TCLP
Misc Info :
Vial Number: 9



File : C:\HPCHEM\1\DATA\5021601.S\5021665.D
Operator :
Acquired : 18 Feb 20105 5:59 pm using AcqMethod TPHEXT.M
Instrument : TPH
Sample Name: 0502124-01@TCLP
Misc Info :
Vial Number: 28



CHAIN-OF-CUSTODY RECORD

EnviroMatrix Analytical, Inc.
4340 Viewridge Ave., Ste. A • San Diego, CA 92123 • Phone (858) 560-7717 • Fax (858) 560-776

W.O# 0502124

EMA LOG #: 050177

EMA DATE/TIME STAMP JAN 25 '05

Client: Kleinfelder Inc.

Address: 5015 Shoreham Place
San Diego, CA 92122

Attn: J. Lord + Sean Kearney Phone: 858-320-2206(JL) 2244(SK)

Sampled by: Sean Kearney Fax: 858-320-2001

Billing Address: same

Project: 44102 PO #:

EMA ID #	Client Sample ID	Sample Date	Sample Time	Sample Matrix	Container(s) #	Container(s) Type*
1	T2-13-1	1/26/05	0903	Soil	1	8oz
2	T2-13-2		0917			
3	T2-13-3		0945			
4	T2-14-1		1020			
5	T2-15-1		1052			
6	T2-15-2		1100			
7	T2-15-3		1110			
8	T2-15-4		1130			
9						
10						

REQUESTED ANALYSIS

EMA ID #	418.1 (TRPH)	Oil & Grease 413.1__ 413.2__ 1664__	TPH (8015B) Gas__ Diesel__	TPH-Extended 8015B X ASTM D2887 X	602 / 8021 BTXE__ MTBE__	601 / 8021 (Purgeable Halocarbons)	608 / 8081 (Pesticides)	608 / 8082 (PCB's)	624 / 8260 (Volatile Organics)	625 / 8270 (Semi Volatile Organics)	TTLC Metals (CAC Title 22)	STLC Metals (CAC Title 22)	TCLP (RCRA) Metals__ Organics__	Cd Cr Cu Pb Ni Ag Zn	pH EC TSS TDS		TPHext - STLC	TPHext - TCLP
1				X														
2				X													X	X
3				X														
4				X														
5				X														
6				X														
7				X														
8				X														

*Container Types: B=Brass Tube; V=VOA; (G=Glass): P=Plastic; O=Other (list)

Tamper-Proof Seals Intact: Yes No (N/A) Correct Containers: (Yes) No

Sample(s): (Cold) Ambient Warm VOAs w/ZHS: Yes No (N/A)

All Samples Properly Preserved: Yes No (N/A)

Disposal: N/C (aqueous) *EMA (@$5.00/sample) Return Hold

Turnaround Time: 24 hr 48 hr 3 day 4 day 5 day (Normal)

Comments: Highest 3 samples will require additional analyses
Additional request per Jacques Lord on 1/27/05, MJF 1100

*EMA reserves the right to return samples that do not match our waste profile.

RELINQUISHED BY	DATE/TIME	RECEIVED BY
Signature: Sean Kearney	1-26-05 14:17	Signature: [illegible]
Print: Sean Kearney		Print: [illegible]
Company: Kleinfelder		Company: EMA
Signature		Signature
Print		Print
Company:		Company:
Signature		Signature
Print		Print
Company:		Company:

White - EMA Canary - Accounting Pink - Client (w/Report) Goldenrod - Client (R[illegible]h Samples)

EnviroMatrix Analytical, Inc.

facsimile transmittal

To: Jacques Lord / Sean Kearny Fax: 858-320-2001

From: Mike Faulkner Date: 2/24/05

Re: Bioassay Prelim Report Pages: 3

CC: EMA Log# 0501256

☐ Urgent ☒ For Review ☐ Please Comment ☐ Please Reply ☐ Please Recycle

Notes:

CONFIDENTIAL

4340 Viewridge Avenue, Suite A • San Diego, California 92123 • (858) 560-7717 • Fax (858) 560-7763
Analytical Chemistry Laboratory

Nautilus Environmental, LLC
San Diego Bioassay Laboratory
February 24, 2006

Client: EnviroMatrix Analytical, Inc.

Subcontract Order #: 0501256

Purchase Order #: 4782

Test Material: 6 soil samples tested in overlying laboratory freshwater

Sample Date: Soil samples collected on 01/24/05

Test Procedures: 96-hour Acute Bioassay Screening

Test Organisms: *Ceriodaphnia dubia* (water flea) and
***Pimephales promelas* (fathead minnow)**

SUMMARY OF TEST RESULTS:

Sample ID	EnviroMatrix Laboratory ID	Fathead Minnow (% Survival)	Water Flea (% Survival)	Water Flea Confirmation (% Survival)
Lab Control	Control	100	100 [a]	100
T3-1	0501256-01	100	93 [a]	95
T3-2	0501256-02	100	**0** *	**35** *
T3-3	0501256-03	100	95	
T3-4	0501256-04	100	100	
T3-5	0501256-05	100	95	
T3-6	0501256-06	100	100	

* a survival value in bold with an asterisk indicates the results are significantly different compared to the Lab Control. This indicates the sample material produced a toxic response to the test organisms.

[a] Note: all tests were conducted with 4 replicates of 5 organisms each, for a total of 20 organisms per sample concentration. During the 1st Water Flea test, though, the lab control and site T3-1 were only tested with 3 replicates (15 organisms total) because 1 replicate was accidentally not initiated with test animals. This 1 replicate was discarded and not included in the final analyses. To confirm our test results, a 2nd Water Flea test was conducted on these two sites that had a missing replicate. We also retested the one site (T3-2) that showed a toxic response, to confirm whether there was truly a toxic response. The confirmation tests had the proper 4 replicates with a total of 20 animals.

CHAIN-OF-CUSTODY RECORD

EnviroMatrix Analytical, Inc.

4340 Viewridge Ave., Ste. A • San Diego, CA 92123 • Phone (858) 560-7717 • Fax (858) 560-7763

EMA LOG #: 0501256

EMA DATE/TIME STAMP

Client: Kleinfelder Inc

Address: 5015 Shoreham Place
San Diego CA 92122

Attn: J Lord Phone (858) 320-2206

Sampled by: DPE Fax (858) 320-2001

Billing Address: Same

Project: 44102-002 PO #:

REQUESTED ANALYSIS

EMA ID #	Client Sample ID	Sample Date	Sample Time	Sample Matrix	Container(s) #	Container(s) Type*	418.1 (TRPH)	Oil & Grease 413.1__ 413.2__ 1664__	TPH (8015B) Gas__ Diesel__	TPH-Extended 8015B__ ASTM D2887__	602 / 8021 BTXE__ MTBE__	601 / 8021 (Purgeable Halocarbons)	608 / 8081 (Pesticides)	608 / 8082 (PCB's)	624 / 8260 (Volatile Organics)	625 / 8270 (Semi Volatile Organics)	TTLC Metals (CAC Title 22)	STLC Metals (CAC Title 22)	TCLP (RCRA) Metals__ Organics__	Cd Cr Cu Pb Ni Ag Zn	pH EC TSS TDS
1	T3-1-BA	1-24-05	10:55	Soil	2	8oz					For Lisa in Rio Assay										
2	T3-2-BA		11:36		2																
3	T3-3-BA		12:59		2																
4	T3-4-BA		13:56		2																
5	T3-5-BA		14:23		2																
6	T3-6-BA		14:55		2																
7	T3-7-BA				2																
8	T1-8-BA				2																
9	T1-9-BA				2																
10	T1-10-BA				2																

*Container Types: B=Brass Tube; V=VOA; G=Glass; P=Plastic; O=Other (list)

Tamper-Proof Seals Intact: Yes No N/A

Correct Containers: Yes No

Sample(s): Cold Ambient Warm

VOAs w/ZHS: Yes No N/A

All Samples Properly Preserved: Yes No N/A

Disposal: N/C (aqueous) EMA @$5.00/sample) Return Hold

Turnaround Time: 24 hr 48 hr 3 day 4 day 5 day Normal

Comments: will contact EMA on 25 Jan requesting specific test

P/U T=18°C

RELINQUISHED BY	DATE/TIME	RECEIVED BY
Signature	1/24/05 1538	Signature
Print Dan Elder		Print Y. Santos
Company: Kleinfelder		Company: EMA
Signature	1/24/05 1614	Signature
Print J. Santos		Print A. Coltin
Company: EMA		Company: Ecot.
Signature		Signature
Print		Print
Company:		Company:

*EMA reserves the right to return samples that do not match our waste profile.

White - EMA Canary - Accounting Pink - Client (w/Report) Goldenrod - Client (Relinquish Samples)

T-075 P 003/003 F-104
+18585607763
From-ENVIROMATRIX ANALYTICAL
Feb-24-2005 11:02am

LAKESIDE COMMUNITY PLANNING GROUP

Po Box 2040 Lakeside CA 92040

February 6, 2005

RECEIVED
FEB 08 2005
DEPT. OF PLANNING & LAND USE

Robert Forsythe, Project Planner
DPLU
5201 Ruffin Road Suite B
San Diego CA 92123-1666

Subject: RP 04-005, Reclamation & Grading Plan Specifications & Support Documentation

The documentation received by the Chair, Lakeside Community Planning Group (LCPG) under cover of DPLU form 534 is in fact not a reclamation plan within the definition of such. It is in fact a request for contractor's proposal to perform work for the Lakeside Converancy (Conservancy) Additionally the documentation is incomplete, missing several pages of the attached map as well as containing errors in the application documents.

The LCPG heard this proposal/project at our scheduled meeting on 2 February 2005. After much discussion and debate the LCPG was only able to pass one motion. A motion to request additional testing to determine if contaminating hydrocarbons are present *in the material to be used in backfilling the river,* passed 14-0-0-1. This motion was in response to testimony that asphalt had been dumped and mixed with the material intended for backfilling the river.

A number of additional issues were addressed but the LCPG was unable to form them into a motion acceptable to gain eight or more votes. As a result, the following concerns are submitted as a minority report supported by seven members of the LCPG.

What has been submitted to the LCPG is not a legitimate reclamation plan in accordance with the County Code of Regulatory Ordinances and State Public Resource Code. It is in fact a Request For Proposal (RFP) soliciting contractor services.

A Major Use Permit is required in accordance with the Riverway Specific Plan, SP 90-003 as amended by SPA 00-002 for planning areas X, XI and XX.

Question as to why an amendment to RP 88-004, indicating the changes proposed and why they are necessary, is not more appropriate.

This project proposes a major shift in the Goals and Objectives of the Upper San Diego River Improvement Project (USDRIP) Redevelopment Plan and Specific Plan as well as the adopted San Diego River Flood Control Plan and River Alignment Plan. All are plans that have been adopted and approved by the County Board of Supervisors. Each of these plans needs to be addressed and amended as required or addressed as to why amendments are not required.

The Lakeside Community Plan shows three major industrial areas in the community and calls for the protection of these employment centers. This needs to be addressed and mitigated for within the community.

The project proponent, Robin Rierdan repeatedly responded to questions or concerns with "the County said it is not required". Several speakers stated that they have filed reclamation plans with the county and were required to comply with the state and local ordinances to include a major use permit and posting financial assurance. They have indicated that there is a perception of preferential treatment being given to the San Diego River Park – Lakeside Conservancy and Michael Beck, a County Planning Commissioner and Director of the Lakeside Conservancy.

Rick Smith
Chair, LCPG

cc Supervisor Jacob
Chair, USDRIC

Upper San Diego River Improvement Committee
Serving the Community of Lakeside for 18 years

Mary Allison, President
R.A. Smith, Vice-president
Mark A. Kennedy, Secretary
.....
A.C. Paving
Bardon Enterprises
Bammasters
Bill Signs Trucking
Caster Family Enterprises
City of San Diego
County of San Diego - Dept. of Public Works
DK Wind
Hanson Aggregates Pacific
JL Lester Co.
John's Trucking
Lakeside Chamber of Commerce
Lakeside Community Planning Group
Lakeside Fire Protection District
Lakeside Investment Co.
Lakeside Land Co. Inc
Lakeside Residents Coalition
Padre Dam
RCP Properties
Vulcan-Calmat
Walker Hanlon Properties
Willowbrook Mobilehome Park
.....
USDRIC was established by the Board of Supervisors in 1984 to serve as the official advisory group for what is now the 592 acre Upper San Diego River Improvement Project
Membership is available to project area and adjacent public agencies, businesses, and property owners.
Regular Meetings - 3rd Thursday of every month, 9:00 a.m. at:
Lakeside Fire Protection Administration Building
9845 Parkside Ln
Lakeside, CA 92040
.....

February 23, 2005

Gary Pryor, Director
County of San Diego
Department of Planning and Land Use
5201 Ruffin Road, Suite "B"
San Diego, California 92123-1666

RECEIVED
MAR 01 2005
San Diego County
DEPT. OF PLANNING & LAND USE

Subject: San Diego River Conservancy (RP 04-005).

Dear Mr. Pryor,

I and others have spent considerable time reviewing the application for the proposed Lakeside River Park, and we are left wondering what the application expected to accomplish. If our findings are correct, this area is the former Calmat/Vulcan site which has an adopted reclamation plan in place, which is part of the overall flood protection for the San Diego River in the Upper San Diego River Improvement Project area. Information gained from the Bureau of Mines and Reclamation in Sacramento, once a reclamation plan is adopted by the County of San Diego and the State of California, it cannot be opened up again or even modified.

No information is given as to the Redevelopment Plan for this area so refresh your memory;

The Redevelopment Plan for the Upper San Diego River Project (USDRIP) state in part, in section IV (400) Redevelopment Plan Goals, Implementation of this Plan is intended to achieve the following:

To provide employment opportunities for the residents of the Community. *This project proposal eliminates one fifth of the USDRIP project area from potential employment opportunity.*

To improve the San Diego River Channel and eliminate flood hazards that constrains the development of various parcels in the USDRIP project area, the cost of which cannot be born by private enterprise acting alone. *This project proposal does not describe how it is superior to the adopted San Diego River Alignment (December 1992) Plan and Flood Control Plan.*

To implement a San Diego River Flood Control and Environmental Rehabilitation Plan that is consistent with the goals of the Army Corps of Engineers, California Department of Fish

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619-443-9086 / 619-596-4667 / 619-561-5949
e-mail: maryal10@cox.net

and Game, County of San Diego, Federal Department of Fish and Wildlife, Project area Property Owners and the Community. *This project proposal does not describe how it is superior to the adopted River Alignment Plan (1992) and Flood Control Plan and consistent with the goals of, and have been approved and permitted by, the Army Corps of Engineers, California Department of Fish and Game, Federal Department of Fish and Wildlife and the County of San Diego, Project Area Property Owners and the community.*

To provide additional recreation opportunities for the Community within the constraints imposed by Federal and State Environmental Agencies. *This proposed project does not describe how it is superior to the existing proposed recreational opportunities.*

To achieve an environment reflecting a high level of concern for architectural, landscape, and suburban design principles appropriate to the goals of this Plan and applicable Community plans. *This proposed project does not describe how it is superior to the existing Redevelopment Plan, Riverway Specific Plan and Lakeside Community Plan.*

To develop safeguards against noise and pollution to enhance future industrial/commercial activity in the Project Area. *This project proposal does not describe how it is superior to the existing plan to enhance future industrial/commercial activity in the project area.*

To expand the resource of developable land by obtaining, if necessary, undersized land and making it available for development. *This project does not describe how it will expand or make available land for development.*

Section V. (500) Redevelopment Actions states in part, The Agency proposes to eliminate and prevent the spread of blighting influences, and to strengthen the economic base of the Project Area and the Community through:

The instillation of flood control and other required improvements to the San Diego River Channel.

The development or redevelopment of land by private enterprise or public agencies for purposes and uses consistent with the objectives of this Plan.

Assisting in providing financing for the construction of industrial and commercial buildings to increase the industrial and commercial base of the Community, and the number of temporary and permanent jobs in the Community and East County region.

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e-mail: maryal10@home.com

This project proposal dies not describe how it will be in compliance with the adopted and required actions of the Redevelopment Agency to strengthen the economic base in the community.

These issues only cover the Redevelopment Plan goals and policies, the Riverway Specific Plan goals and policies which are just about the same.

After reviewing the USDRIP Redevelopment Plan and the Riverway Specific Plan we turned our attention to SMARA and have found many issues the Conservancy has not covered and to name a few we add the following:

1. SMARA Section 2770 states that prior to conducting mining operations it is necessary to obtain a permit, reclamation plan and financial assurances from the lead agency. If a Reclamation Plan is appropriate for this project, it must then also be appropriate to require the approval of a Major Use Permit for mining.

2. SMARA and the County Grading Ordinance identify specific information that must be included in the Reclamation Plan. SMARA Section 2772 lists these requirements. The application has none of these requirements and should be rejected as a result. Section 2772 also states that all documentation for the relamation plan must be submitted at one time. It is difficult to determine which portion of the application documents apply to the reclamation plan.

3. The former Calmat operations were conducted through the authority of a vested mining right. The County released the reclamation responsibilities for the Calmat sight as part of the deal to sell the property to the Lakeside Conservancy. Because the reclamation plan has been completed and signed off by the county there does not appear to be a connection between the reclamation requirement and the purpose for reclamation (i.e. , mining). If mining is proposed as a vehicle for approval of a reclamation plan, it will be necessary to obtain a Major Use Permit and the reclamation plan will need to meet all the requirements outlined in the State Mining and Geology Board Reclamation Regulations (CCR 3500 et seq.) Remember this site has an adopted reclamation plan now.

4. SMARA Section 2773 also identifies that the reclamation plan must comply with verifiable statewide reclamation standards. These regulations require the development of performance standards for reclamation adequacy. Where have these standards been addressed in the reclamation plan?

5. The grading plan indicates that some of the excavated materials will be used on site to fill ponds and other areas (Hanson Aggregate). The application indicates that about 79,000 cy will be utilized by Hanson Aggregates, but does not include this volume as "Excess Materials to be disposed of off site ". The Hanson property is not within the limits of the project and any materials exported to this property must be included in the sum of materials

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to be exported from the site. This little bookkeeping error would increase the total export to just over 300,000 cy.

6. The application does not indicate the receiver site for the 18,000 + truck loads of export for this project. What roadways and intersections will be impacted by the project truck traffic ? The proponent should be advised of the high cost of mitigation for traffic impacts. Using the schedule of fees suggested by the TIF Ordinance, payment of substantial fees should be expected..

7. The application identifies that construction in the river channel at the eastern end of the site (on Hanson land) will be removed. However, all of the maps indicate that this area is not within the project boundaries. In addition, it will be necessary to account for the grading volumes that will result from grading in this area. Will this material be exported from the site ? If so, a traffic analysis will be required to identify mitigation requirements.

8. The application suggests that the project would result in only "minor" changes and the Addendum (to the certified EIR) is appropriate. The CEQA Documentation for the project provides misleading and incomplete information. Conclusions that the project will have no impact on traffic, noise, mineral resources, hazardous materials, visual quality, and biological resources are not supported by subtractive facts. The preparer of this document has instead relied on information from the USDRIP EIR that is dated and does little to address the actual impacts that will result from the proposed project (e.g., noise from grading operations, habitat destruction that will result from grading activities and roadway impacts that will result from exporting materials, etc.) . At a minimum, the county should require a detailed biological study to identify existing habitat conditions and evaluate habitat loses that will result from site grading activities. Other environmental review requirements should include the preparation of a detailed noise study, air quality analysis, traffic study, and visual impact assessment. All these studies should be prepared by consultants certified by the San Diego County DPLU.

9. The USDRIP EIR does not anticipate a project of this type and magnitude. Hanson Aggregates is being required to gain approval of a Specific Plan Amendment to address their project. Why isn't the Lakeside Conservancy being required to also amend the plan ?

10. The County should take a closer look at the hydraulic analysis prepared for this project. The CEQA Documentation states that the project will benefit flood control capacity and water quality, but does not offer supporting documentation.

11. Section 1.1.3 a) on page 3 of 15 indicates that "Proper and adequate bed and bank protection will be employed to safeguard surrounding properties." This statement does not appear to be supported by factual scientific studies. If these studies have been provided to the county, USDRIC should be provided an opportunity to review this information in one of

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their subcommittees, not at a counter at DPLU. We would also like to understand the meaning of "Proper and adequate" in this context.

12. On page 2 of the Supplemental Reclamation Plan Application, Item 1 asks "Mineral commodity to be mined". The response is: "No Surface Mining Activity". Item 2 asks for a geological description of the site. The response is "N/A". Page 4 Item 5 asks for a description of the effect of the proposed reclamation on further mining at the site. This information is required for all other applications for surface mining projects and must be provided by Lakeside Conservancy . It is important because the site has been designated as MRZ-2 by the State of California and the county is experiencing a shortfall of aggregate reserves. Any project that would needlessly eliminate these resources should not be allowed to move ahead until a plan to recover all resources has been approved.

13. If the county does not require an MUP, to what approval will conditions that protect the community be attached ? These conditions must include traffic improvements, noise and dust control.

14. How will the project facilitate groundwater recharge ? Are the native (or fill) materials a substrate to facilitate groundwater infiltration ?

15. Appendix B Off Site Soil Management and Transportation Plan indicates that materials to be removed have been characterized and believed to be non-hazardous for the purpose of handling .. Further review of the plans seems to indicate that chemical quality of the export materials is not fully known, and recently at the Lakeside Community Planning Group, members of the audience testified they had hauled chemically treated material to the site during the Calmat/Vulcan back filling. As a result, the environmental review for disturbance of subsurface soils should include a full characterization of the existing fill materials at the site.

These are but a few of the many questions that we have identified through a partial review of the application materials. We do not understand how the county could have EVEN accepted this application. The materials appear to be less than complete and should be sent back to the Lakeside Conservancy to have them follow the simple directions provided in the county forms. USDRIC also believes that a project should be accurately defined as a mining project and be required to gain approval of a Major Use Permit prior to commencement. This would also trigger the need to apply for approval of an amendment to the Riverway Specific Plan.

The USDRIC has problems with the fact that industrial/commercial land will be utilized for non human use called habitat. This takes away more of the Lakeside employment base, this project if approved should be required to mitigate for the lost building sites it will destroy, we also believe that the application should be required to provide professionally prepared application materials that accurately describe the project, and has a financial violability study been done to show this project will create commerce for Lakeside? We also insist that the

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project should be reviewed in a public forum in the absence of backroom maneuvering to gain special privileges.

Sincerely

Mary Allison, Chairwoman
cc: Supervisor 2nd. District
Lakeside Community Planning Group
East County Property Owners Association

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APPENDIX B
Lakeside's River Park Conservancy Responses

DPLU Account Number: CP 04-0034149
Case Number: RP 04-005; Project Name: USDRIP FHR

Comment	Response
The Department of Planning and Land Use (DPLU) has reviewed your application for a Reclamation Plan and is providing you with the attached package of information as a guide for further processing your application. This package consists of: 1. Determination of Completeness pursuant to Section 65943 of the Government Code 2. Determination of Completeness pursuant to the California Environmental Quality Act (CEQA) 3. A MATRIX which summarizes all the information we are requesting; 4. Attachments which are detailed and provide you with very specific information on our request(s); 5. Preliminary conditions from the Department of Public Works 6. An Environmental Cost Estimate 7. Estimated Processing Schedule	Understood.
PROJECT DESCRIPTION The project consists of the restoration of the San Diego River in the Upper San Diego River Improvement Project area of Lakeside. The project includes a number of actions: remove waterway constrictions and improve flood control capacity for the river; significantly increase wetland, riparian and coastal sage scrub habitat areas and construct wetland cells near the Riverside Water District groundwater wells to reduce pollutants	Due to a correction on the plot plan at the Hanson site constriction removal, the volume of fill soils to be excavated has changed. The new volumes are noted in the revised Reclamation Plan, Revised SWMP, and Revised Revegetation Plan. The new volumes reflect that approximately 354,100 cubic yards of fill material would be excavated and removed from the

in the groundwater through phyto-remediation and other mechanisms and near the Los Coches Creek outfall to reduce pollutants in the Los Coches Creek non-point source waters. Also proposed is the implementation of a maintenance program to ensure the survival and preservation of the habitat and wetland treatment values restored, enhanced or created during construction. Approximately 222,300 cubic yards of fill sands would be excavated and removed from the site as part of the proposed project. The project would restore, enhance or create a substantial amount of habitat on the site with varying topography and then plant native, slope stabilizing and buffering vegetation to lessen erosion or landslide potential at the site. In addition, approximately 79,000 cubic yards of fill would be used within the USDRIP area for another Reclamation Plan and 115, 000 cubic yards would be used on site to fill two existing sand mining ponds to approximately 2.0 to 3.5 feet below the surface water. The total excavated fill would equal approximately 416,700 cubic yards. The project would include creation of approximately 57 acres of additional wetlands in an area where approximately 22 acres of wetlands currently exist. Recreational and educational activities would be allowed only to the extent that they would be compatible with habitat and species conservation	site as part of the proposed project. Approximately 132, 100 cubic yards are planned for use on site to partially fill two existing sand mining ponds to 2.0 to 3.5 feet below the surface water. The total excavated fill material would equal approximately 491,700 cubic yards.

DETERMINATION OF COMPLETENESS PURSUANT TO SECTION 65943 OF THE GOVERNMENT CODE DPLU has reviewed your application and has determined that it is complete pursuant to Section 65943 of the Government Code.	Understood.
DETERMINATION OF COMPLETENESS PURSUANT TO THE CALIFORNIA ENVIRONMENTAL QUALITY ACT (CEQA) ***PROJECT REQUIRES EXTENDED INITIAL STUDIES OR ADDITIONAL INFORMATION*** The Department of Planning and Land Use has completed its review of your AEIS and determined it not to be "complete" as defined by the CEQA. At this time, additional information will be required to determine your project's potential impacts on the environment and to complete the CEQA Environmental Initial Study.	The submittal package includes the following requested additional information: • Volume 4A - Revised Reclamation Plan/Plot Plan • Volume 4E - Revised Revegetation Plan • Drainage Report (under separate cover) • Volume 4G - Revised Stormwater Management Plan • Chemical Test Results (under separate cover) • Asphalt Location Exhibit (under separate cover) The following documents are planned for submittal at a later date: • Traffic Management Plan • Revised Project Description
The County of San Diego's environmental review guidelines require that the requested environmental technical studies be prepared by a California Licensed professional (i.e., engineer, geologist) qualified to complete the study or a consultant from the County's List of Environmental Consultants. These reports will be reviewed for technical accuracy and to determine whether a Negative Declaration or Environmental Impact Report will be necessary for your project. Additional copies of	The requested environmental technical studies have been prepared by a California licensed professional qualified to complete the study where a license is required. Additional copies of the final technical report(s) will be provided for public review as needed.

the final technical report(s) will be required when your project's environmental documents are circulated for public review. The reasons for this determination and the information required are found on the following attachments.	
APPEAL INFORMATION: If you disagree with any of the environmental processing requirements you may, in certain circumstances, be able to appeal some or all of the requirements to the appropriate hearing body pursuant to Section 6.3.3 or 7.2 of the San Diego County CEQA Guidelines. Such an appeal must be filed at the DPLU Zoning Counter, 5201 Ruffin Road, Suite B, San Diego, CA 92123 (Telephone: (858)565-5981) no later than 4:00 p.m. on the tenth calendar day after the date of this letter and must be accompanied by the appropriate appeal form. Appeal forms and other information are available at the DPLU Zoning Counter. If the tenth day falls on a weekend or County holiday, an appeal will be accepted until 4:00 p.m. the following day the County is open for business. No separate appeal fee is required but be aware that your deposit account will be charged for the staff time spent processing such an appeal (typically approximately 20 - 30 hours). Prior to filing an appeal you should, but are not required to, confirm with the project Environmental Analyst that the point(s) of your disagreement are in fact subject to appeal. Furthermore, discussing the points of the disagreement with staff often results in a clarification or compromise that may alleviate your concerns thereby eliminating the need for the appeal.	Understood.

PROJECT ISSUE RESOLUTION PROCESS: If you have disagreements with the requirements within this letter you should contact the project staff to resolve those issues. Upon discussion with project staff, you may have these issues referred to the Project Issue Resolution process to provide you with an opportunity to quickly and inexpensively have issues considered by senior County management. Issues considered under this procedure can include disagreements with staff interpretations of codes or ordinances, requests for additional information or studies, or disagreements regarding project related processing requirements.	Understood.
This process does not replace any other appeal mechanisms such as those for CEQA determinations or administrative appeals. Also note that the **ten-day** period to file the appeal described above does not change if you utilize the issue resolution procedure. Please contact me to learn more about this process, the limitations, or to request an application form.	Understood.

ESTIMATED PROCESSING SCHEDULE: An estimated processing schedule is attached. Several assumptions were required to supply a schedule at this time and are listed at the bottom of the estimated schedule. If these assumptions prove to be incorrect, the schedule will be adjusted. The schedule also makes assumptions regarding County staff workload, submittal turnaround times by the applicant, and the number of iterations of submittals required for the applicant to obtain an adequate document. These assumptions are based on staff's experience with this type of case. **If reports are determined to be acceptable with less than three reviews or the applicant turnaround times shortened, the "standard" schedule can be reduced by as much as 50 percent in some cases.**	Understood.
SUBMITTAL REQUIREMENTS: Unless other agreements have been made with County staff, you must submit all of the following items concurrently and by the submittal date listed below in order to make adequate progress and to minimize the time and costs in the processing of your application. The submittal must be made to the DPLU Zoning Counter at 5201 Ruffin Road, Suite B, San Diego, CA 92123-1666 and must include the following items:	Understood.
a. **A COPY OF THIS LETTER**. The requested information will not be accepted unless accompanied by this letter.	See Volume 4A - Revised Reclamation Plan/Plot Plan

b. The following information and/or document(s) with the requested number of copies as specified:

INFORMATION/DOCUMENT	NO. OF COPIES	LEAD REVIEW DEPT./SECTION
Revised Reclamation Plans	16	Full Distribution
Revised Project Description	3	Regulatory Planning (1), Regulatory Resource (1), DPW (1)
Revised Stormwater Management Plan	2	Regulatory Resource (1), DPW (1)
Drainage Study	2	Regulatory Resource (1), DPW (1)
Traffic Management Plan	3	Regulatory Resource (1), DPW (2)
Chemical Test Results	3	Regulatory Planning (1), Regulatory Resource (2),
Asphalt Location Exhibit	2	Regulatory Resource (1), DPW (1)

The submittal package contains the following information and/or documents:

Volume 4A -Revised Reclamation Plan/Plot Plan - 16 copies
Volume 4E - Revised Revegetation Plan - 2 copies
Drainage Study (under separate cover) - 2 copies
Volume 4G - Revised Stormwater Management Plan - 2 copies
Chemical Test Results (under separate cover) - 3 copies
Asphalt Location Exhibit (under separate cover) - 2 copies

Revised Project Description - to be submitted at a later date
Traffic Management Plan - to be submitted at a later date

<table>
<tr>
<td>c. Deposits:

<table>
<tr><th>AGENCY</th><th>ACCOUNT NUMBER</th><th>DEPOSIT AMOUNT</th></tr>
<tr><td>DPLU-Planning</td><td>WN 7960</td><td>$3,650.00</td></tr>
<tr><td>DPLU-Environmental</td><td>WN 7960</td><td>$2,240.00</td></tr>
<tr><td>TOTAL ADDITIONAL DEPOSITS</td><td></td><td>$5,890.00</td></tr>
</table>

The above is an estimate of the additional deposits required to process the application through hearing/decision.</td>
<td>The requested deposits are enclosed under separate cover with this submittal.</td>
</tr>
<tr>
<td>Be aware that Section 362 of Article XX of the San Diego County Administrative Code, Schedule B, 5 states that:

The Director of Planning and Land Use may discontinue permit processing and/or recommend denial of the said project based on non-payment of the estimated deposit.</td>
<td>Understood.</td>
</tr>
<tr>
<td>Several assumptions were required to supply the DPLU-Environmental cost estimate at this time in the process. If these assumptions prove to be incorrect, your cost estimate will be adjusted. These assumptions are listed at the bottom of the attached environmental cost estimate.</td>
<td>Understood.</td>
</tr>
<tr>
<td>Should your application be approved, there will be additional processing costs in the future (e.g., Final Map processing costs, park fees, drainage fees, building permit fees). The above estimate includes only the costs to get your present application(s) to hearing/decision and does not include these additional processing costs.</td>
<td>Understood.</td>
</tr>
</table>

The initial review of your project indicates that there will be an effect on native biological resources. Therefore, State law requires the payment of a fee to the California Department of Fish and Game for their review of the project environmental document (Fish and Game Code §711.4). If this fee is needed, it will be requested and collected at a later time during the process. Payment of the fee is required regardless of whether or not we consider the effect on native biological resources to be significant or clearly mitigated. The project analyst will remind you to pay this fee immediately prior to public review of the project environmental document.	Understood.
SUBMITTAL DUE DATE: In order to maintain adequate progress in the processing of your project, the DPLU requires that the revisions/information/deposits requested in this letter be submitted by **July 12, 2005**. An extension of this date may be granted at the discretion of the Director of Planning and Land Use. To request an extension, submit a written request, signed and dated by the project applicant. The request must include the proposed new submittal date and a brief reasoning for the extension request. If the revised document(s) are not received, or an approved extension request is not granted by the Director by the above date, the Department may make a recommendation for denial of your project to the appropriate decision-making authority based upon inadequate progress pursuant to California Environmental Quality Act (CEQA) Guidelines Section 15109.	Understood.

DPLU Account Number: CP 04-0034149
Case Number: RP 04-005; Project Name: USDRIP FHR
Attachment A - Land Use Issues

Comments	Response
1. It is the Department's understanding that the project site was used as a construction debris landfill during the 1980s and 1990s. It is also the Department's understanding that during the course of doing trenching for soil appraisal, asphalt has been found on the site and that chemical tests are being performed to determine whether the asphalt is contaminated with hydrocarbons as well as to determine if the fill is contaminated. Please provide copies of all test results. These will be reviewed by the Department of Environmental Health.	Three (3) copies of Chemical Test Results are included under separate cover as a part of this submittal package.
2. Please revise the project description to include the excavation of asphalt and a description of whether the asphalt will be exported or remain on site. If it is to remain on site please describe potential uses and what steps will be taken to protect the river.	Lakeside's River Park Conservancy is meeting with the State Regional Water Quality Control Board to discuss the issue of asphalt on the site. Once a mutual decision has been met, the project description would be revised to reflect this decision. See Volume 4A - Revised Reclamation Plan Attachment 5 for further detail.
3. If the project includes removing the river constriction from the Hanson site, please revise the Reclamation Plan to show that work.	See Volume 4A - Revised Reclamation Plan rolled plan set sheet C-9.
4. Please provide an exhibit showing the location of all known asphalt. Note the depth of the asphalt and show the asphalt's depth in relation to the river channel.	Two (2) copies of the asphalt location exhibit are provided under separate cover as part of this submittal package.

9. MSCP findings will be required for this project. If more information is needed, you will be notified.	Understood.

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Attachment A - Land Use Issues

5. Please note that Reclamation Plans require financial assurance and will be included as conditions of approval. The estimated costs of reclamation shall be secured by financial assurance to assure compliance with the Reclamation Plan. The assurance shall be made payable to the Director of the Department of Planning and Land Use and the California Department of Conservation and may take the form of surety bonds, irrevocable letters of credit, trust funds, or other forms of financial assurance adopted by the State Mining and Geology Board, which the County reasonably determines shall be readily available to pay for reclamation in accordance with the surface mining operation's approved Reclamation Plan.	The general contractor for this project will be required to provide financial assurances in the form of an irrevocable completion bond. See the Volume 4A - Revised Reclamation Plan Section 10.0 for further detail.
6. Please note that the Reclamation Plan will be conditioned to require the dedication of a trail easement pursuant to the RiverWay Specific Plan.	Lakeside's River Park Conservancy will dedicate an easement that conforms to the requirements of the RiverWay Specific Plan. See Volume 4A - Revised Reclamation Plan rolled plan set Sheet C-3 and C-4 for the trail easement on the northern edge of the project site.
7. If the extracted fill will be stockpiled on site, please identify the location of the stockpiles on the plot plan	The location of stockpiled fill is identified in Volume 4A - Revised Reclamation Plan on sheet C-4 of the rolled plan set.
8. Please note that an amendment to the USDRIP River Plan must be approved prior to the commencement of any work in the river.	The Volume 4A- Revised Reclmation Plan rolled plan set is an amendment to the USDRIP River Plan.

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ATTACHMENT B
DEPARTMENT OF PUBLIC WORKS – STORMWATER, GRADING AND DRAINAGE

Comment	Response
A Preliminary Drainage Study is required for this project. Please use the latest County of San Diego Hydrology Manual found at the following website link: http://www.sdcounty.ca.gov/dpw/engineer/hydrologymanual.html	Two (2) copies of the drainage study for this project are included under separate cover with this submittal package.
Include a discussion of the asphalt found on the site if it is to remain on the site, and what Best Management Practices will be used in connection with the asphalt.	Lakeside's River Park Conservancy is meeting with the San Diego Regional Water Quality Control Board to discuss the issue of asphalt on the site. Once a mutual decision has been met, the project description would be revised to reflect this decision. See Volume 4A - Revised Reclamation Plan, Attachment 5 for further detail.
A Traffic Management Plan is required for this project to assess the impact of truck traffic on local streets and intersections.	A Traffic Management Plan is being prepared by Darnell and Associates. The Traffic Management Plan will be submitted to the County once it complete.
Grading Plan	
1. Show assessors parcel numbers and property lines on which the work is performed.	The Assessors Parcel Numbers and property lines have been added to the drawings. See Volume 4A - Revised Reclamation Plan rolled plan set Sheet C-3, C-4.

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ATTACHMENT B
DEPARTMENT OF PUBLIC WORKS – STORMWATER, GRADING AND DRAINAGE

2. Show a North Arrow and scale on all sheets.	The North Arrow been added to Volume 4A - Revised Reclamation Plan rolled plan set and the scale has been noted on each sheet.
3. List the name of the applicant/owner, address, and telephone number.	The name, address, and telephone number of the applicant/owner (Lakeside's River Park Conservancy) has been added to the Volume 4A - Revised Reclamation Plan rolled plan set, cover sheet (A-0).
4. List the engineer's name, address, and telephone number.	The names, addresses, and telephone numbers of the Primary Consultant (Huffman & Carpenter) and Engineer (Chow Engineering) have been added to the Volume 4A - Revised Reclamation Plan rolled plan set, cover sheet (A-0).
5. Show project address or Assessors Parcel Number (APN).	There are two main Assessors Parcel Numbers (APN) for the project site and two additional APNs for the Hanson portion of the work. The APNs have been listed on Volume 4A - Revised Reclamation Plan rolled plan set, sheet (C-0) and are noted on drawings C-3 and C-4.
6. Show approximate property lines of the site on which the work is performed.	The property lines for the site have been added to the Volume 4A - Revised Reclamation Plan rolled plan set sheets C-1, C-2, C-3, C-4.

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DEPARTMENT OF PUBLIC WORKS – STORMWATER, GRADING AND DRAINAGE

7. Show any buildings or structures on the site where the work is to be performed, and any structures on adjacent land within fifteen feet (15') of the project and label said structures.	The only buildings or structures on the site where work is to be performed are the pumping station in the southwest portion of the site. The structure has been highlighted and labeled on Volume 4A - Revised Reclamation Plan rolled plan set, drawing C-3 and reference drawing R-1. There are no other structures within 15' of the project site.
8. Show any easements of greater than 20' width.	Easements have been added to Volume 4A - Revised Reclamation Plan rolled plan set, sheets C-3 and C-4.
9. Show estimates of the amount of excavation, fill, import, and export and estimates for the square footage/acreage of disturbed area for each pad or Parcel.	A table of excavation, fill, import, export, and estimates of acreage disturbed for each area has been added to Volume 4A - Revised Reclamation Plan rolled plan set, sheet C-0.
10. Show location of any proposed drainage devices, stormwater protection facilities, walls, cribbing, dams, or other protective devices to be constructed in connection with proposed work.	The location of proposed drainage devices, stormwater protection facilities, and other BMPs are correct as shown. See Volume 4A - Revised Reclamation Plan rolled plan set, sheet C-10.
11. Show clear differentiation between existing and proposed contours.	Clear differentiation between existing and proposed contours is shown on Volume 4A - Revised Reclamation Plan rolled plan set.

12. Some proposed contours appear to be existing contours, please revise.	See previous note.
13. Include this note on the plans. **PRELIMINARY GRADING PLAN NOTE:** "This plan is provided to allow for full and adequate discretionary review of a proposed development project. The property owner acknowledges that acceptance or approval of this plan does not constitute an approval to perform any grading shown hereon, and agrees to obtain a valid grading permit before commencing such activity."	The preliminary grading plan note has been added to Volume 4A - Revised Reclamation Plan rolled plan set, Sheet A-0.
14. Show the direction of lot and street drainage and percent slopes on driveways.	There are no existing impervious surfaces on the site. No lots, streets, or driveways are being proposed for this project site.
15. Show proposed slope ratios, not greater than 1 ½ : 1on cuts and 2:1 on fills.	There is only one area best shown on Volume 4A - Revised Reclamation Plan rolled plan set, sheet C-5 where the slope ratios on a cut is not greater than 1 ½ to 1. This area is being cut in a 1:1 slope then backfilled with material. All slope ratios on fills are equal to or greater than 2:1
16. Show 100 year flood lines of inundation for drainage basins over 25 acres.	The Q_{100} year floodway and floodplain are shown on Volume 4A - Revised Reclamation Plan rolled plan set, sheets C-3 and C-4.

17. There appear to be random contour index text shown that are solitary and are not related to topographic data.	Stray text has been removed from the drawings.
SWMP	
18. The County of San Diego has a standard SWMP format that has been in use since March 2001. Please use the County of San Diego SWMP format. This format is on the Web in PDF or MSWord format at http://www.sdcounty.ca.gov/dpw/stormwater/management.htm.	Volume 4G - Revised Stormwater Management Plan has been included with this submittal package. It has used the County of San Diego SWMP format.
19. Operations and Maintenance Program, Section 5: Visit: http://www.sdcounty.ca. gov/dpw/stormwater/maintenance.html and provide the appropriate maintenance mechanisms for the selected BMPs. Identify which category (i.e. first, second, third, etc.) and discuss "Mechanisms to assure maintenance" and "Funding. Please provide a summary of maintenance costs per responsible party (homeowner, or homeowners association) for each BMP and clearly indicate the cost basis (annual, or every third year, or other).	Operations and Maintenance details for permanent BMPs are included as Section 5.0 of Volume 4G - Revised SWMP. In addition, Volume 4G -Attachment 3 Best Management Practices Methods Specifications Guidelines describes appropriate maintenance for the BMPs. Volume 4G - Revised SWMP, Section 6.0 identifies maintenance categories for proposed permanent BMPs. The Maintenance Plan Guidelines referenced are draft guidelines and are not yet in effect, and therefore no maintenance agreement referenced in that document shall be binding upon the San Diego River Park - Lakeside Conservancy.

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DEPARTMENT OF PUBLIC WORKS – STORMWATER, GRADING AND DRAINAGE

20. Show all proposed permanent BMPs on a plan or schematic (detention/retention basins, biofiltration swales). Provide 85th percentile (first flush) capacity calculations for proposed permanent BMPs.	Proposed permanent BMPs (Attachment 1, Figure 5b) were detailed in the SWMP and are correct as shown. Project site temporary and permanent BMPs are indicated on Volume 4G - Revised SWMP Attachment 1, Figure 5a. Volume 4G - Revised SWMP, Attachment 2, Table 4 shows the 85th percentile capacity calculations for proposed BMPs
21. Discuss post construction BMP's in terms of Site Design, Source Control, and Treatment Control BMPs. Refer to Section G.5 of the Stormwater Standards Manual.	Section 4.2 of Volume 4G - Revised SWMP discusses how post construction BMPs will limit stormwater pollution resulting from the project site through the use of effective site design, source control, and treatment control measures.
22. Add a conclusion section. State that the combination of proposed construction and permanent BMP's will reduce, to the maximum extent practicable, the expected project pollutants and will not adversely impact the beneficial uses of the receiving waters.	A conclusion section is included in Volume 4G - Revised SWMP as Section 7.0.

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DEPARTMENT OF PUBLIC WORKS – STORMWATER, GRADING AND DRAINAGE

DPLU Account Number: CP 04-0034149
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ATTACHMENT C – REVEGETATION PLAN

Comment	Response
The following corrections should be made on the plans submitted. Requested corrections should be highlighted by indicating on what sheets the modifications took place. Any items that are not corrected must have an explanation as to why the changes were not made.	Corrections appear as noted in Volume 4E - Revised Revegetation Plan.
Requirements are based on the *County of San Diego's Landscape Water Conservation Design Manual, County of San Diego's Grading Ordinance, and the County's Revegetation Plan Format, Content and Guidelines.*	Understood.
1. Attachment 1, Figures 3 & 4 – please explain and delineate what the categories in the legend represent.	Volume 4E - Revised Revegetation Plan, Attachment 5: photos of representative vegetation has replaced Attachment 1, Figure 3. Attachment1, Figure 3 illustrated the methodology for conducting the habitat assessment where the site was divided into 6 sampling plots (P1-P6). The vegetation in each sampling plot was then characterized by the dominant vegetation species and GPS points were taken at each sampling point within the plot. Photos were taken and soil pits were dug to as further evidence of the habitat types. Attachment 1, Figure 3 illustrated the locations of these soil pits and photo points.

	Volume 4E - Revised Revegetation Plan, Attachment 1, Figure 4 illustrates locations of representative soil pits and photo points taken during the September 1, 2004 biology study. Soil pits were dug to determine the presence of hydric soils in wetlands. Photos were taken at representative photo points as evidence of project site biology. The four plot areas (P1-P4) correspond to the plot areas in the vegetation species list Volume 4E - Revised Revegetation Plan, Attachment 2, Table 3.
2. Attachment 1, Figure 6 – explain numbering.	The numbering is indicated in Section 4.0 of Volume 4E - Revised Revegetation Plan. The numbers preceding the text correspond with the numbering of Volume 4E - Revised Revegetation Plan, Attachment 1, Figure 6.
3. Attachment 1, Figure 9 – the text indicates that both Areas 3 and 12 will be drip irrigated. This figure only shows one area – please label and revise map to include both areas.	Revised maps are included in Volume 4E - Revised Revegetation Plan as Attachment 1, Figure 9a and 9b.
4. Attachment 2, Table 3 – there is no identification of the region indicators or explanation of 'Plot' nos. Please provide.	See Volume 4E -Revised Revegetation Plan, Attachment 2, Table 3. The region indicator status depicts whether the vegetation species listed is a wetland indicator species for Region 0(California). The following is a list of terms used for wetland indicator species: OBL - Obligate Wetland Plants that occur almost always

	(estimated probability 99%) in wetlands, but may also occur rarely (estimated probability 1%) in non wetlands. FACW - Facultative Wetland Plants that occur frequently (estimated probability 67% to 99%) in wetlands, but also occur (estimated probability 1% -33%) in nonwetlands FAC - Facultative Plants with a similar likelihood (estimated probability 33% - 67%) of occurring in wetlands and nonwetlands FACU - Facultative Upland Plants occur sometimes (estimated probability 1% - 33%) in wetlands, but occur more frequently (estimated probability 67% -99) in nonwetlands. UPL - Obligate Upland Plants occur rarely (estimated probability 1%) in wetlands, but occur almost always (estimated probability 99%) in nonwetlands under natural conditions. The plot numbers referenced are illustrated on Volume 4E - Revised Revegetation Plan, Attachment 1, Figure 4.
5. Attachment 2, Table 4 – Construction Schedule only indicates landscaping on area - please include all areas of revegetation/enhancement.	See Volume 4E - Revised Revegetation Plan, Attachment 2, Table 4 for a revised construction schedule.

6. Attachment 3 – Project Cost Estimate – please include the cost of container stock, hydroseed mix, cost of seed collection, willow cuttings, fertilizers, soil prep (mycorrhiza innoculatnt), irrigation components, soaking and painting of willow cuttings, labor to install planting, labor to weed and maintain the site, labor for irrigation (installation and removal), a 20% contingency for replacement planting, monitoring, and report preparation.	See Volume 4E - Revised Revegetation Plan, Attachment 3 - Project Cost Estimate.

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ATTACHMENT D

DEPARTMENT OF PUBLIC WORKS – PRELIMINARY CONDITIONS

Comment	Response
Pending evaluation and approval of the project's Traffic Management Plan, Drainage Study, and revisions to the SWMP and Grading Plan, further improvements may be required or modified to mitigate for the traffic, drainage, environmental, and grading impacts caused by this project.	Understood.

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Attachment E - Reclamation Plan Review

Comment	Response
1.The scale of the Location Map is meaningless because of the obvious stretching horizontally or compression vertically (aspect ratio has not been maintained). Scale should not be proportional (i.e., 1:100); specify 1"=100' or 1" = 200', as the case may be.	The scale is shown accurately on the Volume 4A - Revised Reclamation Plan rolled plan set.
2. Show "project site" accurately on the vicinity map (the site is immediately adjacent to Hwy. 67 R.O.W., but the map indicates otherwise).	The "project site" on the vicinity map has been revised, see Volume 4A - Revised Reclamation Plan rolled plan set, sheet A-0.
3. Name, address and telephone number of the following personnel: a. Property owner; b. Applicant;	The name, address, and telephone number of the applicant/owner (Lakeside's River Park Conservancy) has been added to Volume 4A - Revised Reclamation Plan rolled plan set, cover sheet (A-0).
4. Name, professional seal, signature, and telephone number of the following: a. Civil engineer; b. Soils engineer; c. Date plan(s) prepared; d. Latest date of plan revision(s).	The name, professional seal, signature, and telephone numbers of the Civil Engineer (Chow Engineering), Soils Engineer (Kleinfelder Inc.), the date the plans were prepared, and the latest date of plan revisions have been added to Volume 4A - Revised Reclamation Plan rolled plan set, cover sheet (A-0).

5. Assessor's Parcel Number(s) and Legal description (APN).	There are two main Assessors Parcel Numbers (APN) for the project site and two additional APNs for the Hanson portion of the work. The APNs have been listed on Volume 4A - Revised Reclamation Plan rolled plan set, sheet (C-0) and are noted on drawings C-3 and C-4.
6. Indicate zoning Land Use District classification and general plan designations of site and of the surrounding properties.	Zoning Land Use District classification and general plan designations are indicated for the site and surrounding properties on Volume 4A - Revised Reclamation Plan rolled plan set, sheet R-3.
7. Bench mark: Show Location on plan and describe (if datum is assumed, so indicate). Correlate with County horizontal and vertical control points.	The survey benchmark is indicated on Volume 4A - Revised Reclamation Plan rolled plan set, sheet C-4. Called-out on sheet Volume 4A - Revised Reclamation Plan rolled plan set, sheet C-0.
8. Thomas Bros./California coordinates.	Thomas Bros. coordinates are indicated on Volume 4A - Revised Reclamation Plan rolled plan set, Sheet C-0.
9. Reclamation Plan number on every sheet.	The Reclamation Plan number (RP04-005) is indicated on the revised Volume 4A - Revised Reclamation Plan rolled plan set - All Sheets.

10. Show and label location of all roads, sewage disposal systems (septic and/or sanitary), water mains, utility facilities, and water courses on the site and within 1000 feet from the site.	Locations of roads, sewage disposal systems, water mains, utility facilities and water courses **on the site** are shown and labeled on Volume 4A - Revised Reclamation Plan rolled plan set, sheets C-3, C-4 also sheets R-1, R-2. The proposed project is a restoration project and as such no major construction activity would take place that would affect surrounding facilities. The 1000 foot requirement for off-site facilities is not applicable to this project.
10a. Show and label (either directly or using a symbol legend) all existing and proposed structures, including but not limited to power poles, towers, fences, trash enclosures, signs, septic systems, curbs, driveways, parking areas, and sidewalks within the project area. Locate by distance in relation to other structures and property lines, and indicate existing structures that are to remain or be removed.	The only buildings or structures on the site where work is to be performed are the pumping station in the southwest portion of the site. The structure has been highlighted and labeled on Volume 4A - Revised Reclamation Plan rolled plan set, sheet C-3 and reference drawing R-1.
11. Submit "Right of Entry Agreement" duly signed by the owner/operator.	See Volume 4A - Revised Reclamation Plan, Attachment 4 "Right of Entry Agreement".
12. Show proper set back(s) from property lines for top-of-slopes (for minimum requirements see STD Drawing DS-11).	This reclamation plan is for a restoration project and no construction would take place that would require "proper set back" from the property line. This is not applicable for this project.

13. Identify property and easement lines. List easements, describing: purpose, name of easement holder, and given all appropriate dimensions.	Easements have been added to Volume 4A - Revised Reclamation Plan rolled plan set, sheets C-3 and C-4.
14. Identify limits of permit on all sheets.	Limit of permit is shown as the project line on Volume 4A - Revised Reclamation Plan rolled plan set, sheet R-3 and sheets C-3 and C-4.
15. Show Q_{100} year floodway and floodplain.	The Q_{100} year floodway and floodplain are shown on Volume 4A - Revised Reclamation Plan rolled plan set, sheet C-3 and C-4.
16. Show, on plans, total amount of excavation and total amounts of export/import (cubic yards).	A table of excavation, fill, import, export, and estimates of acreage disturbed for each area is shown on Volume 4A - Revised Reclamation Plan rolled plan set, sheet C-0.
17. Show cut and fill ratios for all slopes.	Slope ratios are noted on each cross section sheet of Volume 4A - Revised Reclamation Plan rolled plan set.
18. Show locations of cut and placement of fill ("daylight" and limit lines).	This is indicated by the contrast in contour lines on Volume 4A - Revised Reclamation Plan rolled plan set, sheets C-3, C-4; grey = existing, black = new.
19. Show all staging, work areas, and truck routes to, on, and from the site.	Staging, work areas, and truck routes on the site are shown on Volume 4A - Revised Reclamation Plan rolled plan set, sheets C-3 and C-4.

20. Identify the source of the topographic information including the date of such information.	The source of topographic information and date is shown on Volume 4A - Revised Reclamation Plan rolled plan set, sheet A-0.
21. Show the acreage of the site and the acreage designated for reclamation.	The site acreage and acreage designated for reclamation are noted on Volume 4A - Revised Reclamation Plan rolled plan set, sheet C-0.
22. Show and describe the phases of the operation. It is strongly encouraged to "phase" the project.	Phasing is indicated on Volume 4A - Revised Reclamation Plan rolled plan set, sheets A-0, C-3 and C-4; also see sheets C-5,C-6, C-7, C-8, C-9, C-11 and C-12 .
23. Show property and safety fencing, existing and proposed (if there is any proposed).	Property fence is shown on Volume 4A - Revised Reclamation Plan rolled plan set, sheets C-3 and C-4.
24. Show location and identification of all survey monuments used to prepare the plans.	Survey monuments are shown on Volume 4A - Revised Reclamation Plan rolled plan set, sheets C-3 and C-4; note on sheet C-0.
25. Show location of processing and storage areas.	Processing and storage areas are indicated on Volume 4A - Revised Reclamation Plan rolled plan set, sheet C-4.
26. Show the progression of stripping and excavating, including elevation and dates, or phases.	See Comment 22.

27. Show the groundwater level of the site on the cross-sections.	The groundwater level of the site is noted on Volume 4A - Revised Reclamation Plan rolled plan set cross-sections.
28. Show limits of intended grubbing and clearance.	See Volume 4A - Revised Reclamation Plan rolled plan set, sheets C-11 and C-12.
29. Specify backfill materials (what may and may not be included, i.e., asphalt).	Lakeside's River Park Conservancy is still determining the materials that may be used for backfilling. Once a determination is made, the specification will be made in the revised project description. See Volume 4A - Revised Reclamation Plan, Attachement 5 for further detail.
30. Note on plans: "Approval of these plans by the Director of Public Works does not authorize any work or grading to be carried out until the permit is approved by the Department of Planning and Land Use and all conditions have been met and approval to start the operation have been given by the Code Enforcement Engineer."	The note has been added to Volume 4A - Revised Reclamation Plan rolled plan set, cover sheet A-0.

31. Note on Plans: "Notwithstanding the minimum standards set forth in the Grading Ordinance and not withstanding the approval of these grading plans, the permittee is responsible for the prevention of damage to the adjacent properties. There shall be no excavation so close to the property line so as to endanger any adjoining public street, sidewalk, alley, function of any sewage disposal system, or any other public or private property without taking the appropriate measures to prevent damage to same. The operator is responsible for the correction of non-dedicated improvements which damage adjacent properties. "	The note has been added to Volume 4A - Revised Reclamation Plan rolled plan set, cover sheet A-0.
32. Note on Plans: "Excavation: _____Yds.3 Fill:_____Yds.3 Waste/Import:_____Yds.3"	The note has been added to Volume 4A - Revised Reclamation Plan rolled plan set, sheet C-0.

DPLU Account Number: CP 04-0034149
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Attachment E - Reclamation Plan Conditions

Comment	Response
1. Conditions 2 through 17, below, are intended to implement the minimum requirements of the State of California Surface Mining and Reclamation Act of 1975 (SMARA), as well as local requirements. Should conflict arise between the provisions of these conditions and the minimum requirements of SMARA, the SMARA requirements shall take precedence.	Understood.
2. No work shall be conducted pursuant to the Reclamation Plan, site plans, and specifications for the grading of the property until plans have been prepared, and/or approved, and signed by a registered civil engineer, and shall include all information required in County of San Diego Regulatory Ordinances Section 87.208(b) and any other information required by the Director of the Department of Planning and Land Use.	So noted. See Volume 4A - Revised Reclamation Plan text Section 10.0
3. The Reclamation Plan shall, in addition to all other requirements, provide in designated phases for the progressive rehabilitation of the mining site land form so that, when reclamation is complete, it shall contain stable slopes, be readily adaptable for alternate land uses, and be free of derelict machinery, waste materials and scrap to the satisfaction of the Director of the Department of Planning and Land Use. The proposed mining site	So noted. See Volume 4A - Revised Reclamation Plan text Section 10.0

land form, to the extent reasonable and practical, shall be revegetated for soil stabilization, free of drainage problems, coordinated with present and anticipated future land use, and compatible with the topography and general environment of surrounding property.	
4. Where any requirement of the reclamation plan conflicts with any requirement of an approved Major Use Permit, the Director of the Department of Planning and Land Use shall determine which requirement shall apply.	Not Applicable. Lakeside's River Park Conservancy is not applying for a Major Use Permit as they are not proposing to conduct mining activity.
5. Pursuant to County of San Diego Regulatory Ordinances Section 87.707, no reclamation shall be conducted pursuant to an approved Reclamation Plan unless prior to commencement an Agreement [see attachment] has been entered into allowing the County to enter the property to correct any landscaping or irrigation system deficiencies, any unsafe condition, or breach of provisions of the approved Reclamation Plan.	See Volume 4A - Revised Reclamation Plan, Attachment 4 - Right of Entry Agreement.
6. The Agreement shall authorize the County or any person authorized by the County to enter the property at a mutually agreeable time and after having given the mining operator or permittee a minimum 24 hour notice to perform an annual inspection, as mandated by the State, or follow-up inspections as	See Volume 4A - Revised Reclamation Plan, Attachment 4 - Right of Entry Agreement.

a result of the annual inspection. The Agreement shall also authorize the County or any person authorized by the County to enter the property at any reasonable times to investigate any suspected violation of any condition of the Reclamation Plan and/or for emergency abatement of hazardous conditions. Said Agreement shall be executed by the permittee, the owner of the property and by holders of any lien upon the property that could ripen into a fee. The permittee shall provide acceptable evidence of title showing all existing legal and equitable interest in the property. The Director of the Department of Planning and Land Use will execute and accept the Agreement on behalf of the County of San Diego. The Agreement shall be recorded before any work is performed in use and reliance upon the Reclamation Plan.	

7. The estimated costs of reclamation shall be secured by financial assurance, in an amount as specified below in Conditions 8 and 9, to assure compliance with the Reclamation Plan. The assurance shall be made payable to the Director of the Department of Planning and Land Use and the California Department of Conservation and may take the form of surety bonds, irrevocable letters of credit, trust funds, or other forms of financial assurance adopted by the State Mining and Geology Board, which the County reasonably determines shall be readily available to pay for reclamation in accordance with the surface mining operation's approved Reclamation Plan.	So noted. The general contractor for this project will be required to provide financial assurances in the form of an irrevocable completion bond. See Volume 4A - Revised Reclamation Plan text Section 10.0 for further detail.
8. The financial assurance shall be in an amount equal to the estimated cost to reclaim, in accordance with the requirements of the approved Reclamation Plan, all disturbed, unreclaimed lands and all acreage expected to be disturbed in the forthcoming year. The operator or permittee shall provide an estimate of the cost of reclamation prepared by a state-registered civil engineer. All financial assurances shall be forwarded to the California Department of Conservation for review a minimum of 45 days prior to County approval. The County shall review and approve the financial assurance estimates if they are deemed sufficient. The estimate shall be submitted not later than 120 days after the granting of the Reclamation Plan and by July 1st of each year thereafter. If the operator or permittee does not	So noted. See Volume 4A - Revised Reclamation Plan text Section 10.0

submit this estimate by the required deadline, the County will calculate an estimate of assurance. The staff time spent calculating this estimate will be charged against the inspection deposit, required below in Condition 14. The financial assurance shall be provided to the County within 60 days of notification of the Director of the Department of Planning and Land Use's approval of the financial assurance amount.	
9. The financial assurance amount shall be adjusted annually to account for new lands disturbed or expected to be disturbed in the forthcoming year by the reclamation of lands accomplished in accordance with the approved Reclamation Plan. In no event shall the amount of assurance required be construed as a limitation on the liability of the permittee.	So noted. See Volume 4A - Revised Reclamation Plan text Section 10.0
10. The permittee and the surety executing such bond or person issuing such instrument of credit or making such cash deposit shall continue to be firmly bound under a continuing obligation for the payment of all necessary costs and expenses that may be incurred or expended by the County in causing any and all such work to be done. Financial assurances shall no longer be required of an operator or permittee, and shall be released, upon written notification by the County, which shall be forwarded to the operator and the State Department of Mining and Geology, that reclamation has been completed in accordance with the approved Reclamation Plan. In the case of a cash deposit, any unused portion thereof shall be refunded to the permittee.	So noted. See Volume 4A - Revised Reclamation Plan text Section 10.0

11. The County shall be notified no less than 180 days prior to cancellation of any financial assurance. The County may seek the forfeiture of such financial assurance if new assurance is not posted at least 30 days prior to the expiration of the financial assurance.	So noted. See Volume 4A - Revised Reclamation Plan text Section 10.0
12. If the site property is sold or ownership is transferred to another person or entity, the existing financial assurances shall remain in force and shall not be released by the County until new financial assurances are secured from the new owner and have been approved by the County.	So noted. See Volume 4A - Revised Reclamation Plan text Section 10.0
13. The operator or permittee shall file a copy of the operation's annual report with the State pursuant to Public Resources Code Section 2207.	So noted. See Volume 4A - Revised Reclamation Plan text Section 10.0
14. The operator or permittee shall fund an annual inspection deposit account with the Department of Planning and Land Use and the department of Public Works. The initial amount of the deposit shall be $3000.00, as established by the Board of Supervisors ($1000 allocated for use by the Department of Public Works' inspections and $2000 allocated for the Department of Planning and Land Use's inspections). Thereafter, the Director of the respective Department will determine the amount of the deposit based on the cost to inspect the surface mining operation. The Director of the Department of	So noted. See Volume 4A - Revised Reclamation Plan text Section 10.0

Planning and Land Use, or other assigned County agency (i.e., Revenue and Recovery), shall notify the mining operator of the amount of the required deposit. The amount of the deposit required shall not be construed as a limitation on the liability of the operator or permittee.	
15. If, after inspecting the mining operation, the County determines that it does not comply with the Reclamation Plan, the County will notify the operator in writing of the non-compliance. The County shall give the operator a reasonable time, not to exceed 180 days, to comply. If at the end of this time the operation still does not comply with the Reclamation Plan, the County may require the mining operator to stop all or a part of the work. Failure to comply with the Reclamation Plan shall be considered a violation of the Zoning Ordinance and, in accordance with the County of San Diego Regulatory Ordinances Section 87.106, shall be deemed unlawful and a public nuisance. The County's finding of non-compliance with the Reclamation Plan may be appealed pursuant to Zoning Ordinance Sections 7200-7205.	So noted. See Volume 4A - Revised Reclamation Plan text Section 10.0

16. If the reclamation operation or portion of the operation subject to these conditions is sold, assigned, conveyed, exchanged, or otherwise transferred, the successor in interest shall be bound by the provisions of the Reclamation Plan. Notification of such sale, assignment, conveyance, exchange, or transfer shall be provided to the Director of the Department of Planning and Land Use within 30 days of such.	So noted. See Volume 4A - Revised Reclamation Plan text Section 10.0
17. Neither the issuance of a Reclamation Plan, nor the compliance with any provisions or condition thereof, shall relieve any person from any liability or responsibility resulting from grading operations.	So noted. See Volume 4A - Revised Reclamation Plan text Section 10.0
Additionally, I was provided two binders with documents enclosed, labeled: *Volume 4A Reclamation Plan Application* and *Volume 4D Grading permit Application.* The issuance of a RP eliminates the need for a grading permit. Is the applicant clear as to which permit they desire. The provided documents should make it clear: grading or reclamation; one or the other.	Lakeside's River Park Conservancy is submitting a Reclamation Plan and not a Grading Permit Application. See Volume 4A - Revised Reclamation Plan/Plot Plan.
The RP permit application documentation should include the following:	

1. A discussion of verifiable, site-specific standards for reclamation, including, but not limited to: performance standards for wildlife habitat; performance standards for regrading, slope stabilization, and recontouring; performance standards for backfilling; performance standards for revegetation; performance standards for drainage, waterways and erosion control; performance standards for stream and groundwater protection; and performance standards for tailings and mine waste management.	Volume 4A - Revised Reclamation Plan text details standards for: • wildlife habitat; • regrading, slope stabilization, and recontouring; • backfilling; • revegetation; • drainage, waterways and erosion control; • stream and groundwater protection; and • tailings and mine waste management. Additional detail on the proposed standards for this project are included in: Volume 1 - United States Army Corps of Engineers Preconstruction Notification (PCN) for a Nationwide Permit 27 for the Lakeside's River Park Conservancy's Flood Control, Habitat Restoration, and Recharge Project, Lakeside, San Diego County, California; and Volume 3 - NPDES Application, Notice of Intent, and Storm Water Pollution Prevention Plan for Lakeside's River Park Conservancy's Flood Control, Habitat Restoration, and Recharge Project, Lakeside, San Diego County, California.
2. A brief discussion of why the reclamation accomplished by RP84-004 M1 was not considered adequate, relative to the above stated standards.	See Volume 4A - Revised Reclamation Plan text Section 1.2

3. and a brief discussion of how this proposed project meets or exceeds these standards.	See Volume 4A - Revised Reclamation Plan text Section 1.2

APPENDIX C
Revised Reclamation Plan Text

Volume 4A
REVISED RECLAMATION PLAN

FLOOD CONTROL, HABITAT RESTORATION, AND RECHARGE PROJECT
LAKESIDE, SAN DIEGO COUNTY, CALIFORNIA

Prepared for

LAKESIDE'S RIVER PARK CONSERVANCY
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Mr. Patrick Ty Whitaker

Urban Corps of San Diego
Ms. Susanne Millman

April 2005

"Funding for this project has been provided in full or in part through an Agreement with the State Water Resources Control Board ("SWRCB") pursuant to the Costa-Machado Water Act of 2000 (Proposition 13) and any amendments thereto for the implementation of California's Nonpoint Source Pollution Control Program. The contents of this document do not necessarily reflect the views or policies of the SWRCB, nor does the mention of trade names or commercial products constitute endorsement or recommendation for use."

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This report should be cited as: Huffman and Carpenter, Inc. 2005. Reclamation Plan for the Flood Control, Habitat Restoration, and Recharge Project, Lakeside, San Diego County, California, April 2005, Reno, Nevada. 70 pages with attachments.

1.0 PROJECT DESCRIPTION

1.1 Applicant

Lakeside's River Park Conservancy (formerly San Diego River Park - Lakeside Conservancy)
11769 Waterhill Road
Lakeside, CA 92040
Telephone: 619-443-4770

1.2 Introduction

The purpose of this Reclamation Plan (RP04-005) is to develop an end use for the project site that is consistent with the RiverWay Specific Plan, the USDRIP Redevelopment Plan, and SMARA requirements. RP84-004W1 which was finalized by Calmat on the site, left the land in an "end use as that of a stabilized landform with erosion control measures in place." RP84-004W1 planned to allow "for transformation of the river channel by others to the ultimate RiverWay Specific Plan landform at some later date." This Reclamation Plan, RP04-005 describes how the land will be reclaimed to an end use that not only meets SMARA requirements, but also conforms with the goals of the Riverway Specific Plan and the USDRIP Redevelopment Plan. Through this plan, Lakeside's River Park Conservancy (LRPC) proposes to improve the end land use beyond the land use that was left in place by RP84-004W1. This improved land use would be accomplished through the enhancement of on-site habitat, improvement of flood control, and improved water quality on the site. The proposed end use would encourage: recreational activity by the community; wildlife habitat; and recharge through wetlands created on the site.

The LRPC is applying to various Federal, State and local agencies to conduct a flood control, habitat restoration, and recharge project (FHR). The overall project purposes/objectives are to improve:

- flood control attenuation;
- water quality functions;
- habitat restoration; and
- recharge treated groundwater.

The proposed restoration project design will maximize restoration of flood control attenuation, habitat, water quality and groundwater recharge of the Lower San Diego River system in Lakeside, San Diego County, California. Approximately 491,700 cubic yards of material will be excavated; 137,600 cubic yards will be utilized on-site, and approximately 354,100 cubic yards will be transported to an off-site location.

Excavation Quantities (cubic yards)	
Total Excavation	**491,700**

Excavation of Fill	491,700
Fill Ponds to 2.0 Feet to 3.5 Feet below Surface Water	132,100
Fill for RIB & Constructed Wetland	5,500
Excess Material to Be Disposed Off-site	**354,100**

Two constructed wetland systems are being designated for use at the project site; (1) a Recharge Project Constructed Wetland and (2) Urban Non-Point Source Water Quality Improvement Basins. The Recharge Project Constructed Wetland has been designed for nitrogen removal from pumped Riverview Water District groundwater and is located near the Riverview Water District well field. The Urban Non-Point Source Water Quality Improvement Basins have been designed for water quality improvement and will be constructed near the Los Coches Creek discharge point to the Lower San Diego River to treat urban non-point source runoff.

Objectives for habitat restoration include enhancing current seasonal wetland and upland areas. Both wetland and uplands areas will be planted with native species suitable to attract least Bell's vireo (*Vireo bellii pusillus*) a riparian wetland species and the coastal California gnatcatcher (*Polioptila californica californica*) an upland species. The proposed river system restoration project is designed as a minimal human contact area. Public education will take place outside of the project area, with the exception of an interpretive trail on the north side of the project area.

1.3 Location

The project is located 0.6 miles northwest of Lakeside, California, within portions of Sections 13, 23, and 24, Township 15 South, Range 01 West, and in a portion of Section 18, Township 15 South, Range 01 East (Attachment 1, Figures 1a and 1b). The project site can be found on the U.S. Geological Survey El Cajon 7.5-minute quadrangle map. The project is situated on abandoned sand and gravel tailings and much of the site is within the Lower San Diego River Channel. Elevations on the project property range from approximately 350 feet to 400 feet above mean sea level.

The project site is located within the Santee Hydrologic Sub-Area (Hydrologic Unit Basin Number 7.12) of the Lower San Diego Hydrologic Area (Hydrologic Unit Basin Number 7.10), which is located within the San Diego River Hydrologic Unit (Hydrologic Unit Basin Number 7). The San Diego Hydrologic Unit contains approximately 440 square miles drained by the San Diego River. The El Capitan, San Vicente, Cuyamaca, Jennings, and Murray reservoirs are the major storage facilities. The San Diego Hydrologic Unit is comprised of the Lower San Diego, San Vicente, El Capitan and Boulder Creek Hydrologic Areas. Los Coches Creek also discharges to the project site. The Hydrologic Unit delineation has been developed by the San Diego Regional Water Quality Control Board (SDRWQCB) in the Water Quality Control Plan Report (Basin Plan) for the San Diego Region (San Diego RWQCB, 1994).

1.4 Organization

The organization of the Lakeside's River Park Conservancy Flood Control, Habitat Restoration and Recharge Project Application is contained in five volumes as described below:

1. Volume 1 - United States Army Corps of Engineers Preconstruction Notification (PCN) for a Nationwide Permit 27 for the Lakeside's River Park Conservancy's Flood Control, Habitat Restoration, and Recharge Project, Lakeside, San Diego County, California;
2. Volume 2 - Restoration Plan and Feasibility Report for the Flood Control, Habitat Restoration, and Recharge Project for the Lakeside's River Park Conservancy, Lakeside, San Diego County, California;
3. Volume 3 - NPDES Application, Notice of Intent, and Storm Water Pollution Prevention Plan for Lakeside's River Park Conservancy's Flood Control, Habitat Restoration, and Recharge Project, Lakeside, San Diego County, California;
4. Volume 4a - Reclamation Plan for the Flood Control, Habitat Restoration, and Recharge Project, San Diego County, California;
5. Volume 4b - California Environmental Quality Act Documentation for the Flood Control, Habitat Restoration, and Recharge Project, San Diego County, California;
6. Volume 4c - Reserved;
7. Volume 4d - Grading Permit Application for the Flood Control, Habitat Restoration, and Recharge Project, San Diego County, California;
8. Volume 4e - Revegetation Plan for the Flood Control, Habitat Restoration, and Recharge Project, San Diego County, California;
9. Volume 4f - Federal Emergency Management Agency Documentation for the Flood Control, Habitat Restoration, and Recharge Project, San Diego County, California;
10. Volume 4g - Storm Water Management Plan for the Flood Control, Habitat Restoration, and Recharge Project, San Diego County, California; and
11. Volume 5 - Restoration Project Constructed Wetland for the Flood Control, Habitat Restoration, and Recharge Project, San Diego County, California.

1.5 Project Components

The following paragraphs describe specific details of the FHR project components, starting at the upstream (easterly) boundary and continuing to the downstream (westerly) boundary:

A large channel constriction would be removed that presently blocks flood flows near Channel Road. The channel constriction is composed of imported fill sands and gravels. The area would be restored to a natural ephemeral channel similar to the surrounding Lower San Diego River channel. Proper bed and bank protection would be employed to safeguard surrounding properties within and near the constriction area. The large channel constriction contains approximately, 90,000 cubic yards of material. Work would be conducted from the upland side of the river channel. This project component would meet flow control attenuation objectives.

Selective vegetation and trash removal may take place in the natural river channel (depending on the project budget). Work would be done with machinery and conducted out of the bird-nesting season. This project component would meet the flood control attenuation and habitat restoration objectives.

Adjacent to the river channel an existing abandoned floodplain upland terrace would be planted with native vegetation consisting of a Coastal Sage Scrub community, along with an Urban Forest/Riparian plant community composed of willows and trees. Work would be done with machinery and conducted out of the bird-nesting season. This project component would meet the habitat restoration objective.

Adjacent to the river channel, existing denuded upland areas would be converted to native vegetation consisting of a Coastal Sage Scrub community. Work would be done with machinery and conducted out of the bird-nesting season. This project component would meet the habitat restoration objective.

Adjacent to Los Coches Creek, a group of Urban Non-Point Source Water Quality Improvement basins would be constructed. The Urban Non-Point Source Water Quality Improvement basins have been located near the existing Los Coches Creek outfall structure. Due to project budgetary constraints the Los Coches Creek outfall structure could not be redesigned to meet the proposed grade of the adjacent seasonal wetland complex because the grade differences are approximately 20 feet to 25 feet in height and an excavation of this size would create a waterfall. Therefore, it was decided to maintain the existing structure and to provide water quality improvement by detaining and treating non-point source flows from Los Coches Creek.

This project component would meet the flood control attenuation and water quality function objectives.

491,700 cubic yards of imported fill material would be removed from the historic floodplain utilizing machinery. Approximately 132,100 cubic yards of fill material would be utilized to restore two existing gravel/sand pits; approximately 354,100 cubic yards of excess material would be hauled off-site. The area of fill removal would be transformed into a seasonal wetland to attract the least Bell's vireo (*Vireo bellii pusillus*). This project component would meet the flood control attenuation and habitat restoration objectives.

The gravel/sand pits would be filled utilizing machinery to restore floodplain and sediment transport functions. Filling the gravel/sand pits would reduce flow velocities, which would tend to reduce adverse sediment transport downstream. Sediment transport through the project area is virtually non-existent because of the gravel/sand pits within the river channel area. These lake pits act as sediment detention basins during large flood events and actually adversely affect sediment transport as flood waters leave the site in a sediment-starved condition. These gravel/sand pits are not a 'natural feature' for an ephemeral river system. Restoration objectives include a perennial marsh wetland created to mimic oxbow marshes. This project component would meet the habitat restoration and water quality objective.

Selective removal of exotic non-native vegetation and trash removal may take place in the natural river channel and adjacent upland channels by utilizing machinery. This project component would meet the habitat restoration objective as the area would then be suitable to attract the least Bell's vireo (*Vireo bellii pusillus*).

The Recharge Project Constructed Wetland would be built within the imported fill material tailings pile above the 100-year floodplain elevation. The Recharge Project Constructed Wetland is designed in a six-acre area with five wetland cells and a dedicated Rapid Infiltration Basin (RIB). The Recharge Project Constructed Wetland can accommodate the maximum pumping rates from the Riverview Water District well field (400 gallons per minute per day). Preliminary design models estimate an 80% nitrogen removal rate (from a mean total nitrogen concentration of 60 mg/l to 10 mg/l). Final design is being conducted. The design goal is to treat pumped groundwater (from a deeper aquifer that is more highly concentrated in total nitrogen) and recharge it through the RIB into the Riverview Water District well field. The source of nitrogen contamination is poorly understood. Future work may help to isolate the nitrogen source and local communities may then be able to reduce the future nitrogen load to groundwater. This project could help to reduce expensive blending or discharge to sewer outfalls. This project component would meet the water quality function and groundwater recharge objective.

A bioswale/water quality BMP would be constructed below the outfall of State Route 67. Surface flow from the roadside ditch would be diverted to a bioswale for treatment along the flow path prior to discharge into the restored perennial marsh (created oxbow wetlands). This project component would meet the water quality objective.

An Educational Interpretative Nature Trail (EINT) is planned for the north side of the Lower San Diego River. This project component would meet the habitat restoration objective.

An Urban Forest interface is planned on the south side of the project, along State Route 67. This area would serve as an upland buffer and would be planted with trees, utilizing machinery. This project would meet the habitat restoration objective.

1.6 Corps of Engineers Jurisdictional Areas to be Filled by Habitat Type

The abandoned gravel/sand pits (open water) would be partially filled to create perennial marsh habitat suitable for Federal and State listed wildlife species as well as non listed species. Mechanized land clearing would be used to remove exotic non-native vegetation from current wetland areas as well as upland areas. These areas would be cleared of debris and sediment and prepared for replanting with native species, but would not be filled. In addition, minor fill would be placed for a diversion structure(s) in the invert of the Los Coches Creek outfall and for bank protection along the north bank at the channel constriction.

A wetland delineation was conducted for the project by H&C between September 2004 and November 2004. The results of this investigation indicate that there are a total of 21.46 acres of WOUS/wetlands subject to Corps jurisdiction present on LRPC's property. There are 1.46 acres of

WOUS/wetlands, 10.13 acres located below the ordinary high water mark, 0.18 acres of WOUS/wetlands for Los Coches Creek, and 9.69 acres of open water, for a total of 21.46 acres of WOUS/wetlands subject to Corps jurisdiction.

Investigation Results - Proposed Areas Subject to Corps Jurisdiction	
Description	**Acreage**
Los Coches Creek	0.18
Open Water (OW)	9.69
Wetland (WL)	1.46
Ordinary High Water Mark	10.13
Total	**21.46**

1.7 Types, Functions, and Values of the Jurisdictional Areas to be Directly and Indirectly Impacted

The open water abandoned gravel/sand pits currently provide habitat for warm water fish such as catfish, bass, and carp. However, there is no flow or circulation through the gravel/sand pits except during extreme high flow events, so water quality may be limiting. The pits may also provide some resting and 'loafing' habitat for waterfowl and wading birds, but nesting habitat is minimal due to the lack of islands and quality pond shore habitat (dense understory vegetation). The functions and values of the pits would be enhanced by creating persistent emergent marsh habitat as well as leaving a portion as open water habitat, thus attracting waterfowl, wading birds, shorebirds, and songbird species.

The existing willow/shrub wetlands would be enhanced by removing exotic invasive vegetation and replacing them with native willows and other native vegetation.

1.8 Existing Baseline Conditions

The following sections describe the existing baseline conditions within the project area (Attachment 1, Figure 2a). The information in Section 1.8 was summarized from the Initial Study for CEQA (Volume 4b, California Environmental Quality Act Documentation). Volume 1, United States Army Corps of Engineers Preconstruction Notification (PCN) for a Nationwide Permit 27, Volume 2, Restoration Plan and Feasibility Report, and Volume 3, NPDES Application, Notice of Intent, and Storm Water Pollution Prevention Plan, were finalized before the CEQA documents were completed. More detailed information can be found within Volume 4b; Volume 4b should be relied on if discrepancies exist between the information found within Section 1.8 and Volume 4b.

1.8.1 Aesthetic

On September 1, 2004 an initial study was conducted to investigate the visual aesthetic conditions at the project site. The existing visual character or quality of the site and its surroundings were determined in the representative photographs prepared by Huffman & Carpenter, Inc. (H&C)

(Attachment 3).

The existing visual character and quality of the redevelopment area in general (inclusive of the proposed project site) is described in the Program EIR as predominantly developed with industrial uses dominated by mining activities conducted along the river. "Because most of the area within the river valley is being mined for sand and gravel, the scenic quality along most of the river is poor."

1.8.2 Biological

The project site has low-quality and fragmented upland, wetland, and open water habitat due to disturbance of the area for mining and industrial use. The site has been heavily disturbed largely due to past mining operations and, as a result, the function, value and quality of the riparian and upland habitat areas have been substantially degraded. This has in turn significantly reduced plant and animal species abundance and diversity from historical numbers and has allowed invasive vegetation species to flourish.

1.8.2.1 Wetland Delineation

A wetland delineation was conducted for the project by H&C between September 2004 and November 2004. The results of this investigation indicate that there are a total of 21.46 acres of WOUS/wetlands subject to Corps jurisdiction present on LRPC's property. There are 1.46 acres of WOUS/wetlands, 10.13 acres located below the ordinary high water mark, 0.18 acres of WOUS/wetlands for Los Coches Creek, and 9.69 acres of open water, for a total of 21.46 acres of WOUS/wetlands subject to Corps jurisdiction.

Investigation Results - Proposed Areas Subject to Corps Jurisdiction	
Description	**Acreage**
Los Coches Creek	0.18
Open Water (OW)	9.69
Wetland (WL)	1.46
Ordinary High Water Mark	10.13
Total	**21.46**

1.8.2.2 Vegetation Surveys

H&C conducted a project site field assessment on September 1, 2004. Plant species within four representative plots/transects as well as a total species composition were recorded (Attachment 1, Figure 3i). Vegetation types were found to be varied, but typical of arid regions of the southwestern United States.

Plant communities found on the project site are characterized as a mix of upland and riparian vegetation. Limited wetlands are present on the project site near and/or along portions of theSan

Diego River. Large areas of invasive and non-native species have been identified on the project site. In addition, a few large ornamental trees are grouped throughout the project site. The findings from this study can be found in the representative species list (included in Attachment 2, Table 2).

Additionally, the National Wetlands Inventory (NWI) maps were obtained from the U.S. Fish and Wildlife Service (USFWS) (Attachment 1, Figure 3a).

1.8.3 Cultural

The proposed site has been heavily disturbed by historic sand mining operations. As such, archeological or historical resources are not thought to be present. No significant cultural resources have been observed during on-site field investigations at the proposed site, and a cursory review of the California Historic Resources Information System (CHRIS) has not yielded evidence that cultural resources have been observed, collected, or recorded.

Properties of historical importance in California are currently designated as significant resources in three state registration programs: State Historical Landmarks, Points of Historical Interest, and the California Register of Historical Places. The project site is not included in the properties of historical importance for the state of California State Historical Landmarks in San Diego County.[1]

Finally, the Cultural Resource Analysis prepared for the USDRIP Redevelopment Plan by Brian F. Mooney Associates, acknowledged that "the effects of current land uses also have a considerable bearing on the potential for archaeological site occurrence..." and that "...extensive subsurface disturbances such as sand mining effectively negate the potential for archaeological resources whatsoever and are relevant for floodplain and interface zone."

1.8.4 Geology

The RiverWay Specific Plan Amendment and the revised Final USDRIP Programmatic EIR identify the potential for settlement hazards associated with development in alluvial areas. The potential for liquefaction exists wherever unconsolidated soils overlay groundwater during seismic activity.[2]

Approximately 416,700 cubic yards of fill soils, designed for use as industrial building pads, would be excavated from the site as part of the proposed project, triggering the need for an approved County of San Diego Grading Permit (Volume 4d, Grading Permit Application). In addition, much of the site would be recontoured with varying topography and then planted with native, slope-stabilizing vegetation which would lessen erosion and/or landslide potential at the proposed site. See also Attachment 1, Figure 3b for current geologic conditions.

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[1] Refer to http://ceres.ca.gov/geo_area/counties/San_Diego/landmarks.html for a list of California Sate Historical Landmarks in San Diego County.

[2] Information on the USGS California Geological Survey Probabilistic Seismic Hazards Mapping Ground Motion may be found at http://www.consrv.ca.gov/CGS/rghm/pshamap/pshamap.asp

1.8.5 Mineral

Extensive sand mining has historically occurred along the San Diego River in Lakeside, and was at one time considered a locally important resource (Attachment 1, Figure 3c). Hanson Aggregates, Lakeside Land, and Vulcan are existing operations currently surface mining in the vicinity of the proposed project site, but they are expected to complete reclamation work in this area within the next four years.

Since the proposed site has been severely disturbed by historic mining operations, resources there are now depleted. As such, the County of San Diego Department of Planning and Land Use staff, has required preparation of a reclamation plan to repair site conditions pursuant to the California Surface Mining and Reclamation Act of 1975 (SMARA). A reclamation plan was conducted for the project site by Calmat in 1998.

1.8.6 Hydrology

The three sources of water which naturally serve the project site are direct precipitation, groundwater, and surface water which is obtained through the Los Coches Creek discharge. There is, however, no regular surface water flow from the San Diego River through the project site at this time. See Attachment 1, Figure 3d for current hydrology throughout the entire San Diego River watershed. See Section 4.0 below for more information.

Hydrologic investigations conclude:

- *One- and Two-Year Flows*

Review of available data and local knowledge indicates that there is no annual flow regime below the San Vicente and El Capitan Reservoirs. The 2-year design flow would be extrapolated from the published FEMA flow rates.

Area flows are limited to non-point source urban runoff. It is beyond the scope of the project to make flow determinations based on non-point source urban storm runoff. There are two existing studies that have been adopted and would be used to establish river flows: The FEMA *Flood Insurance Study* and the Department of Water Resources *Upper San Diego River Flood Control Investigation.*

In summary, there is no mean annual flow in the San Diego River that can be used for the channel forming (thalweg) flow event because of the ephemeral nature of watercourses in San Diego County, and because the San Vicente and El Capitan reservoirs preclude low flow releases. Therefore, the River Team would utilize a low-flow value determined from FEMA flow rates for channel-forming flows.

- *Constraints Imposed by the San Jacinto-San Vicente Aqueduct*

The San Diego County Water Authority's aqueduct is aligned in a north-south direction and crosses the San Diego River within the easterly portion of the project. The cover over the aqueduct, based on the San Diego County Water Authority's design plans, is as little as approximately 4 feet.

This shallow depth of cover precludes deep excavations within the river channel just upstream and downstream of the crossing. Minor grading can be allowed as determined by the hydraulic analysis currently being conducted.

- *Los Coches Creek*

Los Coches Creek has a 100-year flow rate of 3,500 cfs. An estimate of the 2-year return flow is less than 1,000 cfs. The River Team is currently reviewing and designing a constructed wetland for water quality improvement at this location. Current information indicates the channel bottom near the outfall (which is a rectangular concrete channel) into the San Diego River is approximately 20 feet below the adjacent ground elevation.

1.8.7 Geomorphological

Historical aerial photos depict the geomorphological conditions of the project site (Attachment 1, Figures 4b, 4c, and 4d). Figure 4b is an aerial photograph of the project area as it appears in 1928, while Figure 4c is an aerial photograph of the project area as it appears in 1978 and Figure 4d is a current aerial photograph taken in 2002. See Section 4.3 below for more information.

A bathymetric survey was conducted on November 04, 2004 to determine the contour of the bottom surface of the abandoned gravel/sand pits, as well as the volume of the pits. The contours of the pits are depicted in Attachment 1, Figures 3q and 3r. The volume of the western pit (Pond 1) has been calculated at 60,173 cubic yards, while the volume of the eastern pit (Pond 2) has been calculated at 98,516 cubic yards, for a total of 158,689 cubic yards.

1.8.8 Agricultural

The site is not currently used for agricultural operations. According to the State of California Department of Conservation, Division of Land Resources Protection Farmland mapping and monitoring program (2002), the project area is identified as urban built-up land and other land, refer to Attachment 1, Figure 3f. For further existing information, refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Department of Conservation as an optional model to use in assessing impacts on agriculture and farmland.[3]

1.8.9 Soils and Subsurface Soils Investigation

[3] http://www.consrv.ca.gov/DLRP/fmmp/overview/survey_area_map.htm.

The soils at the project site have been mapped by the Department of Agriculture, Natural Resource Conservation Service (NRCS, formerly known as the Soil Conservation Service), and are available in the San Diego County Soil Survey (USDA, 1983)(Attachment 1, Figure 3g). Relevant pages from the Soil Survey of San Diego County can be found in Volume 1, United States Army Corps of Engineers Preconstruction Notification (PCN) for a Nationwide Permit 27, Attachment 5, Appendix 3. There are three NRCS soils types found on the project site: Rm Riverwash and TuB Tununga sand at 0 to 5 percent slopes; and VaAA Visalia sandy loam at 0 to 2 percent slopes (Volume 1, United States Army Corps of Engineers Preconstruction Notification (PCN) for a Nationwide Permit 27, Attachment 5, Appendix 1, Figure 4 (NRCS Soils Map)).

Historical aerial photos depict the geomorphological conditions of the project site (Attachment 1, Figures 4b, 4c, and 4d). Figure 4b is an aerial photograph of the project area as it appears in 1928, while Figure 4c is an aerial photograph of the project area as it appears in 1978 and Figure 4d is a current aerial photograph taken in 2002. See section 4.3 below for more information.

A bathymetric survey was conducted on November 4, 2004 to determine the contour of the bottom surface of the abandoned gravel/sand pits, as well as the volume of the pits. The contours of the pits are depicted in Attachment 1, Figures 3q and 3r. The volume of the western pit (Pond 1) has been calculated at 60, 173 cubic yards, while the volume of the eastern pit (Pond 2) has been calculated at 98,516 cubic yards, for a total of 158,689 cubic yards.

1.8.10 Fish and Wildlife Habitat Loss or Eradication

The project site has low-quality upland, wetland and open water habitat due to disturbance of the area for mining and industrial use. From past industrial use, two abandoned gravel/sand pits were left on-site, totalling approximately 158,689 cubic yards, as well as fill material left on-site. Due to the low quality habitat, plant and animal species abundance and diversity is limited. Invasive vegetation have also been found throughout the project area. See Section 1.6.2, 1.6.11, and 1.6.12 for a thorough assessment of habitat loss and/or disturbance.

1.8.11 Vegetation and Exotic Species

Habitat assessments were conducted on September 01, 2004 and September 29, 2004 which identified various habitat types and identified vegetation species. The September 01, 2004 habitat assessment identified vegetation species within three selected representative plots/transects(Section 1.6.2). The September 29, 2004 assessment identified vegetation communities throughout the project site. There were five vegetation communities identified during this assessment. The communities are summarized below:

- Broad-leaved cattail (*Typha latifolia*);
- Dense canopy with invasive dominant understory or no understory;
- Understory with no canopy cover;
- Open fill or upland shrub; and
- Native dominant understory with native canopy.

1.8.12 Threatened and Endangered Species

Federal and State listed species are not known to occur in the project area. The following describes threatened and endangered species found on-site.

1.8.12.1 Flora

There have been no State or Federally listed threatened, endangered, or species of concern observed or encountered in the project area.

1.8.12.2 Fauna

Presently no surveys indicate that California species of concern or Federally threatened or endangered species exist at the project site.

1.8.13 Hazards and Hazardous Materials

Greater than two million cubic yards of fill soil is located within the project site. LRPC's investigations and discussion with the County of San Diego, Department of Environmental Health, Hazardous Materials Division did not yield evidence of hazardous soil contaminants within the project site.

The presence of encampments of persons on the property illegally presents risks. As a result of activities by such persons at the encampments or elsewhere on the property, there is a risk of fire. In addition, there are health and safety risks to members of the public on the site lawfully, such as may result from exposure to trash, refuse, confrontation, and/or hazardous substances. Water quality, open water used for swimming and fishing, flood potential, and unknown hazards that may exist on the property, either naturally occurring or left over from past industrial uses, present risks of illness, drowning, and injury to persons on the property illegally.

1.8.14 Recreation

The project site is currently closed to the public and offers no recreational use for the public. However, the public does gain access to the property through illegal trespassing.

1.8.15 Land Use

The project site is extensively disturbed and undeveloped. It is bounded by State Highway 67 on the south and Channel Road on the east (Attachment 1, Figure 1b). The northern boundary of the site includes the 25-acre Hanson Aggregates concrete batch plant, the Willowbrook Country Club nine-hole golf course, and an undeveloped 30-acre site zoned for industrial development. Hanson Aggregates has announced plans to relocate its concrete batch plant and may donate the underlying land to LRPC. Hillside Meadows, a large subdivision with 97 homes, is planned for the open space

area at the northwestern end of the redevelopment area.

The project site is in the San Diego River floodplain and entirely within the redevelopment area described in the 1989 USDRIP Redevelopment Plan. The redevelopment area has long suffered from blight, underutilized land, and recurrent flooding. The County adopted the USDRIP Redevelopment Plan to encourage the rehabilitation, revitalization and development of the area. In part, and relevant to the proposed project, the USDRIP Redevelopment Plan seeks to install flood control and other required improvements in the San Diego River and to restore and develop the riparian habitat adjacent to the floodway.

The RiverWay Specific Plan, as amended (SP 90-003, SPA 00-002), was adopted to implement the goals and objectives of the USDRIP Redevelopment Plan and promulgated land use regulations, zoning, and development standards and guidelines to do so. The overall goals and objectives of the RiverWay Specific Plan, as amended, is the beneficial management of the Upper San Diego River floodplain. The RiverWay designated Special Area Regulation "W" and the S-88 Specific Plan Use Regulation as applicable to the USDRIP flood channel, land to be permanently reserved for conveyance of the 100-year flood and to be planned for natural habitat preservation, restoration, and management and to accommodate recreational access at a level compatible with its primary flood control and natural habitat purposes.

The Lakeside Community Plan, as amended, seeks to foster development while preserving a rural atmosphere and a sense of spaciousness. The plan contemplates the enhancement of the floodplains as an environmental, recreational, and economic asset to the community of Lakeside.

The County of San Diego General Plan, as amended, envisions the conservation of scarce natural resources and lands needed for vital natural processes and the managed production of resources. In the Conservation Element, the General Plan calls for the conservation of natural resources (Policy 1), the use of nonstructural flood protection methods for the conservation of the flood whenever possible (Policy16 'X-30'), the conservation of fisheries, vegetation and wildlife resources (Policy 1 'X-42'), coordination with appropriate federal, state and local agencies to conserve areas of rare, endangered, or threatened species (Policy 2 'X-43'), and flood control measures that whenever practical utilize natural floodways and floodplains and maintain riparian habitats and historic stream flow volumes (Policy 13 'X-49').

1.8.16 Population and Housing

The population for the Lakeside, California region is approximately 57,422 people (Attachment 2, Table 4). The people and the surrounding communities would benefit from the proposed restoration project, a river park (Attachment 2, Tables 3 and 5).

The proposed project would implement elements of the USDRIP Redevelopment Plan and the RiverWay Specific Plan Amendment pertaining to flood control and habitat restoration. The above plans have an objective to provide for residential, commercial, and industrial development compatible with adjacent land uses. For information on the profile of General Housing

Characteristics for Lakeside, California, refer to Attachment 2, Table 4.

1.8.17 Public Services

Implementation of the proposed project would allow both police and fire protection services to maintain their respective current levels of service. The proposed land use, a river park, does not include facilities, infrastructure, and/or other population inducing characteristics that would generate the demand for public services (Attachment 1, Figure 3n).

1.8.18 Utilities

Utilities now on, under, or over the project site include:

- San Vincente Aqueduct;
- Highway 67 culverts;
- Power lines,
- Riverview Water District wells; and
- Los Coches Creek box structures.

Refer to Attachment 1, Figure 3o for location of the aforementioned utilities.

1.8.19 Transportation/Traffic

There are six roads or highways in the community of Lakeside that surround the project site:

- Riverford Road;
- State Route 67;
- Winter Gardens Blvd.;
- Channel Road;
- Riverside Drive; and
- Industry Road.

A traffic intersection survey does exist for the intersections surrounding the project area. For the survey details, refer to Attachment 1, Figure 3p.

1.8.20 Air Quality

The proposed project lies within the San Diego Air Basin. National Ambient Air Quality Standards (NAAQS) have been established for carbon monoxide, ozone, sulfer dioxide, nitrogen dioxide, respirable particulate matter, and lead. EPA has determined that the County is in attainment for the one-hour PM 10 (particulate matter of 10 microns or less) NAAQS standard, though it is in non-attainment of the eight-hour PM 10 NAAQS. EPA has designated the County as "unclassifiable" for PM 10 attainment, but has promulgated new NAAQS for smaller particulates, namely PM 2.5 (particulate matter of 2.5 microns or less). In December 2004, EPA is expected to publish its

attainment/non-attainment designations for PM 2.5. County Air Pollution Control District PM 2.5 data, according to the District, appear to support a finding that the County is in attainment for the 24-hour PM 2.5 standard, but may be in non-attainment for the annual PM 2.5 standard. State standards for the these pollutants are more strict. State standards are administered in the County by the County of San Diego Air Pollution Control District (APCD). The has determined to be in non-attainment of the state standards for Ozone (O_3) and PM 10. Air quality is discussed in significant detail in the Program EIR at Section 6.1.2, page 6-9 et seq.

1.8.21 Noise

The existing noise environment in the area of the proposed project site is affected principally by traffic noise and by mining activities. Noise in the project area is regulated by the County of San Diego Noise Ordinance (Ordinance 6212, Noise Abatement and Control Section 3.401 et seq.), which establishes the noise level limit at the property line and for construction activities. Section 36.404 establishes sound level limits set forth below. However, construction noise level limits are governed by Section 36.410. Construction is not allowed on Sundays or on holidays designated by President, Governor, or Board of Supervisors. Construction is limited on the remaining days (Monday through Saturday) to between the hours of 7:00 am and 7:00 pm. Noise levels shall not exceed 75 decibels for more than eight hours during twenty-four hour day measured at the property line. The Program EIR provides additional detailed information concerning noise at Section 2.3, beginning at page 2.3-1.

Applicable Limit One-hour Average Sound Level (Decibels)

Zone	Time	One Hour Sound Level Limit
R-S, R-D, R-R, R-MH, A-70, A-72, S-80, S-81, S-87, S-88, S-90, S-92, R-V, and R-U Use Regulations with a density of less than 11 dwelling units per acre.	7 a.m. to 10 p.m. 10 p.m. to 7 a.m.	50 45
R-RO, R-C, R-M, C-30, S-86, RV AND R-U Use Regulations with units per acre.	7 a.m. to 10 p.m. 10 p.m. to 7 a.m.	55 50
S-94 and other commercial zones.	7 a.m. to 10 p.m. 10 p.m. to 7 a.m.	60 55
M-50, M-52, M-54	Anytime	70
S-82, M-58, and other industrial zones.	Anytime	75

If the measured ambient level exceeds the applicable limit noted above, the allowable one hour average sound level shall be the ambient noise level. The ambient noise level shall be measured when the alleged noise violation source is not operating.

2.0 GOAL OF RESTORATION

2.1 Type(s) of Habitat to be Created/Enhanced

The following sections describe the habitat types to be created and/or enhanced as shown in Attachment 1, Figures 2b and 2c. See Attachment 2, Table 6 for acreage details for each habitat type.

2.1.1 Perennial Emergent Freshwater Marsh

This habitat would be created at the abandoned gravel/sand pits. The substrate of the pits would be raised to approximately 2.0 to 3.5 feet below groundwater elevation to create shallow water persistent emergent marsh habitat. This would provide for a mosaic of willow and marsh habitat suitable for threatened and endangered species as well as non-listed species. Approximately 115,405 cubic yards of material are needed in the pits and would be obtained from the 416,700 cubic yards of clean fill material existing on the site. See Volume 1, United States Army Corps of Engineers Preconstruction Notification (PCN) for a Nationwide Permit 27, and Section 8 below for construction details.

2.1.2 Vegetation Enhancement and Willow Source Area

Current wetland and riparian habitat would be enhanced in the project area. The existing vegetated areas in the floodplain consist primarily of willow species and invasive vegetation. This habitat would be enhanced by removing the invasive vegetation such as Giant reed *(Arundo donax)* and tamarisk (*Tamarix* sp.) and replacing them with native willow and other native vegetation (as the budget allows). This area would also be used as a source area to revegetate seasonal wetland habitat. Willow species would be selectively cut and transplanted in created seasonal wetland habitat.

2.1.3 Willow/Mulefat Seasonal Wetland Habitat

Fill material would be excavated and willow/mulefat seasonal wetland habitat would be created. This seasonal wetland habitat would be created to attract the least Bell's vireo. The willow species would be established by:

- excavating trenches to groundwater level;
- planting willow cuttings (obtained from the existing vegetated areas) to the groundwater level and then backfilling. See Paragraph 5.0 below for source and

planting method for willow and mulefat species.

2.1.4 Water Quality Features/Constructed Habitats

A new wetland and water quality feature would be created as treatment and water quality improvement wetlands to the fill areas as part of the project.

2.1.4.1 Recharge Project Constructed Wetland

The Recharge Project Constructed Wetland would be built within the imported fill material tailings pile above the 100-year floodplain elevation. The Recharge Project Constructed Wetland is designed in a six-acre area with five wetland cells and a dedicated Rapid Infiltration Basin (RIB). The Recharge Project Constructed Wetland can accommodate the maximum pumping rates from the Riverview Water District well field (400 gallons per minute per day). Preliminary design models estimate an 80% nitrogen removal rate (from a mean total nitrogen concentration of 60 mg/l to 10 mg/l). Final design is being conducted. The design goal is to treat pumped groundwater (from a deeper aquifer that is more highly concentrated in total nitrogen) and recharge it through the RIB into the Riverview Water District well field. The source of nitrogen contamination is poorly understood. Future work may help to isolate the nitrogen source and local communities may then be able to reduce the future nitrogen load to groundwater.

2.1.4.2 Urban Non-Point Source Water Quality Improvement Basins

Adjacent to Los Coches Creek, a group of Urban Non-Point Source Water Quality Improvement basins would be constructed. The Urban Non-Point Source Water Quality Improvement basins have been located near the existing Los Coches Creek outfall structure. Due to project budgetary constraints the Los Coches Creek outfall structure could not be redesigned to meet the proposed grade of the adjacent seasonal wetland complex because the grade differences are approximately 20 feet to 25 feet in height and an excavation of this size would create a waterfall. Therefore, it was decided to maintain the existing structure and to provide water quality improvement by detaining and treating non-point source flows from Los Coches Creek.

This project component would meet the flood control attenuation and water quality function objectives. The total area is 2.5 acres.

2.1.5 Coastal Sage Scrub

Upland areas would be revegetated with coastal sage scrub species (Attachment 2, Table 9). These areas would provide new habitat specifically for the coastal California gnatcatcher. See Section 5.0 below for species composition and planting plan for coastal sage scrub habitat. The eastern coastal sage scrub habitat area (Attachment 1, Figure 2c) would be lined with upland and/or riparian trees along its perimeter. The coastal sage scrub habitat would attract the coastal California gnatcatcher, while the upland and/or riparian trees would attract raptor species. A low pocket area is present in the center of the enhanced coastal sage scrub habitat area and would be left undisturbed.

2.1.6 Bioswale

To treat runoff from State Route 67 before entering the river system, a Bioswale would be constructed where a CalTrans roadside ditch enters the project site. Surface water flows would be diverted to a bioswale. The bioswale would be constructed in the existing non-wetland vegetated enhancement area west of the fill area. The bioswale would consist of a series of vegetated basins to further treat storm water flows.

2.1.7 Urban Forest

Urban forest would be created on the cut slope of the excavation area along the south perimeter of the project site. Vegetated benches would be created using broken concrete to retain the material in nearly horizontal steps which would be vegetated with species such as coast live oak (*Quercus agrifolia*), California sycamore (*Platanus racemosa*), and Fremont's cottonwood (*Populus fremontii*). This would form a visual barrier between State Route 67 and the project area and create habitat for breeding and migrating raptor species (See detail on Attachment 1, Figure 2c).

2.1.8 Open Water

Open water would be retained in the project area for waterfowl and wading bird habitat. The west abandoned gravel/sand pit would be partially filled with the north end partially remaining for open water habitat. A second small pond between the two abandoned gravel/sand pits in the north-central portion of the project site would also be left as open water habitat.

2.2 Functions and Values of Habitat to be Created/Enhanced

As described above, new habitat would be created and current habitat enhanced for flood control, water quality, groundwater recharge, and species abundance and diversity. Federally endangered species such as the least Bell's vireo, and the Federally threatened coastal California gnatcatcher are species of focus for the created and enhanced habitat. Some of the created and enhanced habitat would serve not only as habitat, but also would slow flood water velocities and lower flood stages thereby reducing downstream flooding. The created and enhanced habitat would also attract species of concern, as well as other species which include songbirds, mammals, raptors, reptiles, amphibians, waterfowl, wading birds, and shorebirds which inhabit the floodplain. Songbird and mammals would likely use a variety of habitat types, while amphibians may be found in riparian and wetland areas only, and reptiles in coastal sage scrub areas. Waterfowl would use available open water habitat while wading birds and shorebirds may use shallow water ponds with emergent vegetation and upland areas. While these species are not presently on-site, a few potential species in each group that may be observed or expected in the project area after habitat is created and enhanced include:

Songbird species:

- Wilson's warbler (*Wilsonia pusilla*);

- Coastal cactus wren (*Campylorhynchus brunneicapillus couesi*);
- Yellow breasted chat (*Icteria virens*);
- Red-winged blackbird (*Agelaius phoeniceus*); and
- Northern flicker (*Colaptes auratus*).

Mammalian species:

- Coyote (*Canis latrans*);
- Common muskrat (*Ondatra zibethicus*);
- California ground squirrel (*Spermophilus beecheyi*);
- Common raccoon (*Procyonis lotor*); and
- Virginia opossum (*Didelphis virginiana*).

Shorebird species:

- American avocet (*Recurvirostra americana*);
- Black-necked stilt (*Himantopus mexicanus*);
- Long-billed curlew (*Numenius americanus*);
- Spotted sandpiper (*Actitis macularia*);
- Western sandpiper (*Calidris mauri*); and
- Wilson's phalarope (*Phalaropus tricolor*).

Waterfowl species:

- American coot (*Fulica americana*);
- Canada goose (*Branta canadensis*);
- Gadwall (*Anas strepera*);
- Mallard (*Anas platyrhynchos*); and
- Northern pintail (*Anas acuta*).

Wading bird species:

- American bittern (*Botaurus lentiginosus*);
- Great blue heron (*Ardea herodias*);
- Great egret (*Casmerodius albus*);
- Snowy egret (*Egretta thula*); and
- White-faced ibis (*Plegadis chihi*).

Raptor species:

- Northern harrier (*Circus cyaneus*);
- Red-tailed hawk (*Buteo jamaicensis*);
- Cooper's hawk (*Accipiter cooperii*); and
- Red-shouldered hawk (*Buteo lineatus*).

Reptile species:

- Orange-throated whiptail *(Cnemidophorus hyperythrus belgingi)*;
- San Diego horned lizard (*Phrynosoma coronatum blainvillii*);
- Common side-blotched lizard (*Uta stansburiana*);
- Silvery legless lizard (*Anniella pulchra pulchra*); and
- Two-striped gartersnake (*Thamnophis hammondii*).

Amphibian species:

- Arboreal salamander (*Aneides lugubris*); and
- Pacific treefrog (*Pseudacris regilla*).

2.3 Time Lapse

There would be a temporal loss of wetland habitat of one to two growing seasons while selective vegetation and trash removal occurs. This loss would more than fully be replaced at their existing locations once the enhancement is completed. Upon completion, more acres of wetland habitat would exist on the site than currently exists.

2.4 Estimated Cost

Approximately $1.8 million is currently available for project construction. Additional funding may become available over time by acquiring new monetary grants.

2.5 Special Aquatic Habitats

Wetlands are the only special aquatic habitat on the project site. As discussed above, existing wetland areas would be rehabilitated and new seasonal wetlands would be created in the project area. Additionally, perennial marshes would be created. These wetland areas would attract threatened, endangered, and species of concern as well as other wildlife species such as songbirds, shorebirds, wading birds, mammals, amphibians, and waterfowl species.

2.6 Other Past or Future Projects by Applicant

The project site is located within the focused plan area for the Regional San Diego River Park and is a key element in the Conceptual Master Plan for the area. This plan and subsequent Master Plans would guide land uses and strategies for development of the River Park. The River Way Specific Plan is the land use plan adopted by the County Board of Supervisors for this area. This project is consistent with the habitat and open space and design and aesthetic goals of zoning objectives of the plan.

3.0 PROPOSED RESTORATION SITE

3.1 Location and Size of Restoration Area

The restoration area encompasses approximately 126.7 acres, including existing open water, wetland, and upland habitat. The location of the project site is described in Section 1.2 and is shown in Attachment 1, Figures 1b and 5b.

3.1.1 Description of Watershed Upstream and Downstream from Project

The San Diego River flows for roughly 52 miles from two source areas in the Cuyamaca Mountains to the Ocean Beach area in the City of San Diego. Two reservoirs, San Vicente and El Capitan are located on the river approximately 23 miles from the headwaters. From the reservoirs to the project site, the river travels approximately seven miles through a rural landscape.

The project site is situated in the Lower San Diego River Watershed and defines the boundary between urban and rural zones and is located approximately 22 miles from the Pacific Ocean. The upper watershed of the San Diego River represents some of the roughest terrain in the County and is mostly undisturbed. Deep gorges and chaparral-covered slopes define the majority of the landscape. The chaparral plant community transitions into coniferous forest in the upper reaches of the watershed. The majority of this land is in public ownership (Cleveland National Forest). Public ownership and rough terrain afford a high degree of protection for the upper watershed.

3.2 Ownership Status

The entire restoration area is owned by the Lakeside's River Park Conservancy (LRPC). Attachment 1, Figure 3m is a parcel map showing previous landowners throughout the project site who have either donated or sold land to the LRPC for the purpose of this project.

3.3 Existing Functions and Values of Restoration Area including Sensitive Species

Existing functions and values of the restoration area include limited plant and animal species abundance and diversity. However, even though the site has limited species abundance in its present condition, restoration efforts would be highly successful because the site has not passed biological, geological, or hydrologic thresholds which would preclude restoration efforts. The current riparian corridor and associated uplands function as diverse habitats, supporting both plant and animal species. Existing habitat provides limited (if present) breeding, nesting, denning, and foraging habitat for a number of riparian and upland species because the restoration area has been heavily disturbed by mining and faulty reclamation efforts, reducing the function, value and quality of the riparian and upland areas to marginal habitat for wildlife species. This has in turn reduced plant and animal species abundance and diversity from historical numbers and has allowed for the introduction of invasive vegetation into the restoration area.

The restoration goals are for a riparian ecosystem. Riparian ecosystems, in general, support more

avian species than other habitat types in California and is the most productive, biologically diverse, and threatened system in the southwestern United States. San Diego County Multiple Species Conservation Program (MSCP) analysis has shown that river corridors function as important dispersal linkages for a large number of MSCP-listed animal species (Attachment 2, Table 11). There are 85 species on the MSCP list for San Diego County, many of them are wetland-dependent species. These facts underscore the important biological functions and values of the existing degraded and potential habitat on-site and highlight the value of increasing and enhancing the aquatic, riparian, and associated upland habitats. See Attachment 2, Tables 10 and 11 for a list and description of plant and animal species on the San Diego County MSCP list.

3.3.1 Endangered, Threatened, and Species of Concern

Presently, no surveys indicate that California species of concern or Federally threatened or endangered species exist at the project site. A habitat assessment for plant species has determined no species from the MSCP-list was observed in the project area (Attachment 2, Tables 2 and 10). No other observations have been made within the restoration area, however, information from the California Natural Diversity Database (CNDDB) indicates that twenty-eight species, both plant and animal, have been observed within the USGS El Cajon 7.5' quadrangle (Attachment 2, Table 13). Therefore, the potential is present for other threatened, endangered, and species of concern to breed, forage, nest, or reside year round in the watershed (Attachment 2, Tables 11 and 12).

3.4 Present and Proposed Uses of the Restoration Area

Present and proposed uses of the restoration area are described in this section. The restoration area currently has no approved human occupation and is used primarily for open space, flood control, and riparian habitat. Approximately 85 acres of the site has been filled to provide building sites for industrial facilities and has been used for industrial use recently. The remainder of the site is comprised of two abandoned gravel/sand pits which are presently used as fishing holes for local residents and wintering spots for waterfowl and wading bird species. The highly disturbed upland, riparian and wetland areas are presently used by various wildlife species.

The project area would be restored as open space and would serve many functions for the greater San Diego region. Proposed uses of the restoration area include improving and increasing wildlife habitat for higher diversity and abundance of wildlife species. This would occur through the construction of higher quality wetlands, uplands, and riparian areas. State and Federal threatened and endangered species are a focus for the restoration area. Wetland and riparian restoration areas would target the least Bell's vireo, while upland area restoration would target the coastal California gnatcatcher. The restoration area would also serve to slow flood water velocities and lower flood stages, thereby reducing downstream flooding as well as contributing to improved water quality through creating treatment wetlands and a bioswale.

3.5 Jurisdictional Delineation

A complete wetland delineation has been conducted to determine jurisdictional WOUS/wetlands in

the restoration area. See Attachment 1, Figure 2d for a map of the current jurisdictional WOUS/wetlands and Attachment 2, Table 1 for WOUS/wetland acreages.

A wetland delineation was conducted for the project by H&C between September 2004 and November 2004. The results of this investigation indicate that there are a total of 21.46 acres of WOUS/wetlands subject to Corps jurisdiction present on LRPC's property. There are 1.46 acres of WOUS/wetlands, 10.13 acres located below the ordinary high water mark, 0.18 acres of WOUS/wetlands for Los Coches Creek, and 9.69 acres of open water, for a total of 21.46 acres of WOUS/wetlands subject to Corps jurisdiction.

Investigation Results - Proposed Areas Subject to Corps Jurisdiction	
Description	**Acreage**
Los Coches Creek	0.18
Open Water (OW)	9.69
Wetland (WL)	1.46
Ordinary High Water Mark	10.13
Total	**21.46**

3.6 Present and Proposed Uses of Adjacent Areas

The restoration site is bounded by State Highway 67 on the south and Channel Road on the east (Attachment 1, Figure 1b). The northern boundary of the site includes the 25-acre Hanson Aggregates concrete batch plant, a nine-hole golf course, and an undeveloped 30-acre site zoned for industrial development. Hanson Aggregates is relocating its concrete batch plant and would donate the land to the LRPC. Hillside Meadows, a large subdivision with 97 homes, is planned for the open space area at the northwestern end of the redevelopment area.

3.6.1 Wildlife Corridors

The project site comprises part of the Upper San Diego River/Lakeside linkage corridor to the San Vicente/Iron Mountain wildlife preserve and is a regionally significant biological linkage for MSCP species as well as the major east-west wildlife corridor for the central portion of San Diego County (Attachment 1, Figure 3d). Acquisition and restoration of this site would dramatically increase the functions and values of this linkage.

3.6.2 Connectivity to Open Space

The project site is located within the focused plan area for the Regional San Diego River Park and is a key element in the Conceptual Master Plan for the area. This plan and subsequent Master Plans would guide land uses and strategies for development of the River Park. The RiverWay Specific Plan is the land use plan adopted by the County Board of Supervisors for this area. This project is consistent with the habitat and open space, and design and aesthetic goals of zoning objectives of the plan.

Several nearby parks, including Santee Lakes and Mission Trails Regional Park, attract between 400,000 and 800,000 visitors annually. The proposed project would be part of the Lakeside River Park, and a major hub for San Diego River Park users (Attachment 1, Figure 8b). Development of the FHR Project would be the link between the urban portion of the San Diego River Park on the west (to the Pacific Ocean) and the rural wildlands on the east (to the Cuyamaca Mountains and Cuyamaca State Park).

3.6.3 Relation of Project to MSCP

The restoration site is located within the jurisdiction of the County of San Diego, which adopted the MSCP in 1997 (Attachment 1, Figure 8c). The MSCP, a component of the State Natural Communities Conservation Program (NCCP), is an ambitious regional conservation program that has been invested with hundreds of millions of public and private dollars since its adoption and provides multiple benefits for species, habitats, public enjoyment, as well as regional economic stability. The LRPC's planning area falls within the boundaries of the 592-acre RiverWay Specific Plan or Upper San Diego River Improvement Project (USDRIP) designated by San Diego County.

3.7 Zoning

The present zoning for the project site is M52 and M54, Industrial Uses. The open space land use designation proposed for the restoration site is significantly less intense than that planned for with the existing Limited Industrial zoning designation. See Attachment 1, Figure 7 for zoning details.

3.8 Cumulative Impact Within Watershed

This restoration project would not result in cumulative adverse impacts within the San Diego River watershed. This project would, however, greatly enhance open space, wildlife habitat, and flood control on the Lower San Diego River. This section describes impacts within the San Diego River watershed.

Two abandoned gravel/sand pits are currently present in the project area. These gravel/sand pits are man-made structures and currently function as low-quality water bodies. Water quality has decreased in these pits due to surface water discharge from Los Coches Creek. Due to the reduced quality of these gravel/sand pits, both pits would be partially back-filled with soil to create higher quality perennial marsh wetland habitat that would attract threatened and endangered species, as well as other species and would serve to slow flood water velocities and lower flood stages thereby reducing downstream flooding. A portion of the western gravel/sand pit may be left as open water, as well as a small pond between the two gravel/sand pits, to maintain waterfowl species in this area.

Currently, the abandoned gravel/sand pits represent less than one percent (actually, 0.24 percent) of the entire San Diego River watershed. There is currently 3,913.6 acres of open water in the watershed with 9.69 acres of open water in the project area (Attachment 2, Table 14). This is a small percentage of the total San Diego River watershed and would not result in cumulative adverse impacts within the watershed, but would results in benefits to the watershed by creating higher quality and more productive areas. To view the location of the project area within the watershed, see Attachment 1, Figure 5a.

4.0 WATER QUALITY

4.1 Site Description

The project site is located within the Santee Hydrologic Sub-Area (Hydrologic Unit Basin Number 7.12) of the Lower San Diego Hydrologic Area (Hydrologic Unit Basin Number 7.10) which is located within the San Diego River Hydrologic Unit (Hydrologic Unit Basin Number 7). The San Diego Hydrologic Unit contains approximately 440 square miles drained by the San Diego River. The El Capitan, San Vicente, Cuyamaca, Jennings, and Murray reservoirs are the major storage facilities. The San Diego Hydrologic Unit is comprised of the Lower San Diego, San Vicente, El Capitan and Boulder Creek Hydrologic Areas. Los Coches Creek also discharges to the project site. The Hydrologic Unit delineation has been developed by the San Diego Regional Water Quality Control Board (SDRWQCB) Water Quality Control Plan Report (Basin Plan) for the San Diego Region (San Diego RWQCB, 1994).

4.1.1 Flow Patterns, Brow Ditches and Storm Water Outlets

During storm events, water flows through the project site from two sources, the Lower San Diego River and Los Coches Creek. The Lower San Diego River is an ephemeral stream that flows during extreme storm events from urban non-point sources. Releases from upstream reservoirs have been piped to the University Heights area for irrigation purposes. Flow from the Lower San Diego River enters the property boundary under Channel Road, meanders along the streambed and terminates and recharges at an abandoned gravel/sand pit where water pools along the northern boundary of the property. Los Coches Creek is an ephemeral urban creek that collects storm water runoff from non-point sources from the surrounding Lakeside community. Flow from Los Coches Creek enters the property via a concrete culvert under Los Coches Bridge, disperses through a braided system where it collects at another abandoned gravel/sand pit, pools, and overflows into the Lower San Diego River at the northwestern corner of the property.

Off-site drainage would flow into an existing roadside ditch on the southern side of the project site along California State Highway 67 (Volume 3, NPDES Application, Notice of Intent, and Storm Water Pollution Prevention Plan, Attachment 1, Figure 3). These roadside ditches (brow ditches) are owned and maintained by the California Department of Transportation (CALTRANS). During storm events, an estimated 0.11 cfs of storm water may run-on the southwest corner of the project site from the highway brow ditches. Highway 67 storm water run-on calculations are shown in Volume 3, NPDES Application, Notice of Intent, and Storm Water Pollution Prevention Plan, Attachment 2, Table 2. The proposed Vegetated Bioswale would convey this run-on to the proposed perennial marsh in the northwest corner of the site

4.2 Regulatory Guidance

4.2.1 Regulatory Setting and Beneficial Uses

Water Quality Regulatory guidance is found in the following:

1. The Water Quality Control Plan Report (Basin Plan) for the San Diego Region (San Diego RWQCB, 1994);

2. San Diego County Hydrology Manual, June 2003;

3. County of San Diego Watershed Protection, Storm Water Management and Discharge Ordinance for Storm Water, August 2003;

4. The Upper San Diego River Flood Control Study, Santee City Limits to Confluence with San Vincente Creek, March 1986; and

5. Environmental Protection Agency Storm water Phase II Final Rule, of the National Pollutant Discharge Elimination System (NPDES) permitting regulations in accordance with the Federal Clean Water Act of 1972;

4.2.1.1 San Diego RWQCB Basin Plan

The Basin Plan established water quality objectives for the San Diego River based on beneficial uses. The term "water quality objectives" is defined in the Porter-Cologne Water Quality Control Act (1969) as "...limits or levels of water quality constituents or characteristics which are established for the reasonable protection of beneficial uses of water or the prevention of nuisance(s) within a specified area." The definition reflects provisions of the 1972 Amendments to the Federal Water Pollution Control Act, PL 92-500, and State Water Resources Control Board Policy No. 68-16, "Statement of Policy with Respect to Maintaining High Quality of Waters in California." For location of the project site within the San Diego River Watershed, see Attachment 1, Figure 9.

The water resources in the San Diego Region are classified as coastal waters, surface waters, groundwaters, imported waters, and reclaimed water. The Riverview Water District has four groundwater wells located in the southwest corner of the project site. The surface water source for the project site is non-point source flows from Los Coches Creek, and the surrounding area upstream of the site. Releases from either El Capitan or San Vicente reservoirs are rare and have only occurred twice in the history of reservoir operations. Anecdotal sources have indicated that extreme flood events have been released from upstream reservoirs and reach the project site (Daniel Moran, 2004).

The following beneficial uses of the San Diego River for surface water in Hydrologic Unit Basin Number 7.12 are identified in Table 2-2 of the Basin Plan[4]. These beneficial uses include:

- Potential Municipal and Domestic (MUN)[5];
- Industrial Service Supply[6];
- Contact Water Recreation (REC-1)[7];

[4]*Water Quality Control Plan for the San Diego Basin (9),* California Regional Water Quality Control Board, San Diego Region (September 8, 1994)

[5]Municipal and domestic supply includes uses of water for community, military, or individual water supply systems including, but not limited to, drinking water supply.

[6]Industrial supply includes uses of water for industrial activities that do not depend primarily on water quality including, but not limited to, mining, cooling water supply, hydraulic conveyance, gravel washing, fire protection, or oil well re-pressurization.

[7]Contact water recreation includes uses of water for recreational activities involving body contact with water, where ingestion of water is reasonably possible. These uses include, but are not limited to swimming, wading, water-skiing, skin and SCUBA diving, surfing, white water activities, fishing, or use of natural hot springs.

- Non-Contact Water Recreation (REC-2)[8];
- Warm Freshwater Habitat (WARM)[9];
- Cold Freshwater Habitat (COLD)[10]
- Wildlife Habitat (WILD)[11]; and
- Rare, Threatened, or Endangered Species (RARE)[12].

Beneficial uses for the Lower San Diego River for groundwater in Hydrologic Unit Basin Number 7.12 are identified in Table 2.5 of the Basin Plan. These beneficial uses include:

1. Municipal and Domestic Supply (MUN);[13]
2. Agricultural Supply (AGR)[14];
3. Industrial (IND)[15], and;
4. Industrial Process Supply (PROC)[16].

[8]Non-contact water recreation includes the uses of water for recreational activities involving proximity to water, but not normally involving body contact with water, where ingestion of water is reasonably possible. These uses include, but are not limited to, picknicking, sunbathing, hiking, beachcombing, camping, boating, tidepool and marine life study, hunting, sightseeing, or aesthetic enjoyment in conjunction with the above activities.

[9]Warm freshwater habitat includes uses of water that support warm water ecosystems including, but not limited to, preservation or enhancement of aquatic habitats, vegetation, fish or wildlife, including invertebrates.

[10]Cold freshwater habitat includes uses of water that support cold water ecosystems including, but not limited to, preservation or enhancement of aquatic habitats, vegetation, fish or wildlife, including invertebrates.

[11]Wildlife habitat includes uses of water that support terrestrial ecosystems including, but not limited to, preservation and enhancement of terrestrial habitats, vegetation, wildlife (e.g., mammals, birds, reptiles, amphibians, invertebrates), or wildlife water and food sources.

[12]Rare, threatened, or endangered species includes uses of water that support habitats necessary, at least in part, for the survival and successful maintenance of plant or animal species established under state or federal law as rare, threatened, or endangered.

[13]Municipal and domestic supply are defined as the protection of public health, aesthetic acceptability of the product, and the economic impacts associated with treatment or quality related damages. Includes uses of water for community, military, or individual water supply systems, including, but not limited to, drinking water supply.

[14]Includes uses of water for farming, horticulture, or ranching including, but not limited to, irrigation, stock watering, or support of vegetation for range grazing.

[15]Includes uses of water for industrial activities that do not depend primarily on water quality including, but not limited to, mining, cooling water supply, hydraulic conveyance, gravel washing, fire protection, or oil well re-pressurization.

[16]Includes uses of water for industrial activities that depend primarily on water quality.

4.2.1.2 Water Quality Objective

The SDRWQCB Basin Plan lists the water quality objectives for the Hydrologic Unit - Lower San Diego River, Hydrologic Subunit Area- Santee (Attachment 2, Table15a - Surface Water Objectives and Attachment 2, Table 15b - Groundwater Objectives).

The Lower San Diego River is a 2002 Clean Water Act Section 303(d) water body listed by the SDRWQCB. These pollutants/stressors as identified by the CWA Seciton 303(d) are summarized in Attachment 2, Table 15c.

4.2.2 Impacts to Beneficial Uses Identified by Basin Plan

The proposed restoration project would not adversely affect the eight beneficial uses for surface water (MUN, IND, REC-1, REC-2, WARM, COLD, WILD, RARE), nor the four beneficial uses (MUN, AGR, IND and PROC) for groundwater as defined in footnotes 2-13. The following describes the project non-impact/protection for each beneficial use:

- **MUN** - potential nitrogen removal from Riverview Water District groundwater pumped through the Recharge Project Constructed Wetland, recharging aquifer with groundwater having improved quality for use in Riverview Water District Wells.

- **IND / PROC**- conversion of abandoned gravel/sand pits to perennial marsh habitat. Gravel/sand pits are abandoned and would not serve an industrial process.

- **AGR** - upstream agricultural practices have increased nitrogen levels in the groundwater, which would be reduced through the Recharge Project Constructed Wetland, improving the aquifer water quality. Additionally, there are no agricultural uses within the redevelopment area.

- **REC-1** - although contact recreation activities would not likely occur at the project site (in that recreation uses would be limited to those uses compatible with flood control and habitat conservation), the project would benefit downstream uses by reducing total suspended sediment (TSS), total dissolved solids (TDS), and turbidity.

- **REC-2** - hiking, sightseeing, and aesthetic benefits would be provided with the restoration of the site. These aesthetic improvements would be observable from a new visitor center and nature trail.

- **WARM** - increased number and length of low flow channels, and greatly increase riparian and wetland habitat, thus enhancing the warm freshwater habitat.

- **COLD** - although no cold freshwater habitat is present in the project site, the project would enhance downstream cold freshwater habitat by reducing TSS, TDS, and turbidity.

- **WILD** - increased acreage of upland, wetland, and riparian habitat would support greater abundance and diversity of wildlife habitat.

- **RARE** - enhancing and creating upland, wetland, and riparian habitat to attract threatened, endangered, and species of concern.

4.2.3 Water Quality Pre/Post Implementation

Baseline San Diego River water quality data has been collected by the United States Geological Survey (USGS), and the City of San Diego - San Diego River Watershed Urban Runoff Management Plan (WURMP). The location of each of the water quality data collection points is shown in Attachment 1, Figure 4a.

The USGS Water Quality Gaging Stations are located in the San Diego River (up and downstream of the project site) and on Los Coches Creek (upstream of the project site). This USGS water quality data is summarized in Attachment 2, Table 15d. The same chemical constituents were not measured at gaging stations.

The San Diego River WURMP Mass Loading Monitoring Station is located in the San Diego River (15 miles downstream of the project site) at the lowest point of the San Diego River Watershed. This WURMP data is summarized in Attachment 2, Table 15e. The WURMP data provides a regional water quality view downstream from the project.

Post-construction BMPs would be constructed to prevent contaminated storm water from flowing off the project site. A Quality Assurance Program Plan (QAPP) would be implemented to maintain and monitor the effectiveness of the water quality improvements (Volume 5, Restoration Project Constructed Wetland , Attachment 4).

4.3 Baseline Fluvial Geomorphology and Restoration Geomorphology

Anthropogenic impacts from upstream dams/reservoirs and the various gravel/sand mining activities have permanently altered the type and physical structure of the Lower San Diego River in the project area. As seen in the 1928 aerial photo, Attachment 1, Figure 4b, the river had access to its floodplain and appears to be a gravel/sand bedload system typical of the arid West.

With respect to this project, we have utilized the definition of perennial[17], intermittent[18], and

[17]Streamflow may be (1) perennial, in a channel which never dries up. For perennial streamflow to occur requires that the groundwater table intersect the streambed; otherwise seepage would cause the channel to dry up. Hence, as the water table rises and falls in response to rainfall, the flowing stream channel network may expand and

ephemeral[19] from the Handbook of Hydrology (Maidment, 1993). Historically, the Lower San Diego River was intermittent in nature, which at drier times of year probably had some reaches with flowing water interspersed with other reaches in which the water flows below the surface. Today, the Lower San Diego River is ephemeral within the project area and receives surface flows from discharge due to the Los Coches Creek channel (which is inset into the River Channel) and after extreme rainfall events due to urban runoff.

In addition, sediment transport through the project area is virtually non-existent because of the gravel/sand pits within the river channel area. These gravel/sand pits act as sediment detention basins during large flood events and actually adversely affect sediment transport as flood waters leave the site in a sediment-starved condition. The project proposes to fill these gravel/sand pits, as they are not typically found in a river system that is in equilibrium with its flow and transport of bedload.

In-stream flows were not considered within the operational agreements of the San Vicente and El Capitan Reservoirs. Future predictable flows to this area are probably not possible without extensive legal and legislative agreements and therefore, are not possible within the design phase of this project.

The challenge in this type of restoration situation is what to consider as the baseline geomorphology of the river channel and its bedform; what should the restoration objectives be? Certainly, flood flow capacity and sediment transport is paramount because the Lower San Diego River does maintain the flood flow watershed function. Should the future allow a more natural flow regime such as: low-flows, thalweg.channel 1.3 year return interval, channel forming flows (2-year, 24-hour peak flows), Cottonwood recruitment flows (5-year to 20-year return interval channels) including various flood flows (50-year to 100-year events)? How would the Lower San Diego River design accommodate these flow events and how would the same design accommodate the present ephemeral situation of extreme flood flow-only event? While the design can accommodate a low flow channel that in actuality is an event-based-only channel, this does not address the functions and restoration objectives of the ephemeral channel within the watershed.

Ephemeral channels within watersheds typically yield runoff mostly during winter and after spring rainfall. Baseflow is absent during summer and there are long periods when stream flow is zero. The geomorphology of a ephemeral gravel/sand system would support seasonal wetlands and dense riparian canopies whose vegetation is supported by groundwater. Typically, in an ephemeral system, off-channel oxbows would support marsh areas (that are in turn also supported (hydrologically) by groundwater). Thus, as the ephemeral channel migrates across the floodplain

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contract.

[18]Streamflow may be (2) intermittent, in a channel which at drier times of year may have some reaches with flowing water interspersed with other reaches in which the water flows below the surface, and

[19] Streamflow may be (3) ephemeral, in a channel which flows only after rainfall.

in response to altered flow regimes, the river would predominantly be characterized by a single stem, meandering channel with a floodplain inset into Quaternary alluvium deposits. Although flow would be largely contained within a single channel, occasional mid-channel sand bars would split flows into more than one channel. As can be seen in the 1928 and 1953 pre-dam photos, abundant meander scars, oxbows, and relatively steep cutbanks excavated into the older alluvial deposits on the outer edges of both active and inactive meanders attest to the mobility of the channel along this reach. A prominent photo characteristic of almost the entire study reach in 1928 photo is the presence of recently deposited sand adjacent to the active channel (Attachment 1, Figure 4b). The sand bodies occur on both sides of the channel and possess little to no vegetation, hence they appear as relatively light patches adjacent to the channel. In places, discrete crevasse splays and recently active flood channels were identified on the floodplain. These latter features share the same characteristics in the 1953 photos of the sand bodies adjacent to the main channel. From this intermittent system to the present-day ephemeral reclaimed gravel/sand mine riverine system, a more natural system would typically have evolved with oxbows that contain standing groundwater. In contrast, an aerial photo from 1978 shows an area inundated with water (Attachment 1, Figure 4c). A peak flow of 1580 cfs was recorded for the flight date (March 5, 1978). Unfortunately the river was severely altered between the 1978 photo and the present time.

The proposed ephemeral system restoration design would provide both upstream and downstream benefits. The proposed design would also restore floodplain and sediment transport function, create riparian habitat and seasonal wetlands to include perennial marsh wetlands as the gravel/sand pits are filled to mimic oxbows marshes. Additionally, the restoration objectives would be designed to reduce flow velocities, which would tend to reduce adverse sediment transport downstream. The project design would tend to restore the historic sediment transport in the river by filling some of the existing gravel/sand pits. The project would remove the upper constriction, which would lower water surface elevations and the potential for flooding and/or inundation along adjacent properties. Revised floodplain mapping would be processed through San Diego County, including FEMA, in order to establish the revised floodplain and floodway.

4.4 Design Flows for Restoration and Storm Water Pollution Prevention Plan

4.4.1 Restoration

Typically, a river hydraulic design would consider the bank full channel flow or channel-forming flow which are typically estimated between the 1.3-year to 2-year return interval. Review of available data and local knowledge indicates that no annual flow regime occurs below the San Vicente and El Capitan reservoirs (Chang, 2004). Anecdotal sources have indicated that extreme flood events have been released from upstream reservoirs and reach the project site (Daniel Moran, 2004). Therefore, the 2-year design flow would be extrapolated from the published FEMA flow rates.

It is necessary to point out that project area flows are limited to non-point source urban runoff. However, it is beyond the scope of this project to make flow determinations based on non-point source urban storm runoff. Due to the ephemeral nature of the Lower San Diego River within the

project area, the costs necessary to conduct further studies is not warranted. In other words, it would not be necessary to conduct further studies because whatever event is finally utilized would only be an estimate and would not necessarily reflect how the non-point urban runoff reaches the channel and when.

There are two existing studies that have been adopted and which would be used to establish river flows: The FEMA Flood Insurance Study and the Department of Water Resources Upper San Diego River Flood Control Investigation.

In summary, there is no mean annual flow in the Lower San Diego River that can be used for the channel-forming (thalweg) flow event because of the ephemeral nature of watercourses in San Diego County, and because the San Vicente and El Capitan reservoirs preclude low-flow releases. Therefore, the River Team would utilize a low-flow design storm event extrapolated from the FEMA flow rates.

4.4.2 Storm Water Pollution Prevention Plan

The Storm Water Pollution Prevention Plan (SWPPP) for LRPC's Flood Control, Habitat Restoration, and Recharge Project has been prepared by H&C as shown in Volume 3, NPDES Application, Notice of Intent, and Storm Water Pollution Prevention Plan.

4.4.3 Measures to Maintain Water Quality During Construction

Construction activities are planned to begin in June of 2005 and continue through December of 2005. The SWPPP is designed to serve as an overall project SWPPP that describes a general methodology for storm water pollution prevention and a code of behavior for project construction and operation. BMPs are proposed to retain and detain storm flows and to reduce sediment and other pollutants from discharging from the site to the river during storm events.

4.5 Constraints Imposed by the San Jacinto-San Vicente Aqueduct

The San Diego County Water Authority's aqueduct is aligned in a north-south direction and crosses the Lower San Diego River within the easterly portion of the project. The cover over the aqueduct, based on the San Diego County Water Authority's design plans, is as little as approximately four feet.

This shallow depth of cover precludes deep excavations within the river channel just upstream and downstream of the crossing. Minor grading may be allowed as determined by the hydraulic analysis currently being conducted in the FEMA phase of the project design.

4.6 FEMA Floodplain Analysis for the San Diego River and Los Coches Creek

According to FEMA, the Lower San Diego River has a 100-year flow rate of 32,000 cfs above Los Coches Creek and 33,000 cfs below Los Coches Creek. As stated above, Los Coches Creek discharges into the Lower San Diego River. The Los Coches Creek outfall structure is a rectangular concrete box structure within the project area and has a 100-year flow rate of 3,500 cfs. FEMA floodplain analysis would be made in a separate phase of project design. As necessary, an estimate of the channel forming flow would utilize a low-flow value determined from FEMA flow rates.

The San Diego County 100-year flow rate for the San Diego River is higher than the FEMA values based on comprehensive "build-out" analysis for the county. According to the County, the San Diego River has a 100-year flow rate of 42,000 cfs above Los Coches Creek and 45,000 cfs below Los Coches Creek. The project site 100-year flow rates would be computed in the FEMA Analysis, Volume 4f, Federal Emergency Management Agency Documentation.

4.7 Climate Data for the Project Area

4.7.1 Precipitation

The project area can be characterized by an average rainfall of approximately 10.16 inches annually, with a minimum of 3.41 (1953) inches and a maximum of 24.93 (1941) inches. For reference, the 1978 aerial post-dam photo (Attachment 1, Figure 4c) showing the project area inundated with water was taken in a year where 19.41 inches of precipitation was recorded.

Average daily and monthly precipitation for the San Diego WSO Airport for the period of record (POR) 1914 to 2004 is depicted in Attachment 1, Figures 4e and 4f and the data is shown in Attachment 2, Table 15f (WRCC, 2004)

The volume of runoff produced from a 24-hour, 85th percentile storm event, as determined from the local historical rainfall record, is 0.6 inch (approximate average for the San Diego County area).

4.7.2 Evapotranspiration

The project climatic condition can be classified as Mediterranean, where annual temperatures vary from 56.4 to 69.9 °F (Attachment 2, Table 15g). The water losses due to evapotranspiration (ET) from both water and plant surfaces ranges from 33.2 to 60.5 inches/year. For the purpose of this study, the range of ET values was determined from three sources: 1) Western Regional Climate Center (WRCC); 2) California Irrigation Management Information System (CIMIS); and 3) a calculation utilizing the Thornthwaite Method based on temperature (Thornthwaite and Mather,

1955).

Open pan evaporation within the project area is estimated at 60.5 inches (WRCC, 2004). The San Diego Average Evapotranspiration from standardized grass surfaces (ETo) reported by CIMIS, is 46.5 inches/year (CIMIS, 2004). No site-specific evapotranspiration (ET) data was found. The National Oceanographic and Atmospheric Administration (NOAA) Lakeside Weather Station does not record ET.

Because there would be permanent open water in the proposed Recharge Project Constructed Wetland for nitrogen removal, the input into the wetland probably overwhelms the output and the need for accurate evapotranspiration estimates would be reduced if the wetland plan includes provision to spill excess water as surface outflow. Evapotranspiration calculation methods useful for wetland construction planning fall within three categories: physical, climatologically based, and transpiration (Dunn and Leopold, 1978; Carter, et al., 1979; Carter, 1986). H&C utilized the Thornthwaite method of calculating potential evapotranspiration (Thornthwaite and Mather, 1955) recommended by Dunn and Leopold (1978).

$$E_t = 1.06(10T_a/I)^a$$

Where:

E_t = PET (potential evapotranspiration) in cm/month
T_a = mean monthly air temperature °C

and the monthly heat index (I) is

$$I = \sum(T_a/5)^{1.5}$$

For twelve months, and

$$a = 0.49 + 0.01791 - 0.00007711\ ^2 + 0.0000006751\ ^3$$

The formula is for a standard month of 30 days of daylight and must be adjusted to latitude and month according to the table given by Dunn and Leopold (Attachment 2, Table 15h). The adjustment is made by multiplying the calculated PET by the correction factor in the table. The latitude factor for the San Diego area (latitude 33° N) is reflected in Attachment 2, Table 15h.

Utilizing the Thornthwaite method, Et = inches/month (Attachment 2, Table 15i).

Jan	Feb	Mar	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec	Ann
Inches per Month												
1.43	1.67	2.00	2.49	3.05	3.61	4.29	4.35	3.79	2.91	2.06	1.50	33.2

4.7.3 Corps Regulatory Setting and Growing Season

The 1987 Manual defines wetlands as:

> *"areas that are inundated[20] or saturated[21] by surface or groundwater at a frequency[22] or duration[23] sufficient to support. . . "*

The 1987 Manual focuses on hydrology as inundation and/or saturation to the surface and emphasizes that the presence of water has an overriding influence on characteristics of vegetation and soils due to anaerobic and reducing conditions, respectively.

The Corps regulates wetlands formed under normal hydrologic conditions, i.e., a two year return interval storm event, based on consecutive days of saturation during at least 5 - 12.5 percent of the growing season. Because the growing season is essentially year-round in the San Diego Area, this corresponds to 18 - 45 days at the project site. A two year return interval would be one in which the area in question is inundated or saturated, on average, 50 out of 100 years.

Return period is a means of expressing the exceedance probability. Hydrologists often speak of the 20-year flood or the 100-year rainfall. Thus, the 1 percent exceedance event can be described as a value with a 1 in 100 chance of being exceeded each year. Because weather is highly variable in most locations, including coastal Mediterranean climates such as that found in California, normal circumstances, or normal weather conditions, are best assessed by computing a Log-Pearson probability distributions for extreme events or return periods.[24]

Frequency of inundation or soil saturation is defined as the number of years, 50 out of 100 years that an areas is covered by surface water or has saturated soils to affect anaerobic conditions, usually within 12 inches of the land surface. Thus the 50 percent exceedance event can be described as a value with a 50 in 100 chance of being exceeded each year or the 2-year return interval. The 2-year interval is equal to a flooding class of 50 times in 100 years .

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[20]Inundation - A condition in which water from any source temporarily or permanently covers a land surface. As defined in 1987 Wetlands Manual.

[21]Saturated soil conditions - A condition in which all easily drained voids (pores) between soil particles in the root zone are temporarily or permanently filled with water to the soil surface at pressures greater than atmospheric. As defined in 1987 Wetlands Manual on page 29, item 41, influencing factors of hydric soils are those "unique characteristics of hydric soils that result from the influence of periodic or permanent inundation or soil saturation for sufficient duration to effect anaerobic conditions."

[22] Frequency (inundation or soil saturation) - The periodicity of coverage of an area by surface water or soil saturation. It is usually expressed as the number of years (e.g. 50 years) the soil is inundated or saturated at least once each year during part of the growing season per 100 years or as a 1-, 2-, 5-year, etc., inundation frequency.

[23]Long duration (flooding) - A flooding class in which the period of inundation for a single event ranges from 7 days to 1 month. As defined in 1987 Wetlands Manual.

[24]Maidment, Davie R., *Handbook of Hydrology*, McGraw-Hill, Inc., 1993. Pgs. 18.19-18.22.

The 1987 Manual and the 1992 memo to the field from Major General Arthur E. Williams (Williams Memo)[25] define the length of time that wetland hydrology must be present, based on consecutive days during the growing season.[26] Generally speaking, areas that are seasonally inundated and/or saturated to the surface for more than 12.5% of the growing season are wetlands, provided the soils and vegetation criteria are met. Areas saturated to the surface for 5 - 12 percent of the growing season are sometimes wetlands and sometimes uplands. Areas saturated to the surface for less than five percent of the growing season are non-wetlands. It is generally accepted that the growing season for the project site is year-round (i.e., 365 days). Therefore, the length of time an area must be wet in order to meet the wetland hydrology criterion is at least 18 - 45 days (5 - 12 percent of the growing season), and during this time period, soils must be sufficiently saturated to affect anaerobic conditions. For purposes of this report, H&C has assumed that 85 percent saturation is sufficient to affect anaerobic conditions.[27]

4.8 Recharge Project Constructed Wetlands for Nitrogen Removal in Groundwater and for Urban Non-Point Source Water Quality Improvement Basins from Runoff to Los Coches Creek

4.8.1 Constructed Wetlands - General Information

Two constructed wetland systems are being designed for use at the project site; Recharge Project Constructed Wetland and an Urban Non-Point Source Water Quality Improvement Basins. A separate document, Volume 5, Restoration Project Constructed Wetland, would cover the Recharge Project Constructed Wetland for nitrogen removal from pumped Riverview Water District groundwater.

The constructed wetland to improve water quality from non-point source runoff flowing in Los Coches Creek has been located near the existing Los Coches Creek outfall structure. Due to project budgetary constraints, the Los Coches Creek outfall structure could not be redesigned to meet the proposed grade of the adjacent seasonal wetland complex because the grade differences are approximately 20 feet to 25 feet in height and an excavation of this size would create a waterfall. Therefore, it was decided to maintain the existing structure and to provide water quality improvement by detaining and treating non-point source flows from Los Coches Creek.

The River Team is currently reviewing and designing a constructed wetland for water quality

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[25]Memorandum of March 8, 1992 from Major General Arthur E. Williams, Paragraph 3.

[26]As noted in an earlier general distribution memo from the Corps "[t]he number of days specified in the June 1991 Hydric Soils of the United States (i.e., usually more than 2 weeks during the growing season) as the criteria for hydric soils pertains to hydric soils and not the hydrology criterion of the 1987 Manual, which varies with the growing season . . .." Memorandum of October 7, 1991 from John F. Studt, Chief, Regulatory Branch (emphasis added).

[27]See Volume 1, United States Army Corps of Engineers Preconstruction Notification (PCN) for a Nationwide Permit 27, Attachment 8 for a discussion of soil saturation and anaerobic conditions.

improvement within the project area prior to the discharge point. The existing tailings pile is approximately 20 feet to 25 feet above the channel bottom of Los Coches Creek, which is contained in a rectangular concrete channel that discharges into the Lower San Diego River.

The River Team is planning to create an opening in the existing concrete channel wall on the west side of Los Coches Creek and install a small dam which would allow the low flow to discharge into a constructed wetland. The top of the dam would be approximately one foot (low flow depth) above the existing channel bottom to direct the low flow events into the constructed wetlands while larger events would continue to discharge to the river as they do now. The existing ground would be left in place against the existing concrete channel and the adjacent ground would be lowered to the low flow elevation and contained water would discharge into the wetlands for water quality improvement consisting of two successive pools.

4.8.2 Measures to Maintain/Improve Existing Water Quality

The project would enhance water quality on-site through natural bio-filtration, sediment removal, while decreasing stream velocity and increasing stream flow. Key benefits of the proposed project include construction and enhancement of natural features that would mitigate and remove point-source and non-point-source pollutants that are entering the river through urban and industrial-use runoff. Another key benefit would be the enhancement of direct recharge of the aquifer through the constructed wetland area.

Best Management Practices (BMPs) would be implemented during construction to minimize adverse impacts to water quality as described in Volume 3 - NPDES Application, Notice of Intent, and Storm Water Pollution Prevention Plan. The Recharge Project Constructed Wetland would provide nitrogen removal of pumped groundwater and groundwater recharge through a Rapid Infiltration Basin. The Urban Non-Point Source Water Quality Improvement Wetland would provide sediment removal/retention.

4.9 Groundwater

Groundwater is approximately 355 feet above mean sea level for most of the project site and appears to follow approximately five to seven feet below the existing topography in the Lower San Diego River area. The 355 feet above mean sea level elevation is the estimate below both of the constructed wetland areas and the proposed seasonal wetland area (BDS Engineering topographic survey, March 1, 2001). The groundwater flow follows the Lower San Diego River flow gradient.

There are four groundwater wells, owned and operated by the Riverview Water District, in the southwest area of the project site and the static groundwater elevation is estimated at 25 feet below the ground surface (Riverview Water District As-Built Well Logs, 1999). The variation in the groundwater table indicates a Cone-of-Depression[28] over the Riverview well field.

In addition, groundwater monitoring well data from SECOR International, Inc. (2004) indicates a groundwater flow direction west-northwest, with an approximate hydraulic gradient of 0.031 vertical feet per horizontal foot (ft/ft). No other site-specific data was found. Therefore, depth to groundwater for grading purposes would utilize this information.

5.0 REVEGETATION PLAN

5.1 Purpose and Goals

The purpose of the revegetation plan is to restore, enhance, and create habitat at the project site, producing higher quality habitat that would be suitable for several State and Federally listed threatened and endangered species, as well as species of concern and non-listed species. The habitat replacement detailed in this revegetation plan would be in the form of creating habitat value at the site by planting, seeding, weeding, temporarily irrigating, and performing maintenance activities, thereby creating a self-sustaining and functioning ecosystem.

The goals of the revegetation plan are as follows:

- Restore functioning habitat that would support native plant species and provide habitat for Federal and State listed as well as non-listed wildlife species. Functioning habitat is defined by plant diversity, composition, productivity, structure, and wildlife use;
- Restore habitats that are ecologically appropriate to the project site;
- Use plant and seed propagules local to San Diego County and encourage use of propagules collected from the project site where feasible;
- Establish vegetation that would be self-sustaining over time; and
- Provide conditions that would allow natural processes on the project site including soil development, nutrient cycling, plant succession, natural regeneration, wildlife movement, and recovery from disturbance.

5.2 Revegetation Site Suitability Analysis

The areas proposed for revegetation through this project are suitable sites for establishment of self-sustaining vegetation communities. For information on site hydrology, see Section 4.0. For

[28]Cone of Depression : Pumping from a well near a stream can draw down the water table so that it slopes away from the river. The water surface formed by the drawdown has the form of a funnel or an inverted cone. (Roberson, et al., Hydraulic Engineering, 1995).

information on soil conditions, see Section 1.8.9. It has been determined by a certified biologist that present hydrology and soil conditions are suitable to maintain the vegetation communities proposed for planting throughout this project (Attachment 2, Table 9).

5.3 Project Implementation

5.3.1 Equipment

There are four types of equipment that may be used during the revegetation phase of the project. The equipment types are described as follows:

- **Hydroseed** equipment would be required to mix a slurry of organic mulch, fertilizer, seed, and additives and apply uniformly over the prepared soil;
- **Broadcast feeder** would be used to apply handseed seed mixes;
- **Power auger** would be required to dig holes for container plantings; and
- **Drilling** would be used to insert seed at pre-determined depths.

A description of equipment required for the removal of invasive vegetation is specified in Section 6.2.

5.3.2 Staging Area

A staging area has been identified for construction, Attachment 1, Figure 13. This area would also be utilized and designated as the storage area of equipment on the project site.

Equipment access routes would be identified during the pre-installation consultation and would be monitored throughout construction. Equipment usage would be restricted to the identified routes. To promote the successful development of the vegetation, pedestrian access would be minimized in the revegetation areas to reduce impact to the seeded and planted areas.

5.3.3 Protecting Vegetation

Protection of native vegetation would be implemented during revegetation and invasive vegetation removal. In the case that a native plant is damaged and identified for salvage, it would be kept on-site in a location that would prevent further damage during the vegetation removal and site preparation.

5.3.4 Proposed Vegetation

The following native plant communities are planned for establishment through the revegetation plan:

- Coastal Sage Scrub;
- Urban Forest;
- Seasonal Wetland; and
- Perennial Marsh.

A complete list of the vegetation species that would be included in this planting plan is included in Attachment 2, Table 9.

5.3.5 Method of Planting and Source

Planting would take place in early fall to take advantage of a full rainy season. This would alleviate irrigation needs during the plant establishment phase throughout the majority of the project site.

Whenever feasible, seed would be collected from similar sites within the watershed to propagate vegetation that promotes habitat biodiversity. The selected nursery would be responsible for harvesting seeds, including those which would be harvested from the watershed.

Cuttings of native wetland plants would be used for vegetation propagation whenever possible. Cuttings of willow (*Salix* sp.) species would be taken from mature plants currently on the site.

Soil preparation would be performed during periods when beneficial and optimum results may be obtained. If moisture content of the soil should reach a level that working the soil would alter the desired structure, work would be suspended until the moisture content is increased or decreased to acceptable working levels to obtain the desired planting results.

During pre-installation, it would be decided if areas where rootballs have been removed during invasive vegetation removal would need grading or minor recontouring.

The following planting techniques are described as follows:

Handseeding and Hydroseeding:

- For dry soils, apply water to bring soil moisture to an optimum content for handseeding and hydroseeding. Maintain moisture levels through germination;
- Prior to handseeding and hydroseeding, the soil surface would be raked. Raking would create crevices for the germinating seed;
- Invasive vegetation would be removed prior to the application of handseed or hydroseed;

- For handseeding and hydroseeding, seed mix would consist of a mixture of seeds;

and

- Handseeding and hydroseeding is the preferred method of planting.

Container Planting:

- Initial planting would take place after invasive vegetation eradication;
- Spacing of container plants would follow the planting plan;
- Planting holes would be dug to a minimum of two times the diameter of the root ball. Planting holes would be filled with water and allowed to drain prior to the placement of container plants; and
- Irrigation would be installed to maintain preferred soil moisture during the plant establishment period.

Cuttings

- Initial planting would take place after invasive vegetation eradication;
- Cuttings would be taken from mature willow trees on the project site;
- Cuttings would be approximately one inch in diameter and two feet long;
- Until planting, willow cuttings would be soaked in buckets of water out of direct sunlight to establish a root system; and
- Cuttings would be buried to at least half their length.

A potential list of plants to be planted through hydroseeding, handseeding, container planting, and from cuttings can be found in Attachment 2, Table 16.

5.3.6 Irrigation

Irrigation (drip) would be used to establish container plantings in the Urban Forest vegetation community. Due to the location of the Urban Forest community, an irrigation system would be necessary to establish plantings.

Installation of irrigation would commence after the completion of invasive vegetation eradication, soil preparation, and grading of the site. As-built drawings would be completed by the contractor detailing the point of connection to the existing water lines (POC), routing of underground sprinkler lines, and pressure regulators.

Trenches for buried irrigation lines would be excavated so that they are wide enough to allow a minimum of four inches between parallel pipe lines. Three inches of vertical clearance would be maintained between crossing lines. Trenches would be free from rocks, clods, and other sharp objects.

After installing the irrigation line, each section would be tested. Leaks or defective pipe fittings would be replaced or repaired. Once the piping is approved, the trenches would be backfilled. Backfill material would be free from rocks, clods, or sharp objects.

5.4 Project Maintenance

During the first year immediately following planting, inspection and maintenance would be conducted as necessary. During these inspections, dead or diseased container plants may be replaced in kind. In the seeded areas, areas that have not reached 50 percent cover or more should be reseeded. Areas greater than 400 feet that are bare should be reseeded.

5.4.1 Maintenance Needs

During the maintenance period, the contractor would inspect and maintain the site, providing for:

- Replacement of dead plants in the container planted areas;
- Reseeding of hydroseeded and handseeded areas that have not reached proper the proper percentage of cover;
- Removal of regrowth of invasive vegetation; and
- Replacement or repairing of broken irrigation lines.

5.4.2 Plant Replacement Program

Plants would be maintained in a vigorous thriving condition throughout the entire project. Should plants not achieve success, they should be replaced. Replacement planting stock could be procured in advance to ensure the replacement of dead container plants in a timely manner. Plants should be replaced in kind, as specified in the plant palettes, or with appropriate replacement species which have shown success in that area. If certain plant species are failing in an area, these plant species may be replaced. However, substitutions would consist of only native plants, and only local native stock would be used. Substitutions must be approved by the LRPC project manager.

6.0 INVASIVE VEGETATION REMOVAL

6.1 Goals

There are two goals of the invasive vegetation removal project which are described below:

- To remove invasive vegetation, as indicated, prior to planting or seeding; and
- To maintain invasive vegetation removal throughout the duration of the project.

6.2 Materials

The proposed equipment to remove invasive vegetation are described as follows:

- **Hand tools** including chain saws, tri-blades, and pulaskis would be used to remove invasive vegetation as specified in Section 6.6;
- **Mechanized land clearing** would be used in specified areas to clear and remove large volumes of invasive vegetation in the upland zones;
- **Herbicides** for use in wetland areas only would consist of the following active ingredients: 53.5% glyphosate, –(phosphonomethyl) glycine, in the form of its isopropylamine salt, "Rodeo"; and
- **Spray Pattern Indicator:** brightly colored blue or purple dye would be used in herbicide applications. This dye would be a non-toxic, non-staining, water soluble, liquid material.

6.3 Methods

Invasive vegetation removal would be achieved through the use of a wide range of techniques that emphasize alternatives to chemical control.

6.3.1 Manual and Mechanical Eradication

Manual removal, including pulling invasive vegetation by hand or removing with shovels, picks, rakes, hoes, and weed-whips, would be used to remove invasive vegetation that are small enough to be feasibly removed by hand. Chain saws and brush cutters would be used to cut woody vegetation and would be followed by spot herbicide application as specified. Mechanical control methods include the use of backhoes for excavation.

6.3.2 Herbicide Treatment

Limited use of selected herbicides is specified prior to seeding and planting when no other effective alternative is available to control certain invasive vegetation such as giant reed, tamarisk, pampas grass, cape ivy, fennel, tree tobacco, and castor bean.

Spot herbicide treatments are specified for species that require root kill. Invasive vegetation that typically require root kill are species that may resprout from roots or rhizomes. In addition, spot herbicide application is specified where root systems cannot be dug up without inflicting harm on crews or surrounding habitats.

Herbicide recommendations are limited to those formulations and conservative application methods which present minimal risk to native vegetation and riparian environments.

6.3.3 Eradication Method by Species

The following describes recommended methods used for invasive vegetation species. Other methods may be utilized as site conditions warrant.

Arundo donax (giant reed)

- Cut to six inches above ground with a chain saw and paint the freshly cut stems within two minutes of the cut with a 75% Rodeo mixture and brightly colored dye;
- Dispose of vegetation off-site;
- Resprouts should be cut and sprayed per the above specifications; and
- Removal of regrowth would continue throughout the revegetation installation, plant establishment, and maintenance periods.

Tamarix sp. (tamarisk), ***Nicotiana glauca*** (tree tobacco), ***Foeniculum vulgare*** (fennel), and ***Cortaderia selloana*** (pampas grass)

- Bag seed if present on plants and dispose off-site;
- Cut stems to within six inches of ground level with a chain saw or brush cutter and paint the cut stems within two minutes with a mixture of 50% Rodeo and brightly colored dye;
- Remove vegetation and dispose off-site; and
- Removal of regrowth would continue throughout the revegetation installation, plant establishment, and maintenance periods.

Polypogon monspeliensis (rabbitfoot beardgrass), ***Bromus spp.*** (chesses), and ***Avena spp.*** (wild oat)

- Treat annual grasses before they produce seed;
- Weed-whip or hoe to just above ground level, bag seed if present and dispose of vegetation off-site; and
- No more than 5% cover of annual grasses collectively would be allowed in the invasive vegetation removal zone during the revegetation installation, plant establishment, and maintenance periods.

Xanthium strumarium (cocklebur), ***Salsola tragus*** (Russian thistle)

- Bag seed heads if present and dispose off-site;
- Pull up or dig up plant and dispose off-site; and
- Removal of regrowth would continue throughout the revegetation installation, plant establishment, and maintenance periods.

Ricinis communis (castor bean)

- Bag seed heads and dispose off-site;
- For plants under one foot high and one inch basal diameter, dig up plants and dispose off-site;
- For plants over one foot high or greater than one inch basal diameter, cut stems to within six inches of the base and paint within two minutes with a mixture of 50% Rodeo and brightly marked dye;
- Dispose of vegetation off-site;
- Inspect stumps at one-month intervals; and
- Removal of regrowth would continue throughout the revegetation installation, plant establishment, and maintenance periods.

Rumex crispus (curly dock), ***Picris echioides*** (bristly ox-tongue)

- Bag seeds heads if present and dispose off-site;
- Pull up or dig up plants before they produce seed; and
- Removal of regrowth would continue throughout the revegetation installation, plant establishment, and maintenance periods.

Bassia hyssopifolia (bassia), ***Centaurea melitensis*** (star thistle), ***Apium graveolens*** (common celery)

- Treat before plant produces seed;
- Weed-whip, hoe or pull plant, bag if seed is present and dispose of vegetation off-site; and
- Removal of regrowth would continue throughout the revegetation installation, plant establishment, and maintenance periods.

Cynodon dactylon (common Bermuda grass), ***Carpobrotus edulis*** (hotten-tot fig), ***Mesembranthemum crystallinum*** (crystalline iceplant)

- If seed is present, bag seed heads and dispose of off-site;
- Spray plants during periods of active growth with 2% Rodeo and brightly colored dye. Apply herbicide to the blades of the grass; and
- Removal of regrowth would continue throughout the revegetation installation, plant establishment, and maintenance periods.

Schinus spp. (pepper-trees), ***Washingtonia robusta*** (Mexican fan palm)

- Cut at ground level;
- Chip woody vegetation on-site and spread the mulch evenly; and

- Removal of regrowth would continue throughout the revegetation installation, plant establishment, and maintenance periods.
- Apply a mixture of 50% Rodeo and brightly colored dye to the base of the tree if resprouting occurs.

Eucalyptus spp. (eucalyptus), ***Fraxinu spp.*** (ash)

- Girdle at breast height;
- Apply a mixture of 50% Rodeo and brightly colored dye to the base of the trees if resprouting occurs;
- Removal of regrowth would continue throughout the revegetation installation, plant establishment, and maintenance periods; and
- Chip vegetation on-site and spread mulch evenly throughout.

6.4 Execution

6.4.1 Training of Personnel

Personnel responsible for the removal of invasive vegetation should be trained in the identification of target species for removal and in the identification of native plants within the protected habitats. This should include the identification of plant species to be seeded or planted.

6.4.2 Herbicide Application

Herbicide treatments would be prescribed by a Licensed Pest Control Advisor and performed by a Licensed Pesticide Applicator. Intentional or unintentional application of herbicides to non-target vegetation would be prohibited.

Herbicide would be applied through the painting of herbicide onto a freshly cut stump with a hand-held spray bottle; or spraying with a backpack sprayer with the throttle adjusted to low volume under low pressure.

No herbicide would be sprayed when wind speeds exceed five mph or within 24 hours of anticipated rainfall or for 24 hours after rainfall. No herbicide would be sprayed during periods of dense fog or when dense fog is anticipated within a 24-hour period.

Personnel must wear protective clothing as required by law and would stringently follow label directions and precautions. Spray bottles and other containers of herbicides would be tightly secured during their movement within the project area.

Non-target plants or seedings would not be contaminated during spraying or stump treatment. Drift of herbicide spray to adjacent areas would be prohibited. Necessary precautions would be taken to protect adjacent habitat including, but not limited to, providing a barrier to herbicide drift when necessary.

Herbicide preparation (mixing, addition of dye and surfactant) would only be conducted in approved on-site areas. The pouring of prepared herbicide into spray or paint apparatus would be conducted only in the approved area. Herbicide solutions would be marked through the addition of brightly colored blue or purple dye.

Plants treated with herbicide would not be disturbed until the glyphosate has taken effect, approximately four to eight weeks after application, per manufacturers instructions.

For the proper application of the cut-and-paint treatment, herbicide should be applied within two minutes of cutting, before the sap on the cut surface begins to congeal. If more than two minutes elapse, the stump should be recut and the fresh cut would be painted within two minutes.

6.5 Frequency of Invasive Vegetation Removal

The removal of invasive vegetation would be completed between December and January and September 15 and March 15, outside the parameters of the bird nesting season (Attachment 1, Figure 10). Invasive vegetation eradication could be monitored at weekly intervals throughout the first year of the project or as the budget allows. The continuing invasive vegetation monitoring and maintenance after the first year would be continued through the LRPC. It is suggested that they continue invasive vegetation eradication at monthly intervals throughout the second year of the project and less frequently in subsequent years as the budget allows.

To the extent possible, invasive vegetation should be removed from the site prior to the installation of plants or seed. Throughout the revegetation period, on-going invasive vegetation removal should be conducted. On-going invasive vegetation removal should consist of monitoring and eradicating target invasive vegetation species throughout the project area.

During the maintenance period, invasive vegetation removal should emphasize the control of target invasive vegetation in areas disturbed during construction and revegetation. Monitoring and continued invasive vegetation removal should continue throughout the revegetation project area as the budget allows.

6.6 Target Species

See Attachment 2, Table 17 for a list of species targeted for removal.

7.0 FLOOD CONTROL SUMMARY

Flood control measures within the project area are described in this section. The flood carrying capacity of the project area would be enhanced by the removal of a constriction near Channel Road, which would expand the floodplain (Attachment 1, Figure 1b). The wider channel cross section would tend to reduce velocities, thereby reducing scouring velocities and sediment transport downstream, better protecting important flood control structures near the constriction. The downstream hydraulics are controlled by a bridge at Riverford Road as well as other on-site physical features such as gravel/sand pits, vegetation, utility crossings, etc. (Attachment 1, Figure 1b).

The flood water surface elevations would generally be reduced from the existing pre-project elevations, as the FHR project would tend to reduce the channel elevation and increase the floodplain width. Flow velocities would be reduced due to increased channel and floodplain width, which would reduce the probability of property damage during periods of peak flood flow. There would be increased storage capacity, which would reduce the peak flood downstream. Channel storage benefits can only be considered if hydrologic analyses are readily available. The flow velocities during more frequent events would generally decrease due to the increased river meander length, which decreases grade; and increased floodplain width, which increases the surface area; and increased vegetation cover, which increases the roughness coefficient. Equally important, storm water would filter through the wetlands back into the groundwater to recharge and improve the water quality in the Riverview Water District well fields. Refer to Attachment 1, Figure 11 for a detailed map of flood control. In summary, flood control within the project area would be enhanced because 416,700 cubic yards of soil would be removed.

8.0 CONSTRUCTION PLAN

8.1 Schedule

An anticipated schedule for the construction phases of the Flood Control, Habitat Restoration, and Recharge Project may be found in Attachment 2, Table 18.

Project implementation for the restoration project would be determined by U.S. Army Corps of Engineers (Corps) permits. Work requiring a Corps Section 404 permit as described in the NWP 27 PCN is planned to begin in June of 2005 upon receipt of a Corps verification or permit.

8.2 Technique

For construction of the Flood Control, Habitat Restoration, and Recharge Project, work would be performed in phases to ensure that project elements can be properly managed and quality control maintained. The majority of the construction work on-site consists of the excavation of approximately 416,700 cubic yards of soil – with approximately 115,400 cubic yards being slated for use as infill for the closure of two on-site gravel/sand pits (see Attachment 2, Table 7 for Vehicle Trips (Traffic). Approximately 222,300 cubic yards would be hauled off-site to an approved upland

area. Prior to commencement of excavation, the areas to be worked would be cleared and grubbed as required to remove organic surface materials and debris, which would be properly disposed of as Class III materials at an approved landfill (hazardous materials are not expected to be found within the proposed excavation areas). The excavation of the material would be accomplished by use of motorized scrapers and/or excavators. Materials to be placed into the gravel/sand pits would be staged in a designated location along the gravel/sand pit edge, ensuring that materials are not lost into the watercourse in an uncontrolled manner. An excavator, blade or dozer would then be used to push the material into the desired locations according to the grading plan. The contractor may utilize one of several temporary, portable cofferdam systems such as those manufactured by PORTADAM, INC.; Hydro-Solutions, Inc., or functional equivalent. The contractor may pump 'clean' pit water to the existing river channel to dewater the construction area. The use of these technologies would allow the gravel/sand pits to remain hydrated except for those areas being worked as a part of the infill construction process.

The gravel/sand pits would be infilled to a nominal depth of two to three feet below the water surface to facilitate the propagation and growth of marsh flora and biota. Excess soil not required for gravel/sand pit infill would be staged in a designated area immediately to the east of Los Coches Creek in an area where excavation activity is not expected to occur. This material would then be loaded onto trucks for transportation off-site and disposal or re-use by others as directed by the client, this would be accomplished through use of a continuous material conveyor, or other approved measures, to maximize the total number of trucks which may be loaded in the course of a standard eight hour work day. Finish contours would be cut according to the desired elevations required by the engineer per the grading plan and would be surveyed to document the final elevations in the final report. Some field adjustments are expected and final grade must be approved by the wetland consultant in conjunction with the project engineer.

8.3 Staging Area

Equipment and site support utilities would be staged immediately within the security perimeter fence gate adjacent and to the west of the Winter Garden Blvd access point, in the upland location eventually to be used as an "enhanced habitat" area.

Access roads would be made primarily through the excavation areas - avoiding existing habitat that is slated to remain undisturbed. Constructed access around the perimeter of each gravel/sand pit to be infilled would be accomplished where practicable to support the infill of the gravel/sand pits. The existing service road that supports access to the local water district well field and pump houses would be retained and utilized as a supporting haul road. This road would be restored as necessary to approximate the present condition at completion of the project. The existing access bridge crossing from east/west over Los Coches Creek would be preserved and, if necessary, would be strengthened to carry the project traffic load. See Attachment 1, Figure 13 for a map of the staging area.

8.4 Equipment

It is anticipated that the following equipment would be used during construction of this project:

- 14 cubic yard capacity (minimum) motorized scrapers for major excavation;
- Track blade, dozer and/or grader as required to place and finish grade materials and to cut finish contours, grades and slopes;
- Track-hoe excavator to assist with movement, placement and compaction of soils, rip-rap and stabilization media;
- Water trucks for dust abatement control and compaction assistance;
- Materials conveyor for truck loading (materials designated for off-site disposal);
- 18-wheel end dump trucks for off-site debris and soil transportation;
- 3 cubic yard capacity (minimum) wheeled front end loaders for material staging;
- Conveyor support and truck loading; and
- Miscellaneous crew support vehicles.

8.5 Noise

The contractor would follow the same standards as listed in the US DOT/FHA manual on Noise Analysis and Abatement Policy. "It is difficult to predict reliable levels of construction noise at a particular receptor or group of receptors. Heavy machinery, the major source of noise in construction, is constantly moving in unpredictable patterns. Daily construction normally occurs during daylight hours when occasional land noises are more tolerable. No one receptor is expected to be exposed to construction noise of long duration; therefore, extended disruption of normal activities is not anticipated. However, provisions would be included in the plans and specifications requiring the contractor to make every reasonable effort to minimize construction noise through mitigation and abatement measures such as work-hour restrictions, site management and engineering controls."

It is planned that work would only be conducted during daylight hours to reduce the stress of construction related noise on local wildlife. Work would also be phased whenever possible to occur outside of the relevant breeding window for the target species.

A Corps and USFWS-approved biologist, or a designated representative, would perform monitoring of least Bell's vireos and construction activities adjacent to riparian habitat during their breeding season, to ensure that noise attenuation strategy is effective in reducing construction noise at the edge of or within adjacent riparian habitat to no more than an average of 60 db(A) Leq hourly. To ensure these requirements are met, the biologist, or a designated representative, would:

- Perform noise monitoring, as required, at the edge of riparian habitat adjacent to construction areas and/or at least Bell's vireo nests found in riparian habitat within the project area; and

- The biologist, or a designated representative, would stop construction activities that cause the project to exceed the noise limit and immediately (i.e., within four hours) notify the Corps and USFWS. Work may not resume until corrective measures have

been implemented..

A noise monitoring plan would be submitted to the Corps and USFWS for approval prior to initiating construction during the least Bell's vireo breeding season. Noise and least Bell's vireo monitoring reports would be submitted to the USFWS. The noise monitoring report would include tables and figures, as appropriate, that summarize the noise monitoring results and the number and location of least Bell's vireos and/or their nests detected within the project area. Monitoring may be modified or terminated if justification (e.g., noise attenuation structures consistently reduce construction noise as required) is submitted to, and approved by, the Corps and Service.

Orange construction fencing would be placed at the edge of the vegetated area to assure construction equipment and personnel do not infringe on the nesting habitat.

8.6 BMPs

The following Best Management Practices (BMPs) would be developed and followed during the construction of this project for:

- On-Site Soil Management Plan;
- Off-Site Soil Management and Transportation Plan;
- Site Safety Program;
- Dust and Air Pollution Abatement Protocols;
- Noise Control; and
- Site Security Plan.

According to the current projected schedule, no major construction or excavation activity is anticipated to occur during the rainy season at the project site. Contractors working on-site would be fully briefed on the requirements of the SWPPP (Volume 3, NPDES Application, Notice of Intent, and Storm Water Pollution Prevention Plan) and the means and methods to ensure that fugitive emissions, dust, etc. would not encroach upon areas outside of the projected work areas. Sensitive habitat not included within the work areas would be delineated with orange construction fencing, and provisions of the SWPPP and Storm Water Management Plan (SWMP) regarding sediment control, runoff, etc. would be implemented as required. The contractor would comply with the SWPPP and San Diego County grading requirements.

8.7 Dust

Dust impacts would be minimized through the use of water and/or an approved dust palliative. Active construction areas would be wetted to assure the significant reduction or elimination of dust plumes. Trucks carrying soils or debris would be covered or would be loaded to ensure a minimum of two feet of freeboard. Finished slopes and grades would be expeditiously replanted, treated with an approved stabilizing agent or otherwise stabilized. Access into and out of the site onto public roadway would be maintained free of soil, dust, and/or debris accumulations by sweeping with commercial water/vacuum sweepers as necessary, but no less frequently than once per week during

the major construction period. Exposed soil stockpiles would NOT be permitted unless being actively worked and would be covered when not in active use and as specified in the SWPPP and San Diego County grading requirements. Water or an approved dust palliative would be applied during soil stockpile accumulation, loading or unloading operations. Truck and crew support vehicle traffic would be restricted to a road travel speed of no more than 15 mph while on-site to minimize associated dust issues.

8.8 Water Quality

Major excavation and construction is expected to be complete prior to the rainy season. BMPs would be used to minimize impacts to water quality. See Volume 3, NPDES Application, Notice of Intent, and Storm Water Pollution Prevention Plan, for more information.

8.9 Grading Plan

The grading plan has been designed to eliminate an artificial accumulation of fill materials placed on the site as a result of many years of gravel and sand mining operations. In the primary excavation areas, the current elevations would be reduced by between 20 to 30 feet, and approximately a third of the excavated materials would be used to modify and infill two on-site gravel/sand pits which are no longer deemed desirable as a part of the San Diego River restoration. The remaining excavated material is slated to be managed and transported off-site by the client for use as fill or cover, which determination is outside the contractual scope of this project.

To accomplish the project goals and objectives, five key operational construction elements are planned:

1. Excavation and development of two water quality features, one immediately adjacent and to the east of the current control structure of the Los Coches Creek, which would be modified as a flood control measure to divert excess water from the creek into the Urban Non-Point Source Water Quality Improvement Basins. This water quality feature would be constructed in at least two terraces with predominant slope from east to west. The second would be the Recharge Project Constructed Wetland at the far western terminus of the major excavation area and would also be predominantly sloped from east to west;
2. In between the two water quality features there would be a seasonal wetland which would follow the connective slopes and gradients from east to west. Bordering this area to the south would be a constructed upland slope comprising a three to one gradient from the finish elevation at the toe of the slope (elevation -22.5 feet) to the existing berm barrier which fronts the access road to the north. This existing access road would be preserved and parallels State Route 67. The new slope construction would be terraced and planted with native trees and shrubs;
3. A drainage swale would be constructed along the toe of the new upland. This would collect storm water runoff from three drainage systems designed to carry runoff from State Route 67;

4. There would be a bioswale treatment area adjacent to the clarifier and designed to collect, polish, treat, and re-infiltrate surface water to the groundwater table. This area may also be used to treat well water containing high nitrate values; and
5. Two major gravel/sand pits on-site are proposed to be either completely or partially in-filled. The fill would be restricted and placed to no more than 3.5 feet below the static water level to promote the attainment of marshland habitat.

In general, slopes and grades would be cut trending from east to west and from southeast to northwest to collect, control and divert surface waters into and through the constructed wetlands and flood control areas and then back into the Lower San Diego River.

A complete dimensioned grading plan is being prepared as a part of the construction plans and specifications package, but a review of Volume 4d, Grading Permit Application, would provide a presentation of the proposed grading plans.

9.0 MAINTENANCE AND MONITORING PLAN

Maintenance during the monitoring period would be developed, managed and implemented through the LRPC. The maintenance protocols would address the major issues related with park longevity. In addition, management of the biological resources would be the responsibility of the LRPC and would help establish a standard for partnerships between the County of San Diego and the non-government entities working to support the regional conservation plans. The LRPC anticipates establishing a Memorandum of Understanding (MOU) with the County regarding MSCP default fee-title ownership and management obligations for this site.

9.1 Maintenance Activities

Planned maintenance activities include inspections of BMPs, erosion control techniques, control of invasive vegetation, pest control, wildlife presence, irrigation lines, vegetation establishment and landscape maintenance (Attachment 1, Figure 12).

The following items could be included in routine maintenance inspections:

- Invasive vegetation and pest control;
- Trash removal;
- Fencing maintenance;
- Routine landscape maintenance and irrigation repair;
- Sediment removal (where less than three inches deep) from erosional sources by manual labor within one week of discovery; and
- Maintenance of permanent BMPs.

Non-routine maintenance activities would require separate permit modification or written authorization from the Corps. These non-routine activities would not be conducted during avian

breeding and nesting time periods; generally, these activities would not be conducted between March through August. Such non-routine activities include (but are not limited to) the following:

- Mechanized removal of vegetation or invasive vegetation from jurisdictional waters;
- Dredging or excavation of jurisdictional waters;
- Mechanized filling of jurisdictional waters; and
- Emergency flood control maintenance.

A program would be implemented to control invasive vegetation in the restoration area after their initial eradication. Local labors would be used on an ongoing basis to remove invasive vegetation using the techniques described in Section 6.6. Maintenance would also be necessary in habitat revegetation areas. This may require, but is not limited to, the replacement of dead plants in the container-planted areas, reseeding of hydroseeded and handseeded areas that have not reached proper percentage of cover, and replacement of broken irrigation lines (Section 5.4).

The river system is intended to remain as natural as possible and would be allowed to form new channels as dictated by flow conditions. Rock rip rap at the upstream end of the project and the diversion structure(s) at Los Coches Creek would be inspected after high flows and repairs would be made as necessary.

Proposed BMP maintenance activities and schedules are included in the SWPPP, Volume 3, NPDES Application, Notice of Intent, and Storm Water Pollution Prevention Plan, Attachment 5.

9.1.1 Vector Control

LRPC would be responsible for coordinating a vector control/monitoring program with San Diego County's Vector Surveillance and Control Program. To the extent possible, the project would adhere to the guidelines established in the County of San Diego proposed wetbasin construction agreement. It is expected that open water and perennial marsh habitat on the project site would be populated with mosquito fish (*Gambuzia* sp.) to control the mosquito population. Other steps may also be taken to control mosquito populations on the project site including, but not limited to, maintenance and inspection of BMPs. A vector control/monitoring program would be used to monitor for a mosquito population on the site after project construction is completed, as well as implementing mosquito control methods when populations are found.

9.2 Schedule

Maintenance would be performed regularly, as needed, and as funding allows. A proposed maintenance and monitoring inspection schedule may be found in Attachment 2, Table 19.

9.3 Target Jurisdictional Acreage to be Created/Enhanced

Target jurisdictional areas for habitat types to be created, enhanced, and restored, is described in Section 2.1.

9.4 Performance Criteria

Performance criteria are used to determine the completion of a permittee's responsibilities to the restoration area. Fulfillment of these criteria would indicate that the restoration area is progressing well toward the habitat characteristics, functions, and values that constitute the long-term goals of the restoration activity.

The performance criteria would be assessed on a regular basis through an on-going monitoring program to evaluate progress toward long-term project goals. See Section 9.6 for performance evaluation criteria.

9.5 Monitoring Methods

The objective of monitoring the restoration area is to evaluate progress in relation to each performance criterion. Monitoring would be conducted regularly and would serve to:

- Determine the need for erosion control measures;
- Determine the need for supplemental planting;
- Determine the necessity of on-going invasive vegetation control;
- Ensure that potential sources of anthropogenic disturbance are detected and prevented;
- Determine corrective actions related to hydrology;
- Determine corrective actions related to soil conditions and needs for soil amendments; and
- Determine the progress by abundance and/or diversity of wildlife.

Methods for monitoring vegetative success would be conducted by establishing transects and sampling vegetative cover at regular intervals. Vegetation would be sampled in a one-meter square, within which vegetation would be identified by species. Area of coverage of each species would be estimated. Estimates from sampling points would be averaged to determine overall success of the vegetative type.

9.6 Final Success Criteria

Success of habitat creation, enhancement, and restoration activities would be determined by the overall sustainability of the habitat in the long-term. Criteria that would be considered to judge habitat sustainability are:

- Establishment of native vegetation in the various habitat areas;
- Low percentage of non-native vegetation in habitat regions;
- Decreased nitrogen concentration in the constructed wetland effluent;
- Presence of targeted avian species on-site;
- Improved sediment transport along the Lower San Diego River; and
- Flood flow improvement.

9.6.1 Target Functions and Values

Target functions and values for the habitat restoration areas are described in Section 2.2.

9.6.2 Target Hydrological Regime

Target hydrological regimes, with the exception of the Urban Non-Point Source Water Quality Improvement Basins and the Urban Forest, would remain unchanged from current conditions. Perennial marsh and seasonal wetlands in the western abandoned gravel/sand pits would be supported by groundwater as would the willows established in the riparian corridor. The western Urban Non-Point Source Water Quality Improvement Basin would be supported by groundwater pumped from the Riverview Water District wells. The eastern Urban Non-Point Source Water Quality Improvement Basin would be supported by seasonal flows through Los Coches Creek. Irrigation would be used to establish container plantings in the Urban Forest vegetation community. Due to the location of the Urban Forest community, an irrigation system would be necessary to establish plantings (Section 6.3.6).

10.0 RECLAMATION PLAN CONDITIONS

The following conditions are intended to implement the minimum requirements of the State of California Surface Mining and Reclamation Act of 1975 (SMARA), as well as local requirements. Should conflict arise between the provisions of these conditions and the minimum requirements of SMARA, the SMARA requirements shall take precedence.

1. No work shall be conducted pursuant to the Reclamation Plan, site plans, and specifications for the grading of the property until plans have been prepared, and/or approved, and signed by a registered civil engineer, and shall include all information required in County of San Diego Regulatory Ordinances Section 87.208(b) and any other information required by the Director of the Department of Planning and Land Use.
2. The Reclamation Plan shall, in addition to all other requirements, provide in designated

phases for the progressive rehabilitation of the mining site land form so that, when reclamation is complete, it shall contain stable slopes, be readily adaptable for alternate land uses, and be free of derelict machinery, waste materials and scrap to the satisfaction of the Director of the Department of Planning and Land Use. The proposed mining site land form, to the extent reasonable and practical, shall be revegetated for soil stabilization, free of drainage problems, coordinated with present and anticipated future land use, and compatible with the topography and general environment of surrounding property.

3. The estimated costs of reclamation shall be secured by financial assurance, in an amount as specified below in Conditions 4 and 5, to assure compliance with the Reclamation Plan. The assurance shall be made payable to the Director of the Department of Planning and Land Use and the California Department of Conservation and will be provided by the general contractor for this project in the form of an irrevocable completion bond and shall be readily available to pay for reclamation in accordance with the approved Reclamation Plan.
4. The financial assurance shall be in an amount equal to the estimated cost to reclaim, in accordance with the requirements of the approved Reclamation Plan, all disturbed, unreclaimed lands and all acreage expected to be disturbed in the forthcoming year. The operator or permittee shall provide an estimate of the cost of reclamation prepared by a state-registered civil engineer. All financial assurances shall be forwarded to the California Department of Conservation for review a minimum of 45 days prior to County approval. The County shall review and approve the financial assurance estimates if they are deemed sufficient. The estimate shall be submitted not later than 120 days after the granting of the Reclamation Plan and by July 1st of each year thereafter. If the operator or permittee does not submit this estimate by the required deadline, the County will calculate an estimate of assurance. The staff time spent calculating this estimate will be charged against the inspection deposit, required below in Condition 14. The financial assurance shall be provided to the County within 60 days of notification of the Director of the Department of Planning and Land Use's approval of the financial assurance amount.
5. The financial assurance amount shall be adjusted annually to account for new lands disturbed or expected to be disturbed in the forthcoming year by the reclamation of lands accomplished in accordance with the approved Reclamation Plan. In no event shall the amount of assurance required be construed as a limitation on the liability of the permittee.
6. The permittee and the surety executing such bond or person issuing such instrument of credit or making such cash deposit shall continue to be firmly bound under a continuing obligation for the payment of all necessary costs and expenses that may be incurred or expended by the County in causing any and all such work to be done. Financial assurances shall no longer be required of an operator or permittee, and shall be released, upon written notification by the County, which shall be forwarded to the operator and the State Department of Mining and Geology, that reclamation has been completed in accordance with the approved Reclamation Plan. In the case of a cash deposit, any unused portion thereof shall be refunded to the permittee.
7. The County shall be notified no less than 180 days prior to cancellation of any financial assurance. The County may seek the forfeiture of such financial assurance if new assurance is not posted at least 30 days prior to the expiration of the financial assurance.
8. If the site property is sold or ownership is transferred to another person or entity, the existing

financial assurances shall remain in force and shall not be released by the County until new financial assurances are secured from the new owner and have been approved by the County.

9. The operator or permittee shall file a copy of the operation's annual report with the State pursuant to Public Resources Code Section 2207.
10. The operator or permittee shall fund an annual inspection deposit account with the Department of Planning and Land Use and the department of Public Works. The initial amount of the deposit shall be $3000.00, as established by the Board of Supervisors ($1000 allocated for use by the Department of Public Works' inspections and $2000 allocated for the Department of Planning and Land Use's inspections). Thereafter, the Director of the respective Department will determine the amount of the deposit based on the cost to inspect the surface mining operation. The Director of the Department of Planning and Land Use, or other assigned County agency (i.e., Revenue and Recovery), shall notify the mining operator of the amount of the required deposit. The amount of the deposit required shall not be construed as a limitation on the liability of the operator or permittee.
11. If, after inspecting the mining operation, the County determines that it does not comply with the Reclamation Plan, the County will notify the operator in writing of the non-compliance. The County shall give the operator a reasonable time, not to exceed 180 days, to comply. If at the end of this time the operation still does not comply with the Reclamation Plan, the County may require the mining operator to stop all or a part of the work. Failure to comply with the Reclamation Plan shall be considered a violation of the Zoning Ordinance and, in accordance with the County of San Diego Regulatory Ordinances Section 87.106, shall be deemed unlawful and a public nuisance. The County's finding of non-compliance with the Reclamation Plan may be appealed pursuant to Zoning Ordinance Sections 7200-7205.
12. If the reclamation operation or portion of the operation subject to these conditions is sold, assigned, conveyed, exchanged, or otherwise transferred, the successor in interest shall be bound by the provisions of the Reclamation Plan. Notification of such sale, assignment, conveyance, exchange, or transfer shall be provided to the Director of the Department of Planning and Land Use within 30 days of such.
13. Neither the issuance of a Reclamation Plan, nor the compliance with any provisions or condition thereof, shall relieve any person from any liability or responsibility resulting from grading operations.

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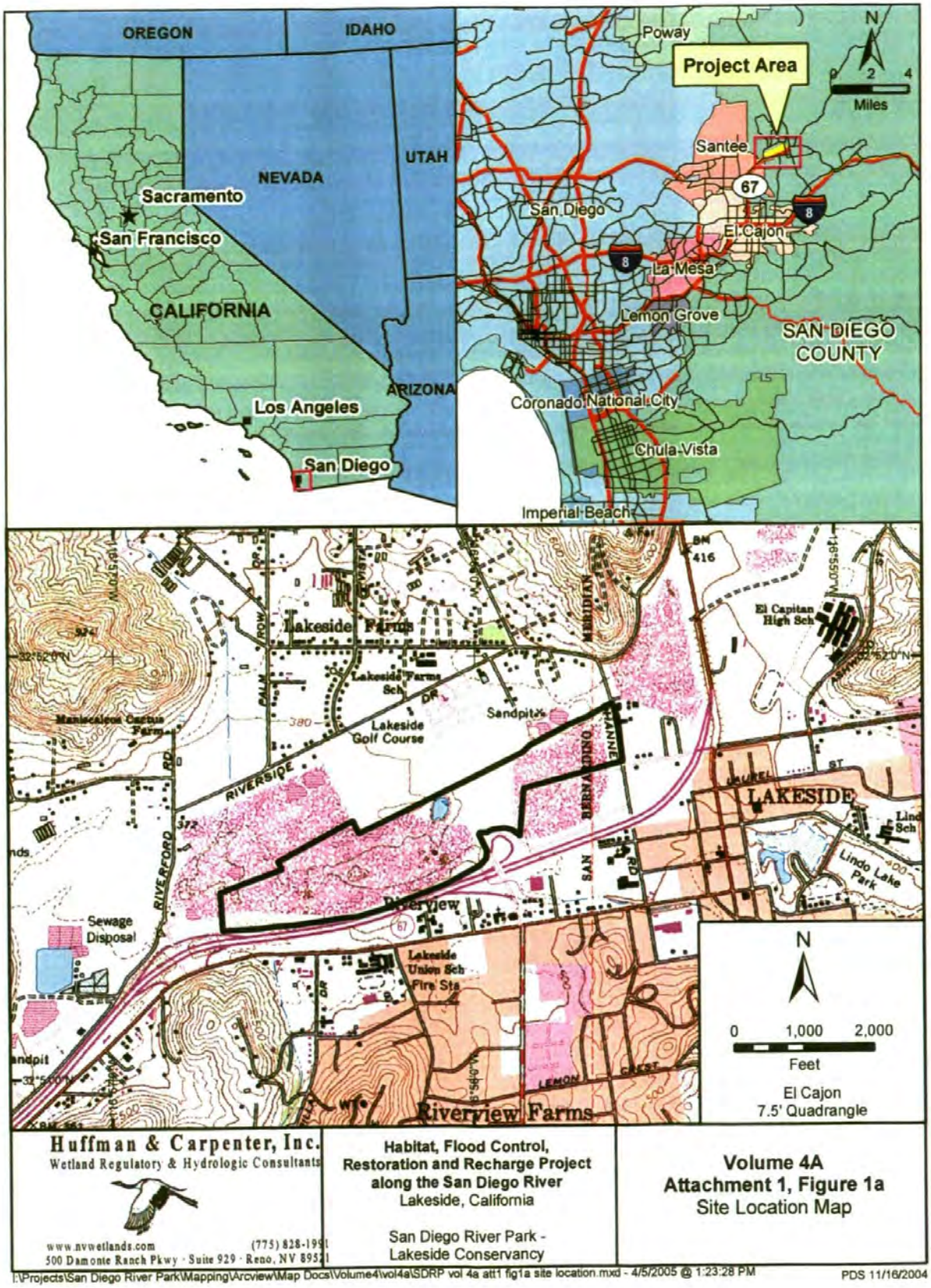

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Habitat, Flood Control, Restoration and Recharge Project along the San Diego River
Lakeside, California

San Diego River Park - Lakeside Conservancy

Volume 4A
Attachment 1, Figure 1a
Site Location Map

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Restoration, and Recharge Project

**Volume 4A
Attachment 1, Figure 1b**

Project Location Map

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Spring, 2002 Aerial Photo

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Flood, Habitat, Restoration, and Recharge Project

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Attachment 1, Figure 2a

Existing Site Conditions

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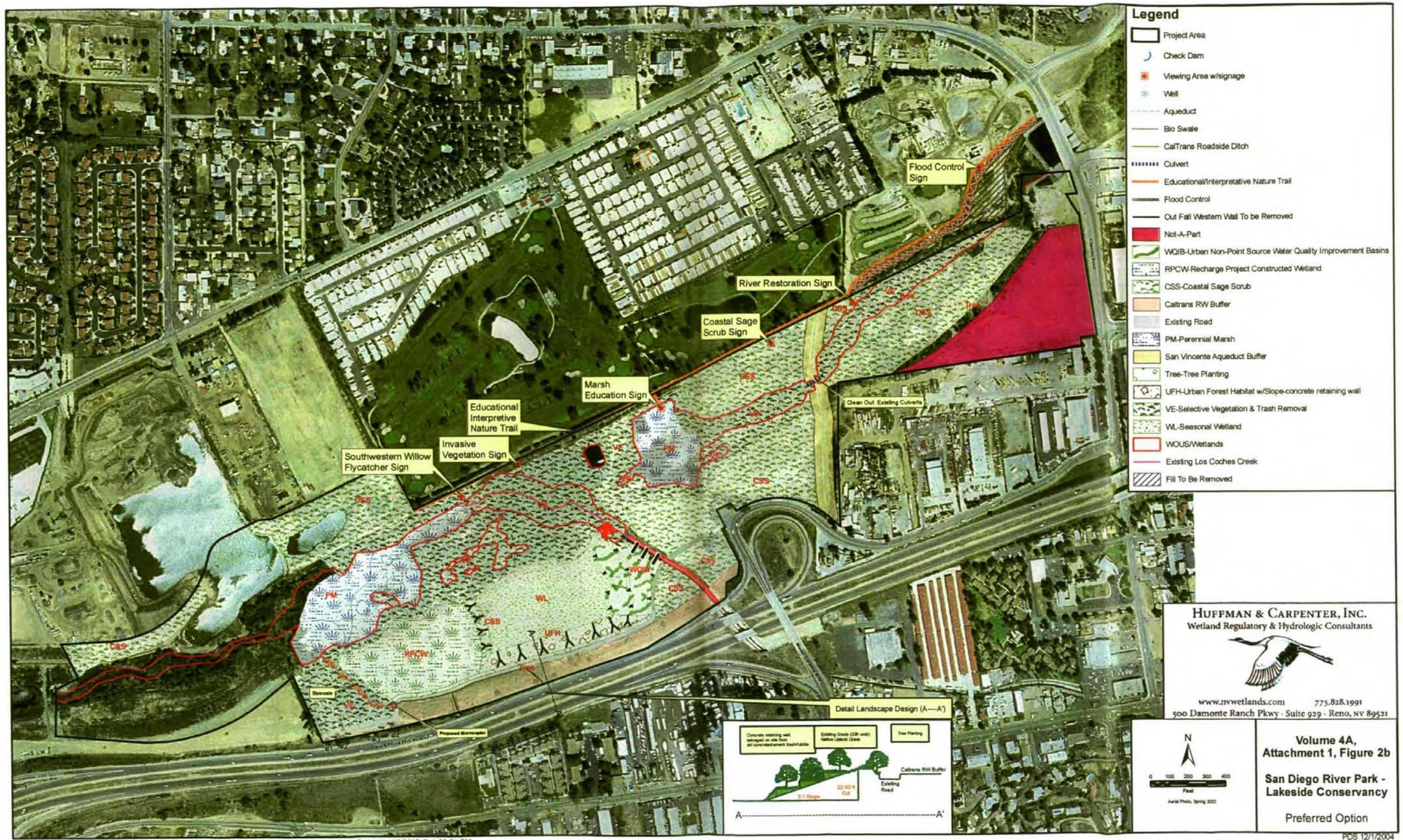

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Preferred Option

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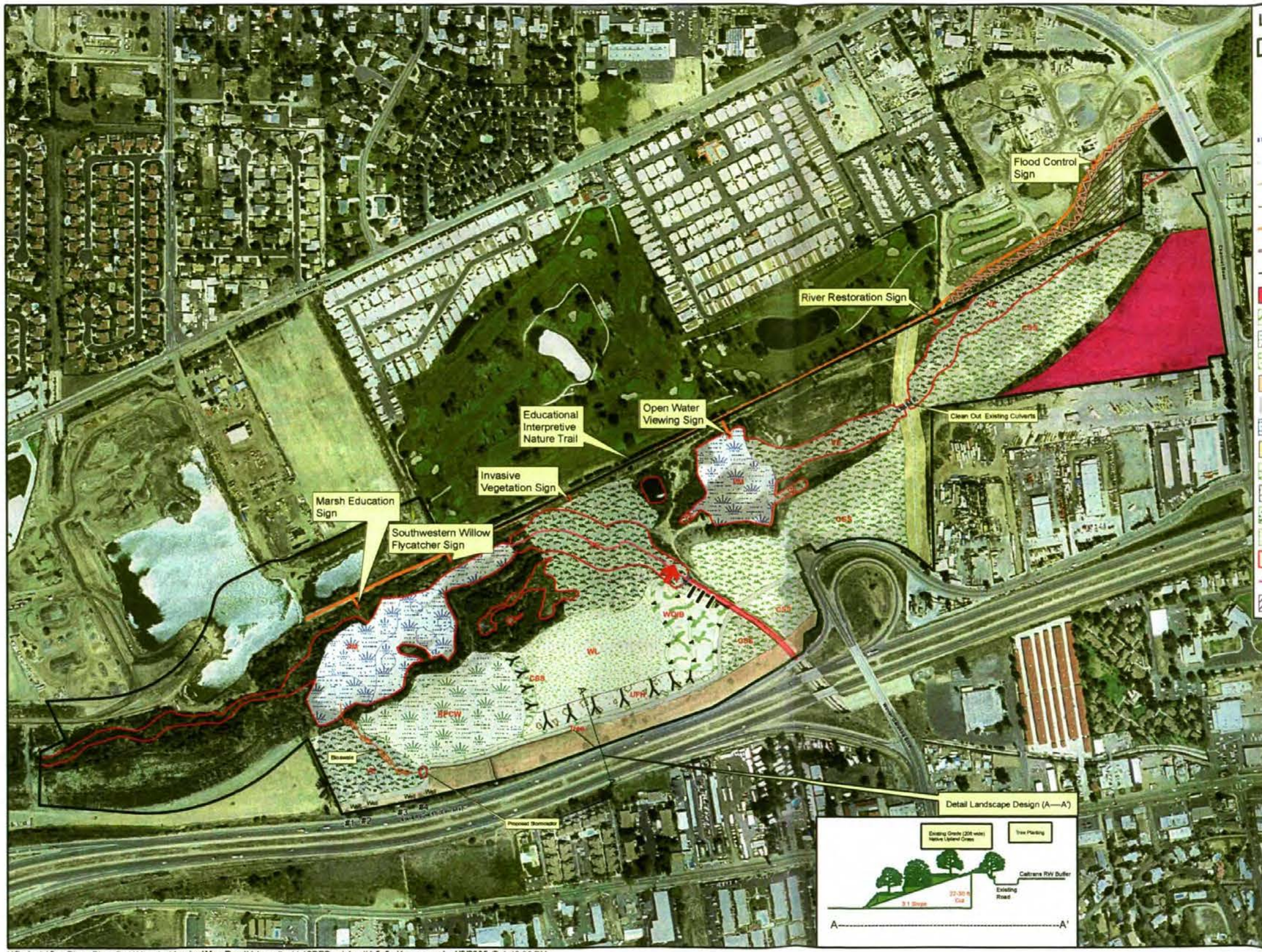

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San Diego River Park - Lakeside Conservancy

Alternative Option

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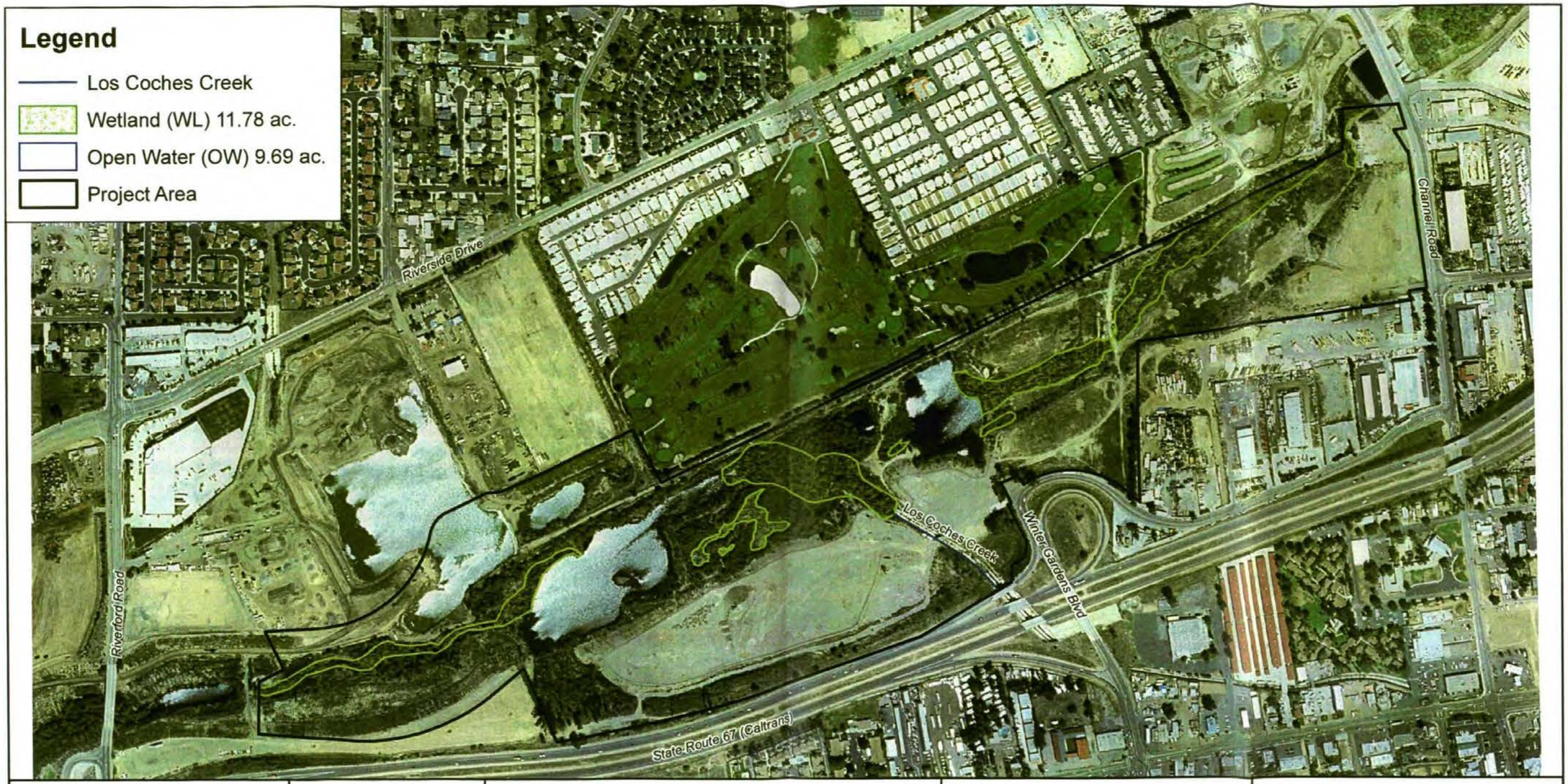

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Flood, Habitat, Restoration, and Recharge Project

Volume 4A, Attachment 1, Figure 2d

Wetland Delineation Map

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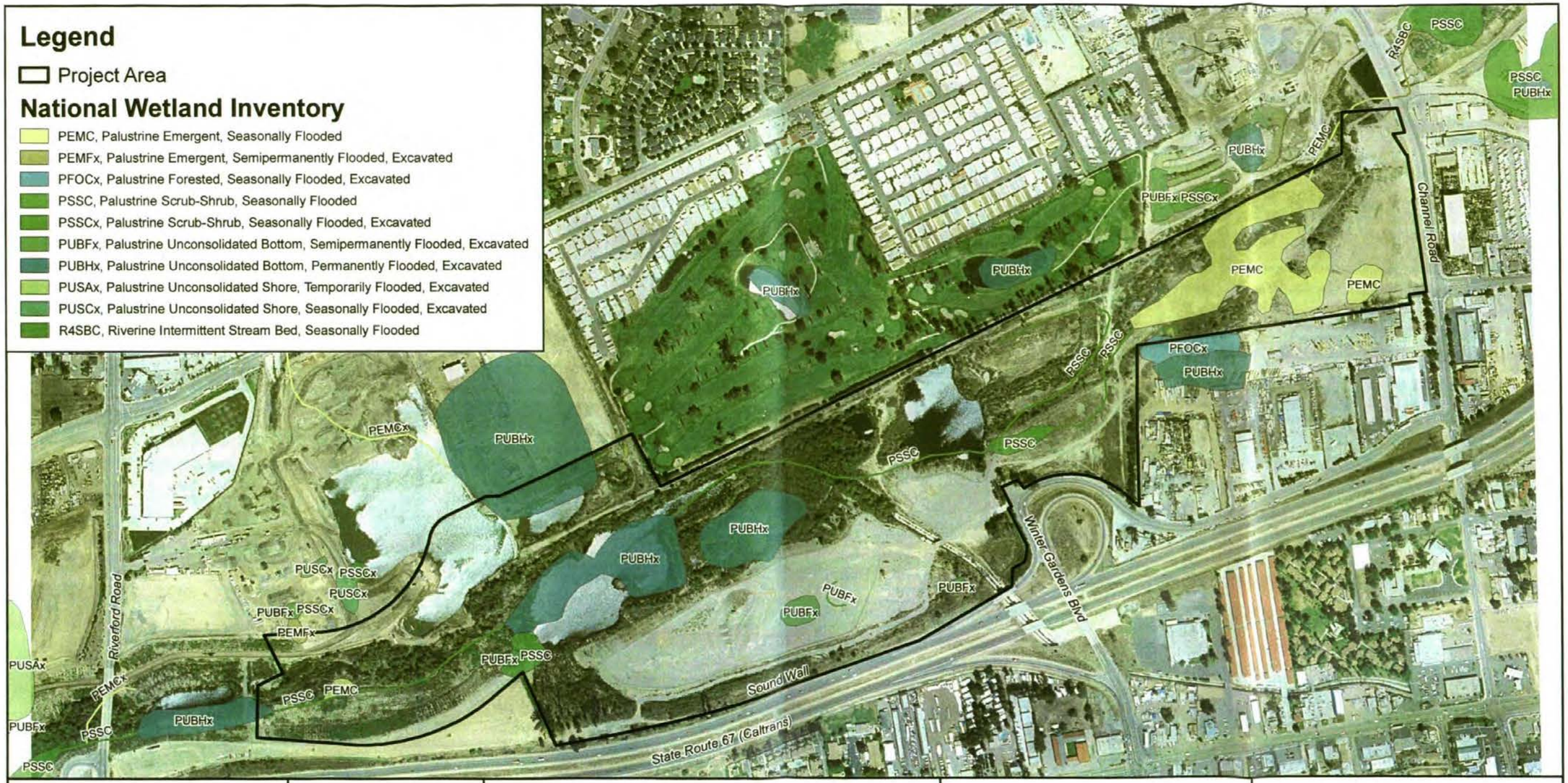
Legend

Project Area

National Wetland Inventory

- PEMC, Palustrine Emergent, Seasonally Flooded
- PEMFx, Palustrine Emergent, Semipermanently Flooded, Excavated
- PFOCx, Palustrine Forested, Seasonally Flooded, Excavated
- PSSC, Palustrine Scrub-Shrub, Seasonally Flooded
- PSSCx, Palustrine Scrub-Shrub, Seasonally Flooded, Excavated
- PUBFx, Palustrine Unconsolidated Bottom, Semipermanently Flooded, Excavated
- PUBHx, Palustrine Unconsolidated Bottom, Permanently Flooded, Excavated
- PUSAx, Palustrine Unconsolidated Shore, Temporarily Flooded, Excavated
- PUSCx, Palustrine Unconsolidated Shore, Seasonally Flooded, Excavated
- R4SBC, Riverine Intermittent Stream Bed, Seasonally Flooded



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Flood, Habitat, Restoration, and Recharge Project

Volume 4A, Attachment 1, Figure 3a

National Wetlands Inventory

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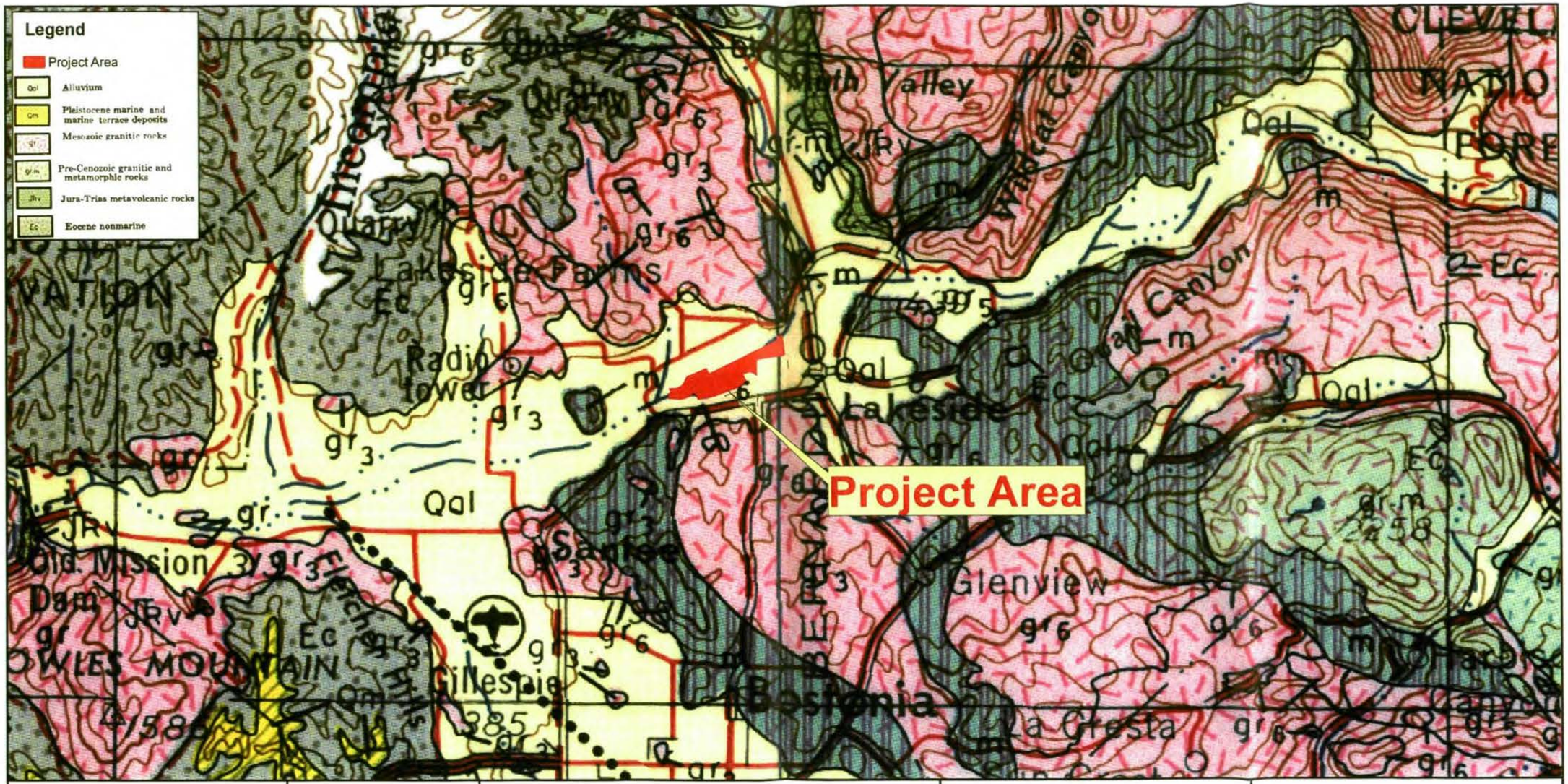

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Geologic Map of California:
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San Diego River Park - Lakeside Conservancy

Flood, Habitat, Restoration, and Recharge Project

Volume 4A, Attachment 1, Figure 3b

Geologic Map

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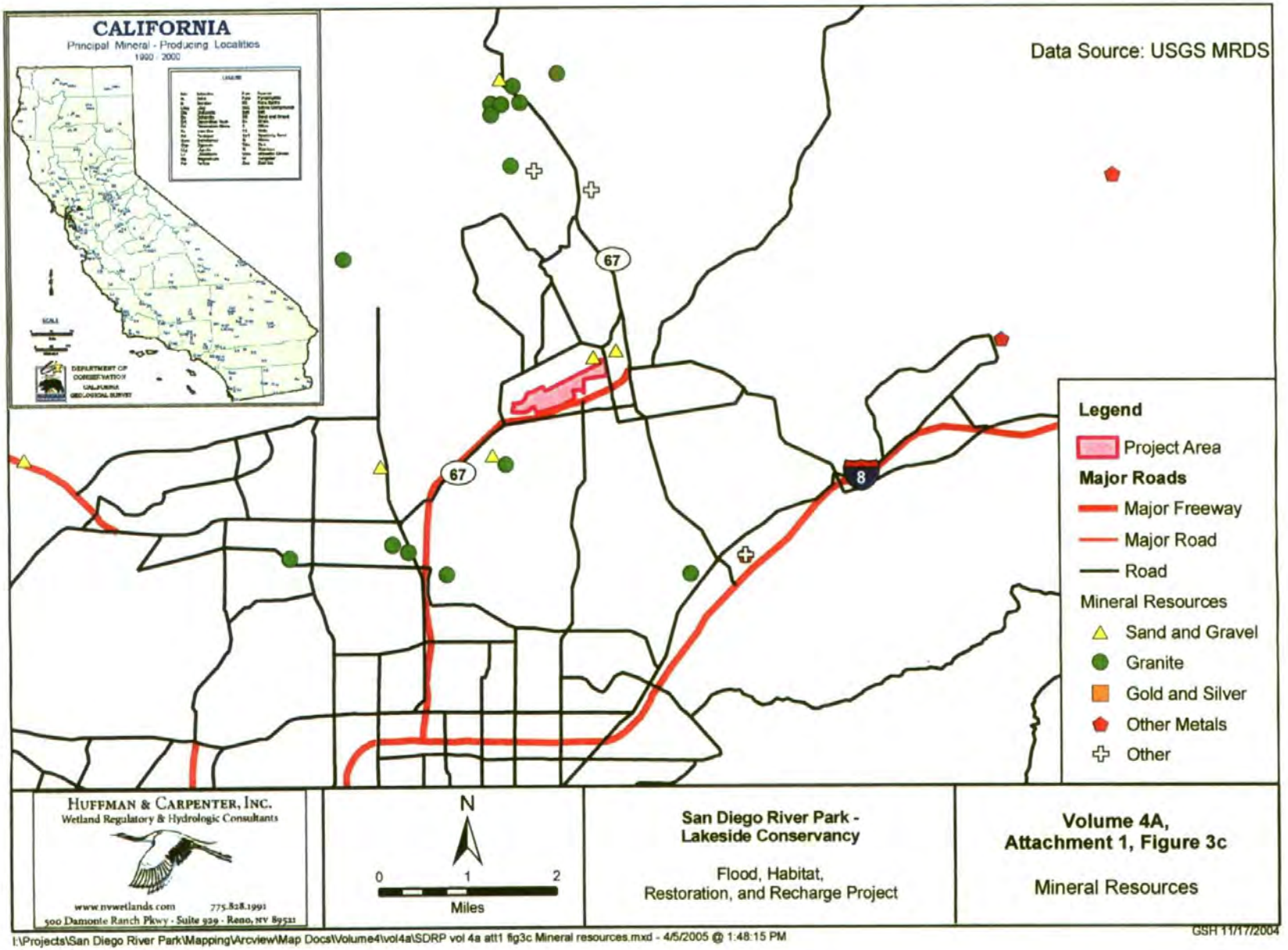

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Flood, Habitat,
Restoration, and Recharge Project

Volume 4A,
Attachment 1, Figure 3d

Hydrology

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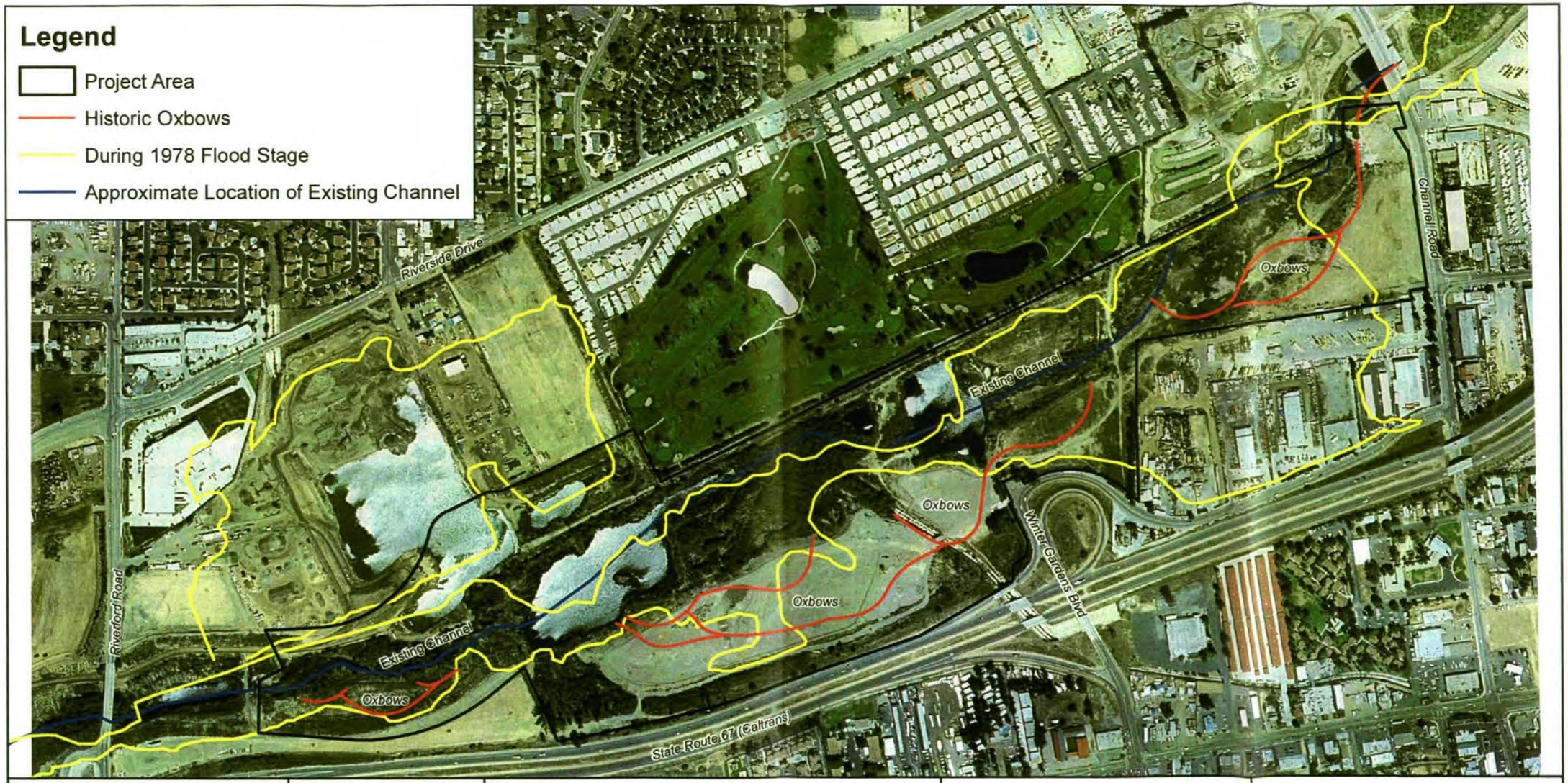

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Flood, Habitat, Restoration, and Recharge Project

Volume 4A, Attachment 1, Figure 3e

Geomorphology

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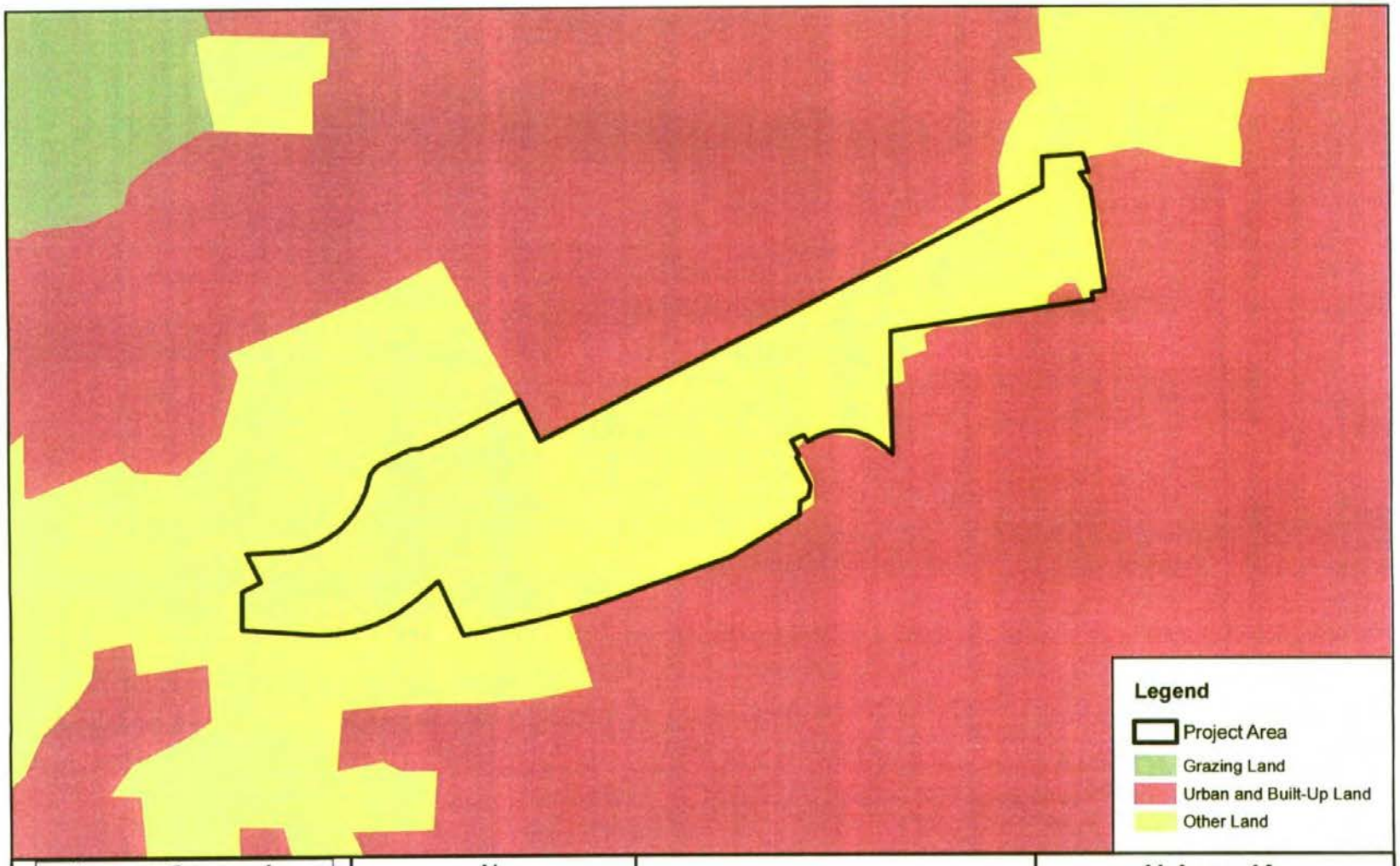

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Volume 4A, Attachment 1, Figure 3f

California Conservation District Agricultural Zoning Map

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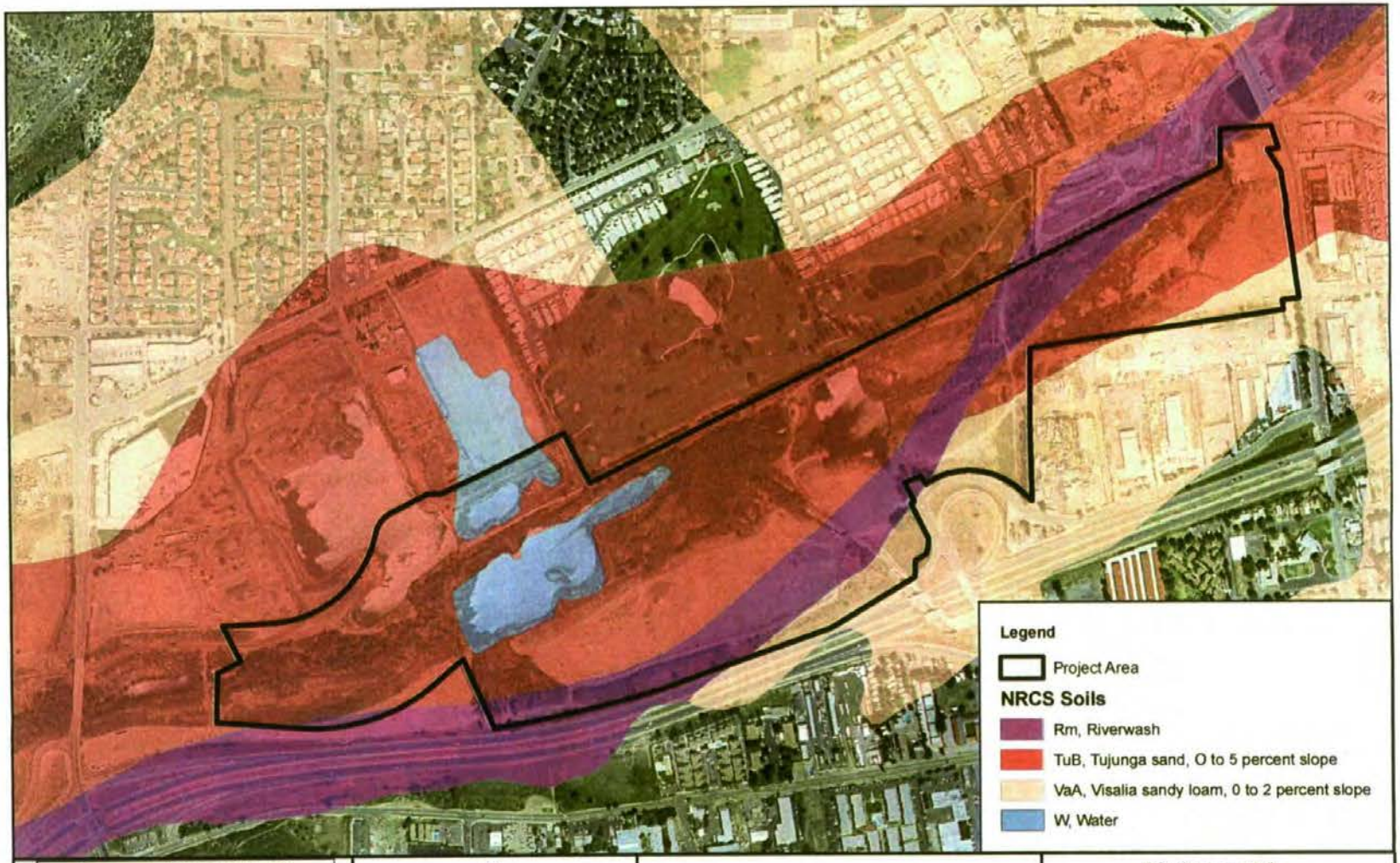

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Volume 4A, Appendix 1, Figure 3g

Soils and Subsurface Soils Map

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San Diego River Park - Lakeside Conservancy

Flood, Habitat, Restoration, and Recharge Project

Volume 4A, Attachment 1, Figure 3i

Vegetation and Exotic Species Map

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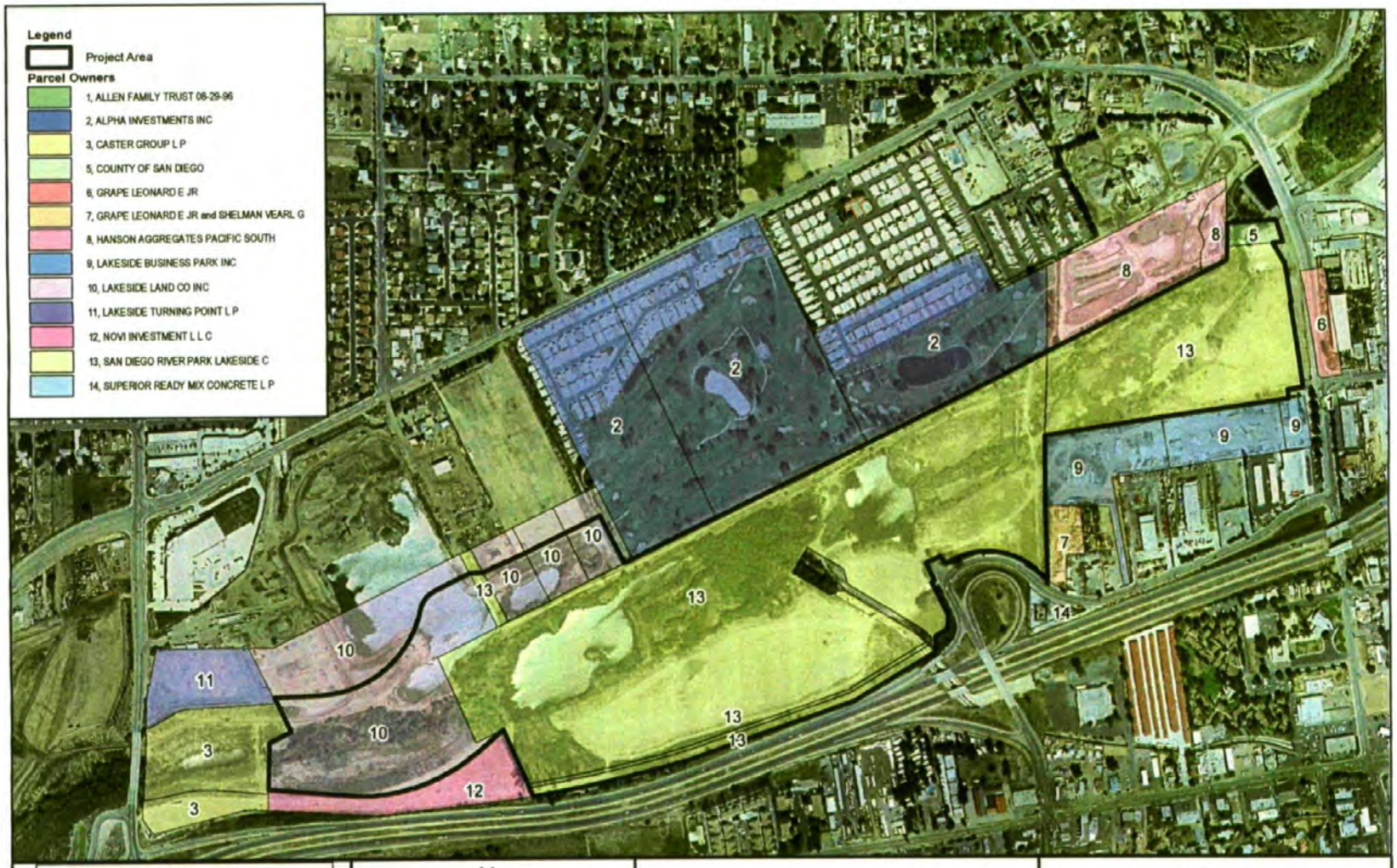

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Flood, Habitat, Restoration, and Recharge Project

Volume 4A, Attachment 1, Figure 3m

Parcel Map

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Volume 4A, Attachment 1, Figure 3n

Public Services

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Flood, Habitat, Restoration, and Recharge Project

Volume 4A
Attachment 1, Figure 3o

Utilities

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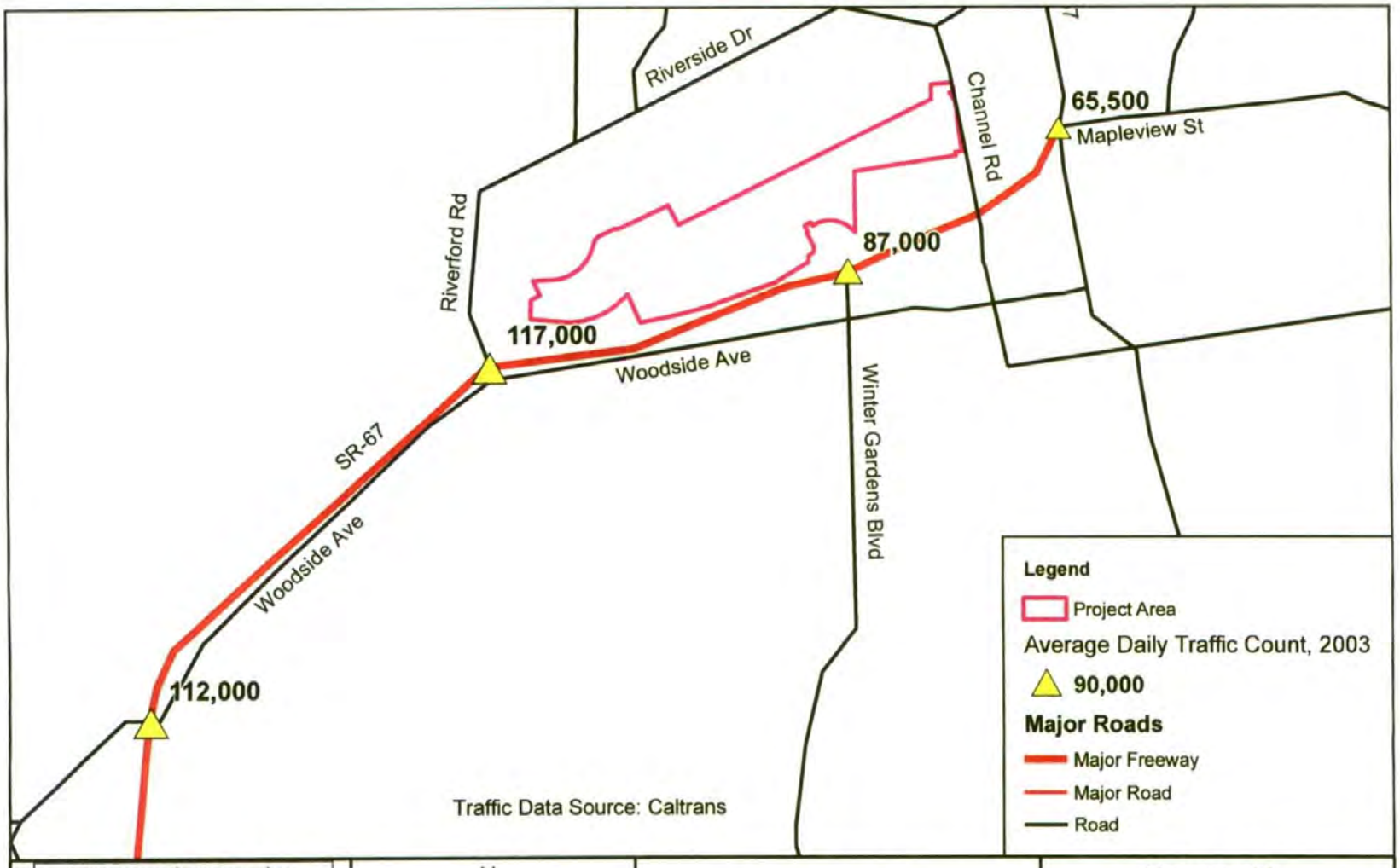

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Volume 4A, Attachment 1, Figure 3p

Average Daily Traffic Count on State Route 67

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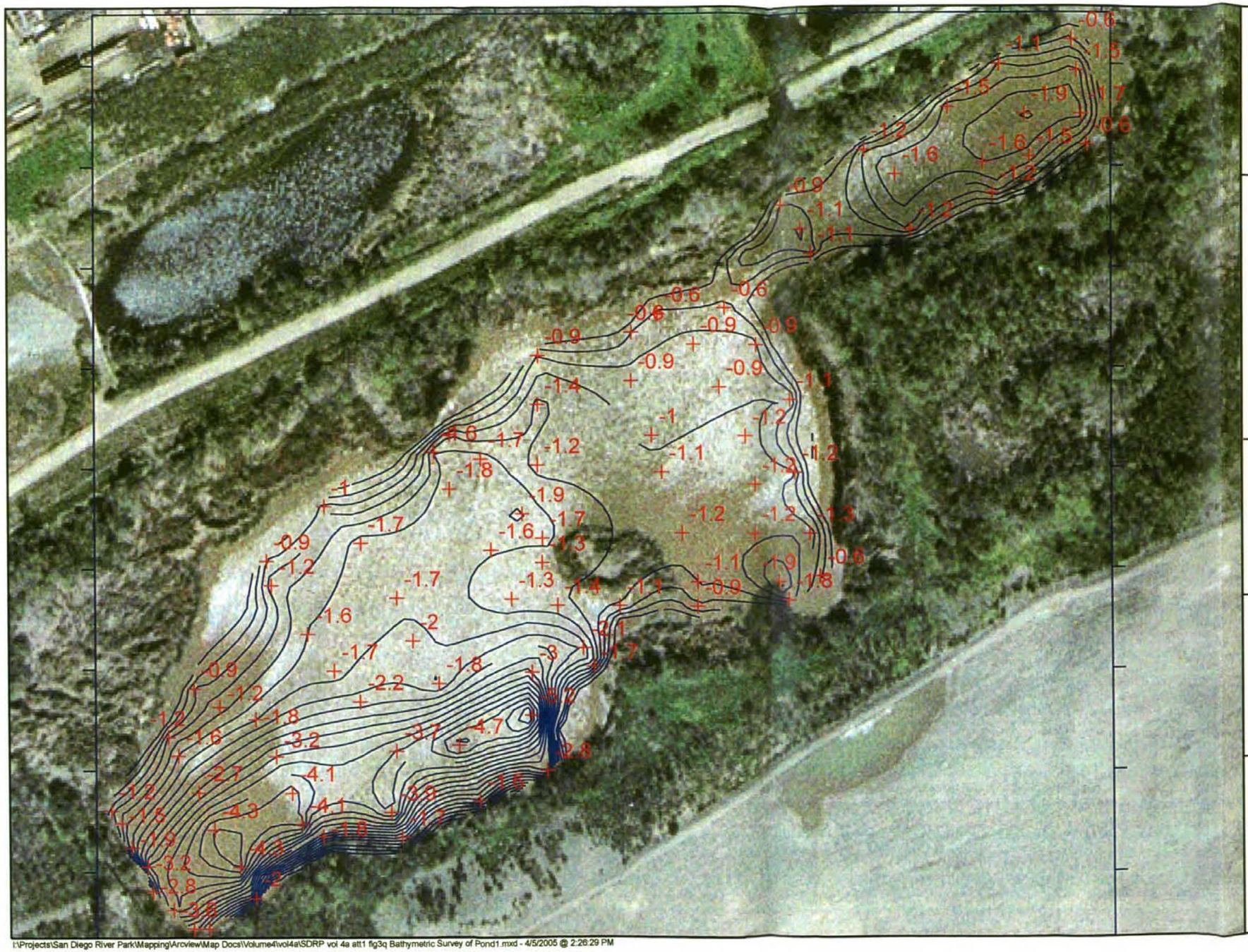

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Legend

Bathymetry Survey Points (Meters)
Contour

Volume = 60,173 cubic yards

N

0 100 200
Feet

Scale 1" = 100'

San Diego River Park - Lakeside Conservancy

Flood, Habitat, Restoration, and Recharge Project

Volume 4A, Attachment 1, Figure 3q

Bathymetric Survey of Pond 1

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LJ 11/24/2004

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Legend

Bathymetry Survey Points (Meters)

Contour

Volume = 98,516 cubic yards

N

0 100 200

Feet

Scale 1" = 100'

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Flood, Habitat, Restoration, and Recharge Project

Volume 4A, Attachment 1, Figure 3r

Bathymetric Survey of Pond 2

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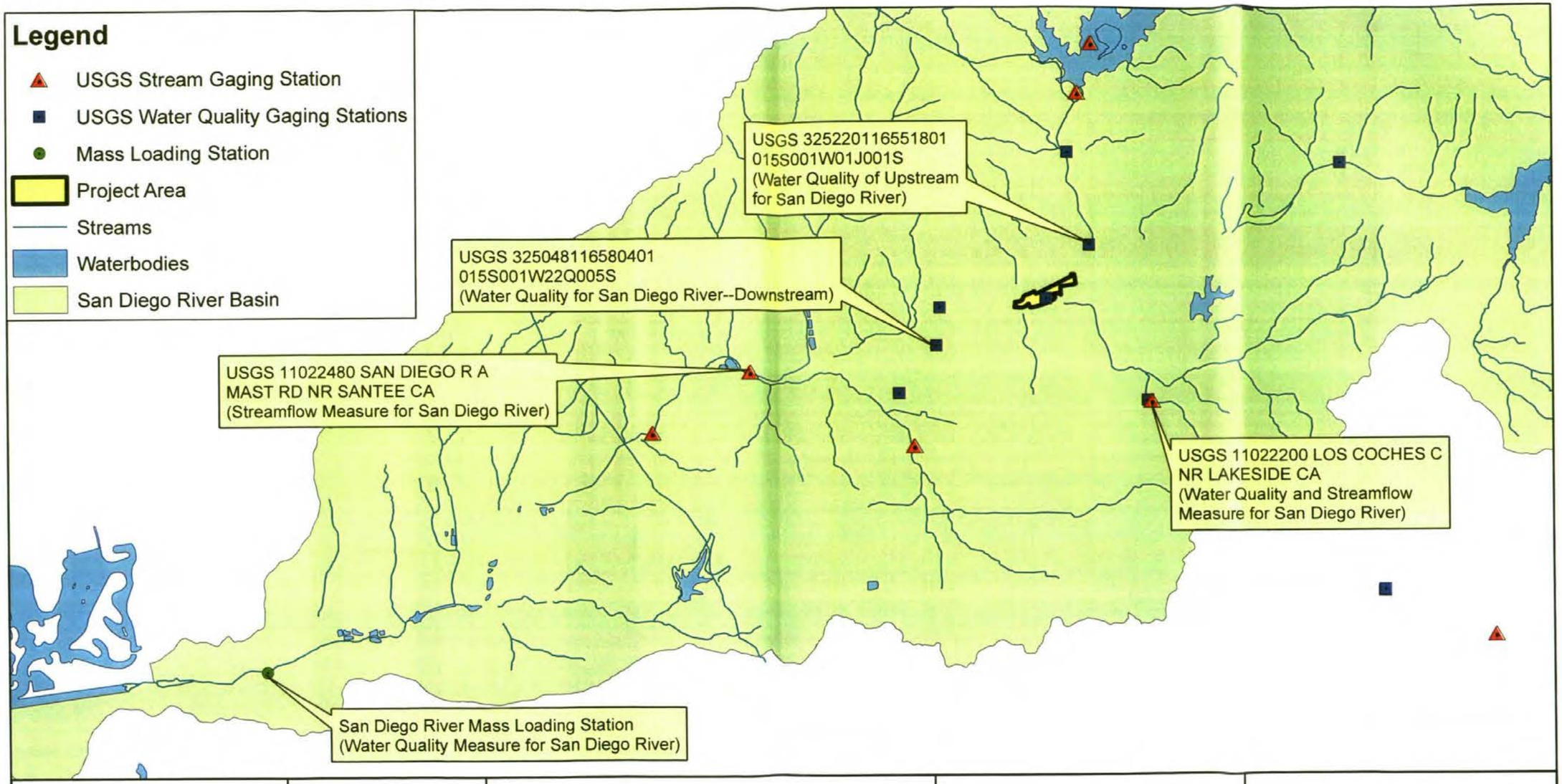
LJ 11/24/2004



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N

0 0.5 1 1.5 2
Miles

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Volume 4A, Attachment 1, Figure 4a

Gaging Stations

I:\Projects\San Diego River Park\Mapping\Arcview\Map Docs\Volume4\vol4a\SDRP vol 4a att1 fig4a Gaging Stations.mxd - 4/5/2005 @ 2:33:27 PM

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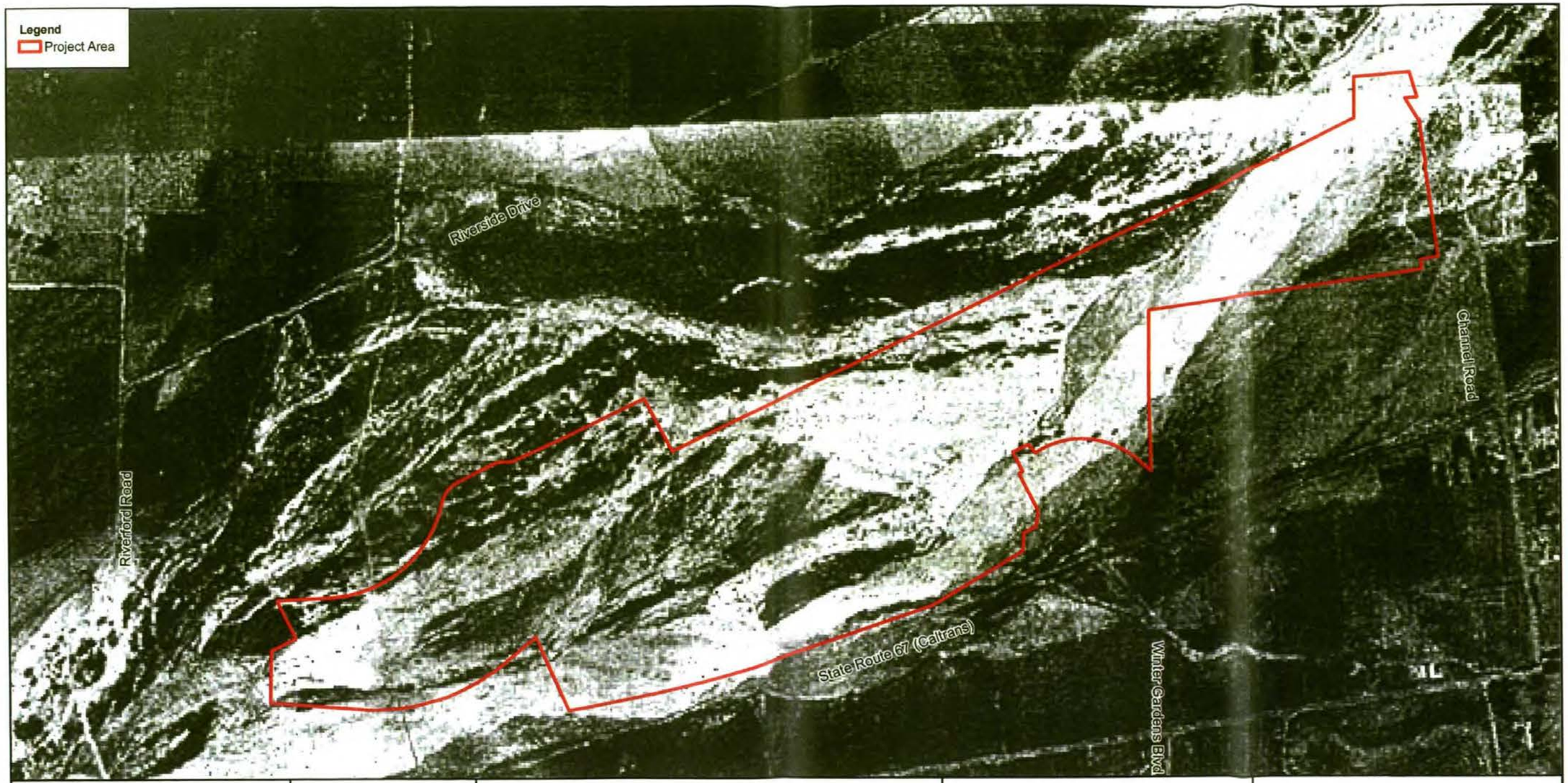

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N

0 200 400 600 800
Feet
Scale 1" = 500'

1928 Aerial Photo

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Flood, Habitat, Restoration, and Recharge Project

Volume 4a, Attachment 1, Figure 4b

1928 Aerial Photograph with Project Boundary

I:\Projects\San Diego River Park\Mapping\Arcview\Map Docs\Volume4\vol4a\SDRP vol 4a att1 fig4b 1928 Aerial.mxd - 4/5/2005 @ 2:35:30 PM

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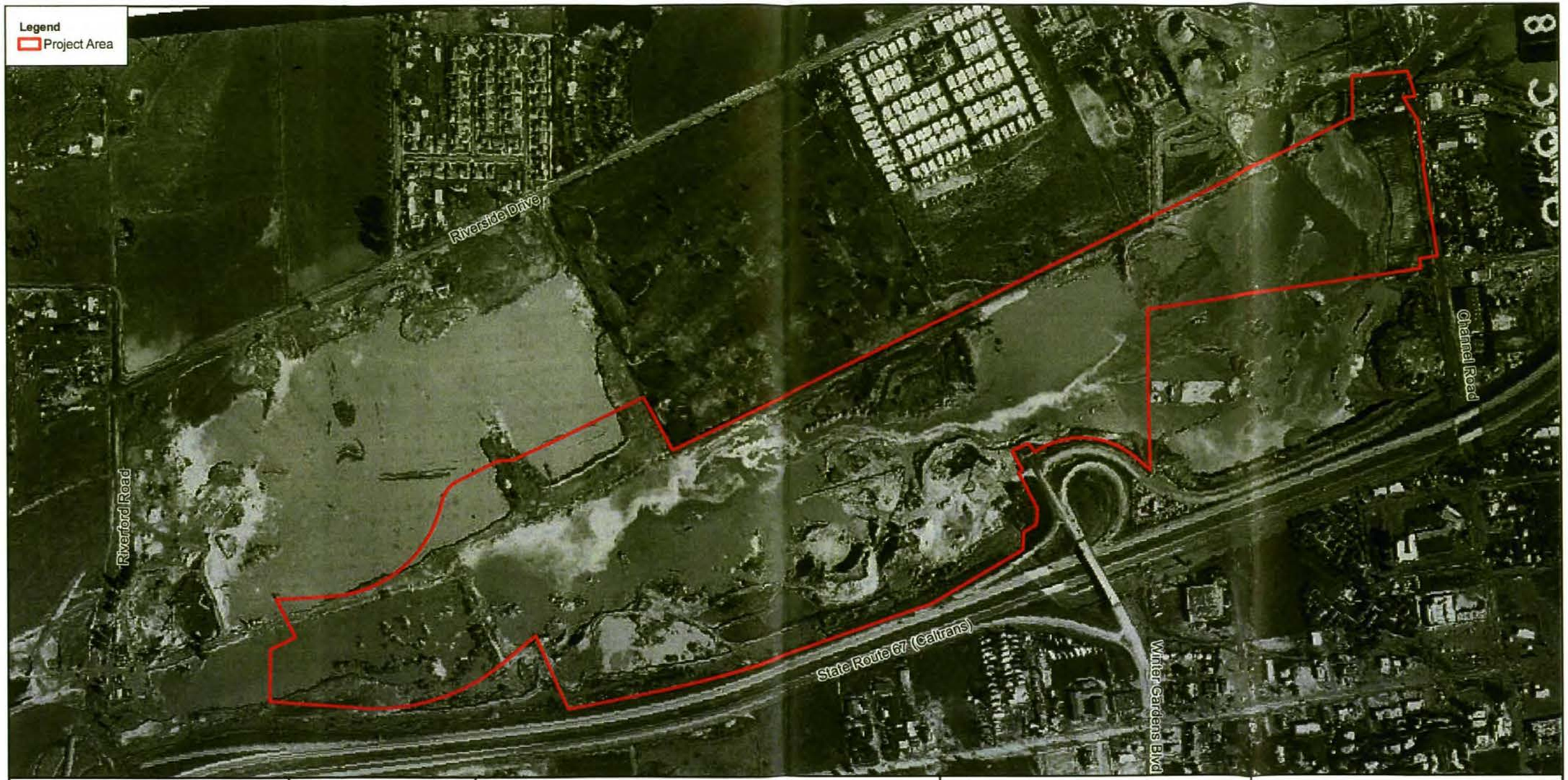

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N

0 200 400 600 800
Feet
Scale 1" = 500'

March 6, 1978 Aerial Photo

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Volume 4A, Attachment 1, Figure 4c

1978 Aerial Photograph with Project Boundary

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0 200 400 600 800
Feet
Scale 1" = 500'

2002 Aerial Photo

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Flood, Habitat, Restoration, and Recharge Project

Volume 4A, Attachment 1, Figure 4d

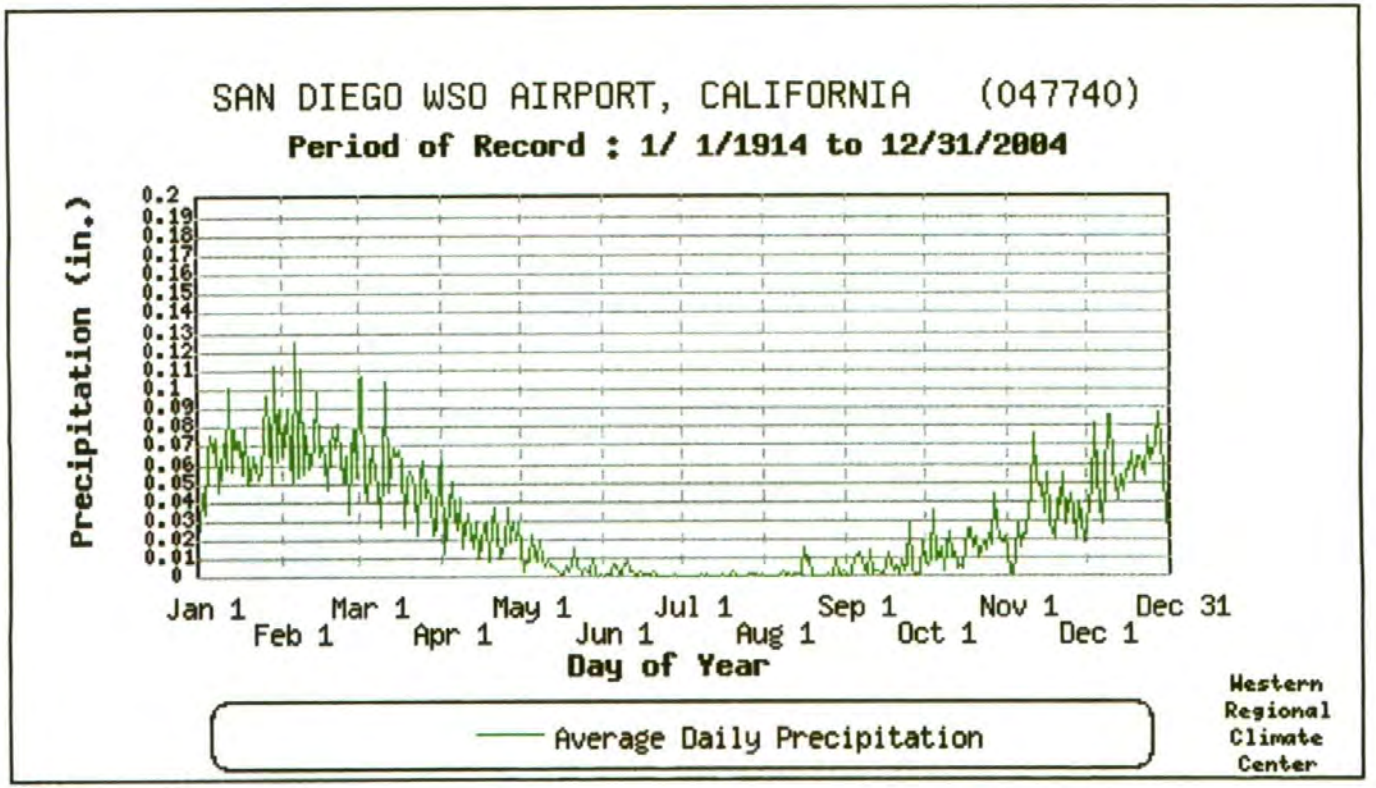
2002 Aerial Photograph with Project Boundary

I:\Projects\San Diego River Park\Mapping\Arcview\Map Docs\Volume4\vol4a\SDRP vol 4a att1 fig4d Current Aerial.mxd - 4/5/2005 @ 2:38:13 PM

PDS 11/17/2004

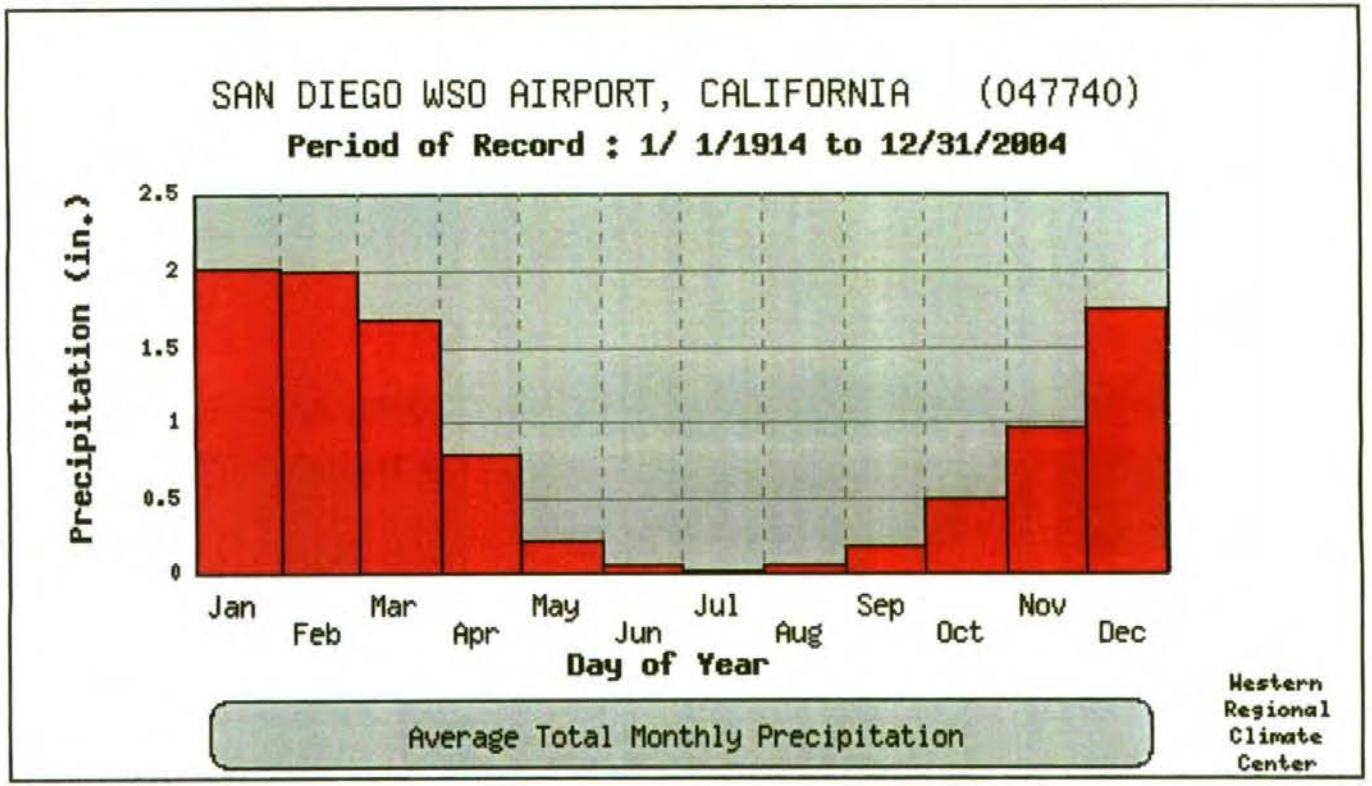
Volume 4A, Attachment 1, Figure 4e. Average Daily Precipitation, San Diego WSO Airport

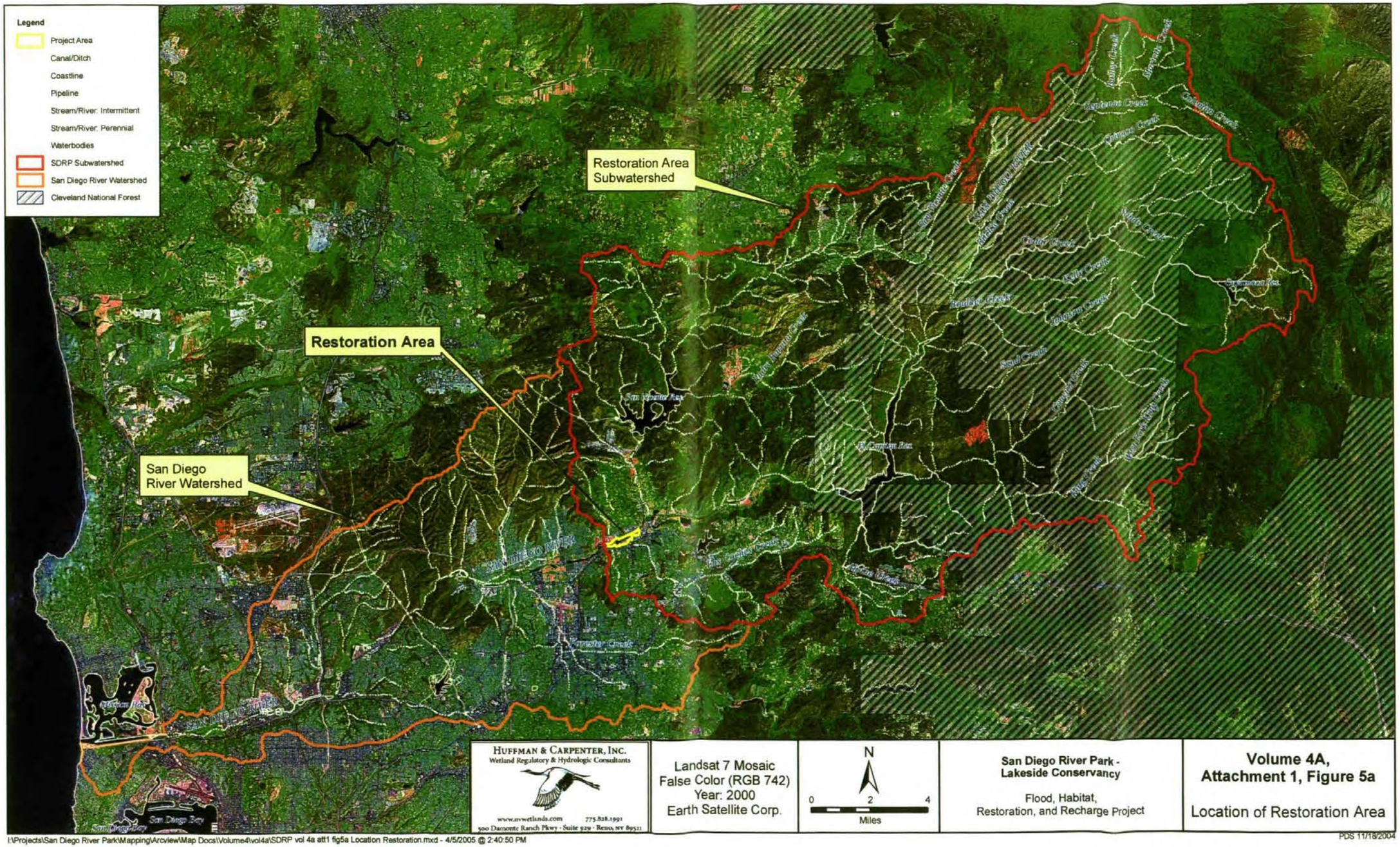
POR - Daily Precipitation Average



Volume 4A, Attachment 1, Figure 4f. Average Monthly Precipitation, San Diego WSO Airport

POR - Monthly Average Total Precipitation





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Landsat 7 Mosaic
False Color (RGB 742)
Year: 2000
Earth Satellite Corp.

N
0 2 4
Miles

San Diego River Park - Lakeside Conservancy

Flood, Habitat, Restoration, and Recharge Project

Volume 4A, Attachment 1, Figure 5a

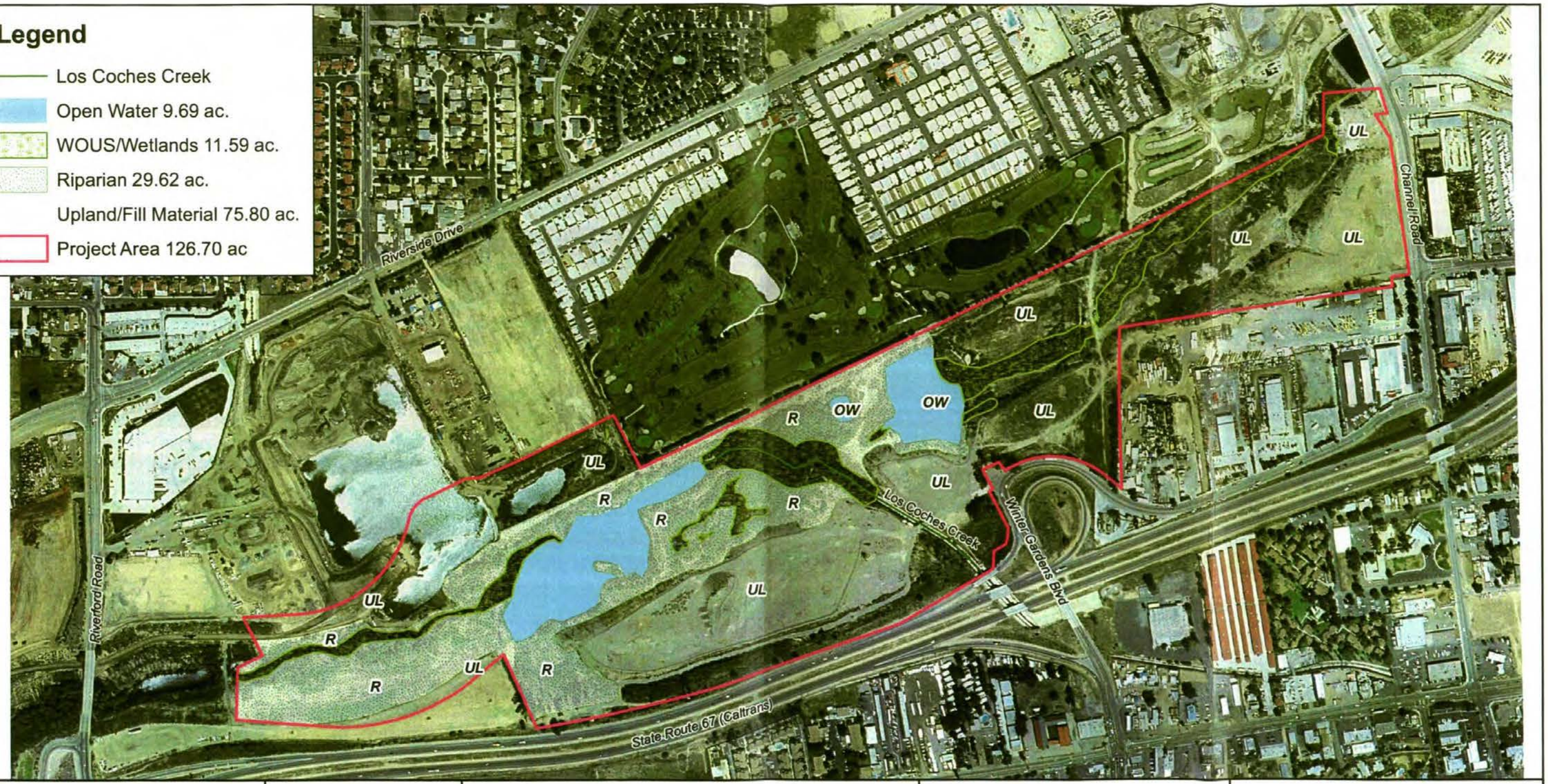
Location of Restoration Area

I:\Projects\San Diego River Park\Mapping\Arcview\Map Docs\Volume4\vol4a\SDRP vol 4a att1 fig5a Location Restoration.mxd - 4/5/2005 @ 2:40:50 PM

PDS 11/18/2004

Legend

- Los Coches Creek
- Open Water 9.69 ac.
- WOUS/Wetlands 11.59 ac.
- Riparian 29.62 ac.
- Upland/Fill Material 75.80 ac.
- Project Area 126.70 ac



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N

0 200 400 600 800

Feet

Scale 1" = 500'

Spring, 2002 Aerial Photo

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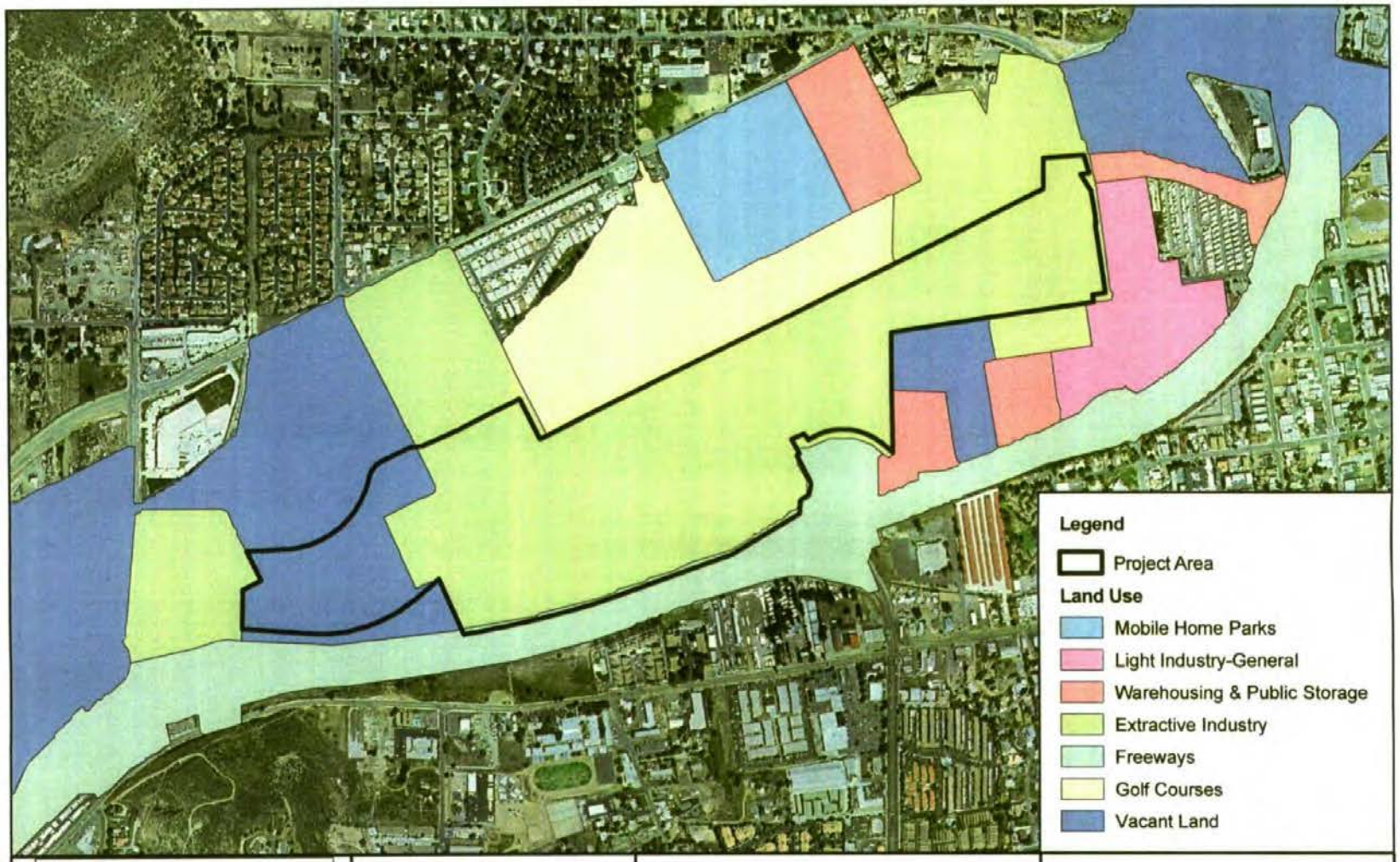
Flood, Habitat, Restoration, and Recharge Project

Volume 4A, Attachment 1, Figure 5b

Size of Restoration Area

I:\Projects\San Diego River Park\Mapping\Arcview\Map Docs\Volume4\vol4a\SDRP vol 4a att1 fig5b Size of Restiration Area.mxd - 4/5/2005 @ 2:41:19 PM

GSH 9/30/2004



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N

0 500 1,000
Feet

San Diego River Park - Lakeside Conservancy

Flood, Habitat, Restoration, and Recharge Project

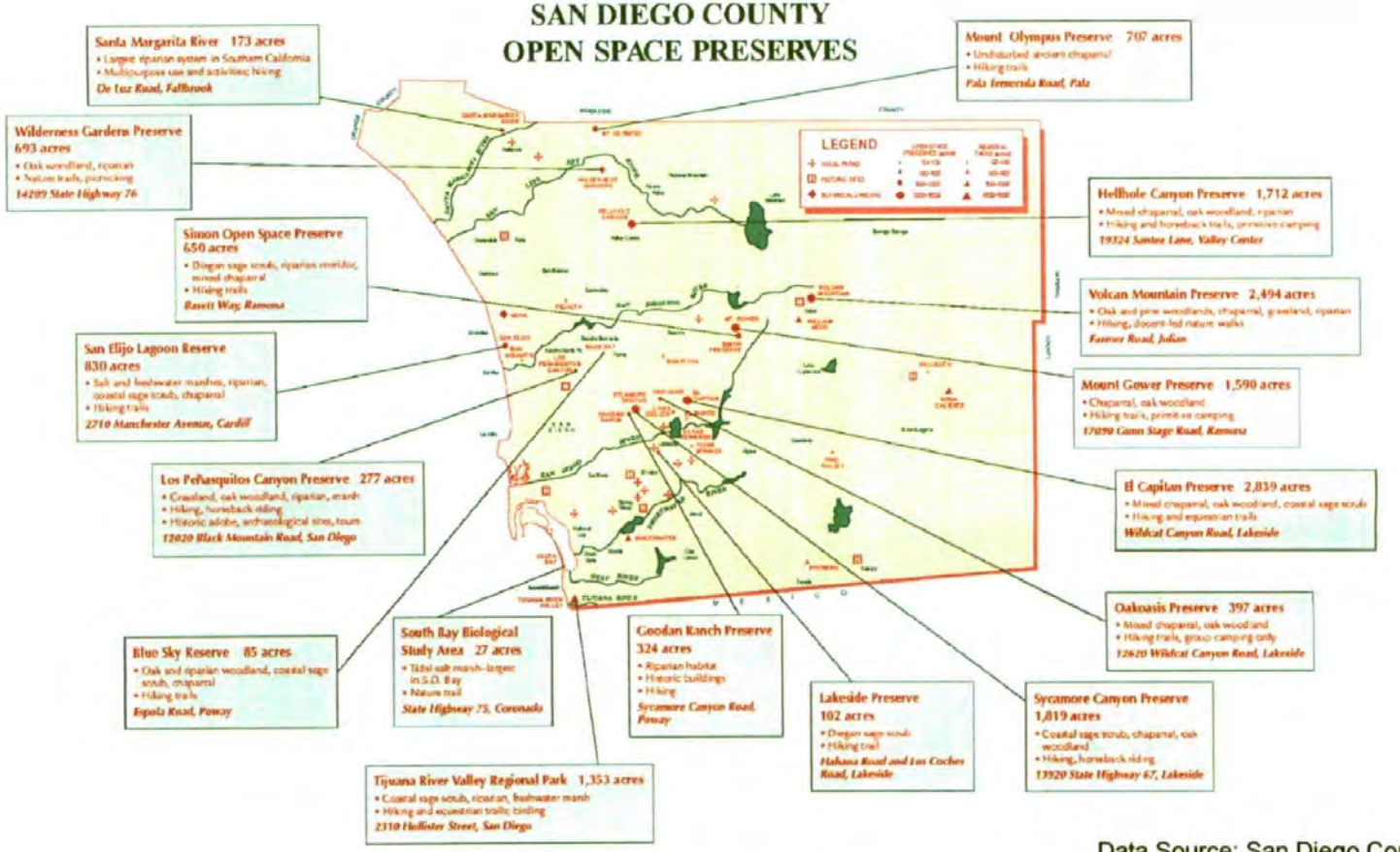
Volume 4A, Attachment 1, Figure 7

Zoning

I:\Projects\San Diego River Park\Mapping\Arcview\Map Docs\Volume4\vol4a\SDRP vol 4a att1 fig7 Existing Land Use.mxd - 4/5/2005 @ 2:43:39 PM

PDS 11/17/2004

SAN DIEGO COUNTY OPEN SPACE PRESERVES



Data Source: San Diego County

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N

No Scale

San Diego River Park - Lakeside Conservancy

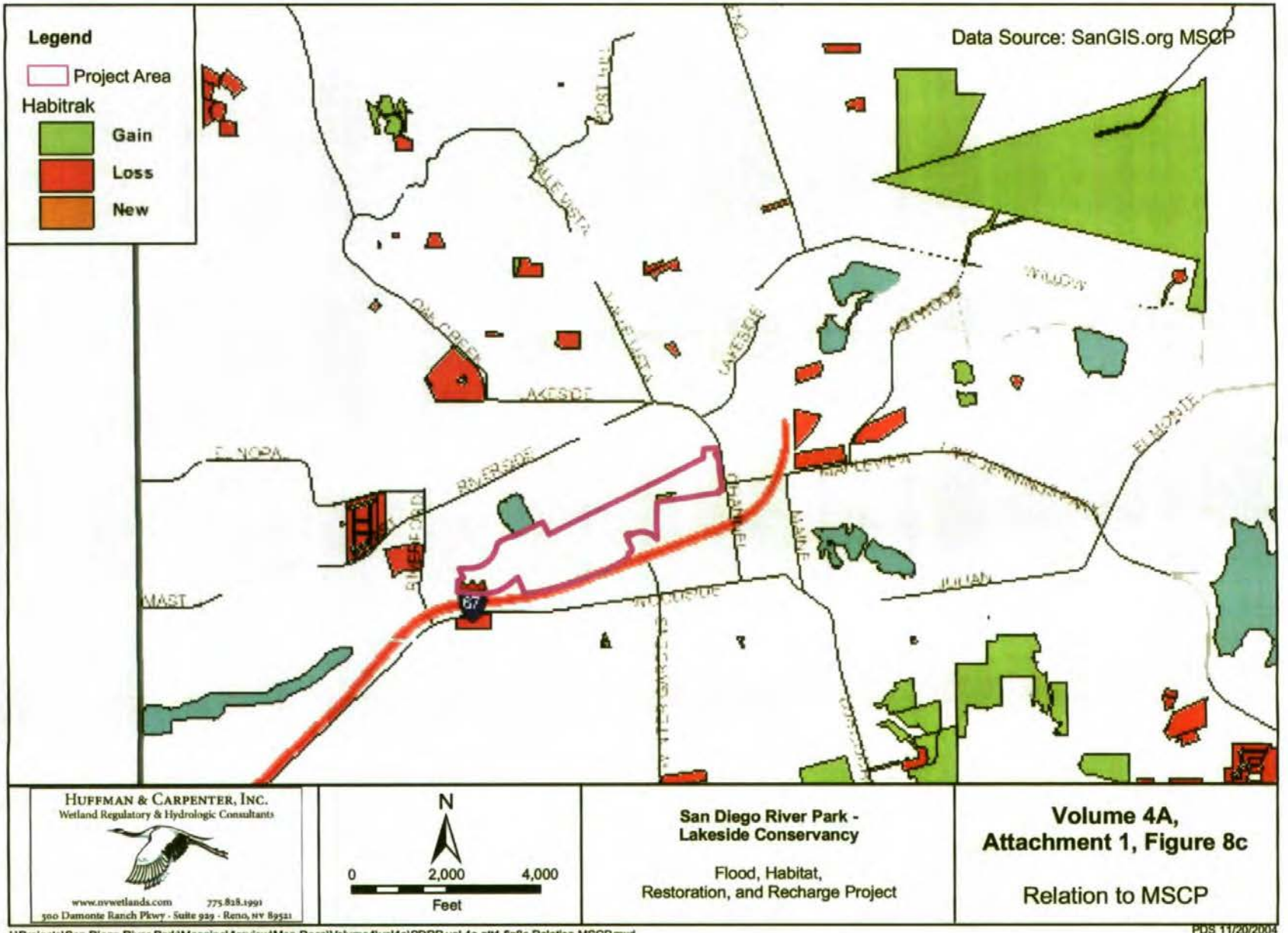
Flood, Habitat, Restoration, and Recharge Project

Volume 4A, Attachment 1, Figure 8b

Connectivity to Open Space

I:\Projects\San Diego River Park\Mapping\Arcview\Map Docs\Volume4\vol4a\SDRP vol 4a att1 fig8b Connectivity to Open Space.mxd - 4/5/2005 @ 2:44:25 PM

PDS 11/23/2004


Legend
Project Area
Habitrak
Gain
Loss
New
Data Source: SanGIS.org MSCP
N
0
2,000
4,000
Feet
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Restoration, and Recharge Project
Volume 4A,
Attachment 1, Figure 8c
Relation to MSCP
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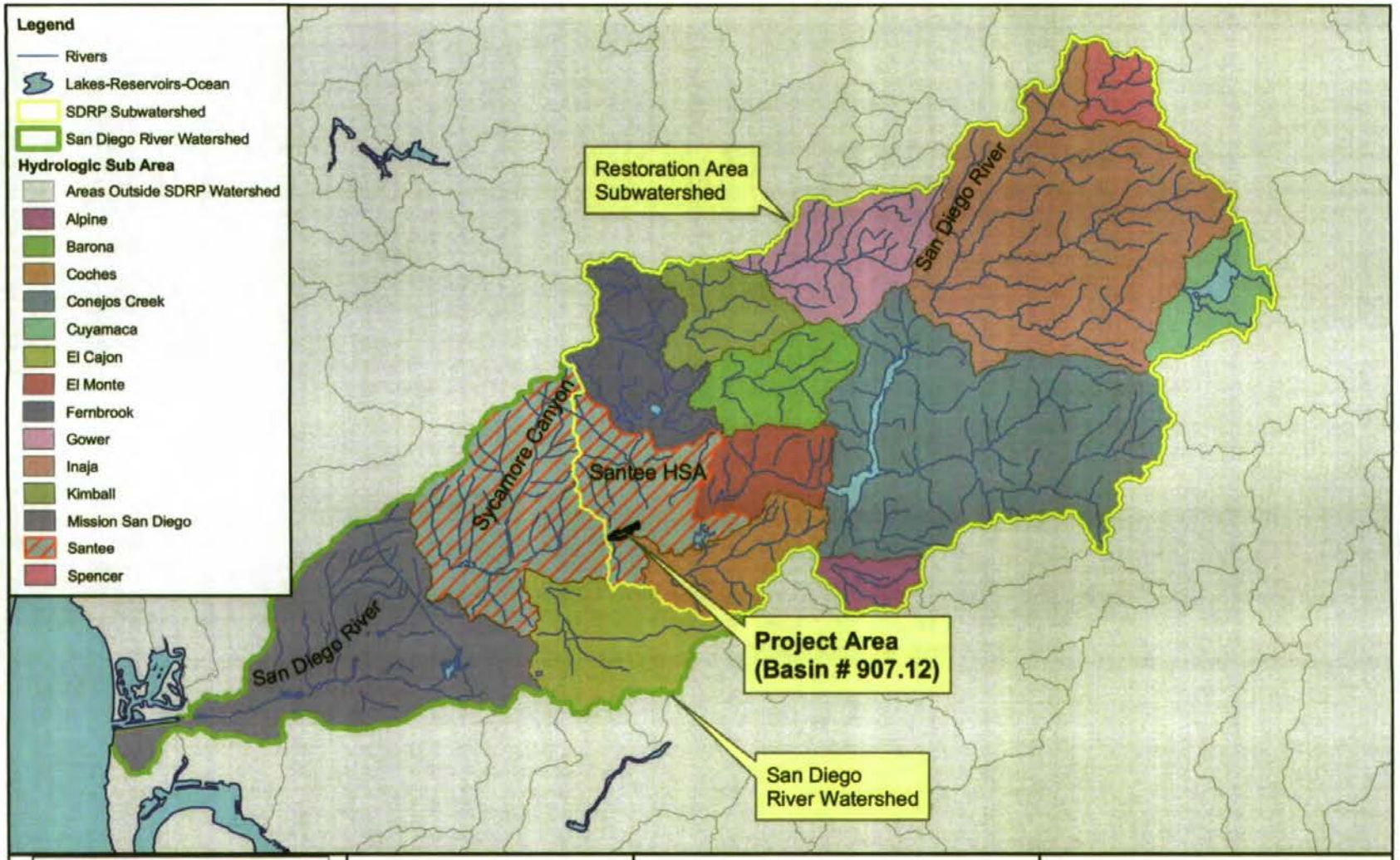
PDS 11/20/2004



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N

0 2 4 6
Miles

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Volume 4A, Attachment 1, Figure 9

Basin Plan

I:\Projects\San Diego River Park\Mapping\Arcview\Map Docs\Volume4\vol4a\SDRP vol 4a att1 fig9 Basin Plan.mxd

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0 500 1,000
Feet

San Diego River Park - Lakeside Conservancy

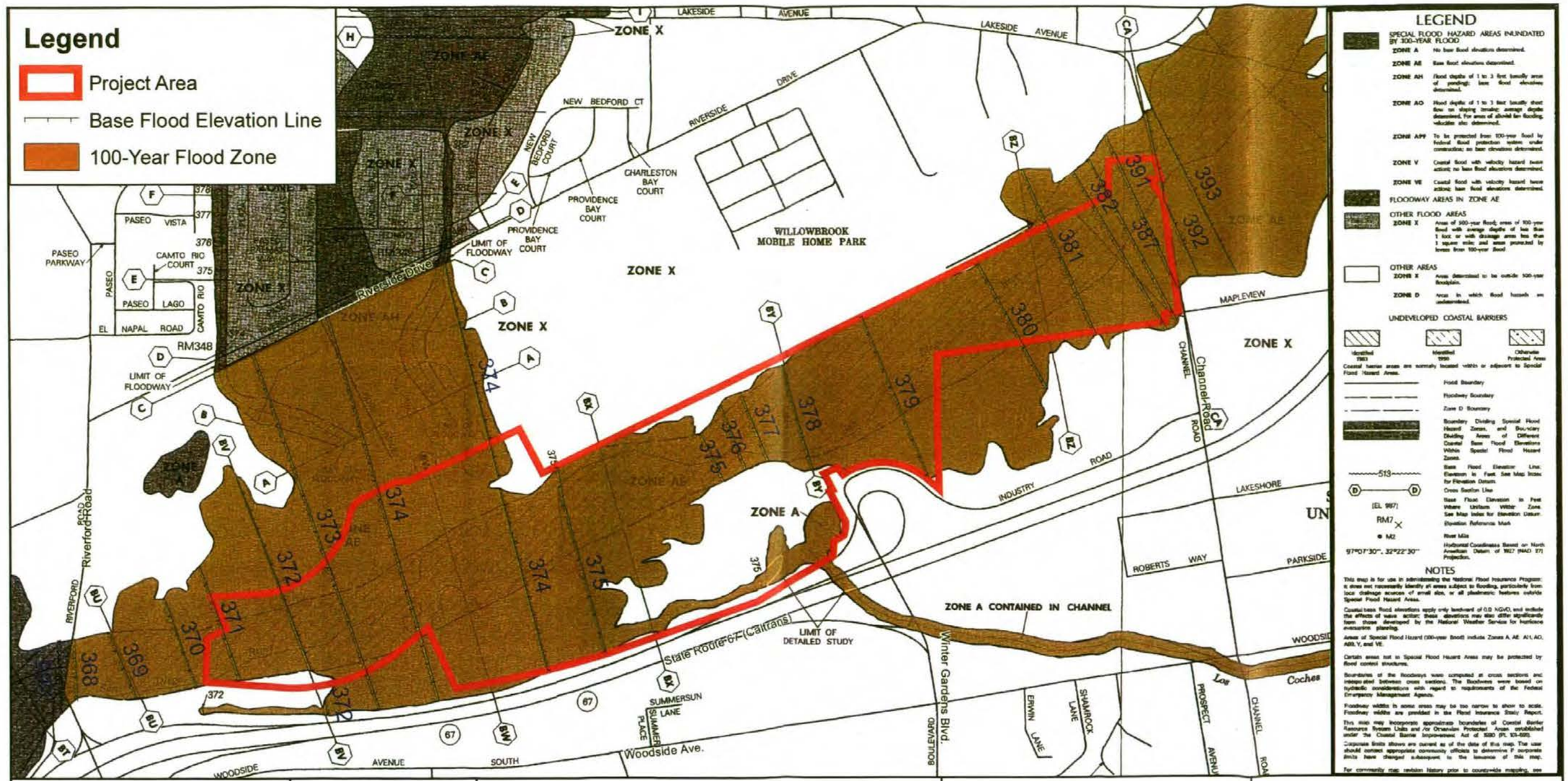
Flood, Habitat, Restoration, and Recharge Project

Volume 4A, Attachment 1, Figure 10

Invasive Vegetation Removal

I:\Projects\San Diego River Park\Mapping\Arcview\Map Docs\Volume4\vol4a\SDRP vol 4a att1 fig10 invasive removal.mxd - 4/5/2005 @ 2:48:37 PM

PDS 11/22/2004



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0 200 400 600 800
Feet

FIRM for

San Diego County and Incorporated Areas

1997

San Diego River Park - Lakeside Conservancy

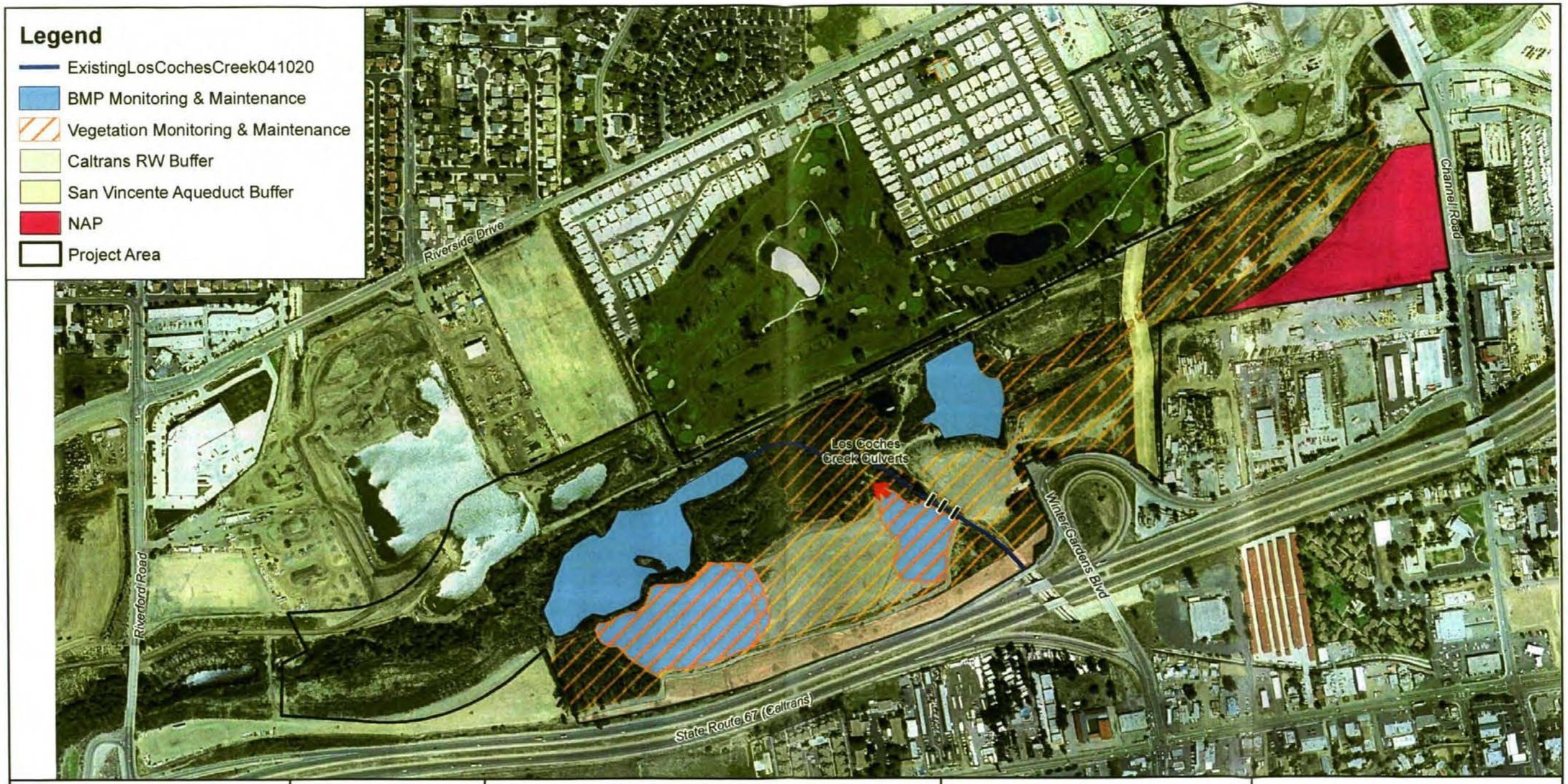
Flood, Habitat, Restoration, and Recharge Project

Volume 4A, Attachment 1, Figure 11

FEMA Flood Data

I:\Projects\San Diego River Park\Mapping\Arcview\Map Docs\Volume4\vol4a\SDRP vol 4a att1 fig11 FEMA flood.mxd - 4/5/2005 @ 2:51:46 PM

PDS 11/18/2004



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N

0 200 400 600 800
Feet

Spring, 2002 Aerial Photo

San Diego River Park - Lakeside Conservancy

Flood, Habitat, Restoration, and Recharge Project

Volume 4A, Attachment 1, Figure 12

Maintenance

I:\Projects\San Diego River Park\Mapping\Arcview\Map Docs\Volume4\vol4a\SDRP vol 4a att1 fig12 Maintenance.mxd - 4/5/2005 @ 2:59:10 PM

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N

0 500 1,000
Feet

**San Diego River Park -
Lakeside Conservancy**

Flood, Habitat,
Restoration, and Recharge Project

**Volume 4A,
Attachment 1, Figure 13**

Construction Plan

I:\Projects\San Diego River Park\Mapping\Arcview\Map Docs\Volume4\vol4a\SDRP vol 4a att1 fig13 construction plan.mxd - 4/5/2005 @ 2:54:08 PM

PDS 11/22/2004

ATTACHMENT 2
Tables

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Table 8	Reserved
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Table 15g	WRCC Climate Summary for San Diego WSO Airport
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Table 15i	Monthly Evapotranspiration-San Diego Area
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Table 17	Target Invasive Species for Removal
Table 18	Construction Schedule
Table 19	Maintenance and Monitoring Schedule

Volume 4A, Attachment 2, Table 1
Existing Habitat Acreages

Habitat Description	Acres
Open Water - Jurisdictional	9.69
Riparian	29.62
Upland/Fill Areas	75.61
WOUS/Wetlands - Jurisdictional	1.46
WOUS/Wetlands - Ordinary High Water Mark	10.13
Total Acreage	126.70

Volume 4A - Attachment 2, Table 2. Vegetation Species List.

Scientific Name	Region 0 Indicator	Common Name	Plot	Origin
Acacia Baileyana	NI	Cootamundra wattle	2, 4	I
Agrostis exarata	FACW	Bent grass, Spike	2	N
Acacia longifolia	NI	Golden wattle	1, 2	I
Ailanthus altissima	FACU	Tree of heaven	1	I
Ambrosia confertiflora	NI	Weak-leaf bur-sage	1, 2, 3, 4	N
Ambrosia psilostachya	FAC	Western ragweed	1, 2, 3, 4	N
Apium graveolens	FACW	Celery	2	I
Artemisia californica	NI	California sagebrush	2,3	N
Artemisia douglasiana	FACW	Mugwort	2	N
Arundo donax	FACW	Giant reed	1, 2, 3, 4	I
Avena barbata	NI	Slender wild oat	3	I
Baccharis salicifolia	NI	Mule fat, seep-willow	1, 2, 3	N
Baccharis sarothroides	FAC	Broom baccharis	1, 2, 3, 4	N
Bassia hyssopifolia	FAC	Bassia	1	I
Brassica nigra	NI	Black mustard	1, 2, 3	I
Bromus hordeaceus	NI	Smooth brome	1, 2, 3	I
Bromus madritensis	NI	Foxtail chess	2,3	I
Camissonia bistorta	NI	California sun cup	2,3, 4	N
Camissonia californica	NI	False-mustard	2	N

Volume 4A - Attachment 2, Table 2. Vegetation Species List.

Scientific Name	Region 0 Indicator	Common Name	Plot	Origin
Carpobrotus edulis	NI	Ice Plant	2, 3	I
Ceanothus leucodermis	NI	Chaparral whitehorn	2	N
Centaurea melitensis	NI	Tocolote, star-thistle	1, 2, 3	I
Cercidium floridum	NI	Blue palo verde	1, 2	N
Chamaesyce polycarpa	NI	Spurge	2, 3	N
Chenopodium	FACW	Goosefoot	1, 2	I
Chrysanthemum coronarium	OBL	Garland, crown daisy	1, 2, 3	I
Conyza canadensis	FAC	Horseweed	1, 2, 3	N
Cortaderia jubata	NI	Pampas grass	2, 3	I
Cotula coronopifolia	FACW+	Brass-buttons	2	I
Croton californicus	NI	California croton	2, 3, 4	N
Cynodon dactylon	FAC	Bermuda grass	2, 3	I
Cyperus sp.	NI	Nutsedge	2	N
Cyperus eragrostis	FACW	Tall flatsedge	1	N
Datura wrightii	NI	Jimson weed	1, 2	N
Distichlis spicata	FACW*	Saltgrass	2	N
Eclipta prostrata	NI	False daisy	2	I
Encelia californica	NI	California brittlebrush	2	N
Eriogonum fasciculatum	NI	California buckwheat	2, 3	N
Erodium sp.	N/A	Unknown species	2	N/A

Volume 4A - Attachment 2, Table 2. Vegetation Species List.

Scientific Name	Region 0 Indicator	Common Name	Plot	Origin
Eucalyptus globulus	NI	Blue gum	1, 2, 3	I
Foeniculum vulgare	FACU	Fennel	2	I
Fraxinu sp.	FACW	Ash	1, 2	I
Gnaphalium canescens	NI	Fragrant everlasting	2	N
Helianthus annuus	FAC-	Common sunflower	1, 2, 3	N
Helianthus gracilentus	NI	Slender sunflower	2	N
Heliotropium curassavicum	OBL	Chinese pusley	1, 2, 3	N
Hemizonia fasciculata	NI	Golden tarplant	3	N
Heterotheca grandiflora	NI	Telegraph weed	2, 3, 4	N
Isocoma meziesii	NI	Coast goldenbush	1, 2, 3	N
Lactuca serriola	FAC	Prickly lettuce	2, 3	I
Lotus scoparius	NI	California broom	2	N
Malacothamnus fasciculatus	FACW	Chaparral mallow	2, 3	N
Malosma laurina	NI	Laurel sumac	2, 5	N
Marrubium vulgare	FAC	Horehound	2, 3	I
Melilotus alba	FACU+	White sweet clover	1, 2, 3	I
Mesembryanthemum crystallinum	NI	Crystalline ice plant	2	I
Myoporum laetum	NI	Ngaio	2	I
Nicotiana glauca	FAC	Tree tobacco	1, 2, 3	I

Volume 4A - Attachment 2, Table 2. Vegetation Species List.

Scientific Name	Region 0 Indicator	Common Name	Plot	Origin
Oenothera californica	NI	Evening Primrose	4	N
Paspalum dilatatum	FAC	Dallisgrass	2	I
Pennisetum setaceum	NI	Fountain grass	2, 3	I
Picris echioides	FAC*	Bristly ox-tongue	1, 2	I
Piptatherum miliaceum	NI	Smilo grass	2, 4	I
Plantago major	FACW-	Common plantain	2	I
Platanus racemosa	FACW	Western sycamore	1	N
Pluchea odorata	NI	Salt marsh fleabane	2, 3	N
Pluchea sericea	FACW	Arrow weed	2	N
Poa annua	FACW-	Annual bluegrass	2, 3	I
Polypogon monspeliensis	FACW+	Annual beard grass	1, 2, 3	I
Populus fremontii	FACU	Fremont cottonwood, alamo	1, 2, 3, 4	I
Quercus agrifolia	NI	California live oak	1	N
Ricinus communis	NI	Castor bean	1, 2, 3, 4	I
Rorippa nasturtium-aquaticum	NI	Water cress	2	I
Rumex crispus	FACW-	Curly dock	1, 2	I
Salix exigua	OBL	Narrow-leaved willow	3	N
Salix gooddingii	OBL	Goodding's black willow	1, 2, 3, 4	N
Salix laevigata	NI	Red willow	1, 2, 3, 4	N

Volume 4A - Attachment 2, Table 2. Vegetation Species List.

Scientific Name	Region 0 Indicator	Common Name	Plot	Origin
Salix lasiolepis	FACW	Arroyo willow	1, 2, 3	N
Salsola tragus	NI	Russian thistle, tumbleweed	1, 2, 3, 4	I
Salvia mellifera	NI	Black sage	2	N
Sambucus mexicana	FAC	Elder, Mexican	2	N
Scirpus californicus	OBL	California bulrush	1, 2, 4	N
Schinus molle L.	NI	California pepper tree	1	I
Schinus terebinthifolius	NI	Brazilian pepper tree	1	I
Schismus barbatus	NI	Mediterranean grass	3	I
Solanum douglasii	FAC	Douglas nightshade	2	N
Sorghum sp.	NI	Grass	2	I
Stephanomeria virgata	NI	Slender stephanomeria	I	N
Tamarix sp.	NI	Tamarisk	1, 2, 3, 4	I
Typha latifolia	OBL	Broad-leaved cattail	1, 2, 3	N
Ulmus parviflora	NI	Dwarf princess elm	2	I
Urtica dioica	FACW	Hoary nettle	2	N
Vitis girdiana	NI	Desert wild grape	2	N
Washingtonia robusta	NI	Mexican fan palm	1, 4	I
Xanthium strumarium	FAC+	Cocklebur	1, 2, 3	N
Yucca gloriosa L.	NI	Moundlily yucca	1	N

Volume 4A - Attachment 2, Table 2. Vegetation Species List.

HABITATS

AG	=	Agriculture
BS	=	Baccharis scrub
CC	=	Chamise chaparral
CD	=	Coastal dunes
CF	=	Coniferous forest
CSS	=	Coastal sage scrub
FM	=	Freshwater marsh
FW	=	Foothill woodland
H	=	Horticultural
M	=	Mesic areas and wetlands
MC	=	Southern mixed chaparral
MF	=	Mule fat scrub
MSS	=	Maritime succulent scrub
NG	=	Native grasslands
NNG	=	Non-native grassland
O	=	Open places, waste places, roadsides, burns, etc.
OW	=	Oak woodland
RW	=	Riparian woodland
SM	=	Saltwater marsh
SMC	=	Southern maritime chaparral
VP	=	Vernal pools

OTHER TERMS

N	=	Native to locality
I	=	Introduced species from outside locality

Volume 4A - Attachment 2, Table 3. Executive Summary Table.

Project Priority Criteria		
Benefit	**Included in Plan**	**Comments**
Flood Protection Benefits		
Existing and potential urban development in floodplain	✓	1) A variety of industrial and numerous residential subdivisions, Lakeside Farms Elementary School, Willowbrook Golf Course, and a chicken ranch.
Improvement expected by completing the project	✓	1) Slow transient and flood flows through expansion of "flood plain" area 2) Water quality improvement through natural treatment in both surface and subsurface flows 3) Reduce sediment transport 4) Reduce need for down stream stabilization structures 5) Facilitate recharge in the Santee/El Monte aquifer and increase the amount and quality of recharge available to the Riverview Water District 6) Restoration of wildlife habitat for threatened and endangered species
Quality of restoration of natural processes	✓	The restoration of the degraded floodplain and enhancement of existing watershed functions will increase the quality of natural processes within the floodplain to pre-disturbance levels.
Quality of effects on local community	✓	1) Reduced flooding both upstream and downstream, increasing quality of life and possibly reducing flood insurance premiums 2) Aesthetic scenic values improved from low quality to high quality 3) High quality educational value through creation of nature trail and habitat area for threatened and endangered species
Value of improvements protected	✓	The project will help protect approximately $51 million in nearby improvements
Wildlife Conservation Benefits		
Importance of the site to regional ecology	✓	1) The project area is a wildlife corridor that provides refuge and ease of movement to wildlife for access to food and water sources during drought, escape routes from brush fires, and dispersal of genetic traits between population centers 2) Home to many threatened and endangered species 3) River discharges into the ocean downstream

Volume 4A - Attachment 2, Table 3. Executive Summary Table.

Project Priority Criteria		
Benefit	**Included in Plan**	**Comments**
Flood Protection Benefits		
Diversity of species and habitat types	✓	1) Currently, the project site does not support the complete and diverse assemblage of the species commonly found in these habitats due to previous disturbances. The entire project site is characterized by low species diversity and dominance of non-native and ruderal species. 2) Four habitat types are present in the area: – Ruderal non-native grassland and recently disturbed areas – Riparian habitats – Agricultural areas – Coastal sage scrub 3) Six riparian habitat types are present in the area: – Open water – Emergent riparian – Riparian woodland – Riparian scrub – Disturbed riparian – Wet meadow
Ecological importance of species and habitat types	✓	1) The region has historically supported 52 sensitive animal species, 16 sensitive plant species and 3 sensitive habitat species.
Quality of expected habitat improvements	✓	The project will restore the high quality natural riparian habitat conditions that are required to increase the low species diversity back to normal levels.
Variability/sustainability of habitat improvements	✓	Since the habitat improvements will be sustained through the river's natural groundwater flows, the habitats will be self-sustaining once the project is completed.
Miscellaneous Benefits and Quality of Proposal		
Size of request, other contributions, number of persons benefitting, cost of grant per benefitted person	✓	1) $2 million for acquisition of approximately 125 acres 2) $2 million for the restoration of 120 acres 3) 696,700 people will benefit
Quality of effects on water supply or water quality	✓	1) Natural wetland treatment of water is known for its ability to filter out contaminants and improve water quality dramatically 2) The widening of the channel will both increase the amount of ground covered in water and slow the flow of water off site, increasing recharge of local aquifers

Volume 4A - Attachment 2, Table 3. Executive Summary Table.

Project Priority Criteria		
Benefit	**Included in Plan**	**Comments**
Flood Protection Benefits		
Quality of impact on underrepresented populations or historic or cultural resources	✓	1) Residents of the Slum and Blight Area 2) No historic or cultural resources are believed to be present within the project area, eliminating the possibility of any adverse impacts from the project
Avoidance of adverse effects on local government tax base	✓	Project in conjunction with river park efforts will be a net benefit to the tax base
Technical and fiscal capability of the project team		1) Experienced hydrologic consulting firm, managed by a Professional Wetland Scientist 2) Technical Advisory Team with broad capabilities

Volume 4A - Attachment 2, Table 4. Demographics/Housing Characteristics

Profile of General Demographic Characteristics: 2000
Data Set: Census 2000 SANDAG
Geographic Area: Lakeside Community Planning Area
NOTE: For information on confidentiality protection, nonsampling error, and definitions, see http://cart.sandag.org/dw/

Subject	Number	Percent
Total population	57,422	100.0
AGE		
Median age (years)	35.8	(X)
RACE		
Hispanic	6,769	11.8
Not Hispanic	50,653	88.2
HOUSING OCCUPANCY		
Total housing units	20,819	100.0
Occupied housing units	20,177	97.2
Vacant housing units	642	2.8
Average Household Size	2.82	(X)
RELATIONSHIP		
Total Population	57,422	100.0
In households	56,896	99.1
In Group Quarters	526	0.9
Institutionalized Population	42	<0.1
Non-Institutionalized	484	0.8
HOUSING UNITS		
Total housing units	20,819	100.0
Single family housing units	12,545	60.3
Multi-family housing units	4,142	19.9
Mobile home and other units	4,132	19.8
Occupied single family homes	12,248	97.6
Occupied multi-family homes	4,003	96.6
Occupied mobile home and other units	3,926	95.0

Volume 4A - Attachment 2, Table 4. Demographics/Housing Characteristics

LAND USE: 2000
Data Set: Census 2000 SANDAG
Geographic Area: Lakeside Community Planning Area
NOTE: For information on confidentiality protection, nonsampling error, and definitions, see http://cart.sandag.org/dw/

Subject	Number	Percent
LAND USE		
Total Acres	44,799.3	100.0
Total Developed Acres	27,454.1	61.3
Total Vacant Acres	13,709.3	30.6
Total Acres Unusable Land	3,653.9	8.1
DEVELOPED LAND USE (ACRES)		
Total Developed	27454.1	100.0
Low density single family	4929.6	18.0
Single family	4608.1	16.8
Multi-family home	239.5	0.9
Mobile home	572.7	2.1
Industrial	253.4	0.9
Commercial	321.5	1.2
Office	15.4	<.01
Schools	206.6	0.7
Roads	1694.2	6.2
Agricultural	923.2	3.4
Parks	12,489.9	45.5
VACANT (ACRES)		
Total Vacant	13709.3	100.0
Low density single family	12,463.1	90.9
Single family	505.5	3.7
Multi-family home	68.9	0.5
Industrial	624.2	4.6
Commercial	46	0.3
Office	0	0.0
Schools	0	0.0
Roads	1.6	<0.1

Volume 4A, Attachment 2, Table 5. Number of People Expected to Benefit.

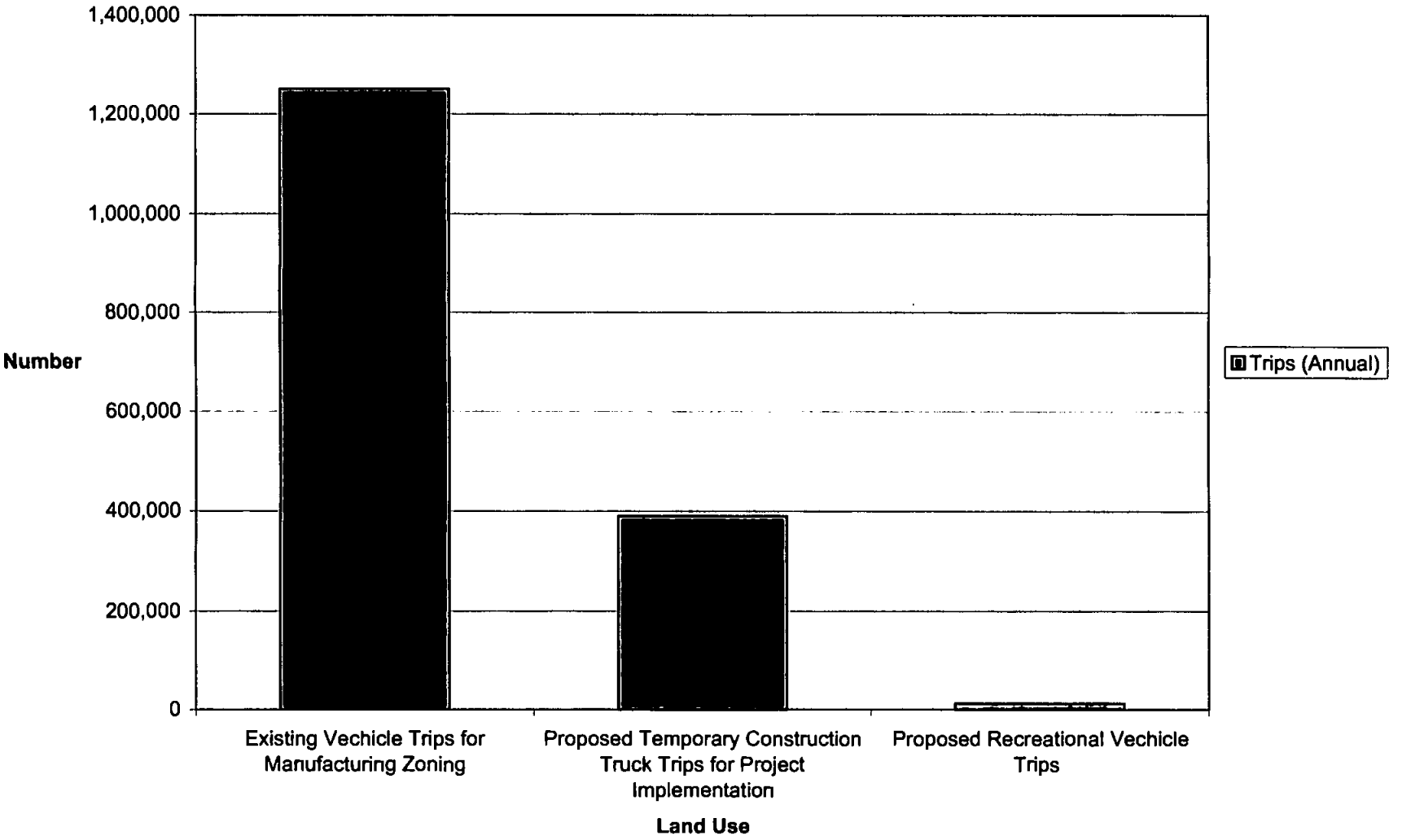
Category of People Benefitting[1]	Number of People
Lakeside Residents living within 1.5 miles of the project.	31,000
Riverview Water District Customers	10,000
Tourists coming to the River Park[2]	400,000
San Diego County Water Authority Customers	204,000
Lakeside Sanitation District Customers	37,500
Vehicle Trips per day across River Bridge	14,200
Total	**696,700**

[1]This is a very rough accounting of people benefitting primarily because there is some overlap in areas considered. Some, but not all of Riverview's customers reside within 1.5 miles of the project. Some, but not all of Lakeside Sanitation District customers reside within 1.5 miles of the project. The same holds true for vehicle trips per day.
[2]Data from two nearby parks, Santee Lakes in Santee (400,000 visitors per year) and Mission Trails Regional Park (800,000 visitors per year) in the City of San Diego, both indicate that when the River Park/Trail are constructed, park will attract somewhere near 400,000 visitors a year.

Volume 4A, Attachment 2, Table 6
Preferred Option Acreages of Created and Enhanced Habitat

Habitat Type	Acres
Bioswale	0.12
Channel Constriction	1.50
Coastal Sage Scrub	22.00
Coastal Sage Scrub with Urban Forest/Riparian Trees	6.90
Interpretive Nature Trail	1.00
Perennial Marsh	9.50
Recharge Project Constructed Wetland	6.00
Seasonal Wetland	5.80
Selective Vegetation and Trash Removal	27.50
Urban Forest	2.40
Urban Non-Point Source Water Quality Improvement Basin	2.50
Total Acres	85.22

Volume 4A - Attachment 2, Table 7. Traffic Trip Generation Analysis.



Volume 4A - Attachment 2, Table 9. Habitat Types with Potential Vegetation Communities

Habitat	Animal Species	Plant Species	Common Name	Indicator Status
Upland Habitat				
Coastal Sage Scrub	Coastal California Gnatcatcher *Polioptila californica californica*	*Artemisia californica*	California sagebrush	FAC
		Baccharis sarothroides	Desert broom	not rated
		Eriogonum fasciculatum	California buckwheat	not rated
		Eriophyllum confertiflorum	golden yarrow	not rated
		Gnaphalium bicolor	bicolored cudweed	not rated
		Hemizonia fasciculata	golden tarplant	not rated
		Lessingia fillaginifolia	California aster	not rated
		Lotus scoparius	deerweed	not rated
		Malosma laurina	laurel sumac	not rated
		Mimulus aurantiacus	Bush monkeyflower	not rated
		Nassella pulchra	purple needle grass	not rated
		Salvia apiana	white sage	not rated
		Salvia mellifera	black sage	not rated
Urban Forest Tree Planting Buffer	Raptors	*Juglans californica*	California walnut	FAC
		Quercus agrifolia	Coast live oak	not rated
		Platanus racemosa	California sycamore	FACW
		Populus balsamifera var. tricocarpa	balsam poplar	FACW
		Populus fremontii	Fremont cottonwood	FACW
Wetland Habitat				
Seasonal Wetland community	Least Bell's Vireo/ *Vireo bellii pusillus*	*Amorpha fruticosa*	False indigo	FAC
		Baccharis salicifolia	Mule-fat	FACW
		Iva hayesiana	San Diego marsh elder	FACW
		Juncus acutus ssp. Leopoldii	southwestern spiny rush	FACW
		Leymus triticoides	creeping wild rye	FAC+
		Mimulus cardinalis	scarlet monkeyflower	OBL
		Muhlenbergia rigens	deergrass	FACW
		Platanus racemosa	western sycamore	FACW
		Populus fremontii	Fremont cottonwood	FACW
Seasonal Wetland community	Least Bell's Vireo/ *Vireo bellii pusillus*	*Rosa californica*	California wildrose	FAC+
		Sambucus mexicana	Mexican elderberry	FAC
		Salix gooddingii	black willow	FACW
		Salix exigua	sandbar willow	FACW
		Salix lapsiolepis	arroyo willow	FACW

Volume 4A - Attachment 2, Table 9. Habitat Types with Potential Vegetation Communities

Habitat	Animal Species	Plant Species	Common Name	Indicator Status
Upland Habitat				
Perennial Marsh community	Southwestern Willow Flycatcher/ *Empidonax traillii extimus*	*Baccharis salicifolia*	Mule-fat	FACW
		Carex hassei	Hasse's sedge	FACW
		Juncus balticus	Baltic rush	FACW+
		Juncus mexicanus	Mexican rush	FACW
		Populus fremontii	Fremont cottonwood	FACW
		Ranunculus aquatilis	Water buttercup	OBL
		Rubus ursinus	California blackberry	FAC+
		Salix gooddingii	black willow	FACW
		Salix exigua	sandbar willow	FACW
		Salix lapsiolepis	arroyo willow	FACW
		Scirpus californicus	California bulrush	OBL
		Scirpus validus	softstem bulrush	OBL
		Tessaria sericea	arrowweed	FACW
Openwater community	waterfowl	*No vegetation*	No vegetation	
WOUS		*No vegetation*	No vegetation	
Treatment Constructed Wetland				
Constructed wetland for nitrates		*Scirpus californicus*	California bulrush	OBL
		To Be Determined	To Be Determined	
Constructed wetland for Non Point Source pollutants		*To Be Determined*	*To Be Determined*	
Bioswale		*Anemopsis californica*	Yerba Mansa	OBL
		Baccharis salicifolia	Mule-fat	FACW
		Ambrosia psilostachya	Western Ragweed	FAC

Volume 4A - Attachment 2, Table 10. Multiple Species Conservation Program (MSCP) Plant Species List

Common Name	Scientific Name	Status	Habitat
San Diego thorn-mint	*Acanthomintha ilicifolia*	PE/CE	G, CSS, CHP
Shaw's Agave	*Agave shawii*	FSC*	CSS, bluff scrub
San Diego ambrosia	*Ambrosia pumila*	FSC*	G
Aphanisma	*Aphanisma blitoides*	FSC*	Maritime scrub
Del Mar manzanita	*Arctostaphylos glandulosa var. crassifolia*	FE	CSS, SMC
Otay manzanita	*Arctostaphylos otayensis*	FSC*	CHP
Coastal dunes milk vetch	*Astragulus tener var. titi*	PE/CE	Coastal strand/foredunes
Encinitas baccharis	*Baccharis vanessae*	FT/CE	CHP
Nevin's barberry	*Berberis nevinii*	FE/SE	CHP, CSS
Thread-leaved brodiaea	*Brodiaea filifolia*	PT/CE	VP, G, seeps, wet meadows
Orcutt's brodiaea	*Brodiaea orcutti*	FSC*	VP, G, seeps, wet meadows
Dense reed grass	*Calamagrostis densa*	none	CHP
Dunn's mariposa lily	*Calochortus dunnii*	FSC*/CR	G, CHP (openings)
Slender-pod jewelflower	*Caulanthus stenocarpus*	FSC*/CR	burned CHP
Lakeside ceanothus	*Ceanothus cyaneus*	FSC*	CHP
Wart-stemmed ceanothus	*Ceanohtus verrucosus*	FSC*	CHP, SMC
Salt marsh bird's-beak	*Cordylanthus maritimus ssp. Maritimus*	FE/CE	SM
Orcutt's bird's-beak	*Cordylanthus orcuttianus*	FSC*	Maritime scrub
Del Mar Mesa sand aster	*Corethrogyne filaginifolia var. linifolia*	FSC+	CHP (openings), CSS, SMC
Tecate cypress	*Cupressus forbesii*	FSC*	CHP, cypress wdld., drainages
Short-leaved dudleya	*Dudleya blochmaniae spp. Brevifolia*	FSC+/CE	CHP openings, SMC
Variegated dudleya	*Dudleya variegata*	FSC*	CSS
Sticky dudleya	*Dudleya viscida*	FSC*	CSS, CHP
Palmer's ericameria	*Ericameria palmeri ssp. Palmeri*	FSC*	Riparian (edges), CSS
San Diego button-celery	*Eryngium aristulatum var. parishii*	FE/CE	VP, G
Coast wallflower	*Erysium ammophilum*	FSC*	Bluff scrub
San Diego barrel cactus	*Ferocactus viridescens*	FSC*	CSS, CHP, maritime scrub
Otay tarplant	*Hemizonia conjugens*	PE/CE	G, CSS
Heart-leaved pitcher sage	*Lepechinia cardiophylla*	FSC*	CHP
Gander's pitcher sage	*Lepehinia ganderi*	FSC*	CHP

Volume 4A - Attachment 2, Table 10. Multiple Species Conservation Program (MSCP) Plant Species List

Nuttall's lotus	*Lotus nuttallianus*	FSC*	Foredunes, CSS
Felt-leaved monardella	*Monardella hypoleuca lanata*	C	CSS, CHP
Willowy monardella	*Monardella linoides ssp. Viminea*	PE/CE	RS, washes/floodchannel
San Diego goldenstar	*Muilla clevelandii*	FSC*	G, CHP (openings)
Prostrate navarretia	*Navarretia fossalis*	PT	VP
Dehesa bear-grass	*Nolina interrata*	PT/CE	CHP, CSS
Snake cholla	*Opuntia parryi var. serpentina*	FSC*	CSS, maritime scrub
California Orcutt grass	*Orcuttia californica*	FE/CE	VP
Torrey pine	*Pinus torreyana ssp. Torreyana*	FSC*	SMC
San Diego mesa mint	*Pogogyne abramsii*	FE/CE	VP
Otay mesa mint	*Pogogyne nudiuscula*	FE/CE	VP
Small-leaved rose	*Rosa minutifolia*	CE	CSS
San Miguel savory	*Satureja chandleri*	C	CHP, OW
Gander's butterweed	*Senecio ganderi*	FSC*/CR	CHP
Narrow-leaved nightshade	*Solanum tenuilobatum*	FSC*	CHP
Parry's tetracoccus	*Tetracoccus dioicus*	FSC*	CHP

Status (Federal State)

FE = Federally Endangered

PE = Proposed for federal listing as Endangered

FT = Federally Threatened

PT = Proposed for federal listing as Threatened

C = Candidate for federal listing

CE = State Endangered

CR = State Rare

CT = State Threatened

SSC = State Species of Special Concern

FSC* Federal Species of Concern

FSC+ = Federal Species of Concern; proposed rule to list as endangered or threatened has been withdrawn; no current federal status

none = no federal or state status

Habitat

CSS - coastal sage scrub

CHP - chaparral

SMC - southern maritime chaparral

G - grassland

NG - native grassland

VP - vernal pool

OW - oak woodland

Cypress wdld. - Tecate cypress woodland

RW - riparian woodland

RS - riparian scrub

RF - riparian forest

SM - saltmarsh

FWM - freshwater marsh

Volume 4A - Attachment 2, Table 11. Multiple Species Conservation Program (MSCP) List of Special-Status Animal Species and their Potential to Occur in or near the San Diego River Park Project Site

Species	Legal Status (Federal/State)	Habitat Requirements	Food Source	Occurrence in the Project Area
American badger (*Taxidea taxus*)	none/SSC	Open plains and prairies, farmland, and sometimes edges of woods.	Rodents, rabbits, snakes	Home range requirement is 590 - 4200 acres, much larger than available land in and around the project area.
American peregrine falcon (*Falco peregrinus*)	FE/CE	Open habitats including tundra, grasslands, seacoasts, open forests. Uses cliff faces near open habitat.	Birds	Does not nest on-site, but may hunt on-site.
Arroyo toad (*Bufo californicus*)	FE/SSC	3rd- to greater order streams with minimal silt and adjacent shallow pools and sandy terraces.	Nocturnal feeding on a variety of insects	Extirpated, unlikely to occur. Very little suitable habitat occurs on-site. Exotic bullfrog predation.
Bald eagle (*Haliaeetus leucocephalus*)	FT/CE	Breeds along large lakes, rivers, or reservoirs. Also seacoasts.	Carrion, fish, waterfowl	Occasional winter visitor (fly-over).
Belding's Savannah sparrow (*Passerculus sandwichensis beldingi*)	FSC*/CE	It occurs in coastal salt marsh habitat.	Small mollusks and crustaceans.	Food and habitat is not present in the project area, present on the coast.
Burrowing owl (*Speotyto cunicularia*)	FSC*/SSC	Found in open grassland habitat and similar habitat, nests and roosts in abandoned animal burrows or other crevices.	Food source includes arthropods, rodents, amphibians, or small birds in open fields.	Unknown
California brown pelican (*Pelecanus occidentalis*)	FE/CE	The California brown pelican is a water bird. It is found in coastal areas: on rocky shores and cliffs, in sloughs, and coastal river deltas.	Primarily fish species.	Habitat is not present in the project area.
California gnatcatcher (*Polioptila californica californica*)	FT/SSC	Found year-round in coastal sage scrub habitat.	Tiny insects and other arthropods.	Unknown
California least tern (*Sterna antillarum browni*)	FE/CE	Seacoasts, estuaries, lagoons, freshwater ponds and lakes.	Invertebrates	Unlikely potential forager on-site.

Volume 4A - Attachment 2, Table 11. Multiple Species Conservation Program (MSCP) List of Special-Status Animal Species and their Potential to Occur in or near the San Diego River Park Project Site

California red-legged frog (*Rana aurora draytonii*)	FT/SSC	Dense, shrubby riparian vegetation (arroyo willow (*Salix lasiolepus)* , cattail (*Typha* sp.), and bulrushes (*Scirpus* sp.), associated with deep (0.7m) still or slow-moving water.	Arthropods, frogs, mice, small birds.	Extirpated, unlikely to occur. No suitable habitat occurs on-site. Exotic fish and bullfrog predation.
California rufous-crowned sparrow (*Aimophila ruficeps canescens*)	FSC*/SSC	Open oak woodlands, treeless dry uplands with grassy vegetation and bushes, often near rocky outcrops.	Arthropods and seeds.	Unknown, no coactal sage scrub uplands on-site.
Canada goose (*Branta canadensis*)	none/none	Found in ponds, marshes and farmland.	Submerged aquatic vegetation; shoots and stems of sedges, grasses, and other aquatic plants; seeds and cultivated grains; some insects, berries, crustaceans, and mollusks.	May occur on-site in winter.
Coastal castus wren (*Campylorhynchus brunneicapillus couesi*)	FSC*/SSC	Open, arid brushland or desert.	Arthropods, seeds.	This species has been reported in the El Cajon quad. May exist, but very little habitat is present.
Cooper's hawk (*Accipiter cooperii*)	none/SSC	Found in lowland riparian areas, hunting small birds through trees and bushes.	Birds, rodents, reptiles.	Occurs - may nest on-site.
Elegant tern (*Sterna elegans*)	FSC*/SSC	Elegant terns are typically found along the shallow waters of estuaries and bays along the ocean.	Small fish.	May forage on-site in winter.
Ferruginous hawk (*Buteo regalis*)	FSC*/SSC	Ferruginous hawks are birds of open country. They occur in semiarid grasslands with scattered trees, rocky mounds or outcrops, and shallow canyons that overlook open valleys. They may occur along streams or in agricultural areas in migration.	Rodents and rabbits.	May occur in winter, but habitat is limited.

Golden eagle (*Aquila chrysaetos*)	BEPA/SSC	Golden eagles are found in open and semi-open habitats. Habitat types that they inhabit include tundra, shrublands, grasslands, woodland-brushlands, and coniferous forests.	Rabbits, squirrels, snakes.	Foraging habitat and no nesting habitat in the area.
Large-billed Savannah sparrow (*Passerculus sandwichensis rostratus*)	FSC*/SSC	It occurs in coastal salt marsh habitat.	Small mollusks and crustaceans.	Unlikely. Food and habitat is not present in the project area.
Least Bell's vireo (*Vireo bellii pusillus*)	FE/CE	Breeds in lowland riparian woodlands and willow scrub.	Small arthropods	Unknown, low probability of occurring on-site, either as a migrant or resident.
Light-footed clapper rail (*Rallus longirostris levipes*)	FE/CE	It inhabits coastal salt and freshwater marshes containing cordgrass, cattails or tules, and rushes.	Crustaceans, gastropods, and arthropods.	Does not occur.
Long-billed curlew (*Numenius americanus)*	FSC*/SSC	Found on fields, dry prairies, as well as mudflats. Frequently found in farmfields and grasslands during migration and on their wintering grounds.	Crustaceans, gastropods, and arthropods.	Does not occur.
Mountain Lion (*Felis concolor*)	none/Protected	Forest and shrubland habitats, where deer, their primary prey are found.	Rabbits, deer.	Does not occur.
Mountain plover (*Charadrius montanus*)	C/SSC	During winter, plovers congregate in valley bottoms in heavily grazed , burned or fallow agricultural lands and are typically associated with sparse, short vegetation.	Arthropods and gastropods.	Does not occur.
Northern harrier (*Circus cyaneus*)	none/SSC	Freshwater marsh, grassland, and coastal sage scrub habitat.	Rodents, small birds, insects.	Does not occur.

Volume 4A - Attachment 2, Table 11. Multiple Species Conservation Program (MSCP) List of Special-Status Animal Species and their Potential to Occur in or near the San Diego River Park Project Site

Orange-throated whiptail (*Cnemidophorus hyperythrus beldingi*)	FSC*/SSC	Chaparral, coastal sage scrub, oak woodland, grassland, agricultural, and riparian communities. California buckwheat (*Eriogonum fasciculatum*), a colonizing species of disturbed, sandy soils, is an important indicator of favorable habitat	Its major food source is termites and also other small arthropods.	Unlikely to occur.
Reddish egret (*Egretta rufescens*)	FSC*/none	Found coastally, singly in expanses of shallow salt water habitat, primarily in coastal tital flats, salt marshes and lagoons.	Fish, amphibians, birds, arthopods, and gastropods.	Unlikely to occur.
Riverside fairy shrimp (*Streptocephalus woottoni)*	FE/none	Found in vernal pools, ephemeral wetlands, and manmade depressions (e.g., road ruts and ditches) in coastal regions.	Detritis	No vernal pools on-site.
San Diego fairy shrimp (*Branchinecta sandiegonensis*)	FE/none	Found in vernal pools, ephemeral wetlands, and manmade depressions (e.g., road ruts and ditches) in coastal regions.	Detritis	No vernal pools on-site.
San Diego horned lizard (*Phrynosoma coronatum blainvillei*)	FSC*/SSC	Coastal sage scrub, chaparral, grassland, coniferous forest, oak woodland, riparian, and chaparral restricted to juniper-desert. Requires fine, loose soil for burying itself and an abundance of open areas for basking.	Feeds primarily on native harvester ants, and also on termites, beetles, flies, wasps, and grasshoppers.	Unlikely to occur.
Southwestern pond turtle (*Clemmys marmorata pallida*)	FSC*/SSC	Slow-moving aquatic water habitat. Habitat quality seems to vary with the availability of aerial and aquatic basking sites.	Fish, amphibians, larvae.	Not likely to occur in the project area (limited basking sites, limited shallow water and emergent vegetation for nestlings, and very few populations in this region).

Volume 4A - Attachment 2, Table 11. Multiple Species Conservation Program (MSCP) List of Special-Status Animal Species and their Potential to Occur in or near the San Diego River Park Project Site

Southwestern willow flycatcher (*Empidonax traillii extimus*)	FE/CE	See Attachment 2, Table 8d for full species description	Flying insects	Low quality habitat is present in the project area. No observations on-site. Unlikely to occur on-site.
Swainson's hawk (*Buteo swainsoni*)	none/CT	Open desert and grassland habitat.	Grasshopper, rodents, small birds.	Extirpated a breeder, unlikely to occur on-site.
Thorne's hairstreak butterfly (*Mitoura thornei*)	FSC*/none	Host plant is the tecate cypress. Only found on hilly, rocky areas.	Nectar from flowers of wild lilac (*Ceanothus*) and other plants.	Does not occur, habitat, host plant, an dnectar sources not in the project area.
Tricolored blackbird (*Agelaius tricolor*)	FSC*/SSC	Colony breeders residing in freshwater marshes dominated by cattails or bulrushes.	Seeds, insects.	Limited cattail vegetation around margins of ponds. Also, their range ends in northern San Diego County.
Wandering (salt marsh) Skipper (*Panoquina errans*)	FSC*/none	Found in salt marshes.	Flower nectar.	Does not occur, habitat does not occur in this project area.
Western bluebird (*Sialia mexicana*)	none/none	Suitable habitat occurs in open conifer forests, farms and ranches, and in streamside groves where there are scattered trees and grassy areas for foraging. Snags where woodpeckers excavate nesting holes, later to be used by bluebirds, are necessary for good habitat.	Juniper and mistletoe berries are a major part of Western Bluebirds' diet.	Unlikely, but occurs and may breed on-site.
Western snowy plover (*Charadrius alexandrinus nivosus*)	FT/SSC	Found on sandy beaches, barren salt pans, or dry mudflats. Rarely found on wet mudflats.	Crustaceans.	Coastal species, does not occur.
White-faced ibis (*Plegadis chihi*)	FSC*/SSC	Found primarily in freshwater areas, on marshes, swamps, ponds and rivers with pockets of emergent vegetation. Prefers shallow-water areas. Also found in coastal areas in the west.	Crustaceans, arthropods, gastropods.	May occur, although habitat is limited.

Volume 4A - Attachment 2, Table 11. Multiple Species Conservation Program (MSCP) List of Special-Status Animal Species and their Potential to Occur in or near the San Diego River Park Project Site

Southern mule deer (*Odocoileus hemionus fuliginata*)	none/game sp.	Coastal sage scrub, riparian grassland, chaparral, other woodlands.	Shrubs, grasses	May occur.

Status (Federal State)
FE = Federally Endangered
PE = Proposed for federal listing as Endangered
FT = Federally Threatened
PT = Proposed for federal listing as Threatened
C = Candidate for federal listing
CE = State Endangered
CR = State Rare
CT = State Threatened
SSC = State Species of Special Concern
FSC* Federal Species of Concern; formerly Category 2 or Category 3 candidate or proposed for federal listing; no current federal status
FSC+ = Federal Species of Concern; proposed rule to list as endangered or threatened has been withdrawn; no current federal status
none = no status
BEPA = Bald Eagle Protection Act

Volume 4A - Attachment 2, Table 12. Probability of Occurrence for Non MSCP State and Federally Listed Vertebrate Species

Type	Common Name	Scientific Name	Status	Habitat	Probability of Occurrence on Site
Avian	Black Skimmer	*Rynchops niger*	SSC	Feeds in lagoons, diked ponds, tidal channels. Breeds in islets, sand flats.	Rare, may occasionally forage on-site.
Avian	California Gull	*Larus californicus*	SSC	Highly diverse habitat–coastal waters, lakes, rivers, city parks and dumps.	Abundant, may occur on-site but no rookeries.
Amphibian	California Red-legged Frog	*Rana aurora draytonii*	FT, SSC	Deep, still or slow moving water with dense, shrubby riparian vegetation.	Extirpated, unlikely to occur. No suitable habitat occurs on-site. Exotic fish and bullfrog predation
Amphibian	California Silvery Legless Lizard	*Anniella pulchra pulchra*	SSC	Common in several habitats but especially in coastal dune, valley-foothill, chaparral, and coastal scrub types. Found primarily in areas with sandy or loose organic soils or where there is plenty of leaf litter.	Probable. Site occurs within species range, and suitable habitat occurs on site.
Reptile	Coast Patch-nosed Snake	*Salvadora hexalepis virgultea*	SSC	Coastal chaparral, desert scrub, washes, sandy flats and rocky areas.	Unlikely to occur, limited habitat.
Avian	Double-crested Cormorant	*Phalacrocorax auritus*	SSC	Coasts, bays, lakes, rivers.	Abundant, may occur on-site but no rookeries present.
Avian	Least Bittern	*Ixobrychus exilis*	SSC	Dense freshwater marshes with tules and cattails.	Probable.
Avian	Long-eared Owl	*Asio otus*	SSC	Nest and roost in dense stands of trees adjacent to open country.	Rare, may hunt or nest on-site.
Avian	Merlin	*Falco columbarius*	SSC	Occurs during migration but prefers coastal estuaries and open areas.	Does not breed in California, occurs uncommonly in winter.
Mammal	Northwestern San Diego Pocket Mouse	*Chaetodipus fallax fallax*	SSC	Coastal sage scrub.	Does not occur on-site. Highly disturbed habitat
Avian	Osprey	*Pandion haliaetus*	SSC	Coastal lagoons, estuaries, freshwater lakes and reservoirs, large rivers.	May forage on-site. No nests.
Mammal	Pallid San Diego Pocket Mouse	*Chaetodipus fallax pallidus*	SSC	Desert scrub habitats.	Does not occur on-site. Highly disturbed habitat.

Volume 4A - Attachment 2, Table 12. Probability of Occurrence for Non MSCP State and Federally Listed Vertebrate Species

Avian	Prairie Falcon	*Falco mexicanus*	SSC	Nests in cliffs or rocky outcroppings adjacent to open, arid lands.	Rare, does not nest, but may forage on-site
Reptile	Red Diamond Rattlesnake	*Crotalus ruber ruber*	SSC	Chaparral and coastal sage scrub preferably with boulders.	Unlikely to occur, limited habitat.
Mammal	San Diego Black-tailed Jack Rabbit	*Lepus californicus bennettii*	SSC	Open shrub and grassland habitats.	Does not occur on-site. Poor habitat.
Mammal	San Diego Desert Woodrat	*Neotoma lepida intermedia*	SSC	Chaparral, sagebrush, scrub, and desert habitats. Quite variable.	Probably occurs.
Avian	Sharp-shinned Hawk	*Accipiter striatus*	SSC	Breeds in northern forests and woodlands.	Occurs on-site in winter.
Avian	Short-eared Owl	*Asio flammeus*	SSC	Nest and roost in stands of tall grasses in wet or dry lowland habitats.	Unlikely winter visitor.
Reptile	Two-striped Garter Snake	*Thamnoophis hammondii*	SSC	Ponds and riparian habitat.	Unlikely to occur, bullfrogs may have eliminated it.
Avian	Vaux's Swift	*Chaetura vauxi*	SSC	Breeds in mature forests, not in this region	May fly over site during migration.
Amphibian	Western Spadefoot	*Scaphiopus hammundii*	SSC	Ephemeral or vernal pools in generally flat terrain or low hills.	Unlikely to occur. Limited on-site habitat.
Avian	White-tailed Kite	*Elanus leucurus*	FPS	Grasslands, groves, and marshes with scattered trees.	Occasionally forages on site, does not breed.
Avian	Yellow Warbler	*Dendroica petechia*	SSC	Breeds in riparian woodlands.	Potential breeder. Occurs during migration.
Avian	Yellow-breasted Chat	*Icteria virens*	SSC	Breeds in dense riparian thickets of willows, tangles and brush.	Potential breeder. Occurs during migration.

Status
FE = Federally endangered
SE = State endangered
FT = Federally threatened
ST = State threatened
SSC = California Species of special concern
FPS = Fully Protected Species

Volume 4A - Attachment 2, Table 13. Multiple Species Conservation Program (MSCP) Species Reported in the California Natural Diversity Database (CNDDB) for El Cajon USGS Quad

Common Name	Scientific Name	Status	Habitat
San Diego thorn-mint	*Acanthomintha ilicifolia*	PE/CE	G, CSS, CHP
San Diego ambrosia	*Ambrosia pumila*	FSC*/	G
Orcutt's brodiaea	*Brodiaea orcutti*	FSC*/	VP, G, seeps, wet meadows
Lakeside ceanothus	*Ceanothus cyaneus*	FSC*/	CHP
Variegated dudleya	*Dudleya variegata*	FSC*/	CSS
Palmer's ericameria	*Ericameria palmeri ssp. Palmeri*	FSC*/	Riparian (edges), CSS
San Diego barrel cactus	*Ferocactus viridescens*	FSC*/	CSS, CHP, maritime scrub
San Diego goldenstar	*Muilla clevelandii*	FSC*/	G, CHP (openings)
Cooper's hawk	*Accipiter cooperii*	/SSC	OW(breeding), RW
California rufous-crowned sparrow	*Aimophila ruficeps canescens*	FSC*/SSC	CSS, rock outcroppings
Orange-throated whiptail	*Aspidoscelis hyperythrus*	FSC*/SSC	CSS, CHP, G
Coastal cactus wren	*Campylorhynchus brunneicapillus couesi*	FSC*/SSC	CSS, cactus patches
San Diego horned lizard	*Phrynosoma coronatum blainvillei*	FSC*/SSC	CSS, CHP
Coastal California gnatcatcher	*Polioptila californica californica*	FT/SSC	CSS
Least Bell's vireo	*Vireo bellii pusillus*	FE/CE	RW, RF

Status (Federal State)
FE = Federally Endangered
PE = Proposed for federal listing as Endangered
FT = Federally Threatened
PT = Proposed for federal listing as Threatened
C = Candidate for federal listing
CE = State Endangered
CR = State Rare
CT = State Threatened
SSC = State Species of Special Concern
FSC* Federal Species of Concern; formerly Category 2 or Category 3 candidate or proposed for federal listing; no current federal status
FSC+ = Federal Species of Concern; proposed rule to list as endangered or threatened has been withdrawn; no current federal status
none = no federal or state status

Habitat
CSS - coastal sage scrub
CHP - chaparral
SMC - southern maritime chaparral
G - grassland
NG - native grassland
VP - vernal pool
OW - oak woodland
Cypress wdld. - Tecate cypress woodland
RW - riparian woodland
RS - riparian scrub
RF - riparian forest
SM - saltmarsh
FWM - freshwater marsh

Lakes and Reservoir Names	AreaSqKm	Acres
El Capitan Lake	5.886	1,454.5
Lake Jennings	0.520	128.5
Grassmont Reservoir	0.063	15.6
San Vicente Reservoir	4.280	1,057.6
Unknown	0.036	8.9
Unknown	0.032	7.9
Unknown	0.028	6.9
Unknown	0.021	5.2
Unknown	0.016	4.0
Santee Recreational Lakes	0.049	12.1
Unknown	0.079	19.5
Unknown	0.023	5.7
Unknown	0.009	2.2
Unknown	0.034	8.4
Unknown	0.012	3.0
Unknown	0.007	1.7
Unknown	0.008	2.0
Unknown	0.030	7.4
Murray Reservoir	0.480	118.6
Unknown	0.028	6.9
Unknown	0.011	2.7
Unknown	0.046	11.4
Unknown	0.013	3.2
Unknown	0.057	14.1
Unknown	0.049	12.1
Unknown	0.085	21.0
Unknown	0.031	7.7
Unknown	0.024	5.9
Unknown	0.033	8.2
Unknown	0.020	4.9
Unknown	0.016	4.0
Unknown	0.026	6.4
Unknown	0.035	8.6
Cuyamaca Reservoir	3.751	926.9
Total	15.838	3,913.6

Volume 4A, Attachment 2, Table 15a. Water Quality Objectives (Surface Water)

Concentrations not to be exceeded more than 10% of the time during any one one-year period.

Inland Surface Waters		Hydrologic Unit Basin Number	Constituent (mg/L or as noted)												
			TDS	Cl	SO_4	%Na	N&P	Fe	Mn	MBAS	B	ODOR	Turb NTU	Color Units	F
San Diego Hydrologic Unit		**907.00**													
Lower San Diego	HA	7.10	1000	400	500	60	a	0.3	0.05	0.5	1.0	None	20	20	-
Mission San Diego	HSA	7.11	1500	400	500	60	a	1.0	1.00	0.5	1.0	None	20	20	-
Santee	HSA c	7.12	1000	400	500	60	a	1.0	1.00	0.5	1.0	None	20	20	-
Santee	HSA d	7.12	1500	400	500	60	a	1.0	1.00	0.5	1.0	None	20	20	-
San Vicente	HA	7.20	300	50	65	60	a	0.3	0.05	0.5	1.0	None	20	20	1.0
El Capitan	HA	7.30	300	50	65	60	a	0.3	0.05	0.5	1.0	None	20	20	1.0
Boulder Creek	HA	7.40	300	50	65	60	a	0.3	0.05	0.5	1.0	None	20	20	1.0

a Concentrations of nitrogen and phosphorus, by themselves or in combination with other nutrients, shall be maintained at levels below those which stimulate algae and emergent plant growth. Threshold total Phosphorus (P) concentrations shall not exceed 0.05 mg/l in any stream at the point where it enters any standing body of water, nor 0.025 mg/l in any standing body of water. A desired goal in order to prevent plant nuisances in streams and other flowing waters appears to be 0.1 mg/l total P. These values are not to be exceeded more than 10% of the time unless studies of the specific body in question clearly show that water quality objective changes are permissible and changes are approved by the Regional Board. Analogous threshold values have not been set for nitrogen compounds; however, natural ratios of nitrogen to phosphorus are to be determined by surveillance and monitoring and upheld. If data are lacking, a ratio of N:P = 10:1 shall be used. Note - Certain exceptions to the above water quality objectives are described in Chapter 4 in the sections titled Discharges to Coastal Lagoons from Pilot Water Reclamation Projects and Discharges to Surface Waters.

c Sycamore Canyon Subarea, a portion of the Santee Hydrologic Subarea, includes the watersheds of the following north-south trending canyons: Oak Creek, Spring Canyon, Little Sycamore Canyon, Quail Canyon, and Sycamore Canyon. The Sycamore Canyon subarea extends eastward from the Mission San Diego HSA to the confluence of the San Diego River and Forester Creek, immediately south of the Santee Lakes.

d These objectives apply to the Lower Sycamore Canyon portion of the Santee Hydrologic Subarea described as all of the Sycamore Canyon watershed except that part which drains north of the boundary between sections 28 and 33, Township South, Range 1 West.

Volume 4A, Attachment 2, Table 15b. Water Quality Objectives (Ground Water)

Concentrations not to be exceeded more than 10% of the time during any one-year period.

Ground Waters		Hydrologic Unit Basin Number	Constituent (mg/L or as noted)												
			TDS	Cl	SO_4	%Na	NO_3	Fe	Mn	MBAS	B	ODOR	Turb NTU	Color Units	F
San Diego Hydrologic Unit		**907.00**													
Lower San Diego	HA	7.10													
Mission San Diego	HSA a	7.11	3000 b	800 b	600 b	60	45 b	0.3 b	0.05 b	0.5	2.0 b	none	5	15	1.0
Santee	HSA	7.12	1000 b	400 b	500 b	60	45 b	0.3 b	0.05 b	0.5	0.75 b	none	5	15	1.0
Santee (alluvial aquifer for lower Sycamore Canyon)	n HSA	7.12	2000 b	800 b	600 b	60	45 b	0.3 b	0.05 b	0.5	2.0 b	none	5	15	1.0
El Cajon	HSA	7.13	1200 b	250 b	500 b	60	45 b	0.3 b	0.05 b	0.5	0.75 b	none	5	15	1.0
Coches	HSA	7.14	600 b	250 b	250 b	60	5 b	0.3 b	0.05 b	0.5	0.75 b	none	5	15	1.0
El Monte	HSA	7.15	600 b	250 b	250 b	60	5 b	0.3 b	0.05 b	0.5	0.75 b	none	5	15	1.0
San Vicente	HA	7.20	600	250	250	60	5	0.3	0.05	0.5	0.75	none	5	15	1.0
El Capitan	HA	7.30	1000	400	500	60	45	0.3	0.05	0.5	0.75	none	5	15	1.0
Conejos Creek	HSA	7.31	350	60	60	60	5	0.3	0.05	0.5	0.75	none	5	15	1.0
Boulder Creek	HA	7.40	350	60	60	60	5	0.3	0.05	0.5	0.75	none	5	15	1.0

a The water quality objectives do not apply westerly of the easterly boundary of Interstate Highway 5. The objectives for the remainder of the Hydrologic Area (Subarea) are as shown.

b Detailed salt balance studies are recommended for this area to determine limiting mineral concentration levels for discharge. On the basis of existing data, the tabulated objectives would probably be maintained in most areas. Upon completion of the salt balance studies, significant water quality objective revisions may be necessary. In the interim period of time, projects of ground water recharge with water quality inferior to the tabulated numerical values may be permitted following individual review and approval by the Regional Board if such projects do not degrade existing ground water quality to the aquifers affected by the recharge.

n These objectives apply for only the alluvial aquifer in the Lower Sycamore Canyon portion of the Santee Hydrologic Subarea described as all of the Sycamore Canyon watershed except that part which drains north of the boundary between sections 28 and 33, Township 14 South, Range 1 West.

Volume 4A, Attachment 2, Table 15c. San Diego Regional Water Quality Control Board Section 303 (d) List

2002 CWA SECTION 303(d) LIST OF WATER QUALITY LIMITED SEGMENT

Approved by USEPA: July 2003

SAN DIEGO REGIONAL WATER QUALITY CONTROL BOARD

REGION	STATE	WATER BODY NAME	WATER BODY NUMBER	POLLUTANT/STRESSOR	POTENTIAL SOURCE	TMDL ESTIMATED COMPLETION	PRIORITY	SIZE AFFECTED
9	R	San Diego River (Lower)	90711000					
				Fecal Coliform			Low	12 Miles
				Lower 6 miles.				
					Urban Runoff/Storm Sewers			
					Wastewater			
					Nonpoint/Point Source			
				Low Dissolved Oxygen			Low	12 Miles
				Impairment transcends adjacent Calwater watershed 90712.				
					Urban Runoff/Storm Sewers			
					Unknown Nonpoint Source			
					Unknown point source			
				Phosphorus			Low	12 Miles
				Impairment transcends adjacent Calwater watershed 90712.				
					Urban Runoff/Storm Sewers			
					Unknown Nonpoint Source			
					Unknown point source			
				Total Dissolved Solids			Low	12 Miles
				Impairment transcends adjacent Calwater watershed 90712.				
					Urban Runoff/Storm Sewers			
					Flow Regulation/Modification			
					Natural Sources			
					Unknown Nonpoint Source			
					Unknown point source			

Volume 4A, Attachment 2, Table 15d. USGS Water Quality Monitoring Data

USGS Gaging Station Description (data collection dates)	USGS Gage Station Number	Constituent (mg/L or as noted)												
		S.C.[a]	Cl	SO_4	%Na	N&P	Fe	Mn	Fecal Coliform[b]	B	DO	pH	Temp °C	F
USGS Parameter Number		00095	00940	00945	00932	006062 & 00932	01046	01056	31625	01020	00300	00400	00010	00950
San Diego River Upstream of Project Site Latitude 32°52'20", Longitude 116°55'18" NAD27 (12/02/1982 - 05/19/1983)	32522011 6551801 01S001W 01J001S	780	81.0	130	47	8.2 & .030	0.02	ND	ND	0.080	ND	7.3	20.0	0.40
San Diego River Downstream of Project Site Latitude 32°52'48", Longitude 116°58'04" NAD27 (05/19/1983))	3250481165 80401 015S001W2 2Q005S	ND	ND	ND	ND	ND	0.21	0.25	ND	ND	ND	6.8	21.0	ND
Los Coches CreekNear Lakeside CA Upstream of Project Site Latitude 32°49'57", Longitude 116°54'15" NAD27 (02/14/1992)	11022200	1630	ND	ND	ND	ND	ND	ND	3100	ND	9.2	8.2	15.0	ND

a Specific Conductance, water, unfiltered, microsiemes per centimeter @ 25 degrees Celsius
b Fecal coliform, —FC MF (0.7 micron) method, water, colonies per 100 milliliters
ND No data for this parameter.

Volume 4A, Attachment 2, Table 15e. San Diego River Mass Loading Monitoring Data, 2001-2002

ANALYTE	UNITS	REFERENCE STANDARD	SOURCE	SAN DIEGO RIVER		
				11/29/01	02/17/02	03/17/02
General / Physical / Organic						
Electrical Conductivity	umhos/cm			1680	2230	2270
Oil And Grease[25]	mg/L	15	USEPA Multi-Sector General Permit	<1	4	<1
pH	pH Units	6.5-8.5	Basin Plan	7.3	7.6	7.5
Bacteriological						
Enterococci	MPN/100 mL	NA	NA	80	2,200	170
Fecal Coliform	MPN/100 mL	400	Basin Plan	130	**30,000**	170
Total Coliform	MPN/100 mL	NA	NA	2,300	80,000	3,000
Wet Chemistry						
Ammonia As N	mg/L	0.025 (a)	Basin Plan	0.9	0.7	0.2
Biochemical Oxygen Demand (BOD)	mg/L	30	USEPA Multi-Sector General Permit	12	**58.8**	3.4
Chemical Oxygen Demand (COD)	mg/L	120	USEPA Multi-Sector General Permit	28	**154**	54
Dissolved Phosphorus	mg/L	2	USEPA Multi-Sector General Permit	0.3	0.03	0.12
Nitrate As N	mg/L	45[25]	Basin Plan	0.9	0.8	0.3
Nitrite As N	mg/L	1	Basin Plan	0.12	0.07	<0.05
Surfactants (MBAS)	mg/L	0.5	Basin Plan	<0.5	**0.6**	<0.5
Total Dissolved Solids	mg/L	300-1500	Basin Plan by watershed	869	691	796
Total Kjeldahl Nitrogen	mg/L			2.7	2.9	1.7
Total Phosphorus	mg/L	2	USEPA Multi-Sector General Permit	1.21	0.4	0.28
Total Suspended Solids	mg/L	100	USEPA Multi-Sector General Permit	<20	24	20
Turbidity	NTU	20	Basin Plan	8.6	15.3	13.1
Pesticides						
Chlorpyrifos	µg/L	0.02	CA Dept. of Fish & Game	<0.03	<0.03	**0.03**
Diazinon	µg/L	0.08	CA Dept. of Fish & Game	**0.21**	**0.10**	**0.08**
Hardness						
Total Hardness	mg	NA	NA	429	399	490

[25] The standards identified in the USEPA Multi-Sector General Permit are discharge-quality objectives rather than in-stream water quality standards. These reference values are included for comparison and do not necessarily constitute a violation.

[26] The underlying water quality objective in the Basin Plan is "Inland surface waters...shall not contain biostimulatory substances in concentrations that promote aquatic growth to the extent that such growths cause nuisance or adversely affect beneficial uses." The Basin Plan also states a goal of 0.1 mg/L for total phosphorous to support this objective. The reference value for nitrogen/nitrates in this table entry is derived from this phosphorous goal, using a ratio suggested by RWQCB staff. This reference value is not a Basin Plan water quality objective.

Volume 4A, Attachment 2, Table 15e. San Diego River Mass Loading Monitoring Data, 2001-2002

ANALYTE	UNITS	REFERENCE STANDARD	SOURCE	SAN DIEGO RIVER		
				11/29/01	02/17/02	03/17/02
	$CaCO_3$/L					
Total Metals						
Antimony	mg/L	0.006	Basin Plan	<0.002	0.003	<0.002
Arsenic	mg/L	0.34/0.05	40 CFR 131/ Basin Plan	0.003	0.002	0.005
Cadmium	mg/L	0.0046	40 CFR 131	<0.001	<0.001	<0.001
Chromium	mg/L	0.016	CTR (Cr VI)	0.005	<0.005	0.007
Copper	mg/L	0.0135	40 CFR 131	0.007	**0.028**	0.011
Lead	mg/L	0.082	40 CFR 131	0.003	0.004	0.009
Nickel	mg/L	0.47/0.1	40 CFR 131/ Basin Plan	0.004	0.005	0.004
Selenium	mg/L	0.02	40 CFR 131	<0.002	0.002	<0.002
Zinc	mg/L	0.122	40 CFR 131	0.029	0.112	0.067
Dissolved Metals						
Antimony	mg/L	(e)	40 CFR 131	<0.002	<0.002	<0.002
Arsenic	mg/L	0.34 (c)	40 CFR 131	0.002	<0.001	0.002
Cadmium	mg/L	(b)	40 CFR 131	<0.001	<0.001	<0.001
Chromium	mg/L	(b)	40 CFR 131	<0.005	<0.005	<0.005
Copper	mg/L	(b)	40 CFR 131	0.006	0.015	<0.005
Lead	mg/L	(b)	40 CFR 131	0.002	<0.002	<0.002
Nickel	mg/L	(b)	40 CFR 131	0.003	0.005	0.002
Selenium	mg/L	0.2 (d)	40 CFR 131	<0.002	<0.002	<0.002
Zinc	mg/L	(b)	40 CFR 131	0.022	0.084	<0.02
Toxicity						
Ceriodaphnia 96-hr	LC_{50} (%)	100		>100	>100	>100
Ceriodaphnia 7-day survival/reproduction	NOEC (%)	100		100/100	100/100	100/100
Hyalella 96-hr	NOEC (%)	100		100	100	100
Selenastrum 96-hr	NOEC (%)	100		100	**25**	100

(a) Water Quality Objective is for unionized ammonia, insufficient information is available to calculate unionized ammonia.

(b) Standards applied to dissolved metal fractions are based on total hardness and are calculated as described by the USEPA Federal Register Doc. 40 CFR Part 131, May 18, 2000.

(c) Standard applied to dissolved metal fractions are based on water effects ratios (WER) and are calculated as described by the USEPA Federal Register Doc. 40 CFR Part 131, May 18, 2000.

(d) Standard is based on the total recoverable form as described by the USEPA Federal Register Doc. 40 CFR Part 131, May 18, 2000.

(e) USEPA has not published an aquatic life criterion value

[a] Exceeds the acute aquatic life criterion.

[c] Exceeds the chronic aquatic life criterion.

NA Not applicable. No water quality objective is applicable for this parameter in the watershed.

Sources:

USEPA National Pollutant Discharge Elimination System (NPDES) Storm Water Multi-Sector General Permit for Industrial Activities. 65 Federal Register (FR) 64746, Final Reissuance, October 30, 2000.

California Department of Fish and Game. Office of Spill Prevention and Emergency Response, Hazard Assessment and Water Quality Criteria documents for pesticides (various dates).

San Diego Regional Water Quality Control Board Basin Plan Water Quality Objectives.

USEPA National Pollutant Discharge Elimination System (NPDES) Storm Water Multi-Sector General Permit for Industrial Activities, 65 Federal Register (FR) 64746, Final Reissuance, October 30, 2000.

USEPA Federal Register Document 40 CFR Part 131, May 18, 2000.

Volume 4A, Attachment 2, Table 15f. Average Monthly Precipitation for San Diego WSO Airport 047740 (1914-2004)

YEAR(S)	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANN
1914	3.59	1.90	0.36	0.85	0.08	0.00	0.00	0.00	0.00	1.05	0.86	2.21	10.90
1915	4.91	3.62	0.33	1.15	0.28	0.00	0.00	0.00	0.00	0.00	0.73	2.60	13.62
1916	7.56	0.66	0.98	0.01	0.01	0.00	0.02	0.01	0.25	0.87	0.05	1.14	11.56
1917	4.32	1.84	0.26	1.06	0.31	0.00	0.00	0.00	0.00	0.17	0.08	0.00	8.04
1918	1.64	1.52	4.57	0.00	0.00	0.06	0.00	0.11	0.08	0.42	1.91	0.00	z 10.31
1919	0.61	1.46	1.83	0.30	0.34	0.00	0.00	0.01	0.26	1.04	0.43	0.48	6.76
1920	0.43	2.87	2.46	0.47	0.44	0.02	0.00	0.01	0.08	0.18	0.19	0.54	7.69
1921	2.02	0.35	1.13	0.04	2.54	0.00	0.00	0.00	1.24	0.67	0.30	9.26	17.55
1922	3.45	1.86	1.34	0.17	0.36	0.00	0.01	0.00	0.00	0.09	0.75	1.21	9.24
1923	1.34	1.53	0.34	1.05	0.00	0.04	0.01	0.00	0.03	0.37	0.16	1.65	6.52
1924	0.26	0.00	2.41	0.77	0.00	0.00	0.00	0.00	0.00	0.35	0.55	1.34	5.68
1925	0.08	0.30	1.78	1.11	0.15	0.15	0.00	0.01	0.00	3.67	1.16	1.50	9.91
1926	0.78	2.33	0.82	5.37	0.01	0.01	0.00	0.05	0.00	0.21	0.59	3.89	14.06
1927	0.32	6.68	2.05	0.71	0.12	0.12	0.00	0.01	0.04	1.76	0.05	4.57	16.43
1928	0.21	0.79	0.69	0.14	0.36	0.09	0.00	0.03	0.00	0.14	0.63	2.42	5.50
1929	0.90	1.14	1.22	0.57	0.05	0.00	0.00	0.00	0.26	0.00	0.00	0.00	4.14
1930	3.90	0.66	3.02	1.06	1.81	0.02	0.00	0.00	0.00	0.22	1.04	0.00	11.73
1931	3.72	4.11	0.06	1.38	0.24	0.01	0.00	0.08	0.00	0.05	1.95	3.56	15.16
1932	1.45	5.15	0.42	0.50	0.01	0.01	0.00	0.00	0.00	1.10	0.30	2.40	11.34
1933	4.32	0.02	0.13	1.75	0.53	0.08	0.02	0.01	0.02	0.16	0.03	1.10	8.17
1934	0.30	1.88	0.24	0.01	0.02	0.47	0.00	0.02	0.18	0.42	1.95	3.38	8.87
1935	2.15	4.54	1.42	1.02	0.02	0.00	0.00	0.18	0.01	0.05	0.07	0.74	10.20
1936	0.75	5.18	0.92	0.48	0.00	0.01	0.01	0.28	0.04	1.86	0.44	4.45	14.42
1937	1.52	4.22	2.65	0.13	0.32	0.01	0.16	0.00	0.00	0.00	0.02	1.06	10.09
1938	0.89	3.26	3.73	0.44	0.15	0.01	0.00	0.03	0.00	0.23	0.02	4.25	13.01
1939	2.38	1.23	1.17	0.47	0.01	0.00	0.00	0.00	3.14	0.62	1.13	0.54	10.69
1940	2.15	3.56	0.82	0.46	0.00	0.00	0.00	0.00	0.08	1.50	0.49	6.09	15.15
1941	2.03	5.31	5.89	3.35	0.00	0.00	0.06	0.03	0.28	2.90	2.23	2.85	24.93
1942	0.21	1.06	1.91	1.40	0.11	0.01	0.00	0.00	0.00	0.27	0.27	0.69	5.93
1943	6.26	1.40	1.66	0.52	0.02	0.01	0.00	0.00	0.04	0.20	0.03	7.60	17.74
1944	1.22	3.65	0.80	0.61	0.22	0.10	0.00	0.00	0.00	0.00	4.93	1.53	13.06
1945	0.42	1.91	2.03	0.03	0.04	0.15	0.00	0.87	0.03	0.00	0.13	3.62	9.23
1946	0.89	0.60	2.67	0.52	0.01	0.00	0.00	0.00	0.00	0.34	2.53	1.18	8.74
1947	0.35	0.43	0.97	0.36	0.17	0.00	0.00	0.00	0.18	0.08	0.72	3.02	6.28
1948	0.00	1.07	1.60	0.13	0.01	0.02	0.00	0.00	0.00	1.32	0.10	2.38	6.63
1949	3.56	1.81	0.75	0.09	0.41	0.00	0.00	0.00	0.00	0.23	1.16	0.86	8.87
1950	3.31	1.62	1.00	0.28	0.09	0.00	0.08	0.00	0.00	0.01	1.23	0.05	7.67
1951	1.60	0.50	0.50	1.95	0.00	0.00	0.00	0.85	0.04	0.68	1.23	3.87	11.22
1952	4.24	0.60	4.97	1.54	0.00	0.14	0.00	0.00	0.00	0.00	1.83	2.20	15.52
1953	0.58	0.58	0.79	0.33	0.09	0.14	0.00	0.00	0.00	0.07	0.80	0.03	3.41
1954	2.76	1.03	4.31	0.09	0.01	0.03	0.00	0.00	0.00	0.00	0.74	0.55	9.52
1955	3.59	0.56	0.38	0.90	0.49	0.00	0.00	0.11	0.00	0.00	0.55	0.33	6.91
1956	1.65	0.22	0.00	1.56	0.10	0.00	0.00	0.00	0.00	0.68	0.00	0.18	4.39
1957	4.80	0.50	0.75	0.84	0.88	0.26	0.00	0.00	0.37	1.76	0.59	1.38	12.13
1958	0.62	3.15	3.98	1.65	0.40	0.00	0.00	0.00	0.62	0.01	0.44	0.06	10.93
1959	0.08	3.76	0.00	0.31	0.00	0.00	0.00	0.00	0.04	0.23	0.02	1.44	5.88
1960	2.99	1.45	0.55	0.56	0.17	0.00	0.00	0.00	0.06	0.04	1.01	0.22	7.05
1961	1.21	0.06	0.85	0.00	0.01	0.00	0.00	0.04	0.00	0.20	0.79	1.45	4.61
1962	2.71	3.08	0.64	0.01	0.62	0.09	0.00	0.00	0.00	0.01	0.01	0.22	7.39
1963	0.11	1.22	1.33	0.71	0.09	0.28	0.00	0.00	1.90	0.13	1.85	0.10	7.72
1964	1.30	0.37	0.97	0.20	0.15	0.08	0.00	0.00	0.00	0.02	1.01	1.17	5.27
1965	0.40	0.52	1.79	3.58	0.00	0.01	0.02	0.00	0.29	0.00	5.82	6.60	19.03
1966	1.29	0.86	0.17	0.00	0.02	0.00	0.00	0.00	0.00	0.80	0.82	3.22	7.18
1967	2.20	0.00	1.14	2.24	0.05	0.16	0.01	0.14	0.08	0.00	3.53	1.66	11.21
1968	0.35	0.22	1.55	0.34	0.08	0.00	0.13	0.00	0.00	0.04	0.36	0.61	3.68
1969	4.78	4.34	0.94	0.21	0.17	0.02	0.00	0.01	0.00	0.04	0.79	0.46	11.76
1970	0.86	2.58	1.50	0.09	0.01	0.00	0.00	0.00	0.00	0.07	2.05	2.22	9.38
1971	0.30	1.27	0.20	0.93	0.95	0.01	0.00	0.03	0.00	1.66	0.06	3.27	8.68
1972	0.07	0.10	0.00	0.02	0.10	0.38	0.00	0.02	0.44	0.58	3.16	1.61	6.48
1973	1.68	1.63	2.26	0.05	0.00	0.00	0.00	0.00	0.02	0.01	1.63	0.19	7.47
1974	2.96	0.04	1.70	0.02	0.01	0.02	0.01	0.00	0.00	1.03	0.14	2.20	8.13
1975	0.49	0.96	3.79	2.00	0.01	0.02	0.00	0.00	0.00	0.09	0.64	0.37	8.37
1976	0.00	5.40	0.99	1.33	0.27	0.02	0.02	0.01	1.00	0.38	0.75	1.06	11.23
1977	2.36	0.06	0.61	0.01	1.79	0.03	0.00	2.13	0.00	0.50	0.05	1.67	9.21
1978	5.95	2.64	5.00	0.73	0.04	0.00	0.00	0.00	0.72	0.05	2.09	2.19	19.41
1979	5.82	0.85	3.71	0.02	0.09	0.01	0.09	0.01	0.00	0.73	0.27	0.02	11.62

Volume 4A, Attachment 2, Table 15f. Average Monthly Precipitation for San Diego WSO Airport 047740 (1914-2004)

1980	5.58	4.47	2.71	1.18	0.65	0.01	0.00	0.00	0.00	0.05	0.00	0.31	14.96
1981	1.48	2.26	3.74	0.22	0.04	0.00	0.00	0.00	0.03	0.14	1.79	0.54	10.24
1982	2.71	0.88	4.74	0.62	0.01	0.04	0.00	0.00	0.38	0.05	2.10	1.43	12.96
1983	2.10	3.88	6.57	1.74	0.01	0.00	0.01	0.39	0.21	0.40	1.94	1.53	18.78
1984	0.46	0.09	0.04	0.62	0.00	0.04	0.19	0.06	0.00	0.29	2.37	4.55	8.71
1985	0.52	0.77	0.58	0.32	0.00	0.00	0.00	0.00	0.20	0.29	4.92	1.06	8.66
1986	0.75	2.59	3.12	1.17	0.00	0.00	0.01	0.00	1.04	1.39	1.16	0.95	12.18
1987	1.68	1.53	1.04	0.78	0.03	0.00	0.03	0.01	0.70	1.74	1.33	2.73	11.60
1988	0.89	1.37	0.59	3.71	0.08	0.00	0.00	0.00	0.00	0.00	1.39	2.23	10.26
1989	0.42	0.70	0.69	0.12	0.04	0.06	0.00	0.00	0.23	0.47	0.09	1.01	3.83
1990	2.52	1.13	0.25	0.76	0.51	0.87	0.00	0.01	0.00	0.00	0.65	0.59	7.29
1991	1.06	2.46	6.96	0.05	0.01	0.00	0.24	0.01	0.28	0.69	0.05	1.70	13.51
1992	1.81	3.34	4.42	0.28	0.07	0.04	0.03	0.05	0.00	0.18	0.03	2.56	12.81
1993	9.09	4.73	1.22	0.00	0.01	0.41	0.03	0.00	0.00	0.22	0.77	0.78	17.26
1994	0.70	2.75	3.67	0.93	0.07	0.00	0.03	0.01	0.00	0.01	0.46	0.80	9.43
1995	8.06	1.93	3.81	0.96	0.59	0.46	0.05	0.00	0.00	0.00	0.30	0.88	17.04
1996	1.52	0.88	1.10	0.36	0.02	0.00	0.09	0.00	0.03	0.94	1.70	0.63	7.27
1997	3.02	0.31	0.00	0.28	0.00	0.00	0.00	0.00	0.85	0.02	1.17	1.35	7.00
1998	2.68	7.65	2.21	1.11	0.64	0.10	0.20	0.00	0.03	0.08	0.69	0.66	16.05
1999	1.54	0.70	1.09	1.62	0.06	0.04	0.00	0.00	0.02	0.00	0.04	0.32	5.43
2000	0.17	3.67	1.00	0.54	0.00	0.00	0.00	0.01	0.00	1.24	0.26	0.01	6.90
2001	3.28	2.38	0.63	0.76	0.01	0.00	0.00	0.00	0.00	0.00	0.95	0.46	8.47
2002	0.32	0.17	0.46	0.63	0.00	0.00	0.00	0.00	0.31	0.04	0.32	1.98	4.23
2003	0.02	4.88	1.36	1.41	0.30	0.00	0.00	0.00	0.00	0.00	0.60	0.61	9.18
2004	0.34	2.81	0.22	0.60	0.00	0.00	0.00	0.00	0.00	0.22 m	0.00 z	0.00 z	3.97
Period of Record Statistics													
MEAN	2.03	1.96	1.69	0.79	0.21	0.06	0.02	0.06	0.18	0.45	0.97	1.73	10.16
S.D.	1.95	1.70	1.59	0.90	0.40	0.13	0.05	0.26	0.44	0.66	1.11	1.74	4.19
SKEW	1.41	1.04	1.35	2.47	3.63	3.79	3.32	6.43	4.38	2.38	2.16	1.88	0.84
MAX	9.09	7.65	6.96	5.37	2.54	0.87	0.24	2.13	3.14	3.67	5.82	9.26	24.93
MIN	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.41
NO.YRS	91.00	91.00	91.00	91.00	91.00	91.00	91.00	91.00	91.00	90.00	90.00	89.00	89.00

File last updated on Oct 20, 2004
*** Note *** Provisional Data *** After Year/Month 200407
a = 1 day missing, b = 2 days missing, c = 3 days, ..etc..,
z = 26 or more days missing, A = Accumulations present
Long-term means based on columns; thus, the monthly row may not
sum (or average) to the long-term annual value.
MAXIMUM ALLOWABLE NUMBER OF MISSING DAYS : 5
Individual Months not used for annual or monthly statistics if more than 5 days are missing.
Individual Years not used for annual statistics if any month in that year has more than 5 days missing.

Volume 4A, Attachment 2, Table 15g. WRCC Climate Summary for SAN DIEGO WSO AIRPORT, CALIFORNIA (047740)

1. Period of Record Monthly Climate Summary

Period of Record : 1/ 1/1914 to 6/30/2004

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
Average Max. Temperature (F)	64.7	65.2	65.9	67.5	68.6	70.9	74.8	76.3	75.7	73.0	70.0	66.0	69.9
Average Min. Temperature (F)	48.0	49.6	51.7	54.6	57.9	60.8	64.2	65.6	63.8	59.2	52.8	48.6	56.4
Average Total Precipitation (in.)	2.03	1.96	1.69	0.79	0.21	0.06	0.02	0.06	0.18	0.45	0.97	1.73	10.15
Average Total SnowFall (in.)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Average Snow Depth (in.)	0	0	0	0	0	0	0	0	0	0	0	0	0

Percent of possible observations for period of record.
Max. Temp.: 99.9% Min. Temp.: 99.9% Precipitation: 99.9% Snowfall: 83.3% Snow Depth: 83.3%
Check Station Metadata or Metadata graphics for more detail about data completeness.

Western Regional Climate Center, wrcc@dri.edu

Volume 4A, Attachment 2, Table 15h. Monthly Sunshine Duration Correction Factors

	Latitude	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
D & L	60 N	0.54	0.67	0.97	1.19	1.33	1.56	1.55	1.33	1.07	0.84	0.58	0.48
D & L	50 N	0.71	0.84	0.98	1.14	1.28	1.36	1.33	1.21	1.06	0.90	0.76	0.68
D & L	40 N	0.80	0.89	0.99	1.10	1.20	1.25	1.23	1.15	1.04	0.93	0.83	0.78
Linearly interpolated between 40 N and 30 N	39 N	0.81	0.89	0.99	1.10	1.19	1.24	1.22	1.15	1.04	0.93	0.84	0.79
	38 N	0.81	0.90	0.99	1.09	1.19	1.23	1.22	1.14	1.04	0.94	0.84	0.79
	37 N	0.82	0.90	0.99	1.09	1.18	1.23	1.21	1.14	1.04	0.94	0.85	0.80
	36 N	0.83	0.91	0.99	1.09	1.18	1.22	1.20	1.13	1.04	0.94	0.85	0.81
	35 N	0.84	0.91	1.00	1.09	1.17	1.21	1.20	1.13	1.04	0.95	0.86	0.82
	34 N	0.84	0.91	1.00	1.08	1.16	1.20	1.19	1.13	1.03	0.95	0.87	0.82
	33 N	0.85	0.92	1.00	1.08	1.16	1.19	1.18	1.12	1.03	0.95	0.87	0.83
	32 N	0.86	0.92	1.00	1.08	1.15	1.19	1.17	1.12	1.03	0.95	0.88	0.84
	31 N	0.86	0.93	1.00	1.07	1.15	1.18	1.17	1.11	1.03	0.96	0.88	0.84
D & L	30 N	0.87	0.93	1.00	1.07	1.14	1.17	1.16	1.11	1.03	0.96	0.89	0.85
D & L	20 N	0.92	0.96	1.00	1.05	1.09	1.11	1.10	1.07	1.02	0.98	0.93	0.91
D & L	10 N	0.97	0.98	1.00	1.03	1.05	1.06	1.05	1.04	1.02	0.99	0.97	0.96
D & L	0 N	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Source: Adapted from Table 2. Correlation factors for monthly sunshine duration. Dunn and Leopold (1978)

Volume 4A, Attachment 2, Table 15i. Monthly Evapotranspiration - San Diego Area (Latitude 33 N)

Jan	Feb	Mar	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec	Ann
Inches per Month												
1.43	1.67	2.00	2.49	3.05	3.61	4.29	4.35	3.79	2.91	2.06	1.50	33.2

Volume 4A - Attachment 2, Table 16. Preferred Method of Planting by Species

Habitat	Plant Species	Common Name	Planting Method
Upland Habitat			
Coastal Sage Scrub	*Artemisia californica*	California sagebrush	seed
	Baccharis sarothroides	Desert broom	seed or cutting
	Eriogonum fasciculatum	California buckwheat	seed
	Eriophyllum confertiflorum	golden yarrow	seed
	Gnaphalium bicolor	bicolored cudweed	seed
	Hemizonia fasciculata	golden tarplant	seed
	Lessingia fillaginifolia	California aster	seed
	Lotus scoparius	deerweed	seed
	Malosma laurina	laurel sumac	seed
	Mimulus aurantiacus	Bush monkeyflower	seed
	Nassella pulchra	purple needle grass	seed
	Salvia apiana	white sage	seed
	Salvia mellifera	black sage	seed
Urban Forest Tree Planting Buffer	*Juglans californica*	California walnut	1 gal. container
	Quercus agrifolia	Coast live oak	1 gal. container
	Platanus racemosa	California sycamore	1 gal. container
	Populus balsamifera var. tricocarpa	balsam poplar	1 gal. container
	Populus fremontii	Fremont cottonwood	1 gal. container
Wetland Habitat			
Seasonal Wetland community	*Amorpha fruticosa*	False indigo	seed
	Baccharis salicifolia	mulefat	seed or cutting
	Iva hayesiana	San Diego marsh-elder	seed
	Juncus acutus ssp. Leopoldii	southwestern spiny rush	seed
	Leymus triticoides	creeping wild rye	seed
	Mimulus cardinalis	scarlet monkeyflower	seed
	Muhlenbergia rigens	deergrass	liners
	Platanus racemosa	western sycamore	1 gal. container
	Populus fremontii	Fremont cottonwood	1 gal. container
	Rosa californica	California wildrose	seed
	Sambucus mexicana	Mexican elderberry	seed
	Salix gooddingii	black willow	cutting
	Salix exigua	sandbar willow	cutting
	Salix lapsiolepis	arroyo willow	cutting
Perennial Marsh community	*Baccharis salicifolia*	Mule-fat	seed or cutting
	Carex hassei	Hasse's sedge	seed
	Juncus balticus	Baltic rush	seed
	Juncus mexicanus	Mexican rush	salvage/cutting
	Populus fremontii	Fremont cottonwood	1 gal. container

Volume 4A - Attachment 2, Table 16. Preferred Method of Planting by Species

Habitat	Plant Species	Common Name	Planting Method
	Ranunculus aquatilis	Water buttercup	salvage/cutting
	Rubus ursinus	California blackberry	salvage/cutting
	Salix gooddingii	black willow	cutting
	Salix exigua	sandbar willow	cutting
	Salix lapsiolepis	arroyo willow	cutting
	Scirpus californicus	California bulrush	salvage/cutting
	Scirpus validus	softstem bulrush	salvage/cutting
	Tessaria sericea	arrowweed	cutting
Openwater community	*No vegetation*	No vegetation	
WOUS	*No vegetation*	No vegetation	
Treatment Constructed Wetland			
Constructed wetland for nitrates	*Scirpus californicus* *To Be Determined*	California bulrush To Be Determined	salvage/cutting
Constructed wetland for Non Point Source pollutants	*To Be Determined*	*To Be Determined*	
Bioswale	*Anemopsis californica*	Yerba Mansa	seed
	Baccharis salicifolia	Mule-fat	seed or cutting
	Ambrosia psilostachya	Western Ragweed	seed

Volume 4A - Attachment 2, Table 17. Target Invasive Species for Removal

Vegetation Species	Common Name	Goal
Arundo donax	Giant Reed	Eradication
Tamarisk sp.	Tamarisk	Eradication
Nicotiana glauca	Tree Tobacco	Eradication
Foeniculum vulgare	Fennel	Eradication
Cortadiera selloana	Pampas Grass	Eradication
Ricinis communis	Castor Bean	Eradication
Schinus spp.	Pepper Trees	Eradication
Washingtonia robusta	Mexican Fan Palms	Eradication
Eucalyptus spp.	Eucalpytus	Eradication
Fraxinus spp.	Ash trees	Eradication
Xanthium strumarium	Cocklebur	Eradication
Salsola tragus	Russian thistle	Eradication
Rumex crispus	Curly dock	Eradication
Picris echioides	Bristly Ox-tongue	Eradication
Bassia hyssopifolia	Bassia	Eradication
Centaurea melitensis	Star thistle	Eradication
Apium graveolens	Celery	Eradication
Cynodon dactylon	Bermuda Grass	Eradication
Carpobrotus edulis	Hotten-Tot Fig	Eradication
Mesembranthemum crystallinum	Crystalline Iceplant	Eradication
Polypogon Monspeliensis	Rabbitfoot Beardgrass	less than 5% cover
Bromus spp.	Chesses	less than 5% cover
Avena spp.	Wild oat	less than 5% cover

Volume 4A - Attachment 2, Table 18. Construction Schedule

Task	Start Date	End Date
Flood Control & Habitat Restoration Project		
Solicitation of Bids	10/03/05	12/29/05
Prep Bid Documents	10/03/05	10/17/05
Solicit Bids	10/18/05	12/05/05
Review Bids	12/06/05	12/12/05
Announce Apparent Low Bid & Commence Contract Negotiations	12/13/05	12/20/05
Request/Receive/Review Project Submittals/P&P Bonds	12/21/05	12/29/05
Site Construction	04/03/06	12/04/06
Mobilization Preparation	04/03/06	04/07/06
Commence Site Operations	04/10/06	04/21/06
Construct Site Excess Soil Laydown Area & Truck Loading Station	04/10/06	04/14/06
Install/Construct SWPPP & Other BMPs	04/10/06	04/21/06
Install/Construct Required Site Support Utilities	04/10/06	04/21/06
Commence Complete Site Grubbing/Clearing in Excavation Areas	04/13/06	04/25/06
Off-Haul Debris	04/13/06	04/24/06
Construct Temporary Access Haul Roads	04/13/06	04/20/06
Construct Southern Landscape - Tree Terrace Barrier/Seasonal Wetland/Perennial Marsh (Phase II)	05/01/06	09/28/06
Excavate Central Area & Adjacent to Creek	05/01/06	06/12/06
Construct 3:1 Slope w/Multiple Terraces	06/13/06	07/03/06
Excess Soil Management/Truck Loading	05/01/06	07/03/06
Install Culverts through channel wall	06/13/06	06/22/06
Creek Sandbag Berm Installation	06/23/06	06/26/06
Perennial Marsh Seeding	08/14/05	08/25/06
Commence/Complete Tree Planting	08/14/06	08/25/06
Seasonal Wetland Planting/Seeding	08/14/06	08/25/06
Install/Construct Drip Irrigation System	08/29/06	09/28/06
Pond In-Filling Phase (III)	06/19/06	07/31/06
Pond In-Fill (west end)	06/19/06	07/17/06
Excess Soil Management/Truck Loading	06/19/06	07/31/06
Pond In-Filling (Phase IV)	07/05/06	08/15/06
Pond In-Fill (east end)	07/05/06	08/01/06
Excess Soil Management/Truck Loading	07/05/06	08/15/06
Cut/Fill to Final Slopes and Grades	07/05/06	08/15/06
Fill to Final Slopes/Grades	08/02/06	08/15/06
Hanson Property - Excavation for Flood Control (Phase V)	07/31/06	10/09/06
Excavation to Remove Northern Constriction	07/31/06	09/01/06

Volume 4A - Attachment 2, Table 18. Construction Schedule

Task	Start Date	End Date
Excess Soil Management/Truck Loading	07/31/06	09/01/06
Site Preparation for Vegetation/Seeding	09/05/06	09/18/06
Top of Slope Vegetation and Irrigation Implementation	09/19/06	10/02/06
Implement Soil Stabilization BMPs	09/05/06	09/18/06
Nature Trail Signage	09/19/06	10/02/06
Demobilize from Site	09/26/06	10/09/06
Coastal Sage Scrub (Phase VI)	10/13/06	12/04/06
Site Preparation	10/13/06	10/26/06
Seeding	10/27/06	11/09/06
Initial Maintenance	11/10/06	12/04/06
Constructed Wetlands/Infiltration Project		
Solicitation of Bids	05/02/05	07/27/05
Prep Bid Documents	05/02/05	05/16/05
Solicit Bids	05/17/05	07/01/05
Review Bids	07/02/05	07/11/05
Announce Apparent Low Bid & Commence Contract Negotiations	07/12/05	07/19/05
Request/Receive/Review Project Submittals/P&P Bonds	07/20/05	07/27/05
Site Construction	07/28/05	12/02/05
Mobilization Preparation	07/28/05	08/03/05
Commence Site Operations	08/04/05	08/15/05
Construct Site Excess Soil Laydown Area & Truck Loading Station	08/04/05	08/10/05
Install/Construct SWPPP & Other BMPs	08/04/05	08/15/05
Install/Construct Required Site Support Utilities	08/04/05	08/15/05
Install Site Identification Signage	08/04/05	08/10/05
Commence/Complete Site Clearing/Grubbing within Excavation Areas	08/08/05	08/12/05
Stockpile Debris	08/08/05	08/12/05
Off-haul Accumulated Debris	08/08/05	08/12/05
Construct Temporary Access Haul Roads	08/08/05	08/12/05
Commence/Complete Site Excavation Ops	08/15/05	11/14/05
Recharge Project Constructed Wetland (Phase I)	08/15/05	11/14/05
Construction of RPCW - construct ponds and RIB	08/15/05	09/26/05
Excess Soil Management/Truck Loading	08/15/05	10/31/05
Installation of Piping System	09/27/05	10/17/05
Backfill to Final Slopes and Grades	10/11/05	10/31/05
Installation of Liner	10/25/05	11/14/05
Baserock Road Construction	11/08/05	11/14/05

Volume 4A - Attachment 2, Table 18. Construction Schedule

Task	Start Date	End Date
Construct Bioswale Treatment and Infiltration Area	09/27/05	10/17/05
Excavation for Bioswale	09/17/05	10/17/05
Excess Soil Management/Truck Loading	09/17/05	10/17/05
Implement Slope Stabilization BMPs	11/15/05	11/30/05
Demobilize from Site	11/21/05	12/02/05

Volume 4A - Attachment 2, Table 19. Maintenance and Monitoring Schedule

Items Being Inspected/Maintained	Frequency of Inspection
Best Management Practices	Weekly or as needed before and after storm events
Erosion Control Techniques	Weekly or as needed
Perimeter Fencing and Maintenance	Minimum monthly or as needed
Potential Pest or Vector Species	Minimum weekly or as needed
Wildlife Presence	Monthly during the months of March - August
Irrigation Systems	Weekly during the release of irrigation water
Removal of Invasive Vegetation	Minimum monthly or as needed
Trash Removal	Minimum monthly or as needed
Routine landscape maintenance and irrigation repair	Minimum monthly or as needed
Best Management Practices Maintenance	See Volume 3, Attachment 5

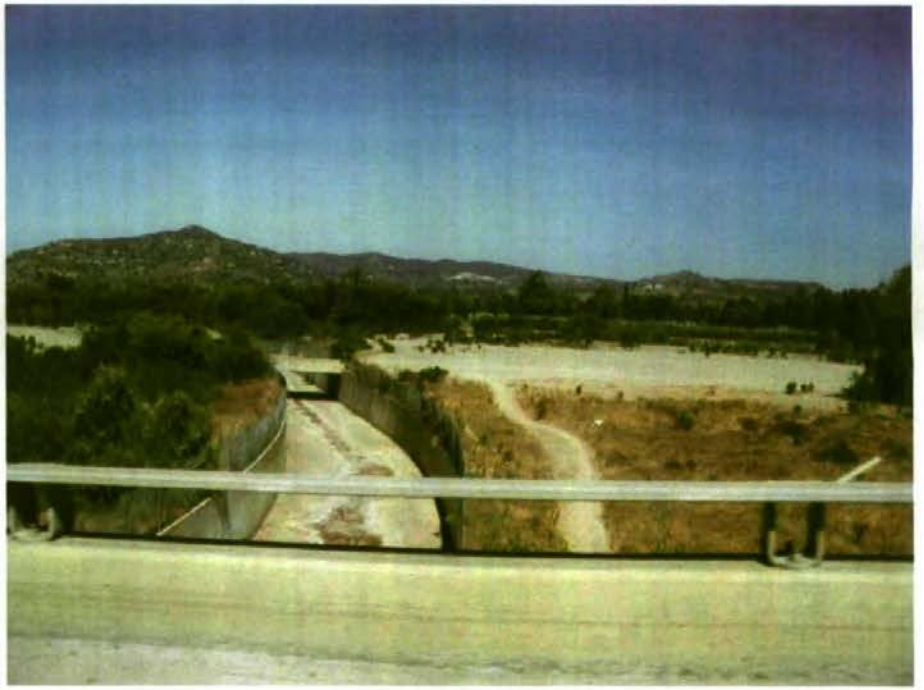
ATTACHMENT 3
Representative Site Photographs

Appendix 1 - Representative Points for Pre-Project Photographs

Volume 4A, Attachment 3. Pre- project photographs of the project site at representative points.

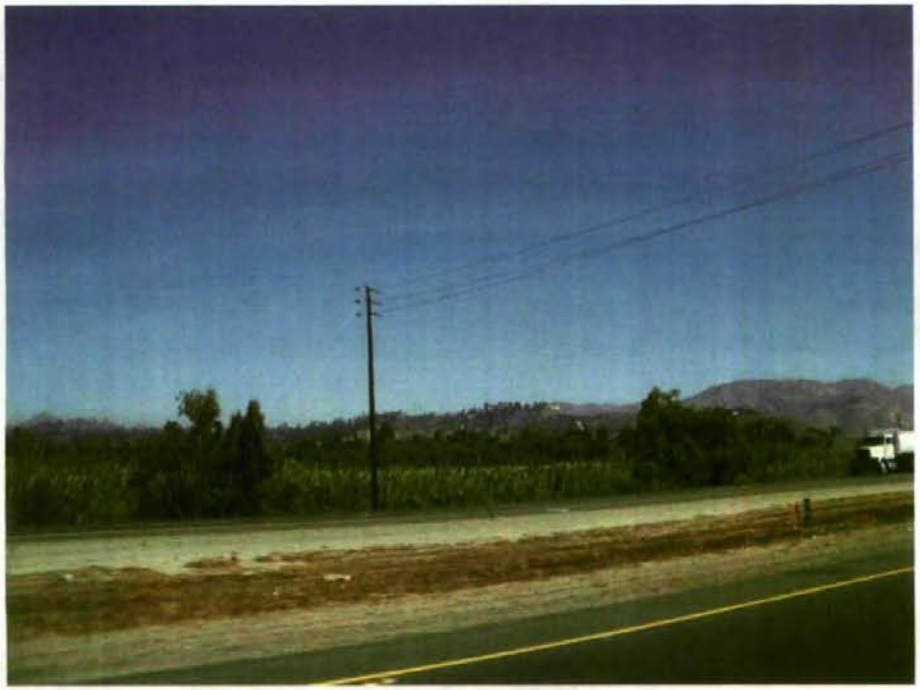
Representative photo point 1: Looking Northwest

Representative photo point 1: Looking North

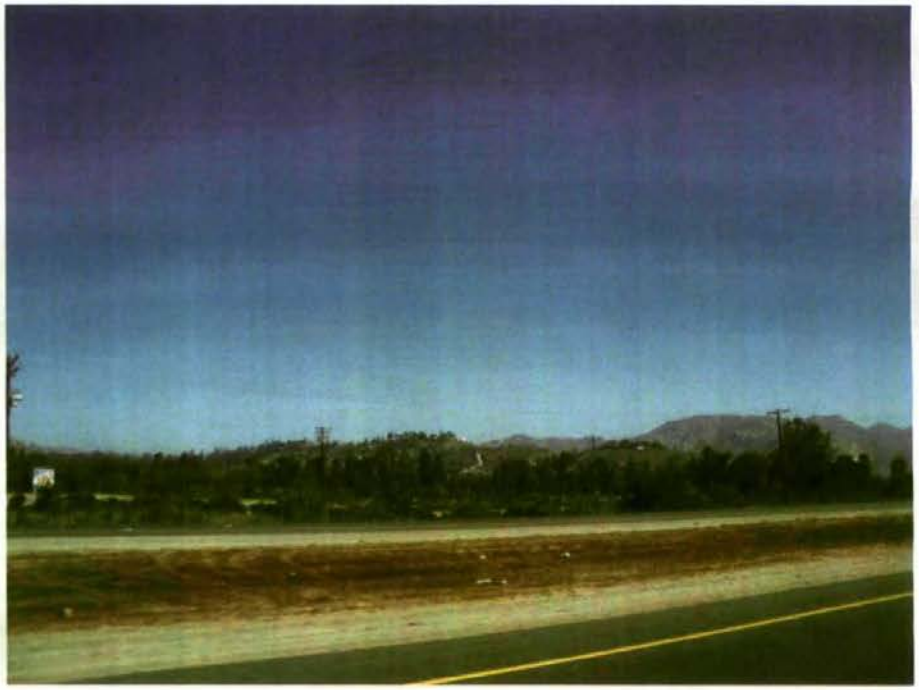


Volume 4A, Attachment 3. Pre- project photographs of the project site at representative points.

Representative photo point 2: Looking Northeast

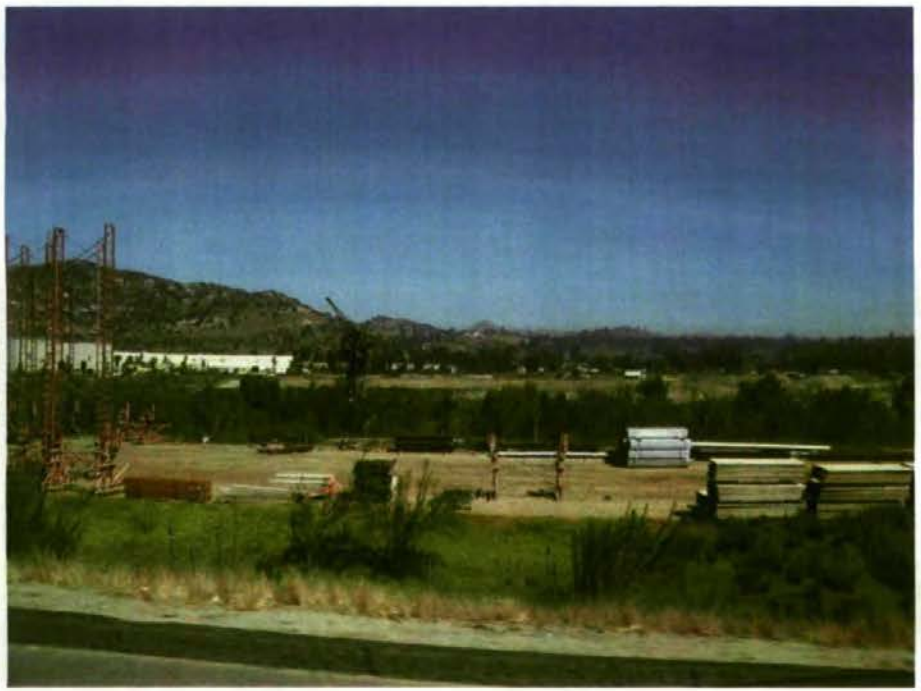


Representative photo point 3: Looking Northeast



Volume 4A, Attachment 3. Pre- project photographs of the project site at representative points.

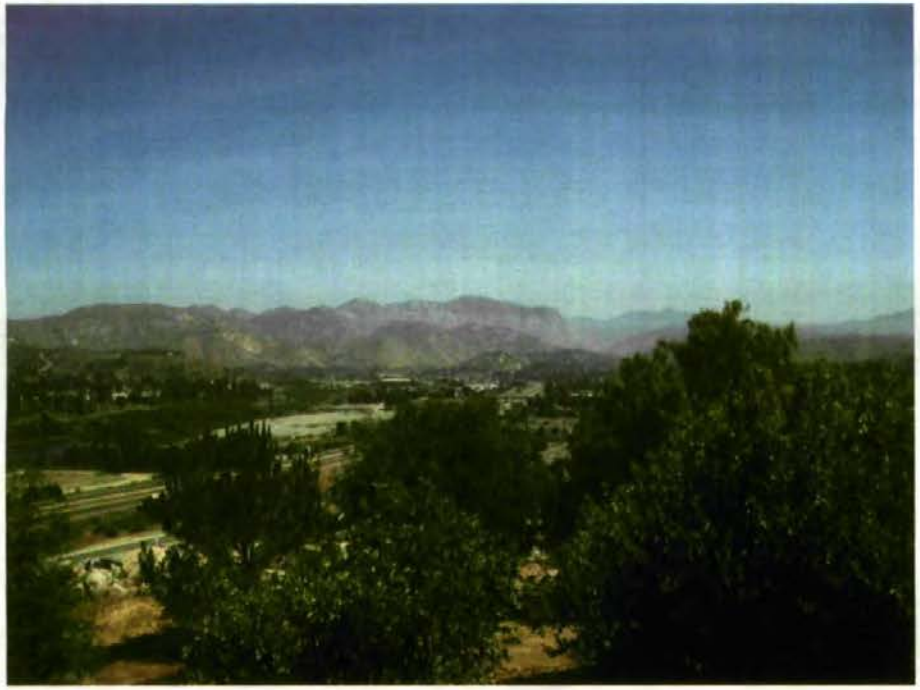
Representative photo point 4: Looking North



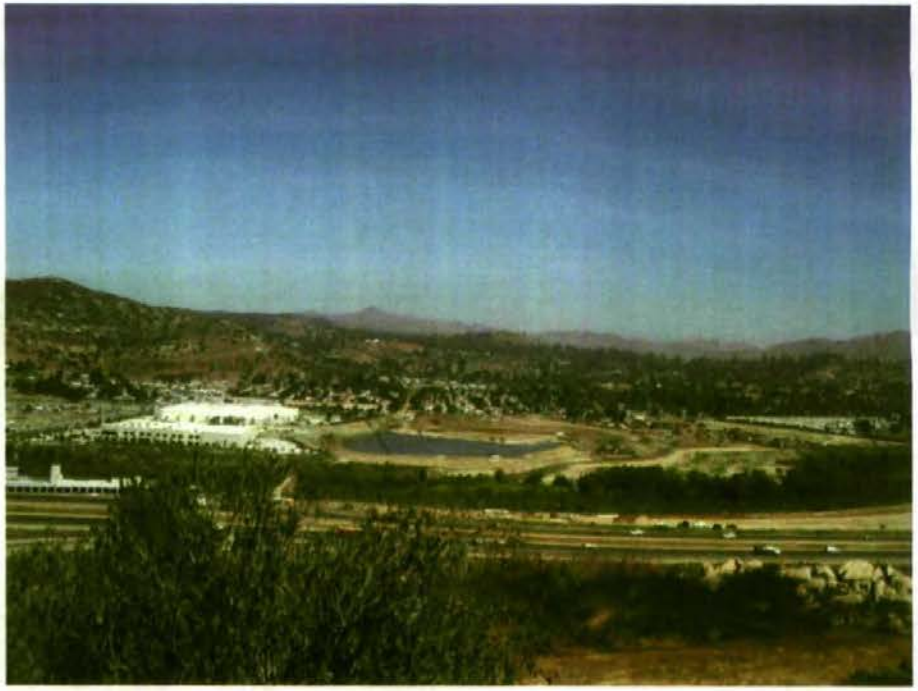
Representative photo point 4: Looking East

Volume 4A, Attachment 3. Pre- project photographs of the project site at representative points.

Representative photo point 5: Looking Northeast



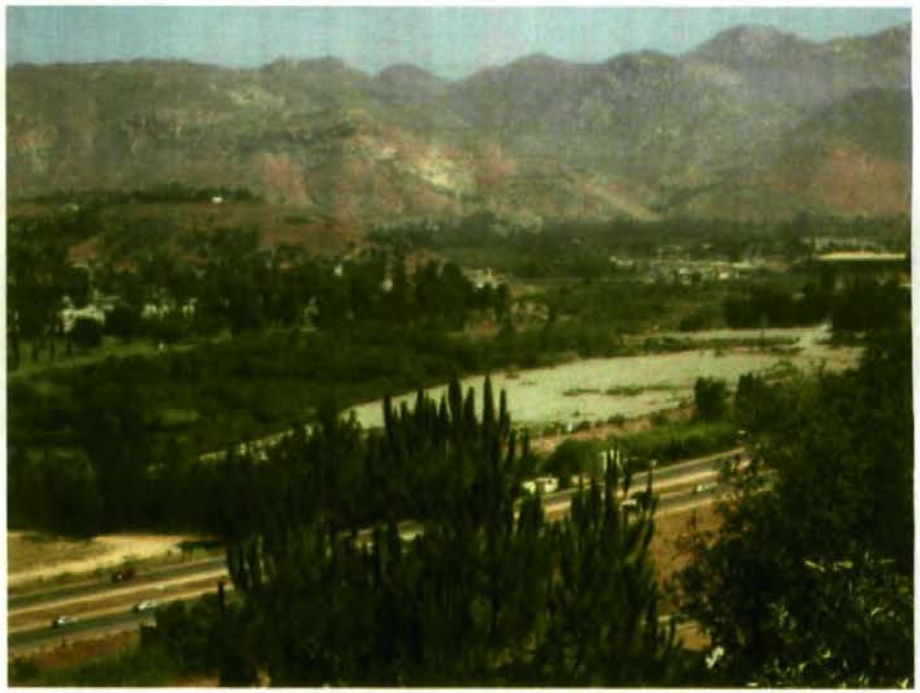
Representative photo point 5: Looking North



Volume 4A, Attachment 3. Pre- project photographs of the project site at representative points.

Representative photo point 5: Looking Northeast

Representative photo point 5: Looking Northeast



Volume 4A, Attachment 3. Pre- project photographs of the project site at representative points.

Representative photo point 6: Looking East

Volume 4A, Attachment 3. Pre- project photographs of the project site at representative points.

Representative photo point 7: Looking East

Representative photo point 7: Looking West

Volume 4A, Attachment 3. Pre- project photographs of the project site at representative points.

Representative photo point 7: Looking below fill

Representative photo point 8: Looking east

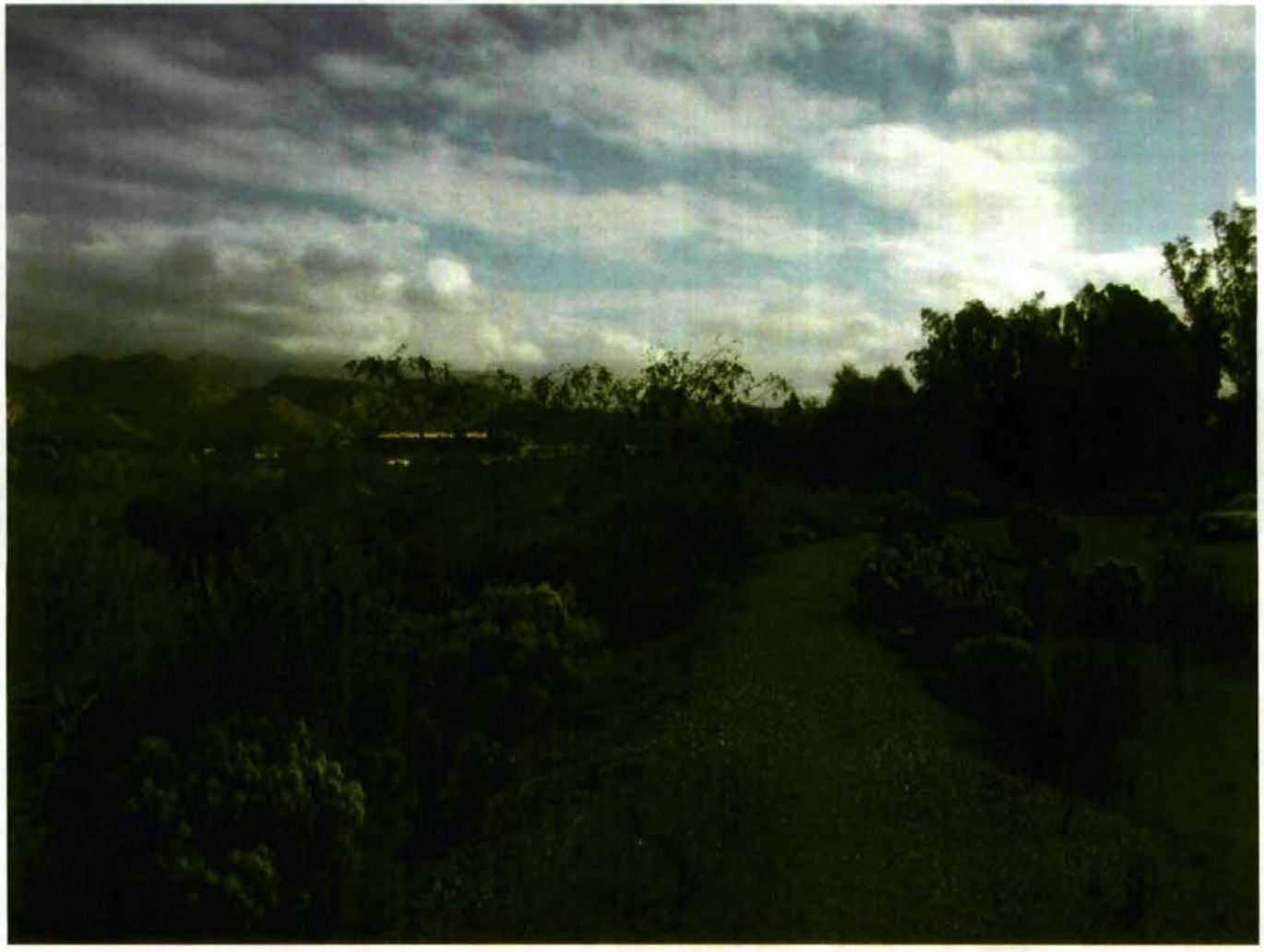
Volume 4A, Attachment 3. Pre- project photographs of the project site at representative points.

Representative photo point 8: Looking East and West

Representative photo point 8: Looking East and south

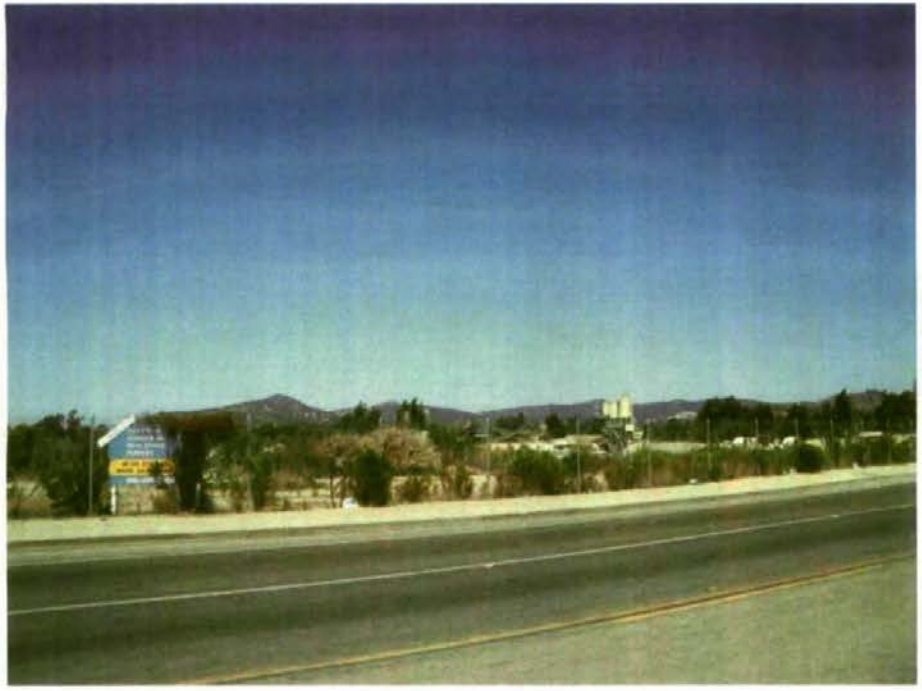
Volume 4A, Attachment 3. Pre- project photographs of the project site at representative points.

Representative photo point 9: Looking Northeast

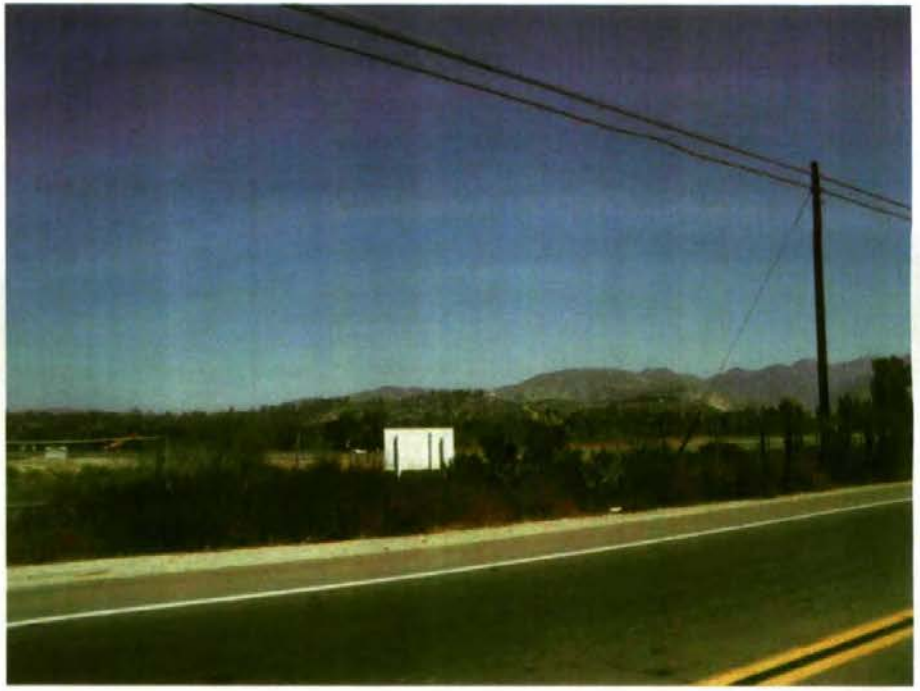


Volume 4A, Attachment 3. Pre- project photographs of the project site at representative points.

Representative photo point 10: Looking North



Representative photo point 10: Looking Northeast



Volume 4A, Attachment 3. Pre- project photographs of the project site at representative points.

Representative photo point 10: Looking West

Representative photo point 11: Looking Southeast

HUFFMAN & CARPENTER, INC.
Wetland Regulatory & Hydrologic Consultants
www.nvwetlands.com 775.828.1991
500 Damonte Ranch Pkwy · Suite 929 · Reno, NV 89521

N

0 200 400 600 800
Feet

Spring, 2002 Aerial Photo

San Diego River Park - Lakeside Conservancy

Flood, Habitat, Restoration, and Recharge Project

Volume 4A
Attachment 3 Appendix 1

Representative Points for Pre-project Photographs

I:\Projects\San Diego River Park\Mapping\Arcview\Map Docs\Volume4\vol4a\SDRP Vol4a Att3 App1 Representative Points for Pre-project Photographs.mxd - 4/5/2005 @ 1:08:40 PM

LJ 11/24/2004

ATTACHMENT 4
Right of Entry Agreement

RECORDING REQUESTED BY AND MAIL TO)
)
)
)
Gary L Pryor, Director)
Department of Planning and Land Use)
County of San Diego)
5201 Ruffin Road, Suite B)
San Diego, CA 92123-1666)
)
Attn. SMARA Enforcement)

AGREEMENT PERMITTING RIGHT OF ENTRY ON REAL PROPERTY

This agreement is made this __10th day of _April_, 2005, by Lakeside's River Park Conservancy hereinafter referred to as "Permittee and Owner," and the County of San Diego.

WHEREAS the following described real property know as the CalMat Property roughly located along the south side of San Diego River between Channel Road and Riverford Road and further described in Exhibit A is located within the County of San Diego and owned by the aforementioned owner(s).

WHEREAS, pursuant to Chapter 7 of Division 8 of Title 8 of the County of San Diego Regulatory Ordinance (Grading Ordinance), the permitee(s) have applied for and been granted and/or Reclamation Plan for a reclamation project.

WHEREAS, the County of San Diego, as a condition to granting said permit(s), requires that the permitee(s) grant to the County of San Diego, or any person authorized by the County of San Diego, a right to enter the property to inspect the permitted project or to correct any landscaping or irrigation system deficiencies, any unsafe condition, or breach of provisions of the Major Use Permit and/or Reclamation Plan.

NOW THEREFORE, in consideration of the granting of said permit and of the benefit conferred thereby on the subject property·

1. Owner(s) and permitee(s) hereby grant to the County of San Diego, or any person authorized by the County of San Diego, permission to enter the property at reasonable times for inspection or for the purpose of correcting any unsafe conditions resulting from the breach of any provisions of the Major use Permit, Reclamation Plan, said Ordinance, or other local ordinance or law to which said project and/or property is subject.

2. Owner(s) and permitee(s) acknowledge that any violation of this deed restriction will constitute a violation of said Ordinance, Major Use Permit and Reclamation Plan, and will subject any person violating the deed restriction to suit and said permit(s) to suspension and/or revocation.

3 IT IS FURTHER RECOGNIZED that this agreement and deed restriction is a covenant running with the land and shall bind owner(s), permitee(s) and all successors

and assigns of permittee(s). If all or any portion of the subject property should hereafter be conveyed, the conveyance shall contain the restriction created by this agreement.

C· See County of San Diego Signature Page R2 Page follows this Page

5201 Ru...
San Diego, CA 92...

By _____
COUNTY REPRESENTATIVE

STATE OF CALIFORNIA)
) SS.
COUNTY OF SAN DIEGO)

On this 12th day of April, in the year 2005, before me, the undersigned, a Notary Public in and for said State, personally appeared Deborah Jones, personally ~~known to me or~~ proved to me on the basis of satisfactory evidence to be the Executive Director (Business Card) (title) of the Department of Planning and Land Use and known to me to be the person who executed the within instrument on behalf of said Department of Planning and Land Use and acknowledged to me that such Department of Planning and Land Use executed the same.

WITNESS my hand and official seal.

Signature _____ Seal

S. DAUPHIN
Comm. # 1522334
NOTARY PUBLIC - CALIFORNIA
San Diego County
My Comm. Expires Oct. 28, 2008

Permitee and Owner
Lakeside's River Park Conservancy
11769 Waterhill Road
Lakeside CA 92040

By Deborah Jones, Executive Director 12 April '05
DEBORAH JONES, EXECUTIVE DIRECTOR

STATE OF CALIFORNIA)
) SS
COUNTY OF SAN DIEGO)

On April 12, 2005, before me, the undersigned, a Notary Public in and for said State, personally appeared Deborah Jones, personally ~~known to me or~~ proved to me on the basis of satisfactory evidence to be the person whose name is subscribed to the within instrument and acknowledged the executed the same

WITNESS my hand and official seal

Signature _____ Seal

S. DAUPHIN
Comm. # 1522334
NOTARY PUBLIC - CALIFORNIA
San Diego County
My Comm. Expires Oct. 28, 2008

County of San Diego

Department of Planning and Land Use
5201 Ruffin Road, Suite B
San Diego, CA 92123-1666
NAME AND TITLE OF COUNTY REPRESENTATIVE

By _____
COUNTY REPRESENTATIVE SIGNATURE

STATE OF CALIFORNIA)
) SS.
COUNTY OF SAN DIEGO)

On this _____ day of _____, in the year 20_____, before me, the undersigned, a Notary Public in and for said State, personally appeared _____, personally known to me or proved to me on the basis of satisfactory evidence to be the _____(title) of the Department of Planning and Land Use and known to me to be the person who executed the within instrument on behalf of said Department of Planning and Land Use and acknowledged to me that such Department of Planning and Land Use executed the same.

WITNESS my hand and official seal.

Signature _____ Seal

EXHIBIT 'A'

The 80 Acres, the 20 Acres and the Miscellaneous Land, as those terms are determined in the Agreement and are described in Parts 1, 2, and 3 of this Exhibit A and together comprise the Property upon which the Scope of Work will be performed under the Agreement.

Part 1. The 80 Acres

The following parcels as described by their assessor's parcel numbers, are currently owned by the Lakeside Conservancy. These parcels form the major portion of the Property.

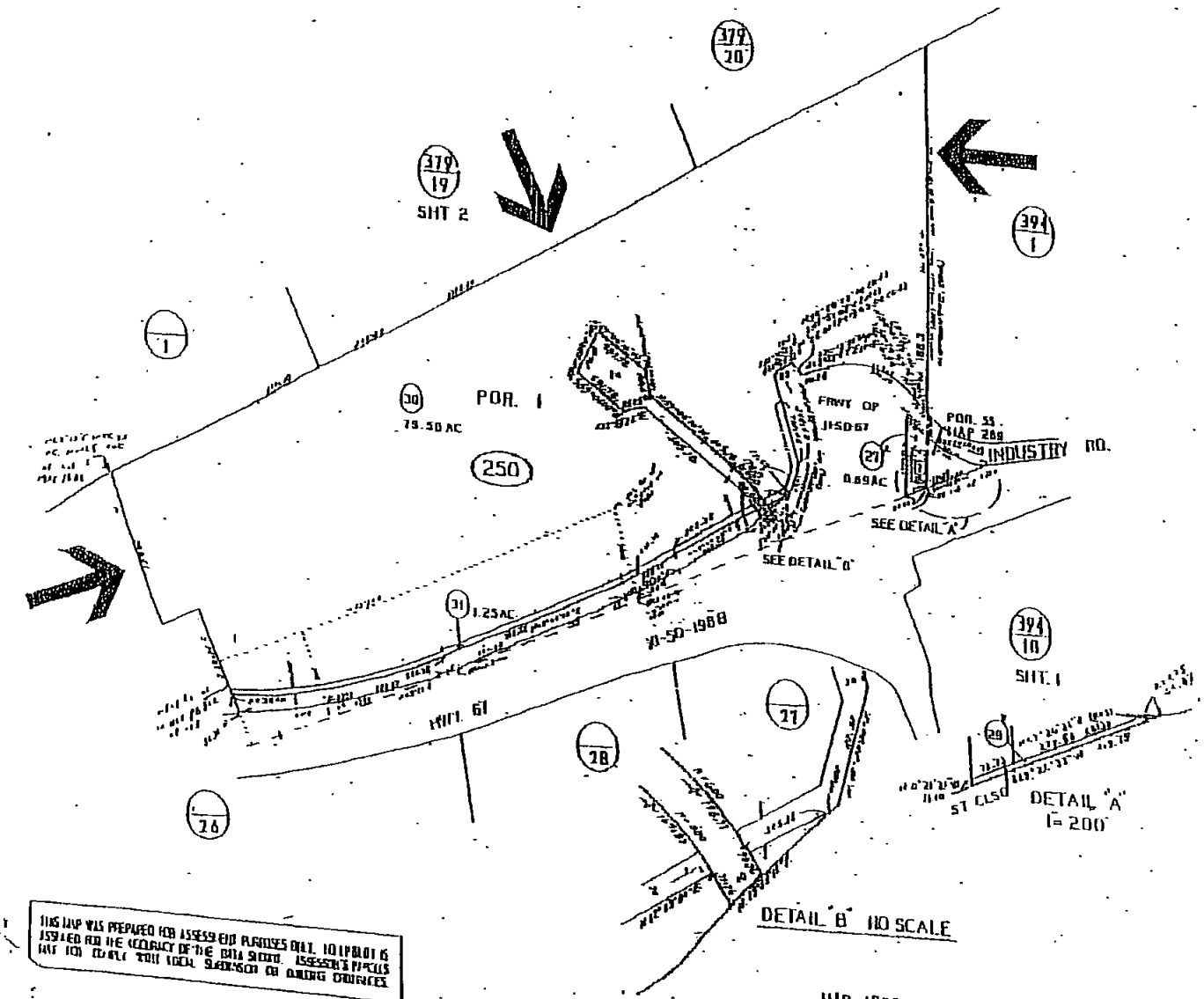
The 80 Acres		
Assessors Parcel Number	**Acreage**	**Map No.**
382-011-10	.66	1
382-250-30	79.56	2

Maps 1 and 2 are attached as a part of this Part 1 of Exhibit A. The legal description is attached.

The legal description of the 80 Acres is contained in Parcels, 1, 2, 3, 92-0460-A, 92-0460-B, 92-0460-C and 4 of "The 80 Acres Legal Description" attached to this Part 1 of Exhibit A.

"This plat is for your aid in locating your land with reference to streets and other parcels. While this plat is believed to be correct, the Company assumes no liability for any loss occuring by reason of reliance thereon."

02/26/2003 11:41 AM 1 o
O10102 adhoc - SDA 382-25
382-25
1"=100'
1"=LOS COCHES CREEK F.C.C.



CHANGES				
BLK	OLD	NEW	YR	CUT
Pt 1	44	33	93	4331
250	1 1/2	28	78	1454
	Pt 44	29	87	2070
	28	29	97	5965
	28	30/31	11	1261

THIS MAP WAS PREPARED FOR ASSESSMENT PURPOSES ONLY. NO LIABILITY IS ASSUMED FOR THE ACCURACY OF THE DATA SHOWN. ASSESSOR'S PARCELS MAY NOT COMPLY WITH LOCAL SUBDIVISION OR ZONING ORDINANCES

MAP 1683 - RIVERVIEW FARMS
MAP 289 - EL CAJON VALLEY CO'S LANDS
ROS 11381

The 80 Acres
Exhibit A
Part 1
Map 1
APN 382-250-30

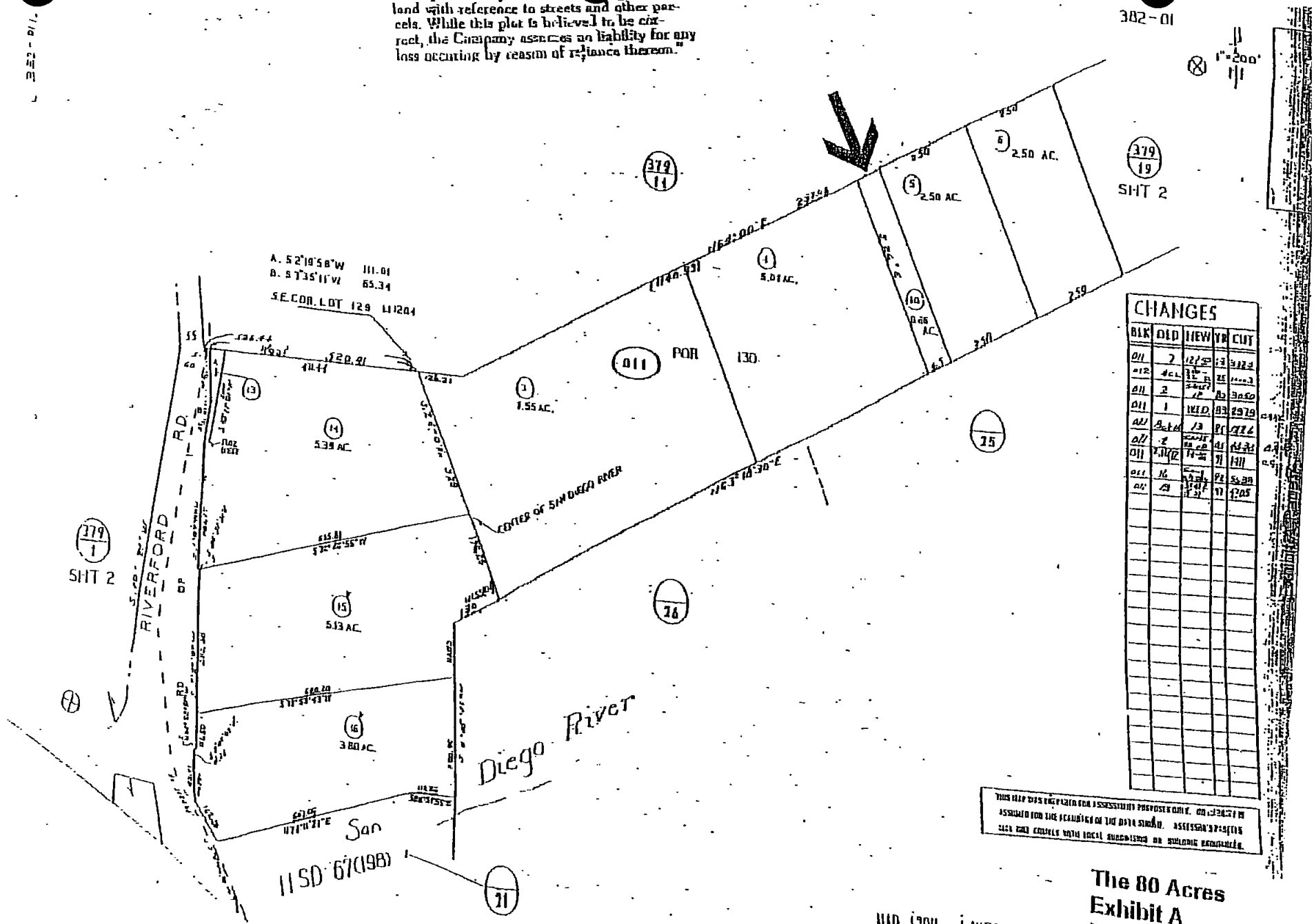
EXHIBIT "A" Attached to and made a part of Agreement 460003315

Ref No: SAP Agreement 460003315

"This plat is for your aid in locating your land with reference to streets and other parcels. While this plat is believed to be correct, the Company assumes no liability for any loss occurring by reason of reliance thereon."

382-01

1"=200'


379/11
379/19
SHT 2
379/1
SHT 2
011
POR 130
1
1.55 AC.
4
5.01 AC.
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6
2.50 AC.
10
0.66 AC.
13
14
5.39 AC.
15
5.13 AC.
16
3.80 AC.
25
26
31
A. S 2°19'58"W 111.01
B. S 7°35'11"W 65.34
S.E. COR. LOT 129 LI1204
N64°00'E 1148.93
237.44
250.91
410.44
N64°00'E 259
350
RIVERFORD RD.
CENTER OF SAN DIEGO RIVER
N 63°30'E
San Diego River
IISD 67(198)
CHANGES
BLK OLD NEW YR CHT
011 2 1 83 2979
011 1 DELD 83 2979
011 2 1 91 1311
011 2.10(2) 91 1311
011 1 91 1311
011 1 91 1311
011 1

THE 80 ACRES
LEGAL DESCRIPTION

Order No. 33010102

PARCEL 1:

ALL THAT PORTION OF LOT 1 OF RIVERVIEW FARMS IN THE COUNTY OF SAN DIEGO, STATE OF CALIFORNIA, ACCORDING TO MAP THEREOF NO. 1683, FILED IN THE OFFICE OF THE COUNTY RECORDER OF SAN DIEGO COUNTY, FEBRUARY 25, 1916, DESCRIBED AS FOLLOWS:

BEGINNING AT A POINT ON THE NORTHERLY LINE OF SAID LOT 1, DISTANT THEREON NORTH 63°13'00" EAST 1027.75 FEET FROM THE NORTHWESTERLY CORNER THEREOF; THENCE NORTH 63°13'00" EAST ALONG SAID NORTHERLY LINE 3744.70 FEET, MORE OR LESS, TO THE MOST NORTHERLY CORNER OF SAID LOT 1; THENCE SOUTH ALONG THE EAST LINE OF SAID LOT 1, A DISTANCE OF 1234.62 FEET, MORE OR LESS, TO AN ANGLE POINT IN THE BOUNDARY OF LAND AS DESCRIBED IN DEED TO THE STATE OF CALIFORNIA, RECORDED JANUARY 27, 1965 AS INSTRUMENT NO. 15041; THENCE ALONG SAID BOUNDARY NORTH 50°24'55" WEST 116.54 FEET; WESTERLY ALONG A CURVE CONCAVE TO THE SOUTH HAVING A RADIUS OF 342.00 FEET THROUGH AN ANGLE OF 59°39'08" A DISTANCE OF 356.07 FEET; TANGENT SOUTH 69°55'57" WEST 111.14 FEET; NORTH 46°52'07" 63.08 FEET; SOUTH 61°06'33" WEST 80.00 FEET; SOUTH 20°24'16" EAST, 318.49 FEET; SOUTH 18°33'50" WEST 87.32 FEET; SOUTH 49°53'12" WEST 249.08 FEET; SOUTH 62°29'02" WEST 302.98 FEET; SOUTH 65°32'25" WEST 193.15 FEET TO THE EASTERLY LINE OF THAT PARCEL OF LAND CONVEYED TO THE RIVERVIEW MUTUAL WATER DISTRICT BY DEED FILED IN THE OFFICE OF THE COUNTY RECORDER OF SAN DIEGO COUNTY ON JANUARY 13, 1960 AS DOCUMENT NO. 7745 OF OFFICIAL RECORDS; THENCE ALONG SAID LINE NORTH 20°23'29" WEST 267.68 FEET TO THE NORTHEASTERLY CORNER THEREOF; THENCE SOUTHWESTERLY ALONG THE NORTHERLY LINE OF SAID LAND TO THE SOUTHWESTERLY CORNER OF LAND DESCRIBED IN DEED TO PARAMOUNT ROCK COMPANY, RECORDED JANUARY 8, 1960 AS DOCUMENT NO. 4498 OF OFFICIAL RECORDS OF SAID COUNTY; THENCE NORTHWEST ALONG THE SOUTHWESTERLY LINE OF SAID LAND TO THE NORTHWESTERLY CORNER THEREOF ALSO BEING A POINT MIDWAY BETWEEN THE NORTHERLY LINE OF THAT CERTAIN TRACT OF LAND CONVEYED TO G. W. CONRAD BY DEED DATED JANUARY 26, 1922, RECORDED FEBRUARY 27, 1922 IN BOOK 877, PAGE 348 OF DEEDS, AND THAT CERTAIN TRACT OF LAND CONVEYED TO SADIE STOCK BY DEED DATED MARCH 6, 1924, RECORDED MARCH 22, 1924 IN BOOK 992, PAGE 242 OF DEEDS; THENCE FOLLOWING AN IMAGINARY LINE SOUTHWESTERLY MIDWAY BETWEEN AND PARALLEL WITH THE SOUTHWESTERLY PROLONGATION OF THE NORTHERLY BOUNDARY OF SAID CONRAD LAND AND TO THE SOUTHERLY BOUNDARY LINE OF SAID STOCK LAND, SAID LINE BEING ALSO THE SOUTHEASTERLY BOUNDARY OF THE STRIP OF LAND CONVEYED TO SOUTHWEST UNION SECURITIES CORPORATION BY DEED DATED APRIL 10, 1930, RECORDED JUNE 10, 1930 IN BOOK 1770, PAGE 446 OF DEEDS, TO THE SOUTHEASTERLY PROLONGATION OF THE SOUTHWESTERLY LINE OF SAID STOCK LAND; THENCE NORTHWESTERLY ALONG SAID PROLONGATION AND ALONG SAID SOUTHWESTERLY LINE TO THE POINT OF BEGINNING.

PARCEL 2:

THAT PORTION OF LOT 1 OF RIVERVIEW FARMS IN THE COUNTY OF SAN DIEGO, STATE OF CALIFORNIA, ACCORDING TO MAP THEREOF NO. 1683, FILED IN THE OFFICE OF THE COUNTY RECORDER OF SAID COUNTY, DESCRIBED AS FOLLOWS:

BEGINNING AT THE SOUTHEASTERLY CORNER OF SAID LOT, BEING ALSO A POINT ON THE NORTHERLY RIGHT OF WAY LINE OF THE SAN DIEGO SOUTHEASTERN RAILROAD - NOW THE SAN DIEGO AND ARIZONA RAILROAD COMPANY -; THENCE ALONG SAID NORTHERLY RIGHT OF WAY LINE SOUTH 69°26'31" WEST 1266.63 FEET; THENCE AT RIGHT ANGLES NORTH 20°33'29" WEST 300.00 FEET TO THE TRUE POINT OF BEGINNING; THENCE SOUTH 69°26'31" WEST PARALLEL WITH SAID NORTHERLY RIGHT OF WAY LINE 1729.39 FEET, MORE OR LESS, TO THE SOUTHWESTERLY LINE OF THE LAND CONVEYED TO THE RIVERVIEW FARMS MUTUAL WATER COMPANY BY DEED FILED JUNE 14, 1935 IN THE OFFICE OF THE RECORDER OF SAID COUNTY IN BOOK 415, PAGE 11 OF OFFICIAL RECORDS; THENCE SOUTH 24°04'29" EAST ALONG THE

THE 80 ACRES LEGAL DESCRIPTION

(APN: 394-011-35)

LOT 59 OF THE EL CAJON VALLEY COMPANY'S LANDS IN THE COUNTY OF SAN DIEGO, STATE OF CALIFORNIA, ACCORDING TO MAP THEREOF NO. 289, FILED IN THE OFFICE OF COUNTY RECORDER OF SAN DIEGO COUNTY, DECEMBER 30, 1886.

EXCEPTING THEREFROM THOSE PORTIONS THEREOF CONVEYED IN THE GRANT DEED TO THE COUNTY OF SAN DIEGO RECORDED DECEMBER 10, 1997 AS FILE NO. 1997-0624452 OF OFFICIAL RECORDS, AS FOLLOWS:

PARCEL NO. 92-0460-A

THAT PORTION OF LOT 59 OF EL CAJON VALLEY COMPANY'S LAND, IN THE COUNTY OF SAN DIEGO, STATE OF CALIFORNIA, ACCORDING TO MAP THEREOF NO. 289 FILED IN THE OFFICE OF THE COUNTY RECORDER OF SAID COUNTY, INCLUDED IN THAT LAND DESCRIBED IN DEED TO SAN DIEGO CONSOLIDATED CO., A CALIFORNIA CORPORATION RECORDED FEBRUARY 10, 1969 AS FILE NO. 23734 IN SAID COUNTY RECORDER'S OFFICE, LYING WITHIN A STRIP OF LAND 92.00 FEET IN WIDTH, 46.00 FEET ON EACH SIDE OF THE FOLLOWING DESCRIBED LINE:

COMMENCING AT THE INTERSECTION OF THE CENTERLINE OF CHANNEL ROAD (PREVIOUSLY KNOWN AS BENEDICT AVENUE) WITH THE CENTERLINE OF MAPLEVIEW STREET (PREVIOUSLY KNOWN AS MAPLE STREET) ACCORDING TO ROAD SURVEY MAP NO. 852 (RS 852) A PLAT OF WHICH IS ON FILE IN THE OFFICE OF THE COUNTY ENGINEER OF SAID COUNTY; THENCE ALONG SAID CENTERLINE OF CHANNEL ROAD, NORTH 08°34'59" WEST (NORTH 08°57'30" WEST PER RS 852), 81.02 FEET TO A POINT HEREINAFTER REFERRED TO AS "POINT A" AND THE TRUE POINT OF BEGINNING; THENCE CONTINUING, NORTH 08°34'59" WEST, 436.14 FEET TO THE BEGINNING OF A TANGENT 850.00 FOOT RADIUS CURVE CONCAVE SOUTHWESTERLY; THENCE LEAVING SAID CENTERLINE OF CHANNEL ROAD, NORTHWESTERLY ALONG THE ARC OF SAID CURVE THROUGH A CENTRAL ANGLE OF 13°53'37" A DISTANCE OF 206.12 FEET TO A POINT HEREINAFTER REFERRED TO AS "POINT B"; THENCE CONTINUING ALONG SAID CURVE THROUGH A CENTRAL ANGLE OF 04°32'15", A DISTANCE OF 67.32 FEET; THENCE TANGENT TO SAID CURVE NORTH 27°00'52" WEST, 466.81 FEET TO THE BEGINNING OF A TANGENT 850.00 FOOT RADIUS CURVE CONCAVE SOUTHWESTERLY; THENCE NORTHWESTERLY ALONG THE ARC OF SAID CURVE THROUGH A CENTRAL ANGLE OF 55°06'48" A DISTANCE OF 817.62 FEET TO A POINT OF TANGENCY WITH A LINE THAT IS PARALLEL WITH AND 5.00 FEET NORTHERLY OF THE CENTERLINE OF ROAD SURVEY (RS) 287A, A PLAT OF WHICH IS ON FILE IN SAID COUNTY ENGINEER'S OFFICE, SAID POINT ALSO BEING THE POINT OF TERMINUS.

TOGETHER WITH THAT PORTION OF SAID LOT 59 LYING EASTERLY OF THE FOLLOWING DESCRIBED LINE:

PARCEL NO. 92-0460-A

COMMENCING AT "POINT A" AS DESCRIBED ABOVE; THENCE SOUTH 81°25'01" WEST, 46.00 FEET TO THE WESTERLY SIDELINE OF SAID 92.00 FOOT WIDE STRIP AND THE TRUE POINT OF BEGINNING; THENCE SOUTH 10°38'23" EAST, 111.04 FEET TO A POINT IN THE SOUTHERLY BOUNDARY OF SAID LOT 59, BEING ALSO A POINT IN A LINE THAT IS PARALLEL WITH AND 42.00 FEET WESTERLY OF THE CENTERLINE OF SAID CHANNEL ROAD AND THE POINT OF TERMINUS.

PARCEL NO. 92-0460-B

TOGETHER WITH THAT PORTION OF LOT 59 OF EL CAJON VALLEY COMPANY'S LAND, IN THE

COUNTY OF SAN DIEGO, STATE OF CALIFORNIA, ACCORDING TO MAP THEREOF NO. 289 FILED IN THE OFFICE OF THE COUNTY RECORDER OF SAID COUNTY, INCLUDED IN THAT LAND DESCRIBED IN DEED TO SAN DIEGO CONSOLIDATED CO., A CALIFORNIA CORPORATION RECORDED FEBRUARY 10, 1969 AS DOCUMENT NO. 23734 IN SAID COUNTY RECORDER'S OFFICE (SDCC'S LAND), LYING WITHIN A STRIP OF LAND 5.00 FEET IN WIDTH, THE EASTERLY SIDELINE OF SAID STRIP BEING DESCRIBED AS FOLLOWS:

COMMENCING AT SAID "POINT A" AS DESCRIBED IN PARCEL NO. 92-0460-A ABOVE; THENCE SOUTH 81°25'01" WEST, 46.00 FEET TO THE WESTERLY BOUNDARY OF SAID PARCEL NO. 92-0460-A; THENCE ALONG SAID WESTERLY BOUNDARY SOUTH 10°38'23" EAST, 111.04 FEET TO THE SOUTHERLY BOUNDARY OF SAID LOT 59 BEING ALSO THE MOST SOUTHWESTERLY CORNER OF SAID PARCEL NO. 92-0460-A AND THE TRUE POINT OF BEGINNING; THENCE RETRACING NORTH 10°38'23" WEST, 111.04 FEET; THENCE CONTINUING ALONG SAID WESTERLY BOUNDARY OF PARCEL NO. 92-0460-A, NORTH 08°34'59" WEST, 436.14 FEET TO THE POINT OF TERMINUS.

THE WESTERLY SIDELINE OF SAID STRIP OF LAND SHALL BE LENGTHENED AND/OR SHORTENED SO AS TO TERMINATE IN THE NORTH ON A LINE THAT BEARS SOUTH 81°25'01" WEST THROUGH THE POINT OF TERMINUS AND IN THE SOUTH ON THE SOUTHERLY BOUNDARY OF SAID LOT 59.

TOGETHER WITH THAT PORTION OF LOT 59 OF EL CAJON VALLEY COMPANY'S LAND, LYING WESTERLY OF PARCEL NO. 92-0460-A DESCRIBED ABOVE AND LYING EASTERLY OF THE FOLLOWING DESCRIBED LINE:

COMMENCING AT POINT "B" AS DESCRIBED IN PARCEL NO. 92-0460-A ABOVE; THENCE SOUTH 67°31'24" WEST, 46.00 FEET TO THE WESTERLY SIDELINE OF SAID PARCEL NO. 92-0460-A AND THE TRUE POINT OF BEGINNING; THENCE IN A STRAIGHT LINE NORTH 30°50'23" WEST TO THE NORTHERLY BOUNDARY OF SAID SDCC'S AND THE POINT OF TERMINUS.

PARCEL NO. 92-0460-C

ALSO TOGETHER WITH THAT PORTION OF LOT 59 OF EL CAJON VALLEY COMPANY'S LAND, IN THE COUNTY OF SAN DIEGO, STATE OF CALIFORNIA, ACCORDING TO MAP THEREOF NO. 289 FILED IN THE OFFICE OF THE COUNTY RECORDER OF SAID COUNTY, INCLUDED IN THAT LAND DESCRIBED IN DEED TO SAN DIEGO CONSOLIDATED CO., A CALIFORNIA CORPORATION RECORDED FEBRUARY 10, 1969 AS DOCUMENT NO. 23734 IN SAID COUNTY RECORDER'S OFFICE, DESCRIBED AS FOLLOWS:

COMMENCING AT THE INTERSECTION OF THE CENTERLINE OF CHANNEL ROAD (PREVIOUSLY KNOWN AS BENEDICT AVENUE) WITH THE CENTERLINE OF MAPLEVIEW STREET (PREVIOUSLY KNOWN AS MAPLE STREET) ACCORDING TO ROAD SURVEY MAP NO. 852 (RS 852) A PLAT OF WHICH IS ON FILE IN THE OFFICE OF THE COUNTY ENGINEER OF SAID COUNTY; THENCE ALONG SAID CENTERLINE OF CHANNEL ROAD, NORTH 08°34'59 WEST (NORTH 08°57'30" WEST PER RS 852) 81.02 FEET; THENCE LEAVING SAID CENTERLINE OF CHANNEL ROAD SOUTH 81°25'01" WEST 46.00 FEET; THENCE SOUTH 10°38'23" EAST, 111.04 FEET TO THE SOUTHERLY BOUNDARY OF SAID LOT 59 AND THE TRUE POINT OF BEGINNING; THENCE ALONG SAID BOUNDARY SOUTH 81°26'50" WEST; 85.99 FEET; THENCE LEAVING SAID BOUNDARY NORTH 08°34'59" WEST, 47.05 FEET; THENCE NORTH 81°26'50" EAST, 84.30 FEET; THENCE SOUTH 10°38'23" EAST, 47.03 FEET TO THE TRUE POINT OF BEGINNING.

Part 2, The 20 Acres

The 20 Acres		
Assessors Parcel Number	**Acreage**	**Map No.**
384-011-35	20.06	3

Map 3 is attached such as part of this Part 2 of Exhibit "A." The legal description is contained in Parcel 92-0460, 92-0460-A, 920460-B 92-0460-C of the "The 20 Acre Legal Description attached to Part 2 of Exhibit "A".

These parcels are described in the attached maps and the metes and bounds description.

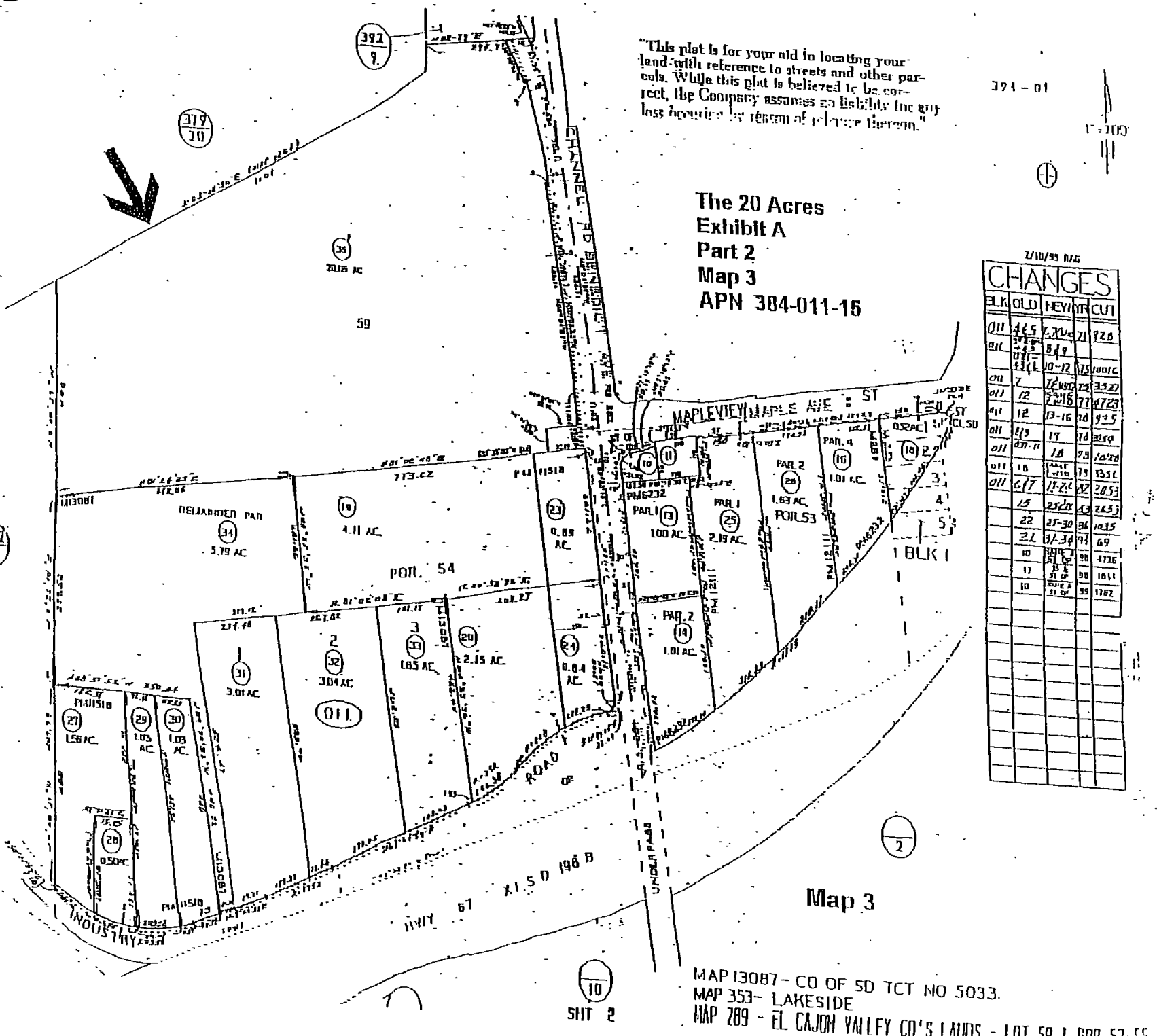


Exhibit A Page 8

Contract No. 4600033415

Ref No: SAP Agreement No. 4600033415 - Volume 2

03/26/2003 11:42 AM

Contract No. 46000033 15

THE 20 ACRE

LEGAL DESCRIPTION

SOUTHERLY BOUNDARY OF SAID LOT 59 AND THE TRUE POINT OF BEGINNING; THENCE ALONG SAID BOUNDARY SOUTH 81°26'50" WEST, 85.99 FEET; THENCE LEAVING SAID BOUNDARY NORTH 08°34'59" WEST, 47.05 FEET; THENCE NORTH 81°26'50" EAST, 84.30 FEET; THENCE SOUTH 10°38'23" EAST, 47.03 FEET TO THE TRUE POINT OF BEGINNING.

PARCEL 4:

ALL OF THAT PORTION OF LOT 130 OF LAKESIDE FARMS, IN THE COUNTY OF SAN DIEGO, STATE OF CALIFORNIA, ACCORDING TO MAP THEREOF NO. 1204, FILED IN THE OFFICE OF THE COUNTY RECORDER OF SAID COUNTY, SEPTEMBER 1, 1909, DESCRIBED AS FOLLOWS:

BEGINNING AT THE SOUTHEAST CORNER OF LOT 124 OF SAID LAKESIDE FARMS; THENCE SOUTH 26° EAST TO A POINT IN THE SOUTHEASTERLY LINE OF SAID LOT 130; THENCE NORTH 63°18'30" EAST ALONG SAID SOUTHEASTERLY LINE, 65 FEET MORE OR LESS, TO THE SOUTHWESTERLY CORNER OF A PARCEL OF LAND CONVEYED TO GEORGE GERBER IN A DEED RECORDED AUGUST 6, 1914 AS DOCUMENT NO. 17886, BOOK 662, PAGE 61 OF DEEDS; THENCE NORTHERLY ALONG THE WESTERLY LINE OF SAID GERBER LAND TO THE SOUTHWESTERLY CORNER OF LOT 123 OF SAID LAKESIDE FARMS; THENCE SOUTHWESTERLY IN A STRAIGHT LINE TO THE POINT OF BEGINNING.

THE 20 ACRE
LEGAL DESCRIPTION

FEET TO THE WESTERLY SIDELINE OF SAID 92.00 FOOT WIDE STRIP AND THE TRUE POINT OF BEGINNING; THENCE SOUTH 10°38'23" EAST, 111.04 FEET TO A POINT IN THE SOUTHERLY BOUNDARY OF SAID LOT 59, BEING ALSO A POINT IN A LINE THAT IS PARALLEL WITH AND 42.00 FEET WESTERLY OF THE CENTERLINE OF SAID CHANNEL ROAD AND THE POINT OF TERMINUS.

PARCEL NO. 92-0460-B

TOGETHER WITH THAT PORTION OF LOT 59 OF EL CAJON VALLEY COMPANY'S LAND, IN THE COUNTY OF SAN DIEGO, STATE OF CALIFORNIA, ACCORDING TO MAP THEREOF NO. 289 FILED IN THE OFFICE OF THE COUNTY RECORDER OF SAID COUNTY, INCLUDED IN THAT LAND DESCRIBED IN DEED TO SAN DIEGO CONSOLIDATED CO., A CALIFORNIA CORPORATION RECORDED FEBRUARY 10, 1969 AS DOCUMENT NO. 23734 IN SAID COUNTY RECORDER'S OFFICE (SDCC'S LAND), LYING WITHIN A STRIP OF LAND 5.00 FEET IN WIDTH, THE EASTERLY SIDELINE OF SAID STRIP BEING DESCRIBED AS FOLLOWS:

COMMENCING AT SAID "POINT A" AS DESCRIBED IN PARCEL NO. 92-0460-A ABOVE; THENCE SOUTH 81°25'01" WEST, 46.00 FEET TO THE WESTERLY BOUNDARY OF SAID PARCEL NO. 92-0460-A; THENCE ALONG SAID WESTERLY BOUNDARY SOUTH 10°38'23" EAST, 111.04 FEET TO THE SOUTHERLY BOUNDARY OF SAID LOT 59 BEING ALSO THE MOST SOUTHWESTERLY CORNER OF SAID PARCEL NO. 92-0460-A AND THE TRUE POINT OF BEGINNING; THENCE RETRACING NORTH 10°38'23" WEST, 111.04 FEET; THENCE CONTINUING ALONG SAID WESTERLY BOUNDARY OF PARCEL NO. 92-0460-A, NORTH 08°34'59" WEST, 436.14 FEET TO THE POINT OF TERMINUS.

THE WESTERLY SIDELINE OF SAID STRIP OF LAND SHALL BE LENGTHENED AND/OR SHORTENED SO AS TO TERMINATE IN THE NORTH ON A LINE THAT BEARS SOUTH 81°25'01" WEST THROUGH THE POINT OF TERMINUS AND IN THE SOUTH ON THE SOUTHERLY BOUNDARY OF SAID LOT 59.

TOGETHER WITH THAT PORTION OF LOT 59 OF EL CAJON VALLEY COMPANY'S LAND, LYING WESTERLY OF PARCEL NO. 92-0460-A DESCRIBED ABOVE AND LYING EASTERLY OF THE FOLLOWING DESCRIBED LINE:

COMMENCING AT POINT "B" AS DESCRIBED IN PARCEL NO. 92-0460-A ABOVE; THENCE SOUTH 67°31'24" WEST, 46.00 FEET TO THE WESTERLY SIDELINE OF SAID PARCEL NO. 92-0460-A AND THE TRUE POINT OF BEGINNING; THENCE IN A STRAIGHT LINE NORTH 30°50'23" WEST TO THE NORTHERLY BOUNDARY OF SAID SDCC'S AND THE POINT OF TERMINUS.

PARCEL NO. 92-0460-C

ALSO TOGETHER WITE THAT PORTION OF LOT 59 OF EL CAJON VALLEY COMPANY'S LAND, IN THE COUNTY OF SAN DIEGO, STATE OF CALIFORNIA, ACCORDING TO MAP THEREOF NO. 289 FILED IN THE OFFICE OF THE COUNTY RECORDER OF SAID COUNTY, INCLUDED IN THAT LAND DESCRIBED IN DEED TO SAN DIEGO CONSOLIDATED CO., A CALIFORNIA CORPORATION RECORDED FEBRUARY 10, 1969 AS DOCUMENT NO. 23734 IN SAID COUNTY RECORDER'S OFFICE, DESCRIBED AS FOLLOWS:

COMMENCING AT THE INTERSECTION OF THE CENTERLINE OF CHANNEL ROAD (PREVIOUSLY KNOWN AS BENEDICT AVENUE) WITH THE CENTERLINE OF MAPLEVIEW STREET (PREVIOUSLY KNOWN AS MAPLE STREET) ACCORDING TO ROAD SURVEY MAP NO. 852 (RS 852) A PLAT OF WHICH IS ON FILE IN THE OFFICE OF THE COUNTY ENGINEER OF SAID COUNTY; THENCE ALONG SAID CENTERLINE OF CHANNEL ROAD, NORTH 08°34'59 WEST (NORTH 08°57'30" WEST PER RS 852) 81.02 FEET; THENCE LEAVING SAID CENTERLINE OF CHANNEL ROAD SOUTH 81°25'01" WEST 46.00 FEET; THENCE SOUTH 10°38'23" EAST, 111.04 FEET TO THE

THE 20 ACRE LEGAL DESCRIPTION

SOUTHWESTERLY LINE OF SAID LAND 189.63 FEET TO A POINT IN THE NORTHERLY LINE OF THE LAND DESCRIBED IN DEED TO THE STATE OF CALIFORNIA, RECORDED MARCH 9, 1965 AS DOCUMENT NO. 41286 OF OFFICIAL RECORDS; SAID POINT BEING ALSO A POINT IN THE ARC OF A 389.00 FOOT RADIUS CURVE CONCAVE NORTHERLY, A RADIAL LINE OF SAID CURVE BEARS SOUTH 07°27'55" EAST TO SAID POINT; THENCE ALONG SAID NORTHERLY LINE EASTERLY ALONG SAID CURVE 888.87 FEET; THENCE NORTH 68°00'16" EAST 796.92 FEET; THENCE NORTH 65°32'25" EAST 40.02 FEET TO A LINE WHICH BEARS SOUTH 20°33'29" EAST FROM THE TRUE POINT OF BEGINNING; THENCE NORTH 20°33'29" WEST 267.68 FEET TO THE TRUE POINT OF BEGINNING.

PARCEL 3:

LOT 59 OF THE EL CAJON VALLEY COMPANY'S LANDS IN THE COUNTY OF SAN DIEGO, STATE OF CALIFORNIA, ACCORDING TO MAP THEREOF NO. 289, FILED IN THE OFFICE OF COUNTY RECORDER OF SAN DIEGO COUNTY, DECEMBER 30, 1886.

EXCEPTING THEREFROM THOSE PORTIONS THEREOF CONVEYED IN THE GRANT DEED TO THE COUNTY OF SAN DIEGO RECORDED DECEMBER 10, 1997 AS FILE NO. 1997-0624452 OF OFFICIAL RECORDS, AS FOLLOWS:

PARCEL NO. 92-0460-A

THAT PORTION OF LOT 59 OF EL CAJON VALLEY COMPANY'S LAND, IN THE COUNTY OF SAN DIEGO, STATE OF CALIFORNIA, ACCORDING TO MAP THEREOF NO. 289 FILED IN THE OFFICE OF THE COUNTY RECORDER OF SAID COUNTY, INCLUDED IN THAT LAND DESCRIBED IN DEED TO SAN DIEGO CONSOLIDATED CO., A CALIFORNIA CORPORATION RECORDED FEBRUARY 10, 1969 AS FILE NO. 23734 IN SAID COUNTY RECORDER'S OFFICE, LYING WITHIN A STRIP OF LAND 92.00 FEET IN WIDTH, 46.00 FEET ON EACH SIDE OF THE FOLLOWING DESCRIBED LINE:

COMMENCING AT THE INTERSECTION OF THE CENTERLINE OF CHANNEL ROAD (PREVIOUSLY KNOWN AS BENEDICT AVENUE) WITH THE CENTERLINE OF MAPLEVIEW STREET (PREVIOUSLY KNOWN AS MAPLE STREET) ACCORDING TO ROAD SURVEY MAP NO. 852 (RS 852) A PLAT OF WHICH IS ON FILE IN THE OFFICE OF THE COUNTY ENGINEER OF SAID COUNTY; THENCE ALONG SAID CENTERLINE OF CHANNEL ROAD, NORTH 08°34'59" WEST (NORTH 08°57'30" WEST PER RS 852), 81.02 FEET TO A POINT HEREINAFTER REFERRED TO AS "POINT A" AND THE TRUE POINT OF BEGINNING; THENCE CONTINUING, NORTH 08°34'59" WEST, 436.14 FEET TO THE BEGINNING OF A TANGENT 850.00 FOOT RADIUS CURVE CONCAVE SOUTHWESTERLY; THENCE LEAVING SAID CENTERLINE OF CHANNEL ROAD, NORTHWESTERLY ALONG THE ARC OF SAID CURVE THROUGH A CENTRAL ANGLE OF 13°53'37" A DISTANCE OF 206.12 FEET TO A POINT HEREINAFTER REFERRED TO AS "POINT B"; THENCE CONTINUING ALONG SAID CURVE THROUGH A CENTRAL ANGLE OF 04°32'15", A DISTANCE OF 67.32 FEET; THENCE TANGENT TO SAID CURVE NORTH 27°00'52" WEST, 466.81 FEET TO THE BEGINNING OF A TANGENT 850.00 FOOT RADIUS CURVE CONCAVE SOUTHWESTERLY; THENCE NORTHWESTERLY ALONG THE ARC OF SAID CURVE THROUGH A CENTRAL ANGLE OF 55°06'48" A DISTANCE OF 817.62 FEET TO A POINT OF TANGENCY WITH A LINE THAT IS PARALLEL WITH AND 5.00 FEET NORTHERLY OF THE CENTERLINE OF ROAD SURVEY (RS) 287A, A PLAT OF WHICH IS ON FILE IN SAID COUNTY ENGINEER'S OFFICE, SAID POINT ALSO BEING THE POINT OF TERMINUS.

TOGETHER WITH THAT PORTION OF SAID LOT 59 LYING EASTERLY OF THE FOLLOWING DESCRIBED LINE:

PARCEL NO. 92-0460-A

COMMENCING AT "POINT A" AS DESCRIBED ABOVE; THENCE SOUTH 81°25'01" WEST, 46.00

Part 3. The Miscellaneous Property

Miscellaneous Property – Map 4

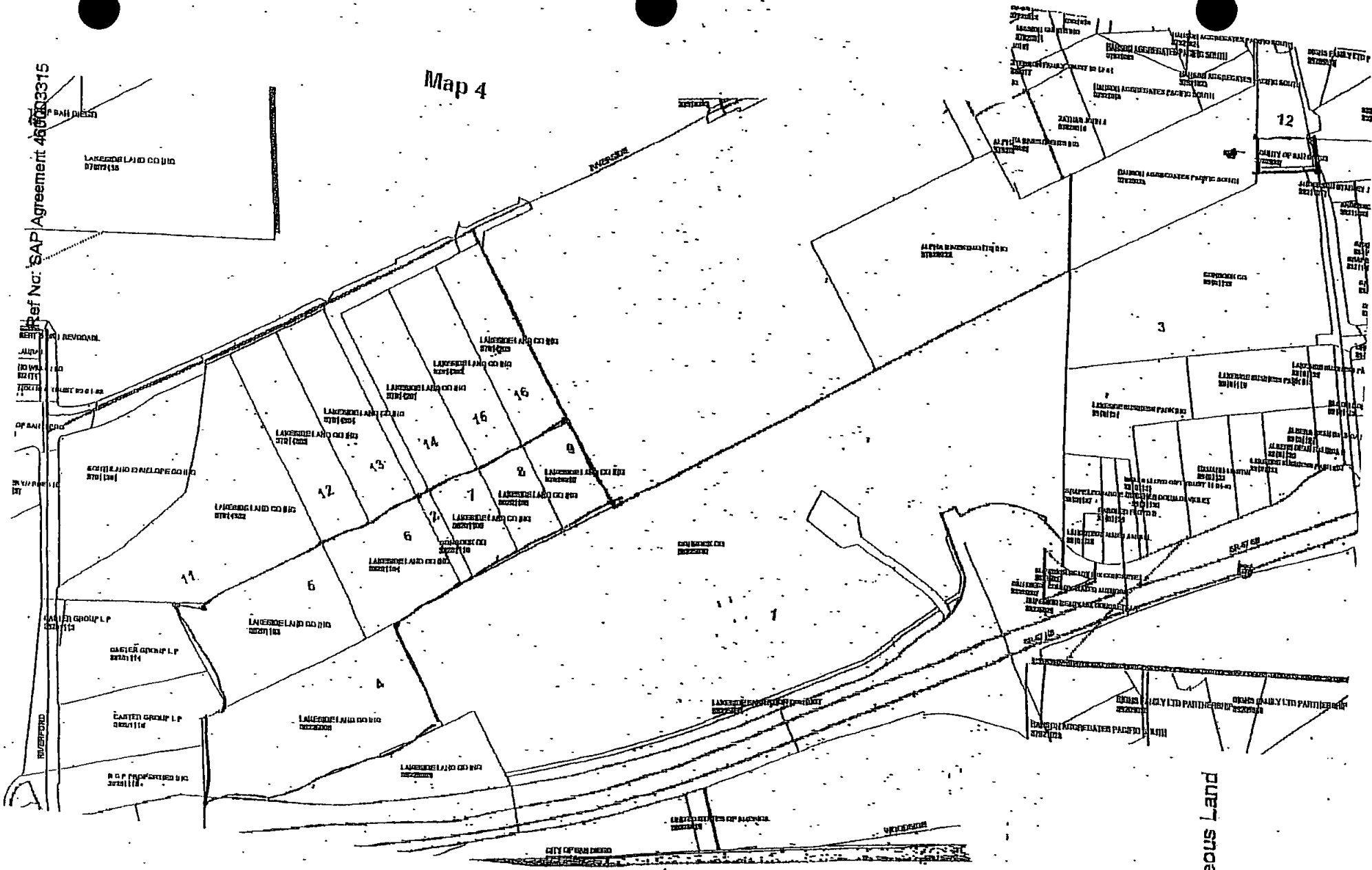
Ownership		
Assessors Parcel Number	**Acreage**	**Map No.**
382-260-08	11.88	4
382-011-03	7.55	5
382-011-04	5.07	6
382-011-05	2.5	7
382-011-06	2.5	8
379-192-15	2.5	9
392-090-07	.75+/-	10

Property, which may be considered as part of the planning process and which may or may not be purchased and included in the final design.

Please see the attached maps for a general description of land that might be included as "Miscellaneous Property."

Ref No: SAP Agreement 45000315

Map 4



The Miscellaneous Land
Exhibit A
Part 3
Map 4

Exhibit A-3

Property Specifically NOT Included in this project – Map 4

Ownership			
	Assessors Parcel Number	**Acreage**	**Map No.**
LLC	379-143-02	13.51	11
LLC	379-143-03	5.452	12
LLC	379-143-04	5.610	13
LLC	379-142-01	5.211	14
LLC	379-142-02	5.211	15
LLC	379-142-03	5.211	16

This property is not included in the Scope of Work. It maybe considered as part of the basic planning effort but is not part of the work of this project.

LLC = Lakeside Land Co. Inc. SDRP-LC = Lakeside Conservancy

ATTACHMENT 5
Correspondence of April 6, 2005 San Diego Regional Water Quality Control Board

James R. Dodson Consulting
12963 Creek Park Dr
Poway, CA 92064

April 6, 2005

John R. Odermatt
Senior Engineering Geologist
Regional Water Quality Control Board
Land Discharge and Tank Site Mitigation and
Cleanup Units
9174 Sky Park Court, Suite 100
San Diego, CA 92123

Re: Lakeside's River Park Conservancy
Proposed Flood Control, Habitat Restoration, and Recharge Project
Utilization of On-site Inert Debris for Project Construction

Hand Delivered

Dear Mr. Odermatt:

Lakeside's River Park Conservancy (Lakeside Conservancy), a non-profit and charitable corporation, is striving to fulfill its mission, "to preserve and restore the biological integrity and beauty of the San Diego River while integrating recreational, educational, and cultural opportunities for youth, seniors, families and citizens of East San Diego County." As a part of its efforts, the Lakeside Conservancy is in the process of acquiring permits to construct it s proposed Flood Control, Habitat Rehabilitation, and Recharge Project on approximately one hundred (100) acres of real property it owns in the unincorporated community of Lakeside, County of San Diego, California. The site location and the Project location maps are Figures 1a and 1b of Volume 2, Restoration Plan and Feasibility Report for the Project, prepared for the Lakeside Conservancy by Huffman and Carpenter, Inc. (December 2004) and enclosed herewith. The referenced Volume 2 is a part of a multi-volume submittal made to the County of San Diego and other federal and state agencies.[1] In the event you may need to refer to another portion of the Application, I am taking the liberty of also enclosing the

[1] This includes the RWQCB (Chiara Clemente-Grant Manager).

remaining volumes, namely, Volume 1, United States Army Corps of Engineers Preconstruction Notification (PCN) For a Nationwide Permit 27, Volume 3, NPDES Application, Notice of Intent, and Storm Water Pollution Prevention Plan, and Volumes 4A, Reclamation Plan Application; 4B, California Environmental Quality Act Documentation; 4D, Grading Permit Application; 4E, Revegetation Plan; and 4G, Storm Water Management Plan (4A -4G in one binder).

The portion of the San Diego River channel traversing the Lakeside Conservancy property has been substantially disturbed over the last several decades due to extensive sand and gravel mining in the past and is subject to recurrent flooding. Past activities on the property have severely reduced, degraded and fragmented habitat for threatened, endangered, sensitive and other native species having a significant and adverse impact on existing species abundance and diversity. The Project proposed by the Lakeside Conservancy would increase flood control capacity, restore, and expand habitat for native species, and improve groundwater and surface water quality. In this regard, the Lakeside Conservancy is grateful to have received grant funding for its Project from the State Water Resources Control Board and from the Department of Water Resources.[2]

As discussed in more detail below, completion of the Lakeside Conservancy Project depends upon the removal of approximately three hundred thousand (300,000) cubic yards and the on-site reuse of approximately One hundred and sixteen thousand (116,000) cubic yards of "inert debris" comprised of fill material deposited on the site many years ago. The deposits were made as a part of a reclamation plan under the Surface Mining And Reclamation Act at the conclusion of sand/gravel mining operations on the site. On-site reutilization of the "inert debris" would include site contouring, the construction of wetlands above and within the floodplain and the conversion of two water-filled sand/gravel extraction pits into shallow emergent perennial marshes. The Lakeside Conservancy needs the assistance of the Regional Water Quality Control Board (RWQCB) to ensure that the work is conducted in a manner protective of public health and sensitive environmental receptors and to ensure that any RWQCB requirements are identified and achieved.

[2] The grant funding agreements are administered by Chiara Clemente at the RWQCB and Earl Nelson at DWR.

I. The Lakeside Conservancy's Project

The Lakeside Conservancy's project benefiting the San Diego River is described in detail in the enclosed Restoration Plan and Feasibility Report.[3] However, to facilitate our discussion, a summary of key Project components is provided below.

(a) At the eastern boundary of the property, a large constriction in the river channel impeding flood flows near Channel Road, would be removed. The channel constriction is largely composed of imported fill sands, gravels and concrete debris. The area would be restored to a natural ephemeral channel similar to the surrounding Lower San Diego River channel. Proper bed and bank protection would be employed to safeguard surrounding properties within and near the constriction area. Work would be conducted from the upland and north side of the river channel. This Project component would lower the depth and velocity of flood flows in the area.

(b) Selective invasive vegetation and trash removal may take place in the natural river channel and adjacent upland areas. Work would include the utilization of machinery and be conducted outside of the established bird-nesting season.

(c) Adjacent to the river channel, an existing abandoned floodplain upland terrace would be planted with native vegetation consisting of a Coastal Sage Scrub community, along with an Urban Forest/Riparian plant community composed of native willows and trees. Work would be done with machinery and conducted outside of the established bird-nesting season.

(d) Adjacent to the river channel, existing denuded upland areas would be converted to native vegetation consisting of a Coastal Sage Scrub community. Work would be done with machinery and conducted outside of the established bird-nesting season.

(e) Adjacent to the Los Coches Creek outfall structure, a group of Urban Non-Point Source Water Quality Improvement basins would be

[3] A good Project description also appears in Volume 4B, California Environmental Quality Act Documentation.

constructed. The basins would be located upon and within existing upland fill materials in the area. As designed, the basins would serve to reduce certain non-point source pollutants (e.g., nutrients) in waters emanating from Los Coches Creek before the waters enter the San Diego River channel.

(e) Approximately four hundred and twenty thousand (420,000) cubic yards of imported fill material would be removed from the site or relocated on-site as a part of the Project design utilizing machinery. Of the estimated four hundred and twenty thousand (420,000) cubic yards of fill material, approximately one hundred and sixteen thousand (116,000) cubic yards would be utilized to restore wetland habitat values in the area of two existing gravel/sand extraction pits; and, approximately three hundred thousand (300,000) cubic yards would be removed from the site and hauled (with appropriate shipping documents) to an appropriate off-site location. The area from which fill materials would be removed from the site would be thereafter transformed into a seasonal wetland to attract the least Bell's vireo (Vireo bellii pusillus).

(f) Two large gravel/sand extraction pits, now filled with water, would be partially back-filled utilizing the fill material until the water depth in the pits is reduced to approximately 2.5 to 3 feet. This component of the Project would serve two functions. First, it would restore floodplain and sediment transport functions. Second, it would meet restoration objectives within the present sand/gravel extraction pit areas for the establishment of emergent perennial marsh wetlands created to mimic the functionality of oxbow marshes.

(g) A Constructed Wetland would be built upon and within the upland fill material tailings pile above the 100-year floodplain elevation. The Constructed Wetland is designed to encompass a six-acre area and be comprised of five wetland cells and a dedicated Rapid Infiltration Basin (RIB). The Constructed Wetland would reduce pollutants (e.g., nitrates) present in the groundwater utilized by the Riverview Water District through phyto-remediation and other passive mechanisms. Groundwater would be pumped into the wetlands from the Riverview Water District wells, allowed to flow through the wetland basins, and then re-enter the groundwater reservoir through the Rapid Infiltration Basin. The Constructed

Wetland could accommodate maximum pumping rates from the Riverview Water District well field (approximately 400 gallons per minute per day). Preliminary design models estimate up to an 80% nitrogen removal rate (from a mean total nitrogen concentration of 60 mg/l to 10 mg/l). Final design is being conducted. The source of the subject groundwater's nitrogen contamination is poorly understood. Future work may help to isolate the nitrogen source and local communities may then be able to reduce the future nitrogen load to groundwater. This Project component is expected to significantly improve groundwater quality in the vicinity of the Riverview wells and to reduce the higher costs incurred by the Riverview Water District arising because of its need to blend relatively expensive imported water with the pumped groundwater to meet applicable drinking water standards.

(h) A bioswale/water quality BMP would be constructed on the project site below and along State Route 67 to reduce certain pollutants from State Route 67 storm water discharges prior to such storm waters entering the San Diego River at the newly created freshwater perennial marshes.

(i) An Educational Interpretative Nature Trail (EINT) is planned for the north side of the Lower San Diego River.

(j) An Urban Forest interface is planned on the south side of the project, along State Route 67. This area would serve as an upland buffer and would be planted with trees, utilizing machinery.

II. Characterization of Fill Materials for Reuse

The Lakeside Conservancy property is host to approximately two million (2,000,000) cubic yards of fill materials (referenced in the Project summary above) deposited onto the property from various off-site locations many years ago (as a part of a SMARA reclamation plan) prior to the Lakeside Conservancy's ownership. As stated in the Project summary above, implementation of the Project would require removing a portion of these fill materials from the site to an off-site location and the reuse of other portions of these fill materials on-site in accordance with the Project design. The greater volume of the existing fill materials would be left in place.

The fill materials have been the subject of extensive geotechnical and environmental testing by Kleinfelder, Inc., culminating in three (3) assessment reports, to wit: *Final Report of Undocumented Fill Assessment Activities, Future Lakeside Riverpark, Highway 67 and Winter Gardens Boulevard, Lakeside, California* dated July 21, 2004; *Report of Area 1 Additional Undocumented Fill Assessment Activities, Future lakeside Riverpark, Highway 67 and Winter Gardens Boulevard, Lakeside, California* dated December 14, 2004; and, *Report of Supplemental Fill Assessment Activities, Areas 1, 3 and Hanson Diversion [sic] Area, Future Lakeside Riverpark, Highway 67 and Winter Gardens Boulevard, Lakeside, California* dated March 9, 2005. A copy of these three reports area enclosed for your reference and review. For purposes of these reports, the location of the fill materials are divided into three areas as shown on Figure 2 of the July 2004 Kleinfelder report. The fill materials which will be affected by the Project are located substantially within Area 3.

As a result of these assessment studies, the Lakeside Conservancy believes the fill materials in Area 3 to be properly characterized as "inert debris" or "inert waste", as defined by the California Integrated Waste Management Board (CIWMB) regulations in Titles 14 and 27 of the California Code of Regulations.[5] While the entirety of the Kleinfelder reports should be reviewed for a complete understanding for the basis of Lakeside Conservancy's belief that the fill materials are "inert debris"/"inert waste", a brief summary of the assessment work relevant to Area 3 is set forth below.

In preparting the July 2004 report, Kleinfelder pursued eleven soil borings (KB-1 to KB-11) within Area 3[6], located as shown on Figure 2 of the report, and analyzed a sample from each boring for,

> "Title 22 metals in general accordance with EPA Methods 6010B/7470 and total recoverable petroleum hydrocarbons (TRPH) in general accordance with EPA Method 418.1. Selected soil samples would be further analyzed for total petroleum hydrocarbons as gasoline and diesel (TPH-g and TPH-d) in general accordance with

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[5] 14 CCR §§ 17381(k) and 17388(k); 27 CCR §§ 20164 and 20230(a).
[6] A total of eighteen (18) borings were pursued in Areas 1, 2, and 3.

EPA Method 8015M, pesticides in general accordance with EPA Method 8081A, polychlorinated biphenyls (PCBs) in general accordance with EPA Method 8082, volatile organic compounds (VOCs) ingeneral accordance with EPA Method 8260B, and semi-volatile organic compounds in general accordance with EPA Method8270C."[7]

From borings KB-1 through KB-5 and KB-7 through KB-11, ten (10) samples from Area 3[8] were submitted for environmental analysis for Title 22 metals (by EPA Methods 6010B/7470) and TRPH (by EPA Method 418.1).[9] From the total of fifteen (15) samples taken from Areas 1, 2, and 3[10] the "samples with the three highest reported concentrations of TRPH were further analyzed for TPH-g and TPH-d by EPA Method 8015 Modified, VOCs by EPOA Method 8260B, SVOCs by EPA Method 8270C, pesticides by EPA Method 8081A, and PCBs by EPA Method 8082."[11]

A. No Significant Concentrations of Metals Found

Metals were not found to be present on the Lakeside Conservancy property, inclusive of Area 3, in significant concentrations.[12] As set forth in Table 2, Summary of Title 22 Metals Analytical Results (mg/kg), from the July 2004 report, Kleinfelder found that the "highest detected metal concentrations of metals reported are below the TTLC and 10×STLC regulatory limits."[13] A comparison of the maximum detected metals concentrations against the regulatory TTLC and 10×STLC limits is made in the July 2004 Kleinfelder report as Table 3, Maximum Detected Metals Concentrations Versus TTLC and STLC Regulatory Limits. Indeed, the concentrations of metals detected are consistent with background metals concentrations in Southern California soils.

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[7] Kleinfelder, Final Report of Undocumented Fill Assessment Activities, Future Lakeside Riverpark, Highway 67 and Winter Gardens Boulevard, Lakeside, California dated July 21, 2004, at pp. 3-5 of 15.
[8] There was no recovery of sample materials from KB-6.
[9] Id. at p. 6 of 15.
[10] There was also no recovery from KB-16 or KB-18 in Area 1.
[11] Id.
[12] However, in Kleinfelder, Report of Area 1 Additional Undocumented Fill Assessment Activities, Future Lakeside Riverpark, Highway 67 and Winter Gardens Boulevard, Lakeside, California, dated December 14, 2004, an elevated level for lead was detected in Area 1. It is believed that the elevated lead level detected arose from the sample inclusion of a chip of road paint originating from asphalt brought to the site in the fill materials.
[13] Id. at p. 13 0f 15.

B. No Significant Hydrocarbons Found in Area 3

As a part of the July 2004 report, Kleinfelder indicated that TPRH was detected in only four (4) of the borings taken from Area 3, of which the highest detectable concentration was only 220 mg/kg in KB-2.[14] The sample from KB-2 was further analyzed for TPH-g, TPH-d, VOCs, SVOCs, pesticides and PCBs, as prescribed earlier. The results are shown on Table 5 of Kleinfelder's July 2004 report and describe no detectable concentrations of VOCs, SVOCs, or PCBs. The analysis found detectable but very low concentrations of pesticide well below applicable EPA Region 9's risk-based residential Preliminary Remediation Goals (PRGs) (alpha-Chlordane and gamma-Chlordane). And, the analysis detected hydrocarbons at 260 mg/kg in the diesel range (TPH-d). Concerning detected hydrocarbons, please rtefer to the discussion in subsection C below, addressing the likelihood that detected hydrocarbons reflect the presence of asphalt in the fill materials.

C. Area 3 Hydrocarbons Detected Likely to be Old Asphalt

At the Lakeside Conservancy's request, Kleinfelder conducted a further assessment of the environmental conditions existing in Area 3 fill materials, as a part of a broader effort to further assess the environmental and geotechnical condition of on-site and off-site fill materials affecting the proposed Project as a whole, to ensure the protection of public health and sensitive environmental receptors. The results of this further assessment for Area 3 fill materials are described in Kleinfelder's March 2005 report.

The two highest detectable concentrations of hydrocarbons in Area 3 were found in KB-8 (93mg/kg) and KB-2 (220mg/kg)[15]. Four (4) trenches were advanced around KB-2 (T3-3 through T3-6) and two (2) trenches were advanced adjacent to KB-8 (T3-1 and T3-2). The locations of the trenches relative to KB-2 and KB-8 are shown on Figure 2 of the March 2005 Kleinfelder report. Eighteen samples were collected from the six Area 3 trenches to assess the extent and character of the hydrocarbon present in the

[14] Id. at p. 10 of 15 (Table 4, Summary of TPRH Analytical Results).
[15] Though a subsequent analysis of the sample detected 260mg/kg TPH-d.

vicinity of KB-2 and KB-8. Samples were also analyzed for VOCs, SVOCs, metals and bioassay acute toxicity screening.[16]

Of the eighteen samples taken, only two indicated the presence of hydrocarbons in the range of TPH-d, namely, trenches T3-4 (136mg/kg at 15 ft BGS) and T3-6 (77.6mg/kg at 9 ft BGS) in the vicinity of KB-2. In addition, trenches T3-1 through T3-5 each revealed the presence of hydrocarbons in the range of TPH-ho (heavy oil) in one or more sample locations, the detectable concentrations of which ranged from 187mg/kg to 1180mg/kg.[17]

A review of these hydrocarbon results must consider the important fact that Kleinfelder's assessment efforts reported a direct observation of the significant presence of crushed asphalt in the fill materials in Area 3 (and an occasional asphalt chunk does appear). The Lakeside Conservancy believes that the above-referenced findings of detectable concentrations of TPH-d and TPH-ho are from varying constituents of such asphalt materials. Indeed, at the Lakeside Conservancy's request, Kleinfelder has determined that the materials giving rise to the detectable concentrations of hydrocarbons in Area 3, as described above, are California crude oil, with some lighter fractions, collectively used for asphalt base. This is certainly consistent with the presence of crushed asphalt in Area 3 and suggests that while TPRH, TPH-d, or TPH-ho may be detected in Area 3, the results are indicative of the presence of old asphalt in the fill materials and not of independent hydrocarbon contamination by gas, diesel or other hydrocarbon fuels or mineral oil.

D. No Significant VOCs or SVOCs Found in Area 3

No detectable VOCs were found in the trenches.

Table 13, Summary of Area 3 Semivolatile Organic Compounds (8270C) of the March 2005 Kleinfelder report reflects the detection of some SVOCs believed to be consistent with the presence of plastic sheeting (phthalates)

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[16] Kleinfelder, Report of Supplemental Fill Assessment Activities, Areas 1, 3 and Hanson Diversion [sic] Area, Future Lakeside Riverpark, Highway 67 and Winter Gardens Boulevard, Lakeside, [16]California dated March 9, 2005, at p. 18 of 25..

[17] Id. at p. 19 of 25, Table 12, Summary of Area 3 Analytical Results Total Petroleum Hydrocarbons

and constituents of asphalt (PAHs).[18] Indeed, the TTLC and STLC tests of sample materials for these parameters have resulted in "non-detects" for SVOCs in the leachate. This, again, is consistent with the conclusion that the SVOCs noted in table 13 are either bound up as a part of plastic sheeting (e.g., visqueen) debris or asphalt debris.

E. Bioassay Acute Toxicity Screening Negative for Five Trenches

A bioassay acute toxicity screening sample was collected from each of the six (6) Area 3 trenches for toxicity analysis using flathead minnows and water fleas. The flathead minnows had a 100% survival rate in all six tests. The water fleas had a 93 to 100% survival rate in five (5) of the six (6) tests.

F. Bioassay Acute Toxicity Screening Inconclusive for Sixth Trench

In the remaining sixth bioassay acute toxicity screening test, one hundred percent (100%) of the flat head minnows survived; however, the water fleas failed to survive. Given the very sensitive nature of water fleas and the possibility for laboratory error, a duplicate bioassay acute toxicity screening test was run using water fleas resulting in a thirty-five percent (35%) survival rate. Because there are no toxic indicators in T3-2 material in contrast with materials from the other five trenches (and, in fact, T3-2 appears to be less burdened by organic materials than the other trenches), because of the sensitivity of water fleas, and because no pattern emerged which would make T3-2 stand out from a metals perspective, Kleinfelder believes that "it is possible that the T3-2 acute toxicity testing screening data is misleading or a false positive."[19] T3-2 is located just west of Los Coches Creek and adjacent to Highway 67 (the outskirts of the planned project). The Lakeside Conservancy will not remove or reuse soil in the vicinity of the T3-2 trench without further conclusive bioassay toxicity analysis demonstrating its lack of toxicity.

III. Area 3 Fill Materials Are Inert Debris/Inert Waste

Inert Debris and Inert Waste are defined as follows:

[18] Id. at p. 19 of 25.
[19] Id. at pp 22 of 25 – 23 of 25.

> "Inert Debris" means solid waste and recyclable materials that are source separated or separated for reuse, do not contain hazardous waste (as defined in CCR, Title 22, section 66261.3 et seq.) or soluble pollutants at concentrations in excess of applicable water quality objectives and do not contain significant qualntities of decomposable waste..." (1) "Type A Inert Debris" includes but is not limited to concrete (including fiberglass or steel reinforcing bar embedded in the concrete), fully cured asphalt, glass, fiberglass,, asphalt or fiberglass roofing shingles, brick, slag, ceramics, plaster, clay, and clay products. Type A inert debris is waste that does not contain soluble pollutants at concentrations in excess of water quality objectives and has not been treated in order to reduce pollutants....[20]
>
> "Inert Waste" is that subset of solid waste that does not contain hazardous waste or soluble pollutants at concentrations in excess of applicable water quality objectives, and does not contain significant quantities of decomposable waste.[21]

The Area 3 fill materials on the site are in distinct locations on the property and have not been commingled with other materials. They are accessible and available for appropriate reuse as "inert debris" on-site and off-site. The Kleinfelder reports have demonstrated that the fill materials do not contain hazardous substances or waste within the meaning of Title 22 CCR Sections 66261.3 et seq. and that they do not contain significant quantities of decomposable waste. Of primary importance is that the Kleinfelder reports indicate that the fill materials do not contain metals beyond background levels for Southern California soils or soluble hydrocarbons. The hydrocarbons are comprised of asphalt debris (including non-soluble SVOCs), no VOCs, no PCBs, and only very low detectable levels of pesticides in some samples (well below residential PRGs). Bioassay acute toxicity screening substantially indicated that materials in Area 3 are non-toxic in light of one hundred percent (100%) survival for flat head minnows and near one hundred percent (100%) survival for water fleas. (One bioassay test was inconclusive for water flea survival.)

[20] Title 14 CCR Section 17380.1(k).
[21] Title 27 CCR Section 20230(a).

IV. Conclusion

Based on the data presented in the Kleinfelder reports, the fill materials of Area 3 constitute "inert debris"/"inert waste" within the meaning of the Integrated Waste Management Board regulations as they have been promulgated by the SWRCB and local government EAs. The Lakeside Conservancy respectfully requests the RWQCB's concurrence that (a) the materials may be used on site in accordance with the Project design, as described above, such as for site/habitat contouring, wetland construction above and within the floodplain, and backfilling the sand/gravel extraction pits to establish perennial emergent marshes, and that (b) the fill materials may also be removed from the site and used for appropriate off-site projects, subject, of course, to applicable permit requirements of government agencies having jurisdiction.

I am very grateful for your productive assistance (and that of Brian McDaniel) concerning the Lakeside Conservancy's contemplation of an appropriate disposition for the "inert debris" located on the site. The Lakeside Conservancy desires to create a public amenity and to enhance and protect natural resource and environmental values on the site and, consistent with its public benefit motive for the Project, to do so in a manner which safeguards public health and sensitive environmental receptors. I look forward to meeting with you and your staff to discuss this Project with you in the near future and the contemplated use of the "inert debris" in Project construction.

If you have any questions or comments, please feel free to contact me at 858-395-3581 or jamesdodson@cox.net.

Sincerely,
James R. Dodson Consulting

James Dodson

JRD/jd

cc. Robin Rierdon (w/o enclosures)
cc. Lori Carpenter (w/o enclosures)

COUNTY OF SAN DIEGO
DEPARTMENT OF ENVIRONMENTAL HEALTH

FOR OFFICE USE:
Date Received 6-24-97
Submittal Fee Paid $160.00
Establishment # H02097-001

SITE ASSESSMENT AND MITIGATION DIVISION
P. O. BOX 85261
SAN DIEGO, CA 92186-5261
(619) 338-2243
(619) 338-2315 (Fax)

VOLUNTARY ASSISTANCE PROGRAM APPLICATION FOR ASSISTANCE

(PLEASE READ BOTH SIDES OF THIS FORM CAREFULLY PRIOR TO COMPLETION)

A. *Site Name* KTM Process Equipment *Assessors Parcel Number:* 381-070-56
Site Address 9484 Mission Park Place (*Street*) Santee (*City*) CA (*State*) 92071 (*Zip Code*)

B. *Property Owner* Baker Hughes Inc.
Mailing Address 3900 Essex Lane (*Street*) Houston (*City*) Texas (*State*) 77210-4740 (*Zip Code*)
Contact Person Joe Curtis *Telephone* ( ) 713-439-8627

C. *Application Submitted By:*
Contact Person JON WACTOR, ESQ. *Telephone* ( ) 415-356-4629
Company Name LUCE, FORWARD, HAMILTON & SCRIPPS LLP
Mailing Address 121 SPEAR STREET #200 (*Street*) SAN FRANCISCO (*City*) 94105 (*Zip Code*)

Invoices will be sent to this address unless other arrangements are made.

D. *Brief Project Description :* RESPOND TO SOIL CONTAMINATION DISCLOSED IN WELL PERMIT REPOR

Type of Assistance Requested: RESOLVE SOIL CONTAMINATION ISSUE

I accept the review conditions listed on the back of this page and agree to pay all costs associated with this request within 30 days of receiving an invoice.

Jon Wactor
Signature of Applicant

6/16/97
Date

FEE 06-25-97 11:41 LINA 78436
CHK $160.00

DEH:HAI-990 (Rev. 12/96)

FE.
J.S.

County of San Diego

DANIEL J. AVERA
DIRECTOR

DEPARTMENT OF ENVIRONMENTAL HEALTH
P.O. BOX 85261, SAN DIEGO, CA 92186-5261
(619) 338-2222 FAX (619) 338-2377

SITE ASSESSMENT AND MITIGATION DIVISION

August 20, 1997

Mr. Joe Curtis
Baker Hughes Inc.
3900 Essex Lane
Houston, TX 77210-4740

VOLUNTARY ASSISTANCE PROGRAM
DEH FILE NO. H02097-001
9484 MISSION PARK PLACE, SANTEE, CA

Per your written request, received June 16, 1997, the County of San Diego Department of Environmental Health (DEH) has completed review of the environmental documentation prepared by various consultants for the property referenced above. DEH focused specific attention towards the detection (1500 mg/kg @ two feet below grade) of total recoverable hydrocarbons at soil boring BH-5.

The results of the environmental investigations provide no evidence of a subsurface environmental impact that could degrade water resources or threaten public health. DEH concludes that no further assessment action is required relevant to the contamination detected at soil boring BH-5. Please note this letter does not address the California EPA tiered permitting or closure issues.

Changes in the proposed use of the property may require reevaluation to determine if the change will pose a risk to public health. If contaminated soil is encountered during future site excavation work or utility trenching, the soil should be managed in accordance with the legal requirements at that time.

Please be advised that this letter does not relieve you of any liability under the California Health and Safety Code or the Porter Cologne Water Quality Control Act. If previously unidentified contamination is discovered which may affect public health, safety and/or water quality, additional site assessment and cleanup may be necessary.

Should you require additional assistance please contact Jim Schuck at (619) 338-2908 within 30 days, otherwise this letter will complete DEH's response to your request for assistance.

Sincerely,

CHUCK PRYATEL, Chief
Site Assessment and Mitigation Division

CP:ac

Enclosure

cc: John Wactor, Luce, Forward, Hamilton & Scripps

WP/KETEMA.CLT

Case Closure Summary
Voluntary Assistance Program

I. AGENCY INFORMATION — Date: August 11, 1997

Lead Agency: County of San Diego, Environmental Health, SAM P.O. Box 85261 San Diego, CA 92186-5261	Phone: (619) 338-2222 Fax: (619) 338-2315
DEH Staff Person: Jim Schuck	Title: Environmental Health Specialist

II. CASE INFORMATION

Case No. H02097-001		
Site Name: KTM Process Equipment		
Site Address: 9484 Mission Park Place, Santee, CA		
Property Owner: Baker Hughes Attn: Joe Curtis	Address: 3900 Essex Lane Houston, TX 77010	Phone: (713) 439-8627
Party Requesting Assistance: John Wactor Luce, Forward, Hamilton & Scripps	Address: 121 Spear Street, Suite 200 San Francisco, CA 94105	Phone: (415) 356-4600
Type of Case: Voluntary Assistance		
RWQCB Approved DEH Oversight: July 1, 1997		

III. SITE CHARACTERIZATION AND/OR INFORMATION

Cause and Type of Contamination: Total petroleum hydrocarbons (1500 mg/kg) detected in a soil boring (2 feet bg)			
Site Characterization Complete? Yes			
Monitoring Wells Installed? No	Total Number: 0	Proper Screened Interval? NA	Number of Decommissioned Wells: NA
Range of Groundwater Levels on the Site Detected at 24.5 to 27 feet below grade			Groundwater Flow Direction: Estimated to be northerly
Most Sensitive Current Use: The RWQCB Basin Plan designates groundwater in this area of San Diego as beneficial for municipal uses			
Are Drinking Water Wells Affected? No			RWQCB Basin Number: 7.12 Santee HSA
Is Surface Water Affected? No			Nearest Surface Water Name: San Diego River
Off-Site Beneficial Use Impacts (addresses/locations): none identified			

TREATMENT AND DISPOSAL OF AFFECTED MATERIAL

Material	Amount (Include Units)	Action (Treatment or Disposal w/Destination)	Date
NA			July 1997

Non-LOP - Underground Storage Tank Oversight handled outside the LOP
Non-Tank - Voluntary Assistance Program

Case Closure Summary
Voluntary Assistance Program

H02097-001

III. SITE CHARACTERIZATION AND/OR INFORMATION (Continued)

MAXIMUM DOCUMENTED CONTAMINANT CONCENTRATIONS -- BEFORE AND AFTER CLEANUP

Contaminant	Soil(mg/kg)		Water (mg/l)		Contaminant	Soil (mg/kg)		Water (mg/l)	
	Before	After	Before	After		Before	After	Before	After
TRPH, 418.1	1500	1500	NA	NA	ethylbenzene, 8240	0.015	0.015	<0.005	<0.005
chlorinated solvents, 8240	<0.010	<0.010	<0.010	<0.010	xylene, 8240	0.091	0.091	<0.005	<0.005
benzene, 8240	<0.010	<0.010	<0.005	<0.005	methylene chloride,	0.006	0.006	<0.005	<0.005
toluene, 8240	<0.010	<0.010	<0.005	<0.005					

Comments: As part of the August 1995 environmental (Phase II) investigation, a soil sample (2 feet bg) from soil boring BH-5 was found to contain 1500 mg/kg of total recoverable petroleum hydrocarbons (TRPH). On the soil borehole log the environmental consultant noted observation of soil as fill with asphalt material throughout. Further subsurface investigations of soil and groundwater at the site have provided no evidence of a significant environmental impact associated with the 1500 mg/kg of TRPH.

IV. CLOSURE

Does completed corrective action protect existing beneficial uses per the Regional Board Basin Plan?	Yes
Does completed corrective action protect potential beneficial uses per the Regional Board Basin Plan?	Yes
Does corrective action protect public health for current land use?	Yes
Are there other issues DEH needs to follow up on:	No
Site Management Requirements: Any contaminated soil excavated as part of subsurface construction work must be managed in accordance with the legal requirements at that time.	
Should corrective action be reviewed if land use changes?	Yes
Enforcement Action Taken: none	
Enforcement Actions Rescinded: NA	

V. LOCAL AGENCY REPRESENTATIVE DATA

Name: Chuck Pryatel	Title: Chief Site Assessment and Mitigation
Signature:	Date: 8-20-97
Hydrogeologist Concurrence: KMB	Date: 8/19/97

VI. RWQCB NOTIFICATION

Date Submitted to the RWQCB: NA -- SOILS ONLY	RWQCB Response:
RWQCB Staff:	Title: Environmental Engineer

VII. ADDITIONAL COMMENTS, DATA, ETC.

The facility treated oily waste in an onsite evaporator unit. This treatment unit has been removed from the site. Any remaining permitting or closure issues associated with this treatment unit must be resolved through the California EPA.

This document and the related CASE CLOSURE LETTER, shall be retained by the lead agency as part of the official site file.

Fax

JULY 1, 1997

County of San Diego

Department of Environmental Health
P.O. Box 85261, San Diego CA 92186-5261
(619) 338-2222 FAX (619) 338-2315

FAX TO: **John Anderson, Senior Engineering Geologist**

COMPANY/AGENCY NAME: **Regional Water Quality Control Board**
Site Mitigation and Cleanup Unit

FAX PHONE **(619) 571-6972**

PHONE **(619) 467-2975**

FROM: **Vickie Church**

PHONE **(619) 338-2243** **FAX (619) 338-2315**

NUMBER OF PAGES (INCLUDING COVER SHEET) **4**

NOTES: **SB1248 Notification** (see attached sheet)

Vons Distribution	H01012-002
KTM Process Equipment	H02097-001
Former Chevron	H32117-002

DATE,TIME 07/01 18:26
FAX NO./NAME RWQCB
DURATION 00:02:00
PAGE(S) 04
RESULT OK
MODE STANDARD ECM

TRANSMISSION VERIFICATION REPORT

TIME : 07/01/1997 18:28
NAME : D.E.H-S.A.M.
FAX : 6193382315
TEL : 6193382315

Fax

July 1, 1997

County of San Diego
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Environmental Site Assessment and Soil and Ground-water Investigation Ketema Process Equipment Division Santee, California

Danaher Corporation

October 1995

BLASLAND, BOUCK & LEE, INC.
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Executive Summary

This report summarizes the results of an Environmental Site Assessment (ESA) and subsurface investigation performed by Blasland Bouck & Lee, Inc. (BBL) for Danaher Corporation at the Ketema Process Equipment Division (Ketema) facility located in Santee, California. The facility is located at four adjacent or nearly adjacent street addresses; 9463, 9484, and 9489 Mission Park Place and 9323 Stevens Road, collectively referred to as "the site". Subsurface investigation was performed at 9484 Mission Park Place.

Phase I Site Assessment Findings

The site visit was performed by a BBL representative on July 7, 1995. Operations at the Ketema facility include manufacturing, assembling, and testing of industrial centrifuges. Mr. Frank Rousseau, Resources & Compliance Manager with Ketema reported that, the Process Equipment manufacturing facility has occupied the site since approximately 1975. Ametek was a previous owner of the facility until 1988 when it was sold to Ketema. Mr. Rousseau stated that prior 1975 the building at 9484 Mission Park Place was occupied by a manufacturer of metal expansion joints. The remaining two buildings at 9463 and 9489 Mission Park Place were occupied by a fiberglass boat manufacturing company.

9463, 9484, and 9489 Mission Park Place

The site consists of three single-story large buildings, one machine shop, and two mobile office trailers totaling 76,000 square feet, located on approximately 6.9 acres of land. Building 1 at 9484 Mission Park Place contains a machine shop and two welding operation areas. West of Building 1 is a machine shop and maintenance building. South of Building 1 are two mobile office trailers. Buildings 2 and 3 are located east of Building 1. Building 2 at 9489 Mission Park Place contains assembly and testing areas and Building 3 at 9463 Mission Park Place is an office building. A shipping and receiving area is located between Buildings 2 and 3.

Solid waste generated on site include oil filters, diatomaceous earth, absorbent material, and metal scrap. Oil filters are removed from the site by a recycling company. Metal scraps consist mainly of carbon steel, stainless steel, and aluminum are recycled. Diatomaceous earth waste generated on site is disposed as non-RCRA hazardous waste by a licensed hazardous waste hauler. Safety-Kleen removes absorbent material from the site. Liquid wastes including oily waste, water based coolant waste, and solvent waste are removed from the site approximately every 90 days by Safety Kleen Corp.

Evidence of underground storage tanks (USTs) was not observed during the site visit. Mr. Rousseau reported that USTs are not present on the property now, nor have they been in the past.

During regulatory agency listings review Ametek, the previous owner of property, was identified as a Resource Conservation and Recovery Act (RCRA) small quantity generator. Small quantity generators produce 100 kilograms(kg)/month but less than 1,000 kg/month of non-acutely hazardous waste. Off-site sources of potential environmental concern were not identified.

9323 Stevens Road

The Ketema facility at this address occupies one single-story building containing a manufacturing area, a fabric storage area, and archive storage. The building is used for the manufacturing of fabric filter bags. Chemicals or hazardous materials are not used or stored in the building. Ketema has occupied this building since 1986 and was the first tenant in this building.

One compressor is located on the western side of the building. No leaks or stains were observed around the compressor.

A regulatory review did not reveal any off-site sources of potential environmental concern.

9484 Mission Park Place - Subsurface Investigation Findings

Subsurface investigations indicated detectable levels of total petroleum hydrocarbons (TPH) in shallow soils at the site. At the majority of these locations, the elevated levels of TPH are believed to be related to quantities of asphaltic material observed in the shallow fill at the site. Low concentrations of TPH were found up to 15 feet below ground surface (bgs) in one boring.

Volatile organic compounds (VOCs) were detected in two soil borings at the site. Detectable concentrations of ethyl-benzene and xylenes were detected in a shallow soil sample collected in borehole BH-4. Concentrations of methylene chloride were reported in a soil sample from borehole BH-5. The laboratory analytical report identified this compound as a suspected laboratory contaminant.

One soil sample collected during the investigation contained lead at 10 times the California Code of Regulations (CCR) Title 26 soluble threshold limit concentration (STLC). Subsequent leachate analysis performed on the sample indicated soluble concentrations of lead below the STLC of 5 parts per million (ppm). The remaining soil samples had concentrations less than the CCR Title 26 total threshold limit concentration (TTLC) and below 10 times the STLC for the respective metals. These results indicate that elevated metal concentrations do not exist at the site.

Two ground-water grab samples were collected during the investigation. Detectable concentrations of VOCs were not observed in the shallow ground water below the site.

Section 1 - Objectives

1.1 Purpose

The purpose of this report is to identify and record existing, potential, or suspect conditions of the Ketema facility that may impose an environmental liability or restriction to land use. Additionally, properties within a one-mile radius of the site were researched through a database review to identify potential off-site concerns. A field sampling plan was implemented on site to obtain further environmental information. The findings are included in this report.

1.2 Tasks

The following tasks were performed for the environmental investigation:

A. A site visit by BBL staff on July 7, 1995 to assess the current activities and conditions at the site, including an interview with Mr. Frank Rousseau, Resources & Compliance Manager of the Ketema facility.

B. A reconnaissance of the adjacent properties to identify potential sources of contamination and/or activities that may have or could have an environmental impact on the site.

C. A review of readily available site information regarding both current and historical land use.

D. A database review, completed by Vista Environmental Information, Inc., of the following United States Environmental Protection Agency (USEPA), California State EPA, and local regulatory agencies files and records:

USEPA INFORMATION

- National Priorities List (NPL)
- Comprehensive Environmental Response, Compensation and Liability Act Information System List (CERCLIS)
- Resource Conservation and Recovery Act Corrective Actions (CORRACTS)
- Resource Conservation and Recovery Act (RCRA) permitted treatment, storage, disposal facilities (RCRA-TSD)
- RCRA violations/enforcement actions
- RCRA registered small or large generators of hazardous waste (GNRTR)
- Emergency Response Notification System List (ERNS)
- Toxic Release Inventory database (TRIS)

CAL EPA INFORMATION

- State Priorities List (SPL)
- Cortese List

- Leaking Underground Storage Tanks (LUST)
- Solid Waste Landfills, Incinerators, and Transfer Stations (SWLF)
- Underground Storage Tank Listing (UST)
- Aboveground Storage Tank Listing (AST)
- Sites with Deed Restrictions (Deed RSTR)
- Toxic Pits cleanup facilities (Toxic Pits)

LOCAL AGENCIES INFORMATION

- City of Santee Fire Department (SFD)
- County of San Diego Environmental Health Services (SDEHS)
- San Diego County Air Pollution Control District (SDAPCD)

E. Preparation of this report summarizing and discussing the investigation findings.

The following tasks were performed for the subsurface investigation:

A. A site visit by BBL staff on August 11, 1995 to mark proposed borehole locations and to assess site conditions and access for the drilling equipment. BBL staff also visited the offices of the County of San Diego, Department of Environmental Health to expedite processing of the required boring permits.

B. A site visit by BBL staff on August 14, 1995 to meet with a geophysical contractor to clear proposed borehole locations of underground utilities and structures.

C. Implementation of a Field Sampling Program to characterize local site conditions. The initial Limited Field Sampling Program, involving the collection of subsurface soil and ground-water samples, was implemented on August 18, 1995. The subsurface soil samples were collected around the hazardous waste storage building using a limited access Acker auger drill rig. The three borings in the metal parts/ drum storage area were drilled using a CME-75 auger drill rig. Ground-water grab samples were collected in three of the borings. Selected soil samples were submitted for the following analyses: VOCs using USEPA Method 8240 and TPH using USEPA Method 418.1. In addition, the shallow two-foot sample was analyzed for California Title 26 Metals. Results of these analyses are summarized in Section 7 - Analytical Results and Discussion.

D. Preparation of this report summarizing and discussing the investigation findings.

1.3 Limitation to Environmental Site Assessment

The conclusions reached are based on the limits of the investigation described in this report. BBL can offer no assurances and assumes no responsibility for site conditions or activities that were outside the scope of the inquiry requested by Danaher Corporation. In performing its investigations, BBL has used reasonable care and has performed its work in keeping with industry standards and standard agency procedures, as

appropriate. It is understood by Danaher Corporation that BBL has relied on the accuracy of documents, oral information, and other material and information provided by sources documented in this report, including Danaher Corporation and Ketema Process Equipment Division. There can be no assurance, and BBL offers no assurance, that site conditions do not exist or could not exist in the future that were undetected and that could lead to liability in connection with the site. Similarly, past and present activities on the site indicating potential environmental concerns may not have been discovered by BBL's inquiries. Such activities may include those that would indicate the potential for regulated hazardous substances at the site. BBL has reviewed the information obtained in its limited investigation, in keeping with existing environmental standards and enforcement practices, but cannot predict what actions any given agency may take presently or what standards and practices may apply to the site in the future.

Section 2 - Site Overview

The Ketema facility is located at 9463, 9484, and 9489 Mission Park Place and 9323 Stevens Road in Santee, California (Figure 1). Operations at the facility include manufacturing, assembling, and testing of industrial centrifuges.

9463, 9484, and 9489 Mission Park Place

The Ketema facility on Mission Park Place is located in a light industrial/commercial area. The site consists of three single-story large buildings, one machine and maintenance building, and two mobile office trailers (Figure 2). The largest building on the property, Building 1, contains approximately 35,000 square feet of floor space. The remaining two buildings (Building 2 and 3) contain approximately 25,000 square feet and 16,000 square feet of floor space, respectively.

Building 1, located at 9484 Mission Park Place, contains a machine shop and two welding operation areas. West of Building 1 is a machine shop and maintenance building. South of Building 1 are two mobile office trailers. Buildings 2 and 3 are located east of Building 1. Building 2 located at 9489 Mission Park Place contains assembly and testing areas; Building 3, located at 9463 Mission Park Place, is an office building. A shipping and receiving area is located between Buildings 2 and 3. Paved parking areas surround the buildings at the site. Further details as to the use of each of these buildings are provided in Section 5.

Potable water and sanitary sewer services are supplied to the property by the City of Santee. The City's potable water comes from the Padre Dam Municipal Water District, which receives their water from the Metropolitan Water District.

One heating, venting, and air-conditioning (HVAC) unit is located on the roof of Building 1. The remaining buildings have air conditioning units mounted on the walls of the buildings.

One roof drain is located on the northern side of Building 1. This drain discharges to the parking area north of Building 1. Storm drains are not located on site. Surface water runoff from the Ketema facility drains to the north, towards the San Diego River.

The San Diego River borders the site to the north. Adjacent to the west of the site is a drive-in theater. Along the southern perimeter of Building 1 is Mission Park Court. Further to the south is a vacant commercial building. An area to the south of Building 3 is occupied by Altech Machining Shop. East of the site is Commercial Sheet Metal Fabrication (Figure 2).

9323 Stevens Road

The Ketema facility occupies one single-story building located east of Stevens Street and north of Hartley Road. The building contains a manufacturing (sewing) area, a fabric storage area, and archive storage. The building is used for manufacturing of fabric filter bags. Chemicals or hazardous materials are not used or stored in the building.

HVAC units are mounted on the walls of the building.

Potable water and sanitary sewer services are supplied to the property by the City of Santee.

Bordering the site to the west is Stevens Street. Further to the west are light industrial/commercial developments. Adjacent north of the site is Best RV Incorporated. The area to the south is occupied by FBC Enterprises. Several manufacturing facilities are located east of the site (Figure 3). Appendix A presents selected photographs of the site.

Section 3 - Site Background/Operating History

Aerial photographs dating from 1953 to 1989 were reviewed at the County of San Diego Department of Planning and Land Use offices in San Diego, California and indicated the following:

- 1953 and 1958: The site and site vicinity are occupied by agricultural land. Several farm houses are present north and northwest of the site. Woodside Avenue is present southeast of the site. The building on Stetson Street has not been constructed yet.

- 1966: The site remains the same as in the previous photographs. A large commercial building has been constructed south of the site. The drive-in theater is present west of the site. The area to the east is occupied by several small structures.

- 1972 and 1974: The site appears as it does today with all three buildings present. A structure which resembles the current machine shop is located west of Building 1. Small structures east of the site have been demolished. Freeway 67 has been constructed southeast of the site. Large residential developments are present approximately one mile southeast of the site. No changes were observed on the property on Stetson Street; it remains vacant.

- 1989: The site appears as it does today. Adjacent properties appear to be fully developed.

Mr. Rousseau stated that the process equipment manufacturing facility has occupied the site since approximately 1975. The building on Stevens Street has been occupied by Ketema since approximately 1986; it was the first tenant of this building. Ametek was a previous owner of the facility until 1988 when it was sold to Ketema. Mr. Rousseau stated that prior 1975, the building at 9484 Mission Park Place was occupied by a manufacturer of expansion joints. The remaining two buildings at 9463 and 9489 Mission Park Place were occupied by a fiberglass boat manufacturing company.

Mr. Rousseau reported that the main changes in the facility operations involved usage of solvents. Approximately 100 gallons of trichloroethane and 400 to 500 gallons of methyl ethyl ketone (MEK) were used at the facility on an annual basis. In the mid 1980's, MEK was replaced by water-based degreasers. In 1990, usage of trichloroethane was discontinued. Mr. Rousseau also stated that approximately five years ago, a reverse osmosis filter was used at the site for treatment of waste water. At that time, the facility had a wastewater discharge permit for the discharge of oil-separated water to a municipal sewer. For the past five years, an evaporator has been used to treat oily water generated on site.

Section 4 - Environmental Setting

The site is located within the San Diego River Valley. Alluvium of Quarternary age underlies the subject property and immediate surrounding areas. This material includes sands, gravels, and boulders primarily of granitic origin. The valley is flanked to the north and south by low lying granite hills. These hills constitute a portion of the Southern California Batholith, a large body of mesozoic plutonic rocks.

A soil survey of San Diego County has classified the soils on the site and vicinity as a part of the Visalia Series. The Visalia series consists of moderately well drained, very deep sandy loams derived from granitic alluvium. These soils are on alluvial fans and alluvial plains and have slopes of 0 to 15 percent. The elevation ranges from 400 to 2,000 feet. The surface layer is grayish-brown, slightly acid, sandy loam about 12 inches thick. The next layers are dark, grayish-brown, slightly acid, sandy loam and loam which extends to a depth of more that 60 inches. In some areas, the soil is gravelly throughout.

Mr. Steven Weston, Engineering Supervisor with the Padre Dam Municipal Water District, stated that information regarding depth to ground water is very limited for the San Diego County area. No data is available for the Santee area. Mr. Weston stated that direction of the ground-water flow in the site vicinity is to the west. Ground-water flow through the deposits underlying the subject property is anticipated to be generally in accord with the topographic gradient; however, flow directions can be modified in response to local ground-water pumping and/or other hydrologic factors.

Section 5 - Site Walkover

5.1 Site Observations and Inquiries

9463, 9484, and 9489 Mission Park Place

Ketema uses a variety of chemicals in their manufacturing operations. An inventory of chemicals used on site and representative of current operations was provided by Mr. Frank Rousseau and is included in Appendix B. The following is a description of our observations made during the site walk-over.

Building 1 (9484 Mission Park Place)

Centrifuge parts are manufactured in the machine shop area of Building 1 (Figure 2). Operations in Building 1 include metal cutting, machining, grinding, and parts degreasing. Minor to heavy staining was observed at several locations around the machines in the shop. A degreaser unit is located in the northeastern portion of the building. Heavy oil staining was noted on the floor around the degreaser. Also, heavy staining was noted on the concrete floor around the compressor located east of the machine shop. One 170,000 cubic feet argon tank and several gas cylinders are stored southeast of Building 1. Metal scrap including carbon steel, stainless steel, and aluminum, is present in open-topped bins outside (west) of Building 1 awaiting recycling. Staining was not observed on the asphalt around these storage bins.

A hazardous storage area is located northeast of Building 1 (Figure 2). It consists of a small storage shed, drum storage area, and three secondary containment units. The storage shed contains a water evaporator used to treat oily water generated during degreasing, cutting, and machining operations on site. The SDAPCD-permitted evaporator significantly reduces the amount of waste disposed off site. According to Mr. Frank Rousseau, approximately 55 gallons of the oily waste is reduced to two or three gallons of sludge. Several 55-gallon drums of oily waste are stored in the secondary containment units awaiting treatment. The drum storage is located underneath the roof adjacent to the shed. During the site walkover, several 55-gallon drums containing anti-splatter, tellus oil, imperial oil waste, and several 5-gallon containers of motor oil were observed in this area. The containers are stored in a metal spill pan. Several empty 55-gallon drums were also observed in this area. Minor to average staining was present on the asphalt around the storage area.

Machine and Maintenance Shop

The machine and maintenance shop is located west of Building 1. The building is a one-story metal frame structure with a concrete floor. One Safety-Kleen unit for cleaning parts is present. Solvent wastes from the parts cleaner are removed from the site by Safety Kleen. Several 5-gallon containers of motor oil are located in the maintenance area. Evidence of spills or leaks was not observed in this area.

Selected photographs of the facility are included as Appendix A. A chemical inventory list is included in Appendix B. Copies of example hazardous waste manifests are included in Appendix C. Ketema

holds SDAPCD permits for both the Safety-Kleen unit and the water evaporator unit. Copies of the permits are included in Appendix D.

Building 2 (9489 Mission Park Place)

Manufacturing of hydraulic parts, assembly, and testing is performed in Building 2 (Figure 2). Large quantities of tellus oil are used to test centrifuge hydraulic drives. The tellus oil used for testing of hydraulic parts is recycled. One Safety Kleen parts washer and five 20-gallon containers of degreasers are present in a hydraulic parts manufacturing area. Along the western wall of Building 2 is a chemical storage area which consists of new and used tellus oil, acetone, paint, and degreasers. The drums are located in the metal spill pan. Minor staining was observed on the concrete floor in this area.

Solid waste generated on site includes oil filters, absorbent material, and diatomaceous earth. Oil filters are removed from the site by a recycling company. Safety-Kleen removes absorbent material from the site on an annual basis. Diatomaceous earth is used for an engineering test of the bag filters. Diatomaceous earth waste generated on site is disposed as non-RCRA hazardous waste by a licensed hazardous waste hauler. Copies of selected hazardous waste manifests are included in Appendix C.

Building 3 (9463 Mission Park Place)

The main portion of Building 3 is occupied by offices and no chemicals are used or stored in this area; however, several 5-gallon containers of solvents and small quantities of degreasers are used in an inspection area.

Building materials generally considered suspect for containing asbestos were observed in office areas of the building. These materials include suspended ceiling tiles, floor tiles, and wallboard. The material appeared in a non-friable condition.

9323 Stevens Road

The main portion of the building at this address is used for manufacturing fabric filter bags and for fabric storage. The remaining portion is occupied by an archive files storage area (Figure 3). Chemicals or hazardous materials are not used or stored in the building.

Building materials generally considered suspect for containing asbestos were observed in office areas of the building. These materials include suspended ceiling tiles, floor tiles and wallboard. The material appeared in a non-friable condition.

One compressor is located on the western side of the building. No leaks or stains were observed around the compressor.

5.2 UST Systems

Evidence of USTs was not observed on the subject property. Mr. Rousseau stated that USTs are not present on site now, nor have they been in the past.

5.3 Transformers and PCB Equipment

Two pad-mounted electrical transformers were observed on site during the site visit. One transformer is located east of Building 2 and 3 on Mission Park Place. The second one is located west of the building on Stevens Street. Both transformers are owned and operated by San Diego Gas & Electric (SDG&E). Since the transformers are the property of SDG&E, potential liabilities pertaining to spills, leaks or fires should rest with them. Federal law has prohibited the manufacture of transformers containing PCBs since 1977; however, the USEPA allows continued use of both contaminated and untested transformers if procedures for service, inspection, handling and disposal of any potentially contaminated materials satisfies their guidelines. The transformers appeared to be in good condition; no leaks or spills were noted.

The lighting system on site consists of overhead fluorescent and mercury vapor lights. There is a possibility that fluorescent light ballasts manufactured prior to 1980 may contain PCBs. At the time of ballast replacement, the ballasts should be inspected to determine if they contain PCBs, and appropriate disposal can be arranged.

5.4 Area Reconnaissance

9463, 9484, and 9489 Mission Park Place

Bordering the site to the north is the San Diego River. Adjacent to the west of the site is a drive-in theater. Along the southern perimeter of Building 1 is Mission Park Court. Further to the south is a vacant industrial building. An area to the south of Building 3 is occupied by Altech Machining Shop. East of the site is Commercial Sheet Metal Fabrication (Figure 2).

9323 Stevens Road

Bordering the site to the west is Stevens Street. Further to the west are light industrial/commercial developments. Adjacent north of the site is Best RV Incorporated. The area to the south is occupied by FBC Enterprises. Light manufacturing facilities are located east of the site (Figure 3).

During the site visit, one 55-gallon drum was observed to be stored on a parking area of a manufacturing company to the east of the site. No leaks or spills were noted around the drum.

Section 6 - Environmental/Regulatory Agency Inquiries

BBL retained Vista Environmental Information, Inc. (Vista) to conduct a search of current regulatory agency listings that provide records on underground tank leaks, non-tank spills of hazardous materials, hazardous waste sites, active and inactive landfills, solid waste transfer stations, and state and federal hazardous waste sites. These regulatory agency listings included; the USEPA, NPL, RCRA listing and the CERCLIS listing; the Federal Superfund Liens (Liens) listing; the Hazardous Waste and Substances Sites List (commonly referred to as the "Cortese List") from the State of California Governor's Office of Planning and Research; California EPA listings; as well as current listings from the State Water Resources Control Board (SWRCB), the San Diego Regional Water Quality Control Board (RWQCB), California Waste Management Board (CWMB), and County of San Diego data. Additional inquiries were made to local regulatory agencies. Table 1 is a summary of the sites identified in the regulatory searches within a one mile radius of the site. Appendix F contains a map displaying the location and description of identified sites. The following is a summary of our findings.

9463, 9484, AND 9489 MISSION PARK PLACE
UNITED STATES ENVIRONMENTAL PROTECTION AGENCY (USEPA)

Listing	No. of Sites	Description
NPL (National Priorities List)	None	The USEPA NPL is a listing for hazardous waste generators which are, or are proposed to be, USEPA-enforced Superfund sites. NPL sites (including the property) were not identified within a 1-mile radius of the subject property.
RCRA-TSD (RCRA Hazardous Waste Treatment Storage and/or Disposal)	None	The USEPA list of RCRA Hazardous Waste Treatment, Storage and/or Disposal (RCRA-TSD) facilities was reviewed. RCRA-TSD sites (including the property) were not identified within a 1-mile radius of the subject property.
RCRA CORRACTS (Resource Conservation and Recovery Act Corrective Actions)	None	The RCRA CORRACTS List is maintained by the USEPA and is a database of RCRA facilities undergoing corrective action due to a "corrective action order". Corrective actions may be ordered beyond the facility's boundary and can be required regardless of when the release of hazardous waste occurred, even if it predates RCRA. No CORRACT sites (including the property) were identified within a 1-mile radius of the subject property.
SPL (State Priorities List)	None	The SPL list is a listing of verified hazardous waste sites that the USEPA targets for clean-up under the Hazardous Substance Cleanup Bond Act of 1984. The SPL list includes AWP sites and High Priority Preliminary Environmental Assessments sites. SPL sites (including the property) were not identified within a 1-mile radius of the subject property.
CERCLIS (Comprehensive Environmental Response, Compensation and Liability Information System List)	None	The CERCLIS is a listing for hazardous waste sites that are not currently under the USEPA Hazardous Ranking System for rating the relative severity of a potential threat to the environment and public health. These sites represent environmental concerns from the discharge of hazardous materials by hazardous waste generators, treatment and storage facilities, and hazardous waste disposal sites. No CERCLIS sites (including the property) were identified within a 1-mile radius of the subject property.
SCL (State CAL-SITES Listing)	None	The SCL database consists of the CAL-SITES list which were formerly listed in the Abandoned Site Program Information System. The SCL database contains a list of potential and known hazardous waste sites generated by the USEPA Toxic Substances Control Program through information provided by county health agencies, local fire departments, county agricultural commissioners, Department of Fish and Game, the RWQCB, and other local and state agencies. The information concerning most of these sites should be considered preliminary, although most confirmed sites from this database are merged into the AWP once they have been hazard ranked. No SCL sites (including the property) were identified within a 1-mile radius of the subject property.
RCRA (Resource Conservation and Recovery Act)	None	The USEPA RCRA violations/enforcement actions list indicated that no RCRA sites (including the property) were located within 1/4 mile of the subject property.

Listing	No. of Sites	Description
TRIS (Toxic Release Inventory)	One	The USEPA, under SARA Title III, established an inventory of toxic chemical emissions from certain facilities known as TRIS. Facilities subject to this reporting are required to complete a Toxic Chemical Release Form (Form R) for specified chemicals. Custom Marble at 10848 Wheatlands is identified in the TRIS database. Quantities released include 16,758 pounds of acetone and 5,400 pounds of styrene. This facility is located approximately 1/8 mile southwest of the subject site, hydrologically downgradient with respect to the apparent ground-water flow. Due to the hydrological relationship, this site does not appear to pose an environmental concern to the subject property at this time.
ERNS (Emergency Response Notification System List)	None	The ERNS is a database of reported releases of oil and hazardous substances. This database is compiled from spill reports submitted to the USEPA, US Coast Guard, National Response Center, and the Department of Transportation. No ERNS sites (including the property) were identified within 1/4-mile of the subject property.
GNRTR (Small or Large Generators of Hazardous Waste)	Three	The USEPA list of RCRA small and large quantity generators and hazardous waste transporters was reviewed. Small quantity generators are those who generate at least 100 kilograms per month (kg/mn) but less than 1,000 kg/mn of non-acute hazardous waste. Large quantity generators are those who generate more than 1,000 kg/mn of non-acute hazardous waste. Three RCRA sites were identified within 1/8-mile of the subject property. Ametek, the previous owner of the property is identified as small quantity generator. In addition, one large quantity and one small quantity generator were identified within 1/8 mile of the subject property. Inclusion on this list does not indicate that the problem exist.

Listing	No. of Sites	Description
SWRCB LUST (Leaking Underground Storage Tanks)	Two	Two LUST sites were identified within a 1/2-mile radius of the subject site. Both cases are described below. 7-Eleven Store is located at 10710 Woodside Avenue, approximately 1/8 mile south of the site. The site is reported to had a gasoline spill which affected ground-water. Reportedly remedial action plan and feasibility study have been completed and a remedial action is underway. This case is located hydrologically offgradient with respect to the reported westerly ground-water flow and does not appear to pose an environmental concern to the subject site at this time. Anthony T. Ditty at 11427 Woodside Avenue is located approximately 1/2 mile northeast of the subject property. This site is reported to had a gasoline tank leak which affected ground-water. Records indicate that a remedial action plan has been developed. This case is located hydrologically offgradient with respect to the reported westerly ground-water flow and does not appear to pose an environmental concern to the subject site at this time.
SWLF (Solid Waste Landfills, Incinerators, and Transfer Stations)	None	The SWLF database includes records of active and inactive landfills and solid waste transfer stations through the Solid Waste Information System (SWIS). The CWMB maintains an inventory of the solid waste facilities in the state. SWLF sites were not identified within a 1/2-mile radius of the subject property. Twenty unmapped SWLF sites are identified in the Vista report; one landfill is proposed/planned; six landfills are reported as closed; and the remaining thirteen landfills are currently active. None of these sites are located in the vicinity of the subject site. No potential environmental concerns were noted in association with these sites.
HWP (Hazardous Waste Property/Border Zone Property)	None	The HWP authorizes the California Department of Toxic Substances Control to enter into voluntary deed restrictions with property owners who propose building specific facilities in a Border Zone. A Border Zone Property is a site which lies within 2,000 feet of a hazardous waste deposit. A hazardous waste deposit is land where hazardous waste has been deposited creating an existing or potential hazard to public health and safety. HWP sites (including the property) were not identified within a 1/2-mile radius of the property.
Cortese	Two	The Cortese List is a compilation of information published by the SWRCB, the RWQCB, the CWMB, the California Department of Health Services (CDHS), and Bond Expenditure Plan. Sites identified on the Cortese List indicate the lead regulatory agency involved with the case. Information found in the Cortese List is then researched to determine the site status using reports from the respective lead agency involved with each site. Two Cortese sites were identified within a 1/2-mile radius of the property. 7-Eleven and Anthony T. Ditty sites were described in a previous paragraph.

Listing	No. of Sites	Description
Toxic Pits	None	The California Water Quality Control Board, Division of Loans/Grants maintains an inventory of toxic pits in the state. No Toxic Pits sites (including the property) were identified within a 1/2-mile radius of the property.
AST/UST (Above Ground and Underground Storage Tank Listing)	Two	The California State Water Regional Control Board maintains an inventory of registered aboveground and underground storage tanks (AST/UST). Two sites were identified within 1/4-mile of the property. Custom Marble at 10848 Wheatlands is listed as having three USTs on site. Circle K Store at 11007 Woodside Avenue is reported to have two USTs containing unleaded gasoline. Inclusion on this list does not indicate that a problem exists.

9463, 9484, AND 9489 MISSION PARK PLACE
LOCAL AGENCIES

Listing	No. of Sites	Description
SFD (Santee Fire Department)	None	The SFD was contacted regarding information on any hazardous materials permits or violations and information regarding the past or present existence of USTs or ASTs located on the subject property. A response is pending.
SDEHS (County of San Diego Environmental Health Services Agency)	1	The SDEHS was contacted regarding information on any hazardous materials permits, spills or emergency response, leaking USTs, and information regarding the past or present existence of USTs or ASTs located on the subject property. Based on information received from the SDEHS for the Ketema facility, there were records of violations involving improper storage procedures. In several cases, inspectors recorded missing labels for storage containers and incomplete records of permits, disposal manifests, business plan, and personnel training.
SDAPCD (San Diego Air Pollution Control District)	1	BBL contacted the SDAPCD requesting information regarding air quality permits or violations pertaining to the subject site. Information received from the SDAPCD indicated that the Ketema facility has records of violation of Rule 10a and 10b of Regulation II Permits. Rule 10a requires obtaining written authorization from the Air Pollution Control officer prior to installation of any article, machine, or equipment which may cause the issuance of air contaminants. Rule 10b requires obtaining a written "Permit to Operate" from the Air Pollution Control Officer before use of any article, machine, or equipment which is described in Section 10a.
HE 17	Two	The San Diego County maintains an unauthorized releases list (HE 17). This database was searched and two sites were identified within a 1/2-mile radius of the property. The 7-Eleven site was described in a previous paragraph. El Capitan Oil Company located at 11427 Woodside Avenue is reported to had a tank leak which affected soil and ground-water. Reportedly remedial investigation and feasibility study have been done and remedial action is underway.

Listing	No. of Sites	Description
NPL (National Priorities List)	None	The USEPA NPL is a listing for hazardous waste generators which are, or are proposed to be, USEPA-enforced Superfund sites. NPL sites (including the property) were not identified within a 1-mile radius of the subject property.
RCRA-TSD (RCRA Hazardous Waste Treatment Storage and/or Disposal)	None	The USEPA list of RCRA-TSD facilities was reviewed. RCRA-TSD sites (including the property) were not identified within a 1-mile radius of the subject property.
RCRA CORRACTS (Resource Conservation and Recovery Act Corrective Actions)	None	The RCRA CORRACTS List is maintained by the USEPA and is a database of RCRA facilities undergoing corrective action due to a "corrective action order". Corrective actions may be ordered beyond the facility's boundary and can be required regardless of when the release of hazardous waste occurred, even if it predates RCRA. No CORRACT sites (including the property) were identified within a 1-mile radius of the subject property.
SPL (State Priorities List)	None	The SPL list is a listing of verified hazardous waste sites that the USEPA targets for clean-up under the Hazardous Substance Cleanup Bond Act of 1984. The SPL list includes AWP sites and High Priority Preliminary Environmental Assessments sites. SPL sites (including the property) were not identified within a one mile radius of the subject property.
CERCLIS (Comprehensive Environmental Response, Compensation and Liability Information System List)	None	The CERCLIS is a listing for hazardous waste sites that are not currently under the USEPA Hazardous Ranking System for rating the relative severity of a potential threat to the environment and public health. These sites represent environmental concerns from the discharge of hazardous materials by hazardous waste generators, treatment and storage facilities, and hazardous waste disposal sites. No CERCLIS sites (including the property) were identified within a 1-mile radius of the subject property.
SCL (State CAL-SITES Listing)	None	The SCL database consists of the CAL-SITES list which were formerly listed in the Abandoned Site Program Information System. The SCL database contains a list of potential and known hazardous waste sites generated by the USEPA Toxic Substances Control Program through information provided by county health agencies, local fire departments, county agricultural commissioners, Department of Fish and Game, the RWQCB, and other local and state agencies. The information concerning most of these sites should be considered preliminary, although most confirmed sites from this database are merged into the AWP once they have been hazard ranked. No SCL sites (including the property) were identified within a 1-mile radius of the subject property.
RCRA (Resource Conservation and Recovery Act)	None	The USEPA RCRA violations/enforcement actions list was searched. No sites (including the property) were identified within 1/4 mile of the subject property.

Listing	No. of Sites	Description
TRIS (Toxic Release Inventory)	2	The USEPA, under SARA Title III, established an inventory of toxic chemical emissions from certain facilities known as TRIS. Facilities subject to this reporting are required to complete a Toxic Chemical Release Form (Form R) for specified chemicals. Two sites are identified in the TRIS database. Custom Marble at 10848 Wheatlands is reported to have released approximately 16,758 pounds of acetone and 5,400 pounds of styrene. This facility is located approximately 1/8 mile southwest of the subject site, hydrologically downgradient with respect to the apparent ground-water flow. Due to the hydrological relationship, this site does not appear to pose an environmental concern to the subject property at this time. Aerowind Corp. at 9426 Wheatlands Court is located approximately 1/8 mile north of the site, hydrologically offgradient with respect to the westerly ground-water flow. Records do not indicate type or quantity of released material. Due to the hydrological relationship, this site does not appear to pose an environmental concern to the subject property.
ERNS (Emergency Response Notification System List)	None	The ERNS is a database of reported releases of oil and hazardous substances. This database is compiled from spill reports submitted to the USEPA, US Coast Guard, National Response Center, and the Department of Transportation. No ERNS sites (including the property) were identified within 1/4-mile of the subject property.
GNRTR (Small or Large Generators of Hazardous Waste)	Five	The USEPA list of RCRA small and large quantity generators and hazardous waste transporters was reviewed. Small quantity generators are those who generate at least 100 kilograms per month (kg/mn) but less than 1,000 kg/mn of non-acute hazardous waste. Large quantity generators are those who generate more than 1,000 kg/mn of non-acute hazardous waste. Three large quantity and two small quantity generator were identified within 1/8 mile of the subject property. Inclusion on this list does not indicate that the problem exist.

9323 STEVENS ROAD
CALIFORNIA ENVIRONMENTAL PROTECTION AGENCY (CAL-EPA)

Listing	No. of Sites	Description
SWRCB LUST (Leaking Underground Storage Tanks)	Four	Four LUST sites were identified within a 1/2-mile radius of the subject site. One site is reported as "Case Closed" and does not appear to pose an environmental concern to the subject property. The remaining three cases are described below. 7-Eleven Store is located at 10710 Woodside Avenue, approximately 1/8 mile south of the site. The site is reported to had a gasoline spill which affected ground-water. Reportedly remedial action plan and feasibility study have been completed and a remedial action is underway. This case is located hydrologically offgradient with respect to the reported westerly ground-water flow and does not appear to pose an environmental concern to the subject site at this time. Chevron Service Station is located at 8888 Magnolia Avenue, approximately 1/2 mile southwest of the subject property. This site is reported to have had a gasoline spill which affected ground-water. Currently the site is undergoing remedial action. This case is located hydrologically offgradient with respect to the reported westerly ground-water flow and does not appear to pose an environmental concern to the subject site at this time. Tuneup Masters at 10529 Mission Gorge Road is located approximately 1/2 mile southwest of the subject property. This site is listed to have had a gasoline tank leak which affected ground-water. Reportedly preliminary assessment for the site was performed. This case is located hydrologically offgradient with respect to the reported westerly ground-water flow and does not appear to pose an environmental concern to the subject site.
SWLF (Solid Waste Landfills, Incinerators, and Transfer Stations)	None	The SWLF database includes records of active and inactive landfills and solid waste transfer stations through the Solid Waste Information System (SWIS). The CWMB maintains an inventory of the solid waste facilities in the state. SWLF sites were not identified within a 1/2-mile radius of the subject property.
HWP (Hazardous Waste Property/Border Zone Property)	None	The HWP authorizes the California Department of Toxic Substances Control to enter into voluntary deed restrictions with property owners who propose building specific facilities in a Border Zone. A Border Zone Property is a site which lies within 2,000 feet of a hazardous waste deposit. A hazardous waste deposit is land where hazardous waste has been deposited creating an existing or potential hazard to public health and safety. HWP sites (including the property) were not identified within a 1/2-mile radius of the property.

Listing	No. of Sites	Description
Cortese	Three	The Cortese List is a compilation of information published by the SWRCB, the RWQCB, the CWMB, the CDHS, and Bond Expenditure Plan. Sites identified on the Cortese List indicate the lead regulatory agency involved with the case. Information found in the Cortese List is then researched to determine the site status using reports from the respective lead agency involved with each site. Three Cortese sites were identified within a 1/2-mile radius of the property. These sites are the same as those listed in the LUST and they are described in a previous paragraph.
Toxic Pits	None	The California Water Quality Control Board, Division of Loans/Grants maintains an inventory of toxic pits in the state. No Toxic Pits sites (including the property) were identified within a 1/2-mile radius of the property.
AST/UST (Above Ground and Underground Storage Tank Listing)	Two	The California State Water Regional Control Board maintains an inventory of registered aboveground and underground storage tanks (AST/UST). Four sites were identified within 1/4-mile of the property. Two of these sites are reported to have had USTs closed/removed. Custom Marble is reported to have three active/in service USTs containing miscellaneous chemicals on site. The remaining Circle K Store contains two active/in service gasoline USTs on the property. Inclusion on this list does not indicate that the problem exists.

9323 STEVENS ROAD
LOCAL AGENCIES

Listing	No. of Sites	Description
SFD (Santee Fire Department)	Pending	The SFD was contacted regarding information on any hazardous materials permits or violations and information regarding the past or present existence of USTs or ASTs located on the subject property. A response is pending.
SDEHS (County of San Diego Environmental Health Services Agency)	Pending	The SDEHS was contacted regarding information on any hazardous materials permits, spills or emergency response, leaking USTs, and information regarding the past or present existence of USTs or ASTs located on the subject property. A response is pending.
SDAPCD (San Diego Air Pollution Control District)	Pending	BBL contacted the SDAPCD requesting information regarding air quality permits or violations pertaining to the subject site. A response from SDAPCD is pending and any pertinent information will be forwarded upon receipt.
HE-17	Four	San Diego County maintains an unauthorized releases list (HE 17). This database was searched and four sites were identified within a 1/2-mile radius of the property. These sites are the same as those listed in the LUST and they are described in a previous paragraph.

Section 7 - Field Sampling

Following completion of the site visit and database file search of portions of the Phase I Assessment, BBL recommended to Danaher that a limited subsurface investigation be completed at the site. The recommendation was made on the following basis:

- The site currently has an outdoor hazardous waste storage shed, where spills and staining were observed.
- A metal parts/drum storage area is located in a large area in the northeastern portion of the property.
- Historically, the facility has used trichloroethane and MEK in its parts degreasing operations. Waste hydraulic oil and other oily wastes possibly containing metals area also generated during manufacturing activities.

Based on this recommendation, Danaher authorized the implementation of a Limited Field Sampling Program to generally characterize soil and ground-water conditions, with a concentration of activities around the hazardous waste storage shed and metal parts/drum storage area. The Field Sampling Program involved the collection of subsurface soils and ground water on August 18, 1995. The work undertaken during completion of Field Sampling Program is discussed below; the analytical results are discussed in Section 9.

7.1 Soil Investigation

BBL personnel observed the installation of five soil borings, BH-1 through BH-5, at the Ketema Facility (Figure 4). Soil sampling procedures are summarized in Section 7.3. A total of three of these borings were advanced to ground water and a ground-water grab sample was collected. Two of the borings were located immediately to the east of the hazardous waste storage area (Figure 4). The remaining three borings were drilled in the metal parts/drum storage area (Figure 4). The initial boring locations were located based on data acquired during the Phase I Environmental Investigation performed during July 1995. Soil samples were collected for analysis in the vadose zone to a depth of approximately 25 feet bgs. The soil samples were transported to a state-certified laboratory for analysis. Laboratory results for these samples are described in Section 9.2. Borings were advanced to depths to 30 feet when collecting a ground-water grab sample.

Before commencement of drilling activities, appropriate soil boring permits were obtained from the County of San Diego, Department of Health Services. Appendix I contains copies of these permits. Prior to drilling, the proposed locations were geophysically cleared of underground structures by Maverick Geophysical, Underground Locating Service on August 14, 1995. Additionally, Underground Services Alert (USA) was contacted. Through USA, public utility companies were alerted and representatives of the local gas, electric, telephone, and water companies cleared the selected drilling locations. Utility lines or underground structures were not found in the area of the proposed boring locations.

The soil borings were drilled and sampled by West Hazmat Drilling Corporation using a CME-75 drilling rig equipped with continuous flight hollow-stem augers in the waste metal/drum storage area. A limited access Acker drilling rig with continuous flight hollow stem augers was used in the area of the hazardous waste storage shed. A detailed geological sampling log was maintained for each soil boring by a BBL geologist. The depth at which samples were collected, a description of the lithology encountered, and other observations including staining and odors were noted on the logs. A copy of the borehole logs are included in Appendix G.

Soil samples from the borings were collected at depths of approximately 2, 5, 7.5, 10, 15, 20, and 25 feet bgs using a California modified split spoon sampler equipped with brass cylinders. Additionally, the samples were field screened for VOCs using a Thermo Instruments Model 580B Organic Vapor Meter Photo-Ionization Detector (OVM-PID). This was accomplished by allowing the volatilization of a portion of the collected soil sample in a self-sealing plastic bag and then inserting the probe of the OVM-PID into the headspace of the bag. The OVM-PID is used to screen the headspace gasses for detectable volatile compounds. Staining associated with hydrocarbons was not observed in the soil samples collected and described. Soil cuttings accumulated during drilling were stored in sealed, labeled, DOT approved 55-gallon drums. After the soil sampling was complete, the soil borings were abandoned with a bentonite grout slurry to the surface. The drums were moved inside the metal parts/drum storage area to await final disposition.

7.2 Ground-water Investigation

As indicated on Figure 3, soil borings BH-3, BH-4, and BH-5 were drilled to a depth sufficient to penetrate the water table to collect preliminary ground-water samples. Sampling procedures are summarized in Section 7.3. Field observations during the investigation did not indicate the presence of contamination in the ground water.

The ground-water samples were transported to a state-certified laboratory for analysis. Laboratory results for these samples are described in Section 9.2. After the ground-water sample was collected, the soil borings were abandoned with an initial bentonite pellet plug consisting of two 50-pound sacks of 1/4-inch bentonite chips, followed by a bentonite grout slurry to surface.

7.3 QA/QC Procedures/Laboratory Analysis

BBL conducts all soil and ground-water sampling in accordance with established standard field procedures. These sampling procedures are designed to provide consistent and reproducible results and ensure that the objectives of the sampling program are met. Prior to drilling each boring, the stainless-steel drive sampler and brass sampling sleeves were thoroughly cleaned with a solution of tap water and Liquinox (a non-phosphate laboratory detergent). All sampling equipment is then triple rinsed with distilled water. Additionally, hollow-stem auger flights were cleaned using a high pressure, hot water "steam cleaner" prior to drilling. These procedures reduce potential cross contamination between borings.

The soil samples recovered from the split spoons were collected in cleaned brass sleeves. The ends of the first brass sleeve were covered with Teflon septa, sealed with plastic end caps, labelled, contained in self-sealing plastic bags, and placed in a chilled cooler. The samples were transported to Curtis & Tompkins,

Ltd., in Irvine, California, a California DOHS-certified analytical laboratory, following industry standard chain-of-custody protocol. The remaining brass sleeves were placed in self-sealing plastic bags and used for head-space analysis as described in Section 7.1.

Preliminary ground-water grab samples were collected from inside the auger flights with an environmentally decontaminated 2-inch diameter disposable teflon bailer. Water samples were stored in 40-ml sampling vials with Teflon-lined screw lids and septa, contained in self-locking plastic bags, placed on ice, and transported to Curtis & Tompkins, a certified analytical laboratory located in Irvine, California.

Section 8 - Site Geology and Hydrogeology

Results of the soil and ground-water investigation and subsequent data analysis indicate the following:

- The site is underlain by alluvium consisting of sands, gravels and boulders. Coarser material consisting of gravels and boulders occurs between 7 to 12 feet in the area of the metal parts/drum storage area. This sequence appears to thin to the south in the area of the hazardous waste storage area.

- This coarser material is underlain by sands to a depth of at least 30 feet bgs. These fine to coarse grained sands appear to be of granitic origin. The sands are generally micaceous with tourmaline.

- Up to 6 feet of fill material containing pieces of asphalt occurs in the metal parts/drum storage area.

- Depth to ground water is approximately 27 feet below bgs and is generally found in a unit of coarse sand.

Section 9 - Analytical Results and Discussion

9.1 Laboratory Results For Soil

Thirteen samples were submitted for analysis of total recoverable petroleum hydrocarbons (TRPH) by USEPA method 418.1. Nine of these samples were also analyzed for VOCs by USEPA Method 8240. A total of five shallow samples were also sampled for CCR Title 26 metals by USEPA Methods 6010 and 7000. Thirteen samples were analyzed for VOCs by USEPA Method 8240.

The result of these analyses are summarized in Table 3 and discussed below. Metals results are not included in Table 3 because individual total metal results were below the TTLC and below 10 times the STLC for the respective metals, with the exception of a sample collected from BH-5-2.

Review of laboratory analytical results for USEPA Method 418.1 indicated detectable levels of total petroleum hydrocarbons were present at varying concentrations in all of the borings. Four samples collected contained over 100 ppm TPH. Additional samples were collected at depths immediately below those containing higher TPH concentrations and contained lower levels of TPH. Sample BH-3-2', collected at a depth of 2 feet bgs, contained 170 ppm TPH. This boring is adjacent to the hazardous waste storage shed. A sample collected at a depth of 5 feet bgs contained only 14 ppm TPH. Sample BH-4-2', collected at 2 feet bgs, contained 320 ppm TPH. Asphaltic material was noted in the soil sampled during the investigation. Sample BH-4-5', collected at 5 feet bgs, contained 49 ppm TPH. Sample BH-4-15', collected at 15 feet bgs, contained 150 ppm TPH. A very slight odor was noted when this sample was collected. Sample BH-4-25', collected at a depth of 25 feet bgs, contained 14 ppm TPH. Sample BH-5-2', collected at a depth of 2 feet bgs, contained 1,500 ppm TPH. Asphaltic material was noted in the sample when it was collected. Sample BH-5-10', collected at 10 feet bgs, contained 12 ppm TPH. These findings are summarized below.

TPH RESULTS AND COMMENTS

Sample Number	TPH (PPM)	Comments
BH-3-2'	170	Adjacent to hazardous waste storage shed
BH-3-5'	14	Decreasing TPH
BH-4-2'	320	Asphaltic material noted in soil sample during drilling
BH-4-5'	49	
BH-4-15'	150	Very slight odor
BH-4-25'	14	
BH-5-2'	1500	Asphaltic Material noted in soil sample during drilling

Detectable concentrations of VOCs were not found in boreholes BH-1, BH-2, and BH-5. Concentrations of ethyl-benzene and xylenes were detected in soil boring BH-4. Sample BH-4-2' contained ethyl-benzene and xylenes at a concentration of 15 ppb and 91 ppb, respectively. Methylene chloride was detected in

sample BH-5-20' at a concentration of 6 ppb. This compound was identified as a suspected laboratory contaminant in the analytical report.

A review of the laboratory analytical results for CCR Title 26 metals indicated that one sample contained lead at 10 times the STLC concentration of 50 ppm. Sample BH-5-2' contained lead at a concentration of 50 ppm. A wet extraction test subsequently performed on the sample indicated a soluble lead concentration of 1.2 ppm. This concentration is below the regulatory STLC limit for lead of 5 ppm. The remaining samples had concentrations less than the TTLC and below 10 times the STLC for the respective metals. Analytical laboratory results are summarized in Table 3.

9.2 *Laboratory Results For Ground Water*

One ground-water grab sample was analyzed from each of the areas under investigation and east of the hazardous waste storage area (BH-3) in the metal parts/drum storage area (BH-5). Figure 4 illustrates the location of these areas.

Ground-water samples collected from boreholes BH-3 and BH-5 were analyzed for VOCs using USEPA Method 8240. Detectable concentrations of VOCs were not found in the ground-water samples collected from BH-3 and BH-5. Laboratory reports and chain-of-custody documentation are provided in Appendix H and summarized in Table 4.

Section 10 - References

SDBPD; 1953, 1958, 1966, 1972, 1974, 1983, and 1989; Aerial Photographs of the San Diego County on file in the San Diego County Building and Planning Department.

F. Rousseau, 1995, Personal communication between Mr. Rousseau, Ketema to Mrs. Bozena Szeremeta, Blasland, Bouck & Lee, Inc., June 7, 1995.

S. Westen, 1995, Personal communication between Mr. Steven Weston, Padre Dam Municipal Water District to Mrs. Bozena Szeremeta, Blasland, Bouck & Lee, Inc., June 24, 1995.

P. Davis, 1995, Personal communication between Mr. Phil Davis, Santee Fire Department to Mrs. Bozena Szeremeta, Blasland, Bouck & Lee, Inc., June 24, 1995.

SDEHS, 1995, Request to Review EHS Records to San Diego Environmental Health Services from Mrs. Bozena Szeremeta, Blasland, Bouck & Lee, Inc., June 28, 1995.

SDAPCD, 1995, Letter to San Diego County Air Pollution Control District, from Mrs. Bozena Szeremeta, Blasland, Bouck & Lee, Inc., June 28, 1995.

DASCS, 1973, Soil Survey of San Diego County, U.S. Department of Agriculture Soil Conservation Service, December 1973.

USGS, 1965, U.S. Geological Survey 7.5 Minute El Cajon Quadrangle Topographic Map, Scale of 1:24,000.

Tables

TABLES

1 *Regulatory Sites Within 1-Mile Radius - Ketema/Process Equipment Division - 9463, 9484 and 9489 Mission Park Place*

2 *Regulatory Sites Within 1-Mile Radius - Ketema/Process Equipment Division - 9323 Stevens Road*

3 *Soil Sampling Analytical Laboratory Results*

4 *Ground-Water Sampling Analytical Laboratory Results*

TABLE 1

REGULATORY SITES WITHIN 1-MILE RADIUS
KETEMA/PROCESS EQUIPMENT DIVISION
9484 MISSION PARK PLACE
SANTEE, CALIFORNIA

Map ID/Site Name [1]	Street Address	Direction/Distance From Property (Miles) [2]	Source [3]
1/Ametek	9484 Mission Park Pl.	Subject Site	4
4/7-Eleven Store	10710 Woodside Ave.	SW/Offgradient 1/2	1,2,5
5/Anthony T. Ditty	11427 Woodside Ave.	NE/Offgradient 1/2	1,2
3/Custom Craft Marble	10848 Wheatlands Ave.	SW/Offgradient 1/8	3
2A/C H Auto Body	10996 North Woodside	S/Offgradient 1/8	4
3/Jack Randall Automotive	10845 Wheatlands Ave.	SW/Downgradient 1/8	4
5/El Capitan Oil Company	11427 Woodside Ave.	NE/Offgradient 1/2	5

Notes: [1] ID Numbers for map in Appendix B.
[2] Ground-water gradient direction assumed from east to west (Padre Dam Municipal Water District).
[3] 1 = LUST (Leaking Underground Storage Tanks), 2 = Cortese, 3 = TRIS (Toxic Chemical Release), 4 = RCRA Registered Small or Large Generators, 5 = HE17 (SD County Unauthorized Release List).

TABLE 2

REGULATORY SITES WITHIN 1-MILE RADIUS
KETEMA/PROCESS EQUIPMENT DIVISION
9323 STEVENS ROAD
SANTEE, CALIFORNIA

Map ID/Site Name [1]	Street Address	Direction/Distance From Property (Miles) [2]	Source [3]
4/7-Eleven Store	10710 Woodside Ave.	S/Offgradient 1/8	1,2,3
7/Chevron Service Station	8888 Magnolia Ave.	SW/Offgradient 1/2	1,2,3
7/Cameron Brothers Construction	8866 Magnolia Ave.	SW/Offgradient 1/2	1,3
8/Tuneup Masters	10529 Mission Gorge	SW/Offgradient 1/2	1,2,3
5/Custom Craft Marble	10848 Wheatlands Ave.	NE/Offgradient 1/8	4
2A/Alts Tool and Machine	9316 Abraham Way	NW/Offgradient 1/8	5
2B/Jerames Tool Mfg	9356 Abraham Way	NW/Offgradient 1/8	5
2B/San Diego Desing Inc.	9366 Abraham Way	NW/Offgradient 1/8	5
3A/Aerowind Corp	9429 Abraham Way	N/Offgradient 1/8	4,5
3B/Philip Thearle's Autowerks	9426 Wheatlands Court	N/Offgradient 1/8	5

Notes: [1] ID Numbers for map in Appendix B.
[2] Ground-water gradient direction assumed from east to west (Padre Dam Municipal Water District).
[3] 1 = LUST (Leaking Underground Storage Tanks), 2 = Cortese, 3 = HE17 (SD County Unauthorized Release List), 4 = TRIS (Toxic Chemical Release), 5 = RCRA Registered Small or Large Generators.

TABLE 3

SOIL SAMPLING
ANALYTICAL LABORATORY RESULTS
KETEMA PROCESS EQUIPMENT DIVISION
SANTEE, CALIFORNIA

SAMPLE I.D.	DATE SAMPLED	418.1 TRPH (ppm)	VOCs (8240)									METALS TTLC (ppm)	OTHER
			PCE[1] (ppb)	TCE[2] (ppb)	DCE[3] (ppb)	TCA[4] (ppb)	DCA[5] (ppb)	B[6] (ppb)	T[7] (ppb)	E[8] (ppb)	X[9] (ppb)		
BH-1-2'	8/18/95	9.2	ND	ND	ND	ND	ND	ND	ND	ND	ND	yes	--
BH-2-2'	8/18/95	9.4	ND	ND	ND	ND	ND	ND	ND	ND	ND	yes	--
BH-2-25'	8/18/95	6.9	ND	ND	ND	ND	ND	ND	ND	ND	ND	--	--
BH-3-2'	8/18/95	170	ND	ND	ND	ND	ND	ND	ND	ND	ND	yes	--
BH-3-5'	8/18/95	14	--	--	--	--	--	--	--	--	--	--	--
BH-3-25'	8/18/95	7.3	ND	ND	ND	ND	ND	ND	ND	ND	ND	--	--
BH-4-2'	8/18/95	320	ND	ND	ND	ND	ND	ND	ND	15	91	yes	--
BH-4-5'	8/18/95	49	--	--	--	--	--	--	--	--	--	--	--
BH-4-15'	8/18/95	150	--	--	--	--	--	--	--	--	--	--	--
BH-4-25'	8/18/95	14	ND	ND	ND	ND	ND	ND	ND	ND	ND	--	--
BH-5-2'	8/18/95	1,500	ND	ND	ND	ND	ND	ND	ND	ND	ND	lead (50)	soluble lead (1.2 ppm)
BH-5-10'	8/18/95	12	--	--	--	--	--	--	--	--	--	--	--
BH-5-20'	8/18/95	9.2	ND	ND	ND	ND	ND	ND	ND	ND	ND	--	methylene chloride (6 ppb) [12]

NOTES:
[1] PCE = Tetrachloroethene
[2] TCE = Trichloroethene
[3] DCE = 1,1-Dichloroethene
[4] TCA = 1,1,1-Trichloroethane
[5] DCA = 1,1-Dichloroethane
[6] B = Benzene
[7] T = Toluene
[8] E = Ethylbenzene
[9] X = Total Xylenes
[10] -- = Not analyzed.
[11] ND = Not detected above laboratory detection limits. See laboratory reports.
[12] Suspected Laboratory Contaminant

TABLE 4

GROUND-WATER SAMPLING
ANALYTICAL LABORATORY RESULTS
KETEMA PROCESS EQUIPMENT DIVISION
SANTEE, CALIFORNIA

SAMPLE I.D.	DATE SAMPLED	418.1 TRPH (ppm)	VOCs (8240)									METALS TTLC (ppm)	OTHER
			PCE[1] (ppb)	TCE[2] (ppb)	DCE[3] (ppb)	TCA[4] (ppb)	DCA[5] (ppb)	B[6] (ppb)	T[7] (ppb)	E[8] (ppb)	X[9] (ppb)		
BH-3	8/18/95	–[10]	ND[11]	ND	ND	ND	ND	ND	ND	ND	ND	–	–
BH-5	8/18/95	–	ND	ND	ND	ND	ND	ND	ND	ND	ND	–	–

NOTES: [1] PCE = Tetrachloroethene
[2] TCE = Trichloroethene
[3] DCE = 1,1-Dichloroethene
[4] TCA = 1,1,1-Trichloroethane
[5] DCA = 1,1-Dichloroethane
[6] B = Benzene
[7] T = Toluene
[8] E = Ethylbenzene
[9] X = Total Xylenes
[10] – = Not analyzed.
[11] ND = Not detected above laboratory detection limits. See laboratory reports.

Figures

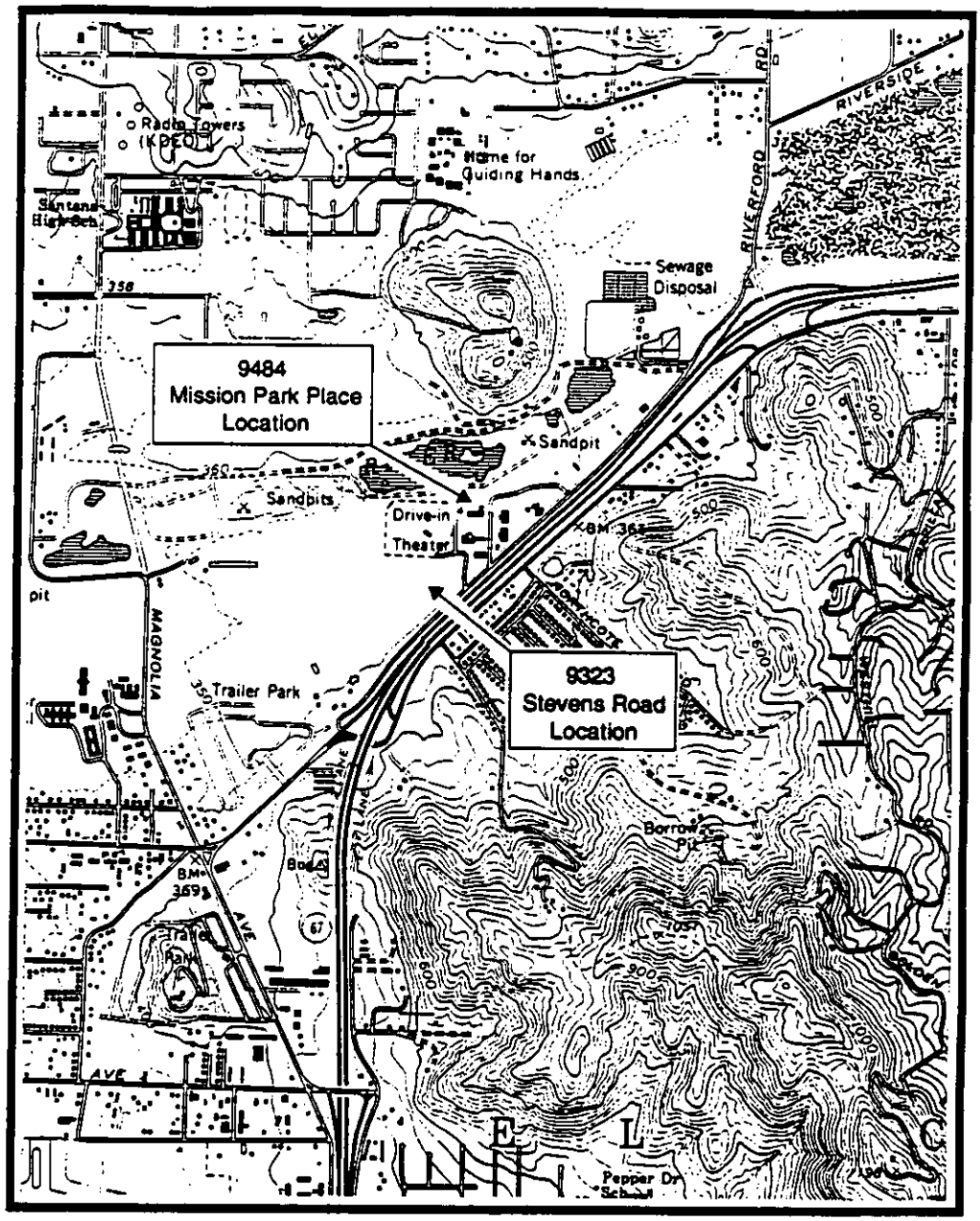
FIGURES

1 *Topographic Map of Site Location and Vicinity*

2 *Schematic Plot Plan - 9484 Mission Park Place*

3 *Schematic Plot Plan - 9323 Stevens Road*

4. *Borehole Locations*



EXPLANATION

0 1/2
MILES

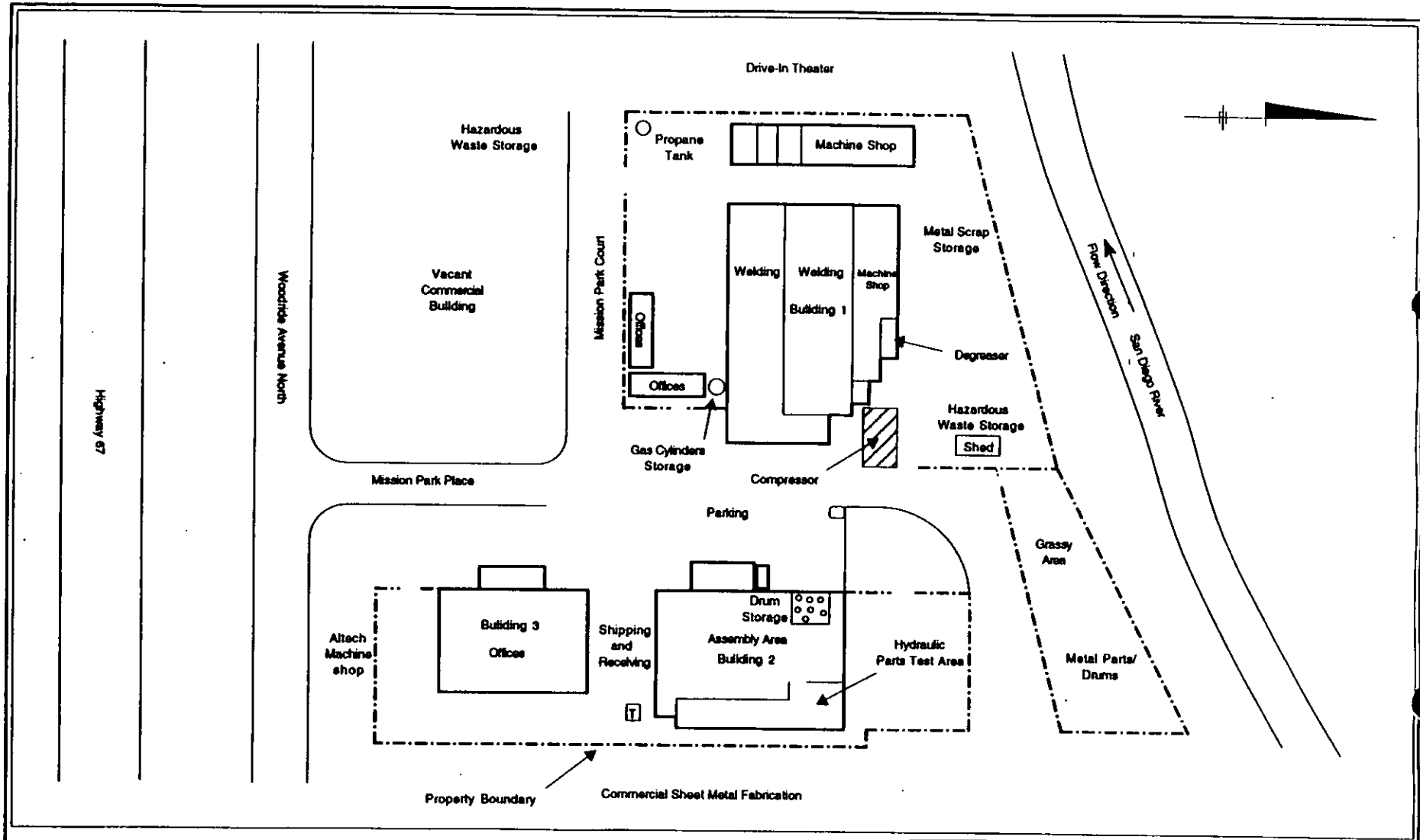
USGS 1:24,000 SCALE
EL CAJON QUADRANGLE
TOPOGRAPHIC MAP

DANAHER CORPORATION
1250 24th Street NW
Washington D.C.

KETEMA PROCESS EQUIPMENT DIVISION
9484 Mission Park Place
9323 Stevens Road
Santee, California
30731.02

TOPOGRAPHIC MAP OF
SITE LOCATION AND VICINITY

FIGURE
1



EXPLANATION

T Pad Mounted Transformer

Property Boundary

BLASLAND, BOUCK & LEE
ENGINEERS & SCIENTISTS
Irvine, California

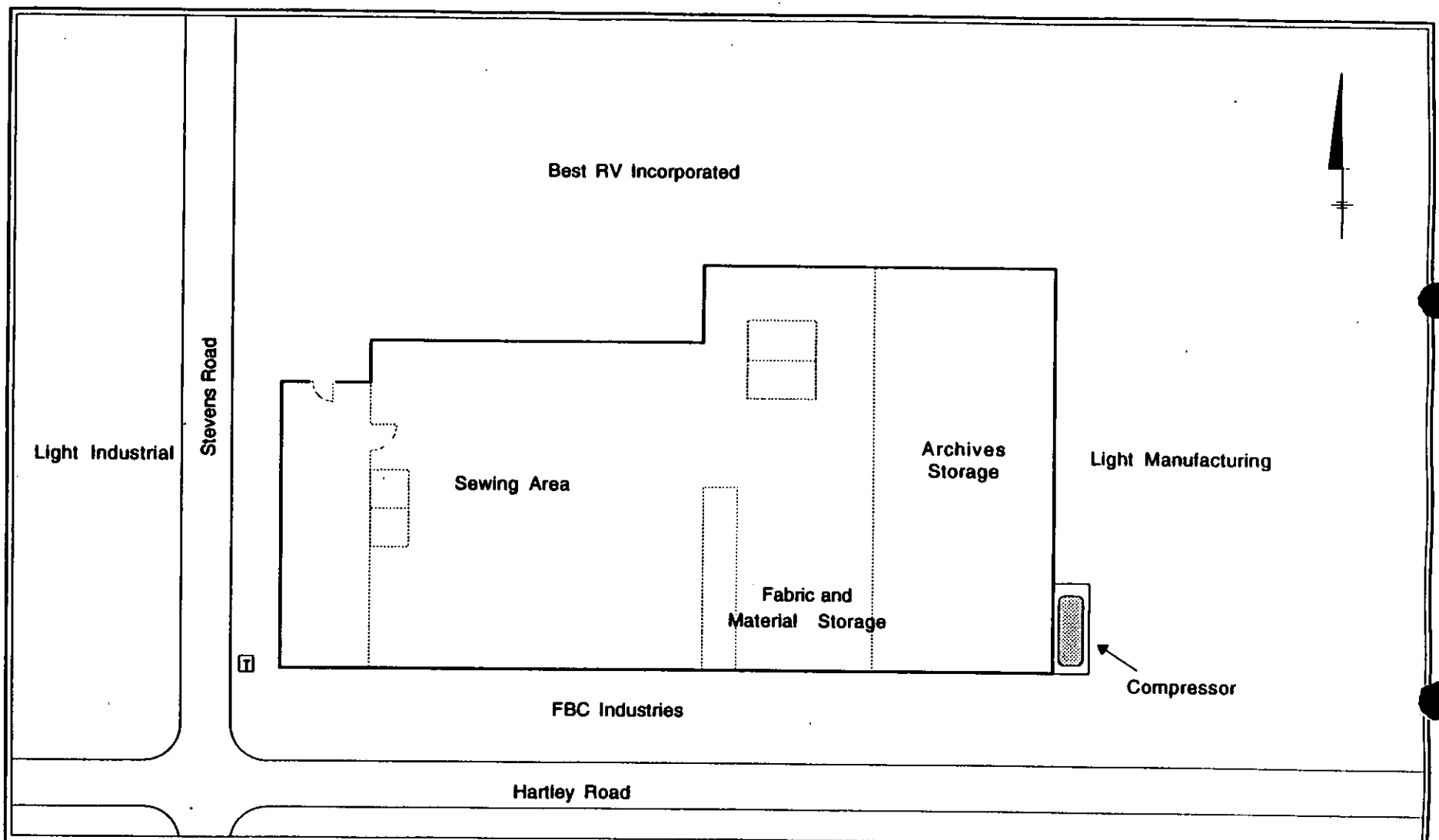
NOT TO SCALE

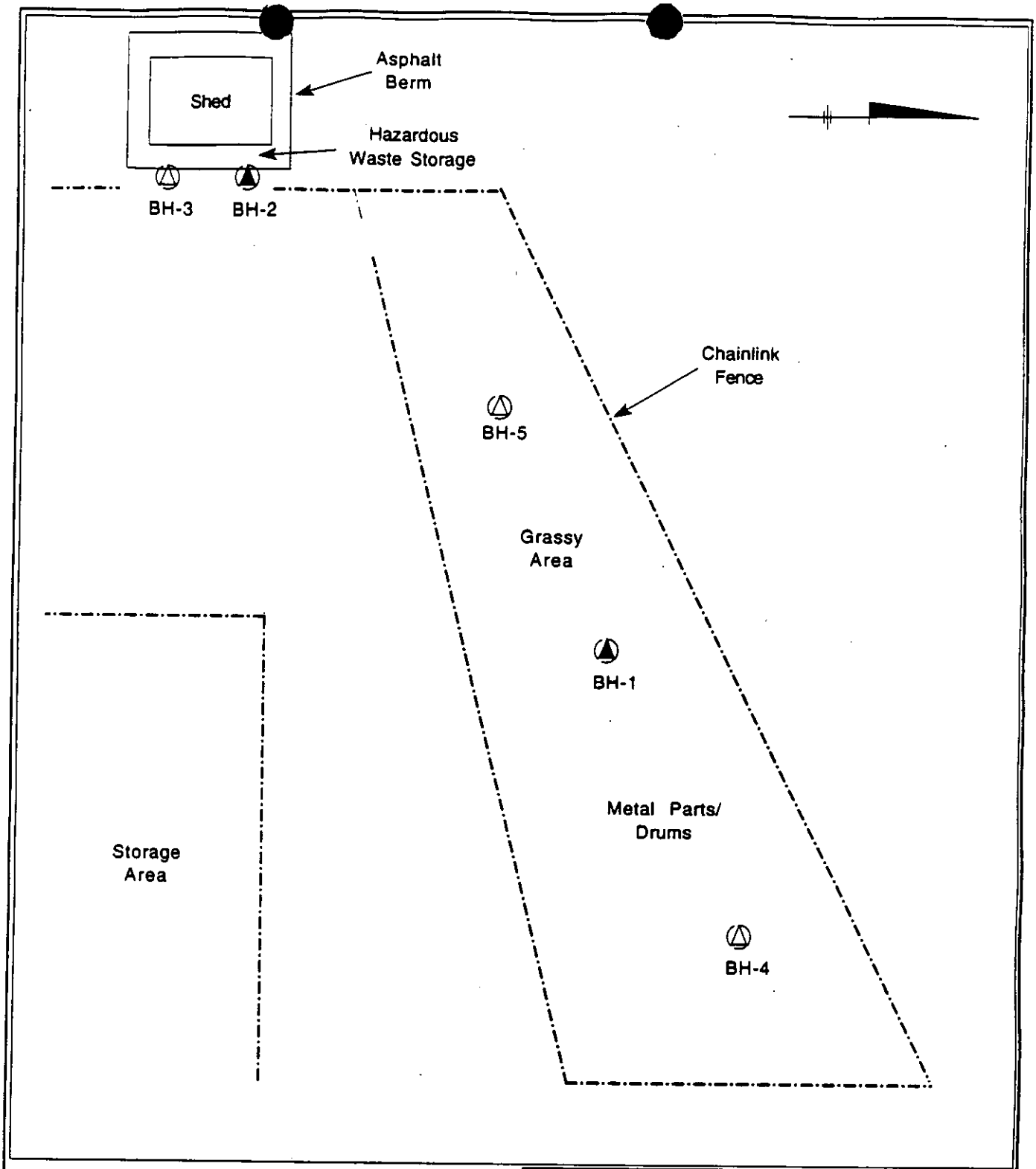
DANAHER CORPORATION
1250 24th Street NW
Washington D.C.

KETEMA PROCESS EQUIPMENT DIVISION
Mission Park Place
mission park court
Santee, California
30731 02

SCHEMATIC PLOT PLAN

FIGURE 2


Best RV Incorporated
Light Industrial
Stevens Road
Sewing Area
Archives Storage
Light Manufacturing
Fabric and Material Storage
Compressor
FBC Industries
Hartley Road
EXPLANATION
Pad Mounted Transformer
BLASLAND, BOUCK & LEE
ENGINEERS & SCIENTISTS
Irvine, California
NOT TO SCALE
SJB072895
DANAHER CORPORATION
1250 24th Street NW
Washington D.C.
KETEMA PROCESS EQUIPMENT DIVISION
Stevens Road
Santee, California
307302
SCHEMATIC PLOT PLAN
FIGURE 3



EXPLANATION

Soil Boring

Soil Boring with Ground-Water Sample

40 0 40

Approximate Scale (in feet)

BLASLAND, BOUCK & LEE
ENGINEERS & SCIENTISTS
Irvine, California

DANAHER CORPORATION
1250 24th Street NW
Washington D.C.

KETEMA PROCESS EQUIPMENT DIVISION
9484 Mission Park Place
Santee, California

30731.02

SOIL BORING LOCATIONS

FIGURE 4

Appendices

APPENDICES

A Selected Site Photographs
B Chemical Inventory List
C Selected Hazardous Waste Manifests
D Permits
E Correspondence
F Vista Environmental Information, Inc., National Radius Survey
G Subsurface Logs
H Analytical Data
I Soil/Ground-water Investigation Permits

ESTAB ID

H 0 2 0 9 7

Date 10 / 12 / 90

HAZARDOUS MATER BUSINESS PLAN

I. INVENTORY

2

LIST HAZARDOUS MATERIALS YOUR ESTABLISHMENT USES OR HANDLES AS FOLLOWS:
- CARCINOGENS, REPRODUCTIVE TOXINS OR HAZARDOUS COMPRESSED GASES IN ANY QUANTITY.
- OTHER HAZARDOUS SUBSTANCES, OR COMPOUNDS IN QUANTITIES EQUAL TO OR GREATER THAN 55 GALLONS, 500 POUNDS OR 200 CUBIC FEET AT ANY ONE TIME.
- ANY ACUTELY HAZARDOUS SUBSTANCE EQUAL TO OR GREATER THAN THRESHOLD PLANNING QUANTITIES.

SEE ATTACHED INVENTORY FORM CODE TABLE FOR STORAGE CODES AND HAZARDOUS CATAGORIES.

ITEM 001 — A R G O N

15 21 — CAS NO. 7 4 4 0 - 3 7 - 1

70 MAXIMUM AMT AT 1 TIME	TOTAL YEARLY AMOUNT	1 = POUNDS, 2 = GALLONS, 3 = TONS, 4 = MILLILITERS, 5 = MILLIGRAMS, 6 = CUBIC FEET	UNITS	STORAGE	HAZARD CATEGORIES		CHECK IF APPROPRIATE: CONF	CARCINOGEN/ REPRO-TOXIN	HSDS	106 (OFFICE USE ONLY)
1 7 5 0 0 0	5 0 0 0 0 0 0		6	A S 3	0 2					
118	124		133	134	137	139	141	142	143	

ITEM 002 — H E L I U M

15 21 — CAS NO. 7 4 4 0 - 5 9 - 7

70 MAXIMUM AMT AT 1 TIME	TOTAL YEARLY AMOUNT	1 = POUNDS, 2 = GALLONS, 3 = TONS, 4 = MILLILITERS, 5 = MILLIGRAMS, 6 = CUBIC FEET	UNITS	STORAGE	HAZARD CATEGORIES		CHECK IF APPROPRIATE: CONF	CARCINOGEN/ REPRO-TOXIN	HSDS	106 (OFFICE USE ONL
5 1 0 0	1 1 6 4 0		6	C Y	0 2					
118	124		133	134	137	139	141	142	143	

ITEM 003 — A R G O N

15 21 — CAS NO. 7 4 4 0 - 3 7 - 1

70 MAXIMUM AMT AT 1 TIME	TOTAL YEARLY AMOUNT	1 = POUNDS, 2 = GALLONS, 3 = TONS, 4 = MILLILITERS, 5 = MILLIGRAMS, 6 = CUBIC FEET	UNITS	STORAGE	HAZARD CATEGORIES		CHECK IF APPROPRIATE: CONF	CARCINOGEN/ REPRO-TOXIN	HSDS	106 (OFFICE USE ONLY)
6 5 0 0	9 0 7 2		6	C Y	0 2					
118	124		133	134	137	139	141	142	143	

ESTAB ID

[# 0 2 0 5 /] Date 10 / 12 / 89

HAZARDOUS MATERIALS BUSINESS PLAN

I. INVENTORY

2

LIST HAZARDOUS MATERIALS YOUR ESTABLISHMENT USES OR HANDLES AS FOLLOWS:
- CARCINOGENS, REPRODUCTIVE TOXINS OR HAZARDOUS COMPRESSED GASES IN ANY QUANTITY.
- OTHER HAZARDOUS SUBSTANCES, OR COMPOUNDS IN QUANTITIES EQUAL TO OR GREATER THAN 55 GALLONS, 500 POUNDS OR 200 CUBIC FEET AT ANY ONE TIME.
- ANY ACUTELY HAZARDOUS SUBSTANCE EQUAL TO OR GREATER THAN THRESHOLD PLANNING QUANTITIES.

SEE ATTACHED INVENTORY FORM CODE TABLE FOR STORAGE CODES AND HAZARDOUS CATAGORIES.

ITEM

[0 0 4] [O X Y G E N]

15 21

CAS NO.

[7 7 8 2 - 4 4 - 7]

70 MAXIMUM AMT AT 1 TIME	TOTAL YEARLY AMOUNT	1 = POUNDS 2 = GALLONS 3 = TONS 4 = MILLILITERS 5 = MILLIGRAMS 6 = CUBIC FEET	UNITS	STORAGE	HAZARD CATEGORIES		CHECK IF APPROPRIATE: CONF	CARCINOGEN/ REPRO-TOXIN	106 (OFFICE USE ONLY) HSDS
1 1 1 0 0	3 4 4 1 4		6	C Y	02				
118 124			133	134	137	139	141	142	143

ITEM

[0 0 5] [2 % O X Y G E N 98 % A R G O N]

15 21

CAS NO.

[7 7 8 2 - 4 4 - 7]

7 4 4 0 - 3 7 - 1

70 MAXIMUM AMT AT 1 TIME	TOTAL YEARLY AMOUNT	1 = POUNDS 2 = GALLONS 3 = TONS 4 = MILLILITERS 5 = MILLIGRAMS 6 = CUBIC FEET	UNITS	STORAGE	HAZARD CATEGORIES		CHECK IF APPROPRIATE: CONF	CARCINOGEN/ REPRO-TOXIN	106 (OFFICE USE ONLY) HSDS
1 2 0 0	4 6 9 0		6	C Y	02				
118	124		133	134	137	139	141	142	143

ITEM

[0 0 6] [2 5 % C A R B O N D I O X I D E]

15 21

CAS NO.

[1 2 4 - 3 8 - 9]

70 MAXIMUM AMT AT 1 TIME	TOTAL YEARLY AMOUNT	1 = POUNDS 2 = GALLONS 3 = TONS 4 = MILLILITERS 5 = MILLIGRAMS 6 = CUBIC FEET	UNITS	STORAGE	HAZARD CATEGORIES		CHECK IF APPROPRIATE: CONF	CARCINOGEN/ REPRO-TOXIN	106 (OFFICE USE ONLY) HSDS
6 6 0 0	1 7 0 0		6	C Y	02				
118	124		133	134	137	139	141	142	143

ESTAB ID

H 0 2 0 9 7

Date 10 / 12 / 89

HAZARDOUS MATERIALS BUSINESS PLAN

I. INVENTORY

2

LIST HAZARDOUS MATERIALS YOUR ESTABLISHMENT USES OR HANDLES AS FOLLOWS:
- CARCINOGENS, REPRODUCTIVE TOXINS OR HAZARDOUS COMPRESSED GASES IN ANY QUANTITY.
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- ANY ACUTELY HAZARDOUS SUBSTANCE EQUAL TO OR GREATER THAN THRESHOLD PLANNING QUANTITIES.

SEE ATTACHED INVENTORY FORM CODE TABLE FOR STORAGE CODES AND HAZARDOUS CATAGORIES.

ITEM

007 NITROGEN

15 21 CAS NO. 7727-37-9

70 MAXIMUM AMT AT 1 TIME: 900 (118) | TOTAL YEARLY AMOUNT: 912 (124)

1 = POUNDS, 2 = GALLONS, 3 = TONS, 4 = MILLILITERS, 5 = MILLIGRAMS, 6 = CUBIC FEET

UNITS: 6 (133) | STORAGE: CY (134) | HAZARD CATEGORIES: 02 (137), (139) | CONF (141) | CHECK IF APPROPRIATE — CARCINOGEN/REPRO-TOXIN (142) | (OFFICE USE ONLY) MSDS (143)

ITEM

008 25% Carbon Dioxide 75% Argon

15 21 CAS NO. 124-38-9 / 2440-37-1 (108)

70 MAXIMUM AMT AT 1 TIME: 1500 (118) | TOTAL YEARLY AMOUNT: 381 (124)

1 = POUNDS, 2 = GALLONS, 3 = TONS, 4 = MILLILITERS, 5 = MILLIGRAMS, 6 = CUBIC FEET

UNITS: 6 (133) | STORAGE: CY (134) | HAZARD CATEGORIES: 02 (137), (139) | CONF (141) | CHECK IF APPROPRIATE — CARCINOGEN/REPRO-TOXIN (142) | (OFFICE USE ONLY) MSDS (143)

ITEM

009 CHEM-O-LENE

15 21 CAS NO. NONE

70 MAXIMUM AMT AT 1 TIME: 4500 (118) | TOTAL YEARLY AMOUNT: 1575 (124)

1 = POUNDS, 2 = GALLONS, 3 = TONS, 4 = MILLILITERS, 5 = MILLIGRAMS, 6 = CUBIC FEET

UNITS: 6 (133) | STORAGE: CY (134) | HAZARD CATEGORIES: 02 (137), (139) | CONF (141) | CHECK IF APPROPRIATE — CARCINOGEN/REPRO-TOXIN (142) | (OFFICE USE ONLY) MSDS (143)

ESTAB ID

a 0 2 0 9 7

Date 10 / 12 / 90

HAZARDOUS MATERIALS BUSINESS PLAN

I. INVENTORY

2

LIST HAZARDOUS MATERIALS YOUR ESTABLISHMENT USES OR HANDLES AS FOLLOWS:
- CARCINOGENS, REPRODUCTIVE TOXINS OR HAZARDOUS COMPRESSED GASES IN ANY QUANTITY.
- OTHER HAZARDOUS SUBSTANCES, OR COMPOUNDS IN QUANTITIES EQUAL TO OR GREATER THAN 55 GALLONS, 500 POUNDS OR 200 CUBIC FEET AT ANY ONE TIME.
- ANY ACUTELY HAZARDOUS SUBSTANCE EQUAL TO OR GREATER THAN THRESHOLD PLANNING QUANTITIES.

SEE ATTACHED INVENTORY FORM CODE TABLE FOR STORAGE CODES AND HAZARDOUS CATAGORIES.

ITEM

010 TRIMIX ARGON-HELIUM-CARBON DIOXIDE MIX

15 21 CAS NO. 7440-59-7

7440-37-1

1244-38-9

106

70 MAXIMUM AMT AT 1 TIME: 1800 — TOTAL YEARLY AMOUNT: 3892 — 118 — 124

1 = POUNDS, 2 = GALLONS, 3 = TONS, 4 = MILLILITERS, 5 = MILLIGRAMS, 6 = CUBIC FEET

UNITS: 6 — 133 — STORAGE: CY — 134 — HAZARD CATEGORIES: 02 — 137 — 139

CHECK IF APPROPRIATE — CONF 141 — CARCINOGEN/REPRO-TOXIN 142 — (OFFICE USE ONLY) MSDS 143

ITEM

011 PROPANE

15 21 CAS NO. 74-84-0

7498-0

115-07-1

1060-97-8

70 MAXIMUM AMT AT 1 TIME: 1000 — TOTAL YEARLY AMOUNT: 5048.7 — 118 — 124

1 = POUNDS, 2 = GALLONS, 3 = TONS, 4 = MILLILITERS, 5 = MILLIGRAMS, 6 = CUBIC FEET

UNITS: 6 — 133 — STORAGE: AS2 — 134 — HAZARD CATEGORIES: 02 — 137 — 01 — 139

CHECK IF APPROPRIATE — CONF 141 — CARCINOGEN/REPRO-TOXIN 142 — (OFFICE USE ONLY) MSDS 143

ITEM

012 KLOR-SOLV NO 2

15 21 CAS NO. 71556

Diy ant

70 MAXIMUM AMT AT 1 TIME: 220 — TOTAL YEARLY AMOUNT: 378 — 118 — 124

1 = POUNDS, 2 = GALLONS, 3 = TONS, 4 = MILLILITERS, 5 = MILLIGRAMS, 6 = CUBIC FEET

UNITS: 2 — 133 — STORAGE: DM5 — 134 — HAZARD CATEGORIES — 137 — 139

CHECK IF APPROPRIATE — CONF 141 — CARCINOGEN/REPRO-TOXIN 142 — (OFFICE USE ONLY) MSDS 143

ESTAB N

H 0 2 0 9 7

Date 10/12 / 90

HAZARDOUS MATERI BUSINESS PLAN

I. INVENTORY

2

LIST HAZARDOUS MATERIALS YOUR ESTABLISHMENT USES OR HANDLES AS FOLLOWS:
- CARCINOGENS, REPRODUCTIVE TOXINS OR HAZARDOUS COMPRESSED GASES IN ANY QUANTITY.
- OTHER HAZARDOUS SUBSTANCES, OR COMPOUNDS IN QUANTITIES EQUAL TO OR GREATER THAN 55 GALLONS, 500 POUNDS OR 200 CUBIC FEET AT ANY ONE TIME.
- ANY ACUTELY HAZARDOUS SUBSTANCE EQUAL TO OR GREATER THAN THRESHOLD PLANNING QUANTITIES.

SEE ATTACHED INVENTORY FORM CODE TABLE FOR STORAGE CODES AND HAZARDOUS CATAGORIES.

ITEM 013 — ENGINE DEGREASER

15 21 — CAS NO. NONE

70 MAXIMUM AMT AT 1 TIME: 55 — TOTAL YEARLY AMOUNT: 165 — UNITS: 2 — STORAGE: DP5 — HAZARD CATEGORIES — CHECK IF APPROPRIATE: CONF — CARCINOGEN/REPRO-TOXIN — (OFFICE USE ONLY) MSDS

1 = POUNDS, 2 = GALLONS, 3 = TONS, 4 = MILLILITERS, 5 = MILLIGRAMS, 6 = CUBIC FEET

118 124 133 134 137 139 141 142 143

ITEM 014 — CIMPERIAL 1011

15 21 — CAS NO. NONE

70 MAXIMUM AMT AT 1 TIME: 55 — TOTAL YEARLY AMOUNT: 110 — UNITS: 2 — STORAGE: DMS — HAZARD CATEGORIES — CHECK IF APPROPRIATE: CONF — CARCINOGEN/REPRO-TOXIN — (OFFICE USE ONL) MSDS

1 = POUNDS, 2 = GALLONS, 3 = TONS, 4 = MILLILITERS, 5 = MILLIGRAMS, 6 = CUBIC FEET

118 124 133 134 137 139 141 142 143

ITEM 015 — RADIAC NF-55 W&B GRINDING COOLANT E-55

15 21 — CAS NO. 123-07-2 / 81-37-8 / 102-71-6 / 106 1113-50-1

70 MAXIMUM AMT AT 1 TIME: 55 — TOTAL YEARLY AMOUNT: 110 — UNITS: 2 — STORAGE: DM5 — HAZARD CATEGORIES — CHECK IF APPROPRIATE: CONF — CARCINOGEN/REPRO-TOXIN — (OFFICE USE ONLY) MSDS

1 = POUNDS, 2 = GALLONS, 3 = TONS, 4 = MILLILITERS, 5 = MILLIGRAMS, 6 = CUBIC FEET

118 124 133 134 137 139 141 142 143

ESTAB ID

H 0 2 0 9 7

Date 10 / 12 / 90

HAZARDOUS MATER BUSINESS PLAN

I. INVENTORY

2

LIST HAZARDOUS MATERIALS YOUR ESTABLISHMENT USES OR HANDLES AS FOLLOWS:

- CARCINOGENS, REPRODUCTIVE TOXINS OR HAZARDOUS COMPRESSED GASES IN ANY QUANTITY.
- OTHER HAZARDOUS SUBSTANCES, OR COMPOUNDS IN QUANTITIES EQUAL TO OR GREATER THAN 55 GALLONS, 500 POUNDS OR 200 CUBIC FEET AT ANY ONE TIME.
- ANY ACUTELY HAZARDOUS SUBSTANCE EQUAL TO OR GREATER THAN THRESHOLD PLANNING QUANTITIES.

SEE ATTACHED INVENTORY FORM CODE TABLE FOR STORAGE CODES AND HAZARDOUS CATAGORIES.

ITEM

01 6 W E L C O A N T I S P L A T T E R

15 21 CAS NO. 7 1 - 5 5 - 6

70 MAXIMUM AMT AT 1 TIME: 5 5 (118)

TOTAL YEARLY AMOUNT: 5 5 (124)

1 = POUNDS, 2 = GALLONS, 3 = TONS, 4 = MILLILITERS, 5 = MILLIGRAMS, 6 = CUBIC FEET

UNITS: 2 (133) STORAGE: D M 5 (134) HAZARD CATEGORIES: (137) (139)

106 — CHECK IF APPROPRIATE — CONF (141) CARCINOGEN/REPRO-TOXIN (142) (OFFICE USE ONLY) MSDS (143)

ITEM

01 7 T E L L U S O I L 4 6

15 21 CAS NO. 6 4 7 4 2 - 5 7 - 7

70 MAXIMUM AMT AT 1 TIME: 1 6 5 (118)

TOTAL YEARLY AMOUNT: 3 3 0 (124)

1 = POUNDS, 2 = GALLONS, 3 = TONS, 4 = MILLILITERS, 5 = MILLIGRAMS, 6 = CUBIC FEET

UNITS: 2 (133) STORAGE: D M 5 (134) HAZARD CATEGORIES: (137) (139)

106 — CHECK IF APPROPRIATE — CONF (141) CARCINOGEN/REPRO-TOXIN (142) (OFFICE USE ONLY) MSDS (143)

ITEM

0 1 8 S H E L L 8 5 - 1 4 0

15 21 CAS NO. 6 4 7 4 2 - 5 7 - 0

6 4 7 4 2 - 6 5 - 0

6 4 7 4 2 - 5 2 - 5

70 MAXIMUM AMT AT 1 TIME: 5 5 (118)

TOTAL YEARLY AMOUNT: 5 5 (124)

1 = POUNDS, 2 = GALLONS, 3 = TONS, 4 = MILLILITERS, 5 = MILLIGRAMS, 6 = CUBIC FEET

UNITS: 2 (133) STORAGE: D M 5 (134) HAZARD CATEGORIES: (137) (139)

106 — CHECK IF APPROPRIATE — CONF (141) CARCINOGEN/REPRO-TOXIN (142) (OFFICE USE ONLY) MSDS (143)

ESTAB NO

0 2 0 9 7

Date 10 / 12 / 90

HAZARDOUS MATERIALS BUSINESS PLAN

I. INVENTORY

LIST HAZARDOUS MATERIALS YOUR ESTABLISHMENT USES OR HANDLES AS FOLLOWS:
- CARCINOGENS, REPRODUCTIVE TOXINS OR HAZARDOUS COMPRESSED GASES IN ANY QUANTITY.
- OTHER HAZARDOUS SUBSTANCES, OR COMPOUNDS IN QUANTITIES EQUAL TO OR GREATER THAN 55 GALLONS, 500 POUNDS OR 200 CUBIC FEET AT ANY ONE TIME.
- ANY ACUTELY HAZARDOUS SUBSTANCE EQUAL TO OR GREATER THAN THRESHOLD PLANNING QUANTITIES.

SEE ATTACHED INVENTORY FORM CODE TABLE FOR STORAGE CODES AND HAZARDOUS CATAGORIES.

ITEM 019 — BO-DAY OIL SUPER HD MOTOR OIL 40 CD/SF

CAS NO. 64742-65-0 / 64742-18-3

70 MAXIMUM AMT AT 1 TIME	TOTAL YEARLY AMOUNT	UNITS	STORAGE	HAZARD CATEGORIES	CONF	CARCINOGEN/ REPRO-TOXIN	HSDS
55	110	2	DM5				
118	124	133	134	137 / 139	141	142	143

1 = POUNDS, 2 = GALLONS, 3 = TONS, 4 = MILLILITERS, 5 = MILLIGRAMS, 6 = CUBIC FEET

ITEM 020 — BO-DAY OIL RED TAC GEAR OIL SAE 85W140

CAS NO. 64742-65-0 / 64742-01-4 / 64742-18-3

70 MAXIMUM AMT AT 1 TIME	TOTAL YEARLY AMOUNT	UNITS	STORAGE	HAZARD CATEGORIES	CONF	CARCINOGEN/ REPRO-TOXIN	HSDS
30	30	2	DM3				
118	124	133	134	137 / 139	141	142	143

1 = POUNDS, 2 = GALLONS, 3 = TONS, 4 = MILLILITERS, 5 = MILLIGRAMS, 6 = CUBIC FEET

ITEM 021 — ANTIFREEAE ETHYLENE GLYCOL

CAS NO. MIXTURE

70 MAXIMUM AMT AT 1 TIME	TOTAL YEARLY AMOUNT	UNITS	STORAGE	HAZARD CATEGORIES	CONF	CARCINOGEN/ REPRO-TOXIN	HSDS
55	55	2	DM5				
118	124	133	134	137 / 139	141	142	143

1 = POUNDS, 2 = GALLONS, 3 = TONS, 4 = MILLILITERS, 5 = MILLIGRAMS, 6 = CUBIC FEET

TEXAS WATER COMMISSION
P.O. Box 13087, Capitol Station
Austin, Texas 78711-3087

175-01

Please print or type. (Form designed for use on elite (12-pitch) typewriter.)

Form Approved. OMB No. 2050-0039 Expires 9-30-94

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. CAD981450232 Manifest Document No. 87074
2. Page 1 of 1 — Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address KETEMA PROCESS
9484 MISSION PARK PL.
SANTEE, CA. 92071

4. Generator's Phone (619) 449-0202

A. State Manifest Document Number 887074
B. State Generator's ID 99906

5. Transporter 1 Company Name: SAFETY-KLEEN CORP.
6. US EPA ID Number: TXD 984908202
C. State Transporter's ID
D. Transporter's Phone 800 669-5740

7. Transporter 2 Company Name: Safety-Kleen Corp
8. US EPA ID Number: TXD984908202
E. State Transporter's ID 40259 TX
F. Transporter's Phone 1-800-669-5740

9. Designated Facility Name and Site Address 000618
SAFETY-KLEEN CORP.
1722 COOPER CREEK ROAD
DENTON TX 76208
10. US EPA ID Number: TXD 077603371
G. State Facility's ID 65124
H. Facility's Phone 817 383-2611

11. US DOT Description (Including Proper Shipping Name, Hazard Class and ID Number)	HM	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No.
a. RQ HAZARDOUS WASTE, LIQUID, N.O.S. 9 NA3082 PG III (D008)(ERG#31) (CAEPA#342)	X	1	DM	166	P	OUTS101H
b.						
c.						
d.						

J. Additional Descriptions for Materials Listed Above
(A) D006, (A) CA STATE WASTE CODE 721

K. Handling Codes for Wastes Listed Above
(A) S01 S02 T50 M141 M061

15. Special Handling Instructions and Additional Information
7-175-01-3777 PP#38814 TE: CA#436564 CA STATE TRANSP ID# 439992
EMERG RESP#708-888-4660 24HR. SPENT AQUEOUS SOLUTION
FOR RECYCLE SKDOT# A: 632 B: C: D:

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.

Printed/Typed Name	Signature	Date (Month Day Year)
F. Rousseau	F Rousseau	8 22 94

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Date (Month Day Year)
TODD DORMEIER		8 22 94

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Date (Month Day Year)
E.A. Dwight		08 23 94

19. Discrepancy Indication Space
#2. - 1B. 11# N

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.

Printed/Typed Name	Signature	Date (Month Day Year)
C Burke		8 30 94

EPA Form 8700-22 (Rev. 9-88) Previous edition is obsolete. White - original Pink-TSD Facility Yellow-Transporter Green-Generator's first copy

TNRCC-311 (Rev. 01/01/89) TXOC297

TEXAS WATER COMMISSION 7-175-01
P.O. Box 13087, Capitol Station
Austin, Texas 78711-3087

Please print or type. (Form designed for use on elite (12-pitch) typewriter.)

Form Approved. OMB No. 2050-0039 Expires 9-30-94

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No.	Manifest Document No.	2. Page 1 of 1	Information in the shaded areas is not required by Federal law.
CAD981450252	20834		

3. Generator's Name and Mailing Address: KETEMA PROCESS, 9484 MISSION PARK PL, SANTEE, CA 92071
4. Generator's Phone: (619) 449-0202

A. State Manifest Document Number: 920834
B. State Generator's ID: 99906

5. Transporter 1 Company Name: SAFETY-KLEEN CORP.
6. US EPA ID Number: ILD 984908202
C. State Transporter's ID: 88888
D. Transporter's Phone: 800 669-5740

7. Transporter 2 Company Name: Safety Kleen Corp
8. US EPA ID Number: ILD984908202
E. State Transporter's ID: 40954
F. Transporter's Phone: 8006695740

9. Designated Facility Name and Site Address: SAFETY-KLEEN CORP. 1722 COOPER CREEK ROAD, DENTON, TX 76208
10. US EPA ID Number: TXD 077603371
G. State Facility's ID: 65124
H. Facility's Phone: 817 383-2611

11. US DOT Description (Including Proper Shipping Name, Hazard Class and ID Number)	HM	12. Containers No.	12. Containers Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No.
a. RQ WASTE FLAMMABLE LIQUIDS, N.O.S. (ALIPHATIC & AROMATIC HYDROCARBONS) ~~3 UN1993 PG III (F001)(ERG#27)~~	X	1	DM	282	P	OUTS211H
b.						
c.						
d.						

J. Additional Descriptions for Materials Listed Above: ~~A. 343-741 F001-D001-D035~~ 9E-CA#436564
K. Handling Codes for Wastes Listed Above: A. S01/S02/T50 MH-MOD

15. Special Handling Instructions and Additional Information: 0000 71143994 000000 7-175-01-3977
EMERGENCY PH# ~~800-888-4966~~ 800-660 24HR. IF UNDELIVERABLE RETURN TO GENERATOR
CA. STATE TRNSPORTER 4399 PRODUCT# A: 00030[illegible] C: D:

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.

Printed/Typed Name	Signature	Date (Month Day Year)
F. Rousseau	F Rousseau	10 21 94

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Date (Month Day Year)
TODD DOBMEIER		10 21 94

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Date (Month Day Year)
Dan Reitz		10 24 94

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.

Printed/Typed Name	Signature	Date (Month Day Year)
W. Munir	W. Munir	10 31 94

EPA Form 8700-22 (Rev. 9-88) Previous edition is obsolete. White - original Pink-TSD Facility Yellow-Transporter Green-Generator's first copy
TWC-0311 (Rev. 01/01/89)

TEXAS WATER COMMISSION
P.O. Box 13087, Capitol Station
Austin, Texas 78711-3087

7-175-C1

Please print or type. (Form designed for use on elite (12-pitch) typewriter.)

Form Approved. OMB No. 2050-0039 Expires 9-30-94

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No.: CAD981450232
Manifest Document No.: 76826
2. Page 1 of 1 — Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address: KETEMA PROCESS
9484 MISSION PARK PL
SANTEE CA 92071
4. Generator's Phone (619) 449-0202

A. State Manifest Document Number: 776826
B. State Generator's ID: 99906

5. Transporter 1 Company Name: SAFETY-KLEEN CORP.
6. US EPA ID Number: ILD 984909202
C. State Transporter's ID: 88888
D. Transporter's Phone: 800 669-5740

7. Transporter 2 Company Name: Safety Kleen Corp
8. US EPA ID Number: ILD 984909202
E. State Transporter's ID: 40554
F. Transporter's Phone: 8006695740

9. Designated Facility Name and Site Address: SAFETY-KLEEN CORP.
1722 COOPER CREEK ROAD
DENTON, TX 76208
10. US EPA ID Number: 0-006-18 / TXD 077603371
G. State Facility's ID: 65124
H. Facility's Phone: 817 383-2611

GENERATOR

11. US DOT Description (Including Proper Shipping Name, Hazard Class and ID Number)	HM	12. Containers No.	12. Containers Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No.
a. RQ WASTE COMBUSTIBLE LIQUID, N.O.S (OIL) NA1993 PG III (F002)(ERG#27)	X	1	DM	4/2	P	910450
b.						
c.						
d.						

J. Additional Descriptions for Materials Listed Above: A. 741 F002 221 D007 211
TE-CA#436564

K. Handling Codes for Wastes Listed Above: A. S01/S02/T50
M141 - M061

15. Special Handling Instructions and Additional Information: 0000 63873293 000000 7-175-01-3977
PP# 870866 S# 211281 C# 0159203-3
EMERGENCY RESP#708-888-4660 24HR. IF UNDELIVERABLE RETURN TO GENERATOR
Std Trans ID # 439697 SKDOT# A: 000341 B: C: D:

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.

Printed/Typed Name	Signature	Date (Month Day Year)
F. Rousseau	F Rousseau	7 15 94

TRANSPORTER

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Date (Month Day Year)
James V. Allwood	James Allwood	7 15 94

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Date (Month Day Year)
Tony Ortiz		7 18 94

FACILITY

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.

Printed/Typed Name	Signature	Date (Month Day Year)
V. Munn	V. Munn	7 25 94

EPA Form 8700-22 (Rev. 9-88) Previous edition is obsolete. White - original Pink-TSD Facility Yellow-Transporter Green-Generator's first copy
TWC-0311 (Rev. 01/01/89)

State of California—Environmental Protection Agency
Form Approved OMB No. 2050-0039 (Expires 9-30-94)
Please print or type. Form designed for use on elite (12-pitch) typewriter.

See Instructions on back of page 6.

Department of Toxic Substances Control
Sacramento, California

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. | Manifest Document No. | 2. Page 1 of 2 | Information in the shaded areas is not required by Federal law.

CAD981410212 | 7515114

3. Generator's Name and Mailing Address
Ketema Inc
9484 Mission Park Place
Santee, CA 92071
Emergency contact see box 15

4. Generator's Phone (619) 449-9202

A. State Manifest Document Number: 92875514

B. State Generator's ID: CAH036028488

5. Transporter 1 Company Name: Van Waters & Rogers

6. US EPA ID Number: CAD041782560

C. State Transporter's ID: 433844

D. Transporter's Phone: (619)-262-0711

7. Transporter 2 Company Name: Van Waters & Rogers

8. US EPA ID Number: CAD009123024

E. State Transporter's ID: 433822

F. Transporter's Phone: (213)-262-0711

9. Designated Facility Name and Site Address
Laidlaw Environmental
5295 South Carvey Road
Westmorland, CA 92281

10. US EPA ID Number: CAD006331644

G. State Facility's ID: CAD006331644

H. Facility's Phone: (619) 344-9400

11. US DOT Description (including Proper Shipping Name, Hazard Class, and ID Number)	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste Number
a. Diatomaceous Earth with Activated Carbon, NON-RCRA, Hazardous Waste, Solid	002	CF	03600	P	State 352 / EPA/Other N/A
b.					State / EPA/Other
c.					State / EPA/Other
d.					State / EPA/Other

J. Additional Descriptions for Materials Listed Above
Date Approved 11/29/94

K. Handling Codes for Wastes Listed Above
03/D01

15. Special Handling Instructions and Additional Information
Emergency contact CHEMTREC (800) 424-9300.
Caller must identify Van Waters & Rogers as the shipper.
Wear proper safety gear when handling.

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of the consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable federal, state and international laws.

If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.

Printed/Typed Name: Frank Rousseau | Signature: Frank Rousseau | Month 11 | Day 29 | Year 94

TRANSPORTER

17. Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name: [illegible] | Signature: [illegible] | Month 12 | Day 5 | Year 94

18. Transporter 2 Acknowledgement of Receipt of Materials
Printed/Typed Name: ROGER A. LIKSTER | Signature: Roger A. Likster | Month 12 | Day 9 | Year 94

FACILITY

19. Discrepancy Indication Space
Section I, state waste code should be N/A Generator notified by Allan of UWR 12/5/94 10:05am LPJ
Section A, should state Non Hazardous waste solid. Generator dates waste Non-Haz.

20. Facility Owner or Operator Certification of receipt of hazardous materials covered by this manifest except as noted in item 19.
Printed/Typed Name: DAVID SCHLEHORN | Signature: David P. Schlehorn | Month 12 | Day 15 | Year 94

DO NOT WRITE BELOW THIS LINE.

IN CASE OF EMERGENCY OR SPILL, CALL THE NATIONAL RESPONSE CENTER 1-800-424-8802; WITHIN CALIFORNIA, CALL 1-800 852-7(illegible)

GENERATOR

9/15/94

Yellow: TSDF SENDS THIS COPY TO GENERATOR WITHIN 30 DAYS.
(Generators who submit hazardous waste for transport out-of-state, produce completed copy of this copy and send to DTSC within 30 days.)

DTSC 8022A (7/92)
EPA 8700—22

TEXAS WATER COMMISSION 7-175-01
P.O. Box 13087, Capitol Station
Austin, Texas 78711-3087

Please print or type. (Form designed for use on elite (12-pitch) typewriter.)

Form Approved. OMB No. 2050-0039 Expires 9-30-94

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No.	Manifest Document No.	2. Page 1 of 2	Information in the shaded areas is not required by Federal law.
CAD981450232	81611		

3. Generator's Name and Mailing Address: KETEMA PROCESS, 9484 MISSION PARK PL, SANTEE, CA 92071

4. Generator's Phone: (619) 449-0202

A. State Manifest Document Number: 981611

B. State Generator's ID: 99906

5. Transporter 1 Company Name: SAFETY-KLEEN CORP.

6. US EPA ID Number: ILD 984908292

C. State Transporter's ID: 88888

D. Transporter's Phone: 800 669-5740

7. Transporter 2 Company Name: Safety Kleen Corp

8. US EPA ID Number: ILD 984908292

E. State Transporter's ID: 40959

F. Transporter's Phone: 8006695740

9. Designated Facility Name and Site Address: SAFETY-KLEEN CORP. 1722 COPPER CREEK ROAD, DENTON, TX 76208

10. US EPA ID Number: TXD 077603371

G. State Facility's ID: 65124

H. Facility's Phone: 817 383-2611

11. US DOT Description (Including Proper Shipping Name, Hazard Class and ID Number)	HM	12. Containers No.	12. Containers Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No.
a. RQ Waste Combustible liquid NOS (OIL) NA 1993 PG III F002 ERG # 27	X	3	DM	1236 55 123	P	910450
b.						
c.						
d.						

J. Additional Descriptions for Materials Listed Above: 11 A.741 F002 221 D007 211

TE CA # 436564

K. Handling Codes for Wastes Listed Above: M061 / S01/S02/T50

15. Special Handling Instructions and Additional Information: 0000 74613118 000000 7-175-01-3977 S# 211281 C# 159203-3 M50260

EMERGENCY RESP#708-888-4660 24HR. IF UNDELIVERABLE RETURN TO GENERATOR

CA State Trans ID # 439642 SKDOT#: A: 0003417 B: C: D:

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

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Printed/Typed Name	Signature	Date (Month Day Year)
F. Rousseau	F. Rousseau	12 22 94

TRANSPORTER

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Date (Month Day Year)
Isaac Valero		12 22 94

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Date (Month Day Year)
Doug Lutz		12 27 94

FACILITY

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.

Printed/Typed Name	Signature	Date (Month Day Year)
F. Whitlock	F. Whitlock	1 6 95

EPA Form 8700-22 (Rev. 9-88) Previous edition is obsolete. White - original Pink-TSD Facility Yellow-Transporter Green-Generator's first copy

TWC-0311 (Rev. 01/01/89)

ASBURY ENVIRONMENTAL SERVICES

2100 NORTH ALAMEDA STREET ◻ COMPTON, CALIFORNIA 90222 ◻ (310) 886-3400

EPA NO. CAD028277036

SERVICE ORDER

ROUTE NO. 15

NO. 75640

DATE 7-2-96

CUSTOMER KATEMA PROCESS EQUIPMENT

BILLING ADDRESS 9464 MISSION PARK PLACE

SANTEE, CA 92071

PHONE 619-449-0202 EXT 213

CUSTOMER EPA #

JOB SITE ADDRESS

NOTES 3 DRUMS - 360. FRANK. 7AM

CONTRACT CUSTOMER ◻ YES or ◻ NO

SERVICE CHARGE ◻ YES or ◻ NO

AMOUNT (if any) 50

CHECK NUMBER

P.O. NUMBER

CASH RECEIVED (AMOUNT)

COMMODITY

HALIDES P.P.M.

◻ U.S. DOT DESCRIPTION: WASTE OIL, COMBUSTIBLE LIQUID NA 1993

◻ U.S. DOT DESCRIPTION: HAZARDOUS WASTE LIQUID, N.O.S. NA 3082

◻ U.S. DOT DESCRIPTION:

MANIFEST NO. 023150721

DRIVER [illegible] 7-2-96

NEXT SERVICE DATE 7-9-96

DRUMS

NO. OF GALLONS 125

TRUCK NO. & RT #5

DESIGNATED TSDF: DeMenno/Kerdoon, 2000 N. Alameda Street, Compton, CA 90222, CAT080013352

This is to certify that the above named articles are properly classified, described, packaged marked and labeled, and are in proper condition for transportation, according to the applicable regulations of the Department of Transportation.

I HEREBY CERTIFY THAT I HAVE NOT MIXED THIS WASTE WITH ANY OTHER WASTE, AND THE TOTAL HALIDES ARE LESS THAN 1000 P.P.M.

I FURTHER AGREE TO ACCEPT THE ADDITIONAL CHARGES FOR LEGAL DISPOSAL IF THIS WASTE IS OVER 1000 P.P.M. TOTAL HALIDES

X [signature]

CUSTOMER SIGNATURE

VORTEX

CERTIFICATE OF RECYCLING

SUPPLIER: KETEMA

TRANSPORTER: KETEMA

This is to certify that 15 FILTERS ~~barrels~~ ~~pounds~~ of used oil filters was received by Vortex on document #_____ dated 4-11-94.

This material has been recycled. All oil filters received on the above referenced document have been recycled by smelting at Tamco Steel 12459 Arrow Hwy Rancho Cucamongo, CA 91739. The oil has also been recycled.

BY: Judy Winchampland

DATE: 4-11-94

9201 ISAAC STREET • SANTEE, CALIFORNIA 92071
(619) 258-9660 • FAX: (619) 258-9770
DESIGNERS AND BUILDERS OF SPECIAL MACHINERY

Dear Safety-Kleen Customer:

This is your current San Diego County Air Pollution Control District "Permit To Operate" for the Safety-Kleen parts washer at your location.

KETEMA PROCESS 013977
9484 MISSION PARK PL 34 011520
612051.
SANTEE CA 92071

This permit expires November 1, 1995 and is specific to the customer and machine information listed above. On the reverse are the "Conditions To Operate." Regulations require these conditions and a copy of the permit to be kept on site; either posted or "maintained readily available at all times on the operating premises."

THIS MUST BE FILED OR POSTED FOR COMPLIANCE

APCD 32A REV. 6/89

COUNTY OF SAN DIEGO
AIR POLLUTION CONTROL DISTRICT
9150 CHESAPEAKE DRIVE SAN DIEGO, CA 92123-1096
(619) 694-3307

043416
CONTROL NO.

PERMIT TO OPERATE

THIS PERMIT IS NOT VALID UNTIL REQUIRED FEES ARE RECEIVED BY THE DISTRICT.

PERMIT NO.
612051
EXPIRES
NOVEMBER 1, 1995

THE FOLLOWING IS HEREBY GRANTED A PERMIT TO OPERATE THE ARTICLE, MACHINE, EQUIPMENT OR CONTRIVANCE DESCRIBED BELOW. THIS PERMIT IS NOT TRANSFERABLE TO A NEW OWNER, NOR IS IT VALID FOR OPERATION OF THE EQUIPMENT AT ANOTHER LOCATION, EXCEPT FOR PORTABLE EQUIPMENT.

612051

SAFETY KLEEN CORP
FACILITY MANAGER
6306 FEDERAL BL
SAN DIEGO CA 92114

EQUIPMENT ADDRESS

6306 FEDERAL BL
SAN DIEGO CA 92114

EQUIPMENT DESCRIPTION

RENEWAL FEE $16.00

ONE (1) SAFETY-KLEEN MODEL 34 REMOTE RESERVOIR CLEANER, 34.75 L X 25.0 W X 17.0 H INCHES, EQUIPPED WITH A LID AND A CONTINUOUS LIQUID FLOW SPRAY NOZZLE. USING AN APPROVED SAFETY-KLEEN SOLVENT.

910975

A 85080A 612051 0344F 28K01

IN ACCORDANCE WITH RULE 19C ATTACH THIS PERMIT TO YOUR CURRENT PERMIT WHICH INCLUDES THE OPERATING CONDITIONS AND MAINTAINED READILY AVAILABLE

APCD 32A REV. 6/89

037132
CONTROL NO.

COUNTY OF SAN DIEGO
AIR POLLUTION CONTROL DISTRICT
9150 CHESAPEAKE DRIVE SAN DIEGO, CA 92123-1095
(619) 694-3307

PERMIT TO OPERATE

THIS PERMIT IS NOT VALID UNTIL REQUIRED FEES ARE RECEIVED BY THE DISTRICT.

PERMIT NO.
920048
EXPIRES
JULY 1, 1995

THE FOLLOWING IS HEREBY GRANTED A PERMIT TO OPERATE THE ARTICLE, MACHINE, EQUIPMENT OR CONTRIVANCE DESCRIBED BELOW. THIS PERMIT IS NOT TRANSFERABLE TO A NEW OWNER, NOR IS IT VALID FOR OPERATION OF THE EQUIPMENT AT ANOTHER LOCATION, EXCEPT FOR PORTABLE EQUIPMENT.

920048

KETEMA / PROCESS EQUIPMENT DIV
SAFETY MGR
9484 MISSION PARK PL
SANTEE CA 92071

EQUIPMENT ADDRESS

9484 MISSION PARK PL
SANTEE CA 92071

EQUIPMENT DESCRIPTION

RENEWAL FEE $259.00

WATER EVAPORATOR, EQUIPMENT MFG. CORP., MODEL 85E,S/N 2403892, 85-GALLON CAPACITY, EQUIPPED WITH HIGH TEMPERATURE SHUT-OFF DEVICE, AND A TEMPERATURE INDICATOR.

B 05895A 920048 0892C 44A01

920048

IN ACCORDANCE WITH RULE 10C ATTACH THIS PERMIT TO YOUR CURRENT PERMIT WHICH INCLUDES THE OPERATING CONDITIONS OR A COPY MUST BE POSTED ON OR WITHIN 25 FEET OF THE EQUIPMENT, OR MAINTAINED READILY AVAILABLE AT ALL TIMES ON THE OPERATING PREMISES.

ANY AND ALL CONDITIONS WHICH HAVE BEEN APPLIED TO THIS EQUIPMENT SHALL REMAIN IN FULL FORCE AND EFFECT UNLESS EXPRESSLY MODIFIED BY THE AIR POLLUTION CONTROL DISTRICT.

THIS AIR POLLUTION CONTROL DISTRICT PERMIT DOES NOT RELIEVE THE HOLDER FROM OBTAINING PERMITS OR AUTHORIZATIONS WHICH MAY BE REQUIRED BY OTHER GOVERNMENTAL AGENCIES.

R.J. Sommerville
AIR POLLUTION CONTROL OFFICER

1. THE OPERATING TEMPERATURE IN THE EVAPORATOR SHALL NOT BE HIGHER THAN 220 DEGREES FARENHEIT. A TEMPERATURE INDICATING DEVICE SHALL BE INSTALLED TO MEASURE THIS TEMPERATURE.
2. THE AUTOMATIC TEMPERATURE SHUT-OFF AND THE LOW LIQUID LEVEL CONTROL DEVICES SHALL BE OPERATIONAL AT ALL TIMES WHEN THE WATER EVAPORATOR IS IN OPERATION.
3. THE EVAPORATOR SHALL BE KEPT COVERED AT ALL TIMES WHEN PROCESSING WATER.
4. DAILY RECORDS SHALL BE KEPT OF THE VOLUMES OF WASTEWATERS PROCESSED AND OF ANY WASTE SUBSTANCES REMOVED FROM THE EVAPORATOR. THE RECORDS SHALL BE MADE AVAILABLE TO THE DISTRICT UPON REQUEST. THE RECORDS SHALL BE KEPT FOR AT LEAST THREE YEARS.
5. EMISSIONS OF VOC AT THIS FACILITY, AS DEFINED IN RULE 20.1, FROM THE ABOVE EQUIPMENT AND ANY OTHER EQUIPMENT CONSTRUCTED OR MODIFIED AT THIS FACILITY SINCE JULY 5, 1979 SHALL NOT EXCEED 100 POUNDS PER DAY.
6. ALL SOLVENTS, MATERIAL CONTAINING SOLVENTS AND OTHER MATERIALS CONTAINING ORGANIC COMPOUNDS SHALL BE STORED IN CLOSED CONTAINERS. WASTES CONTAINING ANY OF THESE SUBSTANCES SHALL BE STORED IN CLOSED CONTAINERS PENDING DISPOSAL IN A MANNER APPROVED BY THE SAN DIEGO HEALTH DEPARTMENT - TOXIC AND HAZARDOUS WASTE PROGRAM.
7. THE PERMITTEE SHALL PROVIDE ACCESS, FACILITIES, UTILITIES AND ANY NECESSARY SAFETY EQUIPMENT FOR SOURCE TESTING AND INSPECTION UPON REQUEST OF THE AIR POLLUTION CONTROL DISTRICT (APCD).
8. OPERATION MUST BE IN COMPLIANCE WITH ALL INFORMATION INCLUDED IN APPLICATIONS FOR THIS PERMIT TO OPERATE, AS APPROVED BY THE DISTRICT, AND WITH ALL CONDITIONS LISTED ABOVE.