

DRAFT

**Limited Phase II Environmental Site Assessment
Tierra del Sol Solar Farm Project
Major Use Permit 3300-12-010, Rezone 3600-12-005
Environmental Review Project Number 3910-120005
Boulevard, San Diego County, California**

Prepared for:

Tierra del Sol Solar Farm LLC
4250 Executive Square, Suite 770
La Jolla, California 92037
Contact: Dwain Boettcher, Soitec Solar, Inc.

Prepared by:

DUDEK
605 Third Street
Encinitas, California 92024
Contact: Glenna McMahon

AUGUST 2012

August 16, 2012

7123-3.8

Dwain Boettcher
Tierra del Sol Solar Farm LLC
4250 Executive Square, Suite 770
La Jolla, California 92037

Subject: Limited Phase II Environmental Site Assessment, Tierra del Sol Property, Assessor's Parcels Numbers (APNs) 658-090-310, 658-090-540, 658-090-550, 658-120-020 and 658-120-030, Tierra del Sol, California.

Dear Mr. Boettcher:

Dudek has prepared this letter report to present the results of the Limited Phase II Environmental Site Assessment for the 419 acre property located in Tierra del Sol, California (subject property). The Limited Phase II Site Assessment activities consisted of advancing 22 soil borings to approximately two feet below ground surface (bgs) and collecting a soil sample from the bottom of the boring. Samples collected in locations historically used as orchards and gardens were analyzed for chlorinated pesticides and arsenic. Samples collected in the area used for burning trash were analyzed for lead, dioxins and furans. The Limited Phase II soil sampling activities were performed on July 24, 2012.

SECTION 1. SITE DESCRIPTION AND BACKGROUND INFORMATION

Dudek performed the soil sampling activities on the property located in Tierra del Sol, Unincorporated San Diego County, California (Figure 1). The subject property is approximately 419 acres and is located within Assessor's Parcel Number (APNs) 658-090-310, 658-090-540, 658-090-550, 658-120-020 and 658-120-030, on the south side of Tierra del Sol Road, south of Interstate 8. The subject property is currently undeveloped and unoccupied.

Dudek prepared a Phase I Environmental Site Assessment (ESA) for the subject property in April, 2012. Based on the historical information reviewed for the Phase I ESA, a residence associated with a homestead was built in 1923. According to correspondence with the owner, household refuse was burned in the vicinity of the residence between 1930 and 1962. Orchards were present on the subject property between 1930 and 1956. Dudek concluded that based on historical land use on the subject property, it was possible that organochlorine pesticides (OCPs) (typically used between the 1940s and 1960s) and arsenical pesticides (typically used prior to 1950) were applied to the areas historically planted as orchards and/or used for gardening. Given the reported trash burning, burn ash may have been present in the soils in the vicinity of the old homestead where the

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658-120-030, Tierra del Sol, California.*

burning activities took place. Burn ash is the residual ash that results from the low temperature combustion of soil waste. The residual ash from nonhazardous household refuse tends to contain metals at concentrations that may be considered hazardous under California regulations. The Phase I ESA recommended that soil samples be collected and analyzed for organochlorine pesticides and metals in the areas formerly used for gardening/orchards and trash burning.

SECTION 2. SOIL SAMPLING

The areas on the subject property that were historically used for gardening/orchards and for trash-burning were identified on an aerial photograph by the owner (Appendix A). Seven areas were identified on the subject property that were historically used for gardening/orchards. Twenty soil samples were collected from these locations and analyzed for organochlorine pesticides (Environmental Protection Agency (EPA) Method 8081B) and arsenic (EPA Method 6010). One area, identified by the owner as approximately 20 feet in diameter and 75 feet north and 30 feet west of the old house, was used to burn trash. Two soil samples were collected from this location and analyzed for lead (EPA Method 6010). Two samples were collected for analysis of dioxins and furans (EPA Method 1631B). Due to the small size of the former trash burning area, one sample was analyzed. The other sample was held pending results of the first.

The soil samples were collected from approximately 2 feet bgs at 22 locations on the subject property (Figure 2) on July 24, 2012. Per County of San Diego's review of the Phase I ESA and comments regarding the scope of the recommended Phase II ESA (7/16/12 letter from Department of Planning and Land Use on the Tierra del Sol Rezone and Major Use Permit, Attachment E; Appendix C), the soil borings were advanced to 2 feet below ground surface (bgs). The borings were advanced via hand auger. Soil grab samples were then collected from the bottom of each boring using a new trowel. Between each soil boring, the hand auger equipment was decontaminated with a triple rinse consisting of one bucket containing de-ionized water and Alconox detergent, and two buckets containing de-ionized water. The soil samples were placed in laboratory supplied glass sample jars, capped, labeled, and placed in a cooler on ice. They were transferred to the analytical laboratory, Enviromatrix Analytical, Inc., after all samples were collected.

SECTION 3. RESULTS

Laboratory analytical results are shown in Table 1, Table 2, Table 3 and Appendix B.

Of the 20 samples analyzed for organochlorine pesticides and arsenic, none contained concentrations above the reporting limits (Tables 1 and 2).

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Lead was detected in both samples collected from the former trash burning area at 15.5 mg/kg and 4.745 mg/kg (Table 2).

Individual dioxin and furan compound concentrations were reported and a tetrachlorinated dibenzo-p-dioxin (TCDD) toxicity equivalency quotient (TEQ), which was calculated using assigned toxicity factors for each compound. While there were detections of three analytes above their respective detection limits in the soil sample collected from the former trash burning area, the calculated TEQ for the soil sample was 0.093 ng/kg (Table 3).

SECTION 4. DISCUSSION

The EPA Regional Screening Levels (RSL) represent a *de minimus* cancer risk level of one in a million. The laboratory reporting limit (RL) for arsenic (1.0 mg/kg) was less than the EPA Regional Screening Level (RSL) of 1.6 mg/kg for industrial soil. The arsenic RL of 1.0 mg/kg is higher than the California Human Health Screening Level (CHHSL) for industrial soil. However, arsenic is naturally-occurring in most soils at concentrations higher than the risk-based screening levels. Based on an evaluation of background arsenic concentrations throughout Southern California conducted by the Department of Toxic Substances Control (DTSC), an arsenic concentration of 12 mg/kg may be a useful screening level when evaluating arsenic as a chemical of potential concern (*Determination of a Southern California Regional Background Arsenic Concentration in Soil*, DTSC. 2008). None of the soil samples collected during this investigation exceeded the 12 mg/kg background concentration screening level.

Concentrations of OCPs were below the laboratory RLs for all samples. The laboratory RLs for OCPs (ranging from 10-250 µg/kg) were below the existing EPA industrial RSLs. EPA RSL concentrations were available for 15 of the 22 compounds. EPA RSL guidance concentrations do not exist for the remaining 7 compounds. The OCP RLs were below the existing CHHSLs. CHHSLs were available for 10 of the 22 compounds. CHHSL guidance concentrations do not exist for the remaining 12 compounds.

The samples that were analyzed for lead had concentrations of 15.5 mg/kg and 4.74 mg/kg. These concentrations are below the EPA RSL (800 mg/kg) and the CHHSL (320 mg/kg) for industrial soil.

The sample that was analyzed for dioxins and furans reported a calculated TEQ of 0.093 ng/kg. This concentration is below the RSL (18 ppt) and the CHHSL (19 ppt) for industrial soil.

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A second sample for dioxins and furans was collected, but analysis was held pending review of results of the first sample. The second sample would have been analyzed if results of the first were above regulatory guidance concentrations in order to obtain an additional data point to observe the spatial concentrations of the contaminant. Given that the result of the first sample was three orders of magnitude below the industrial RSL and CHHSL, the second sample was not analyzed.

SECTION 5. CONCLUSION

The concentrations of arsenic and OCPs were less than the RSL and CHHSL industrial screening levels (published by the EPA and California EPA (CalEPA)), as well as the laboratory reporting limits. The concentrations of arsenic were also less than general background values for naturally-occurring and anthropogenic arsenic in soils in Southern California. The concentrations of lead in the samples were less than the industrial screening level RSLs and CHHSLs.

Based on the sampling conducted, it does not appear that the areas historically used for orchards/gardens are impacted by OCPs or arsenic at concentrations that would require remediation under the planned future land use for solar energy production. Additionally, the area indicated by the owner that was historically used for trash burning does not appear to be impacted by lead or dioxins and furans at concentrations that would require remediation under the planned future land use for solar energy production.

Should you have any questions or require additional information, please contact me at 760.479.4130 or gmcmahon@dudek.com.

Sincerely,



Glenna McMahon, P.E.
Associate Environmental Engineer

cc: David Hochart, DUDEK

Att: Table 1, Analytical Results for Metals
Table 2, OCP Analytes
Table 3, Analytical Results for Dioxins and Furans
Figure 1, Regional Location Map
Figure 2, Soil Sample Locations
Appendix A, Orchard and Trash Burning Locations
Appendix B, Laboratory Analytical Report
Appendix C, San Diego County Comments - Attachment E

TABLE 1. Soil Sample Analytical Results for Metals
Tierra del Sol, Boulevard

Sample ID	Sample Date	Arsenic	Lead	
		mg/kg		
GS.1.1	7/24/2012	<1.00	-	
GS.1.2		<1.00	-	
GS.1.3		<1.00	-	
GS.2.1		-	15.5	
GS.2.2		-	4.47	
GS.3.1		<1.00	-	
GS.3.2		<1.00	-	
GS.4.1		<1.00	-	
GS.4.2		<1.00	-	
GS.5.1		<1.00	-	
GS.5.2		<1.00	-	
GS.5.3		<1.00	-	
GS.6.1		<1.00	-	
GS.6.2		<1.00	-	
GS.6.3		<1.00	-	
GS.7.1		<1.00	-	
GS.7.2		<1.00	-	
GS.7.3		<1.00	-	
GS.8.1		<1.00	-	
GS.8.2		<1.00	-	
GS.8.3		<1.00	-	
GS.8.4		<1.00	-	
DTSC Background Arsenic Screening Level ¹		12	-	
Industrial RSL ²		1.6	800	
Industrial CHHSL ³		0.24	320	

Notes:

Metals analyses performed by EPA 6000/7000 Series Methods

mg/kg - milligrams per kilogram

¹Data from Department of Toxic Substances Control paper: *Background Arsenic Concentration in Soil*

²Data from EPA Regional Screening Levels - Screening Levels for Chemical Contaminants

³Data from CalEPA California Human Health Screening Levels in Evaluation of Contaminated Properties

TABLE 2. List of Analytes for Organochlorine Pesticides Analysis
Tierra del Sol, Boulevard

Analyte	Reporting Limit	Reporting Limit ¹	Industrial RSL ²	Industrial CHHSL ³
	µg/kg			
Aldrin	10.0	20.0	100	130
alpha-BHC	10.0	20.0	270	-
beta-BHC	10.0	20.0	960	-
gamma-BHC (Lindane)	10.0	20.0	2100	2000
delta-BHC	10.0	20.0	-	-
alpha-Chlordane	25.0	50.0	-	-
gamma-Chlordane	25.0	50.0	-	-
Chlordane (Total)	10.0	20.0	6500	-
4,4'-DDD	10.0	20.0	7200	9000
4,4'-DDE	10.0	20.0	5100	6300
4,4'-DDT	10.0	20.0	7000	6300
Dieldrin	10.0	20.0	110	130
Endosulfan I	10.0	20.0	3700000	-
Endosulfan II	10.0	20.0	-	-
Endosulfan Sulfate	10.0	20.0	-	-
Endrin	10.0	20.0	180000	230000
Endrin aldehyde	10.0	20.0	-	-
Endrin ketone	10.0	20.0	-	-
Heptachlor	10.0	20.0	380	520
Heptachlor epoxide	10.0	20.0	190	-
Methoxychlor	25.0	50.0	3100000	3800000
Toxaphene	125	250	1600	1800

Notes:

Samples were analyzed by EPA Method 8081B

All results were below the reporting limits.

µg/kg - micrograms per kilogram

¹Reporting Limits for some samples were increased due to need to dilute samples to get them to an injectable consistency for the instrumentation.

²Data from EPA Regional Screening Levels - Screening Levels for Chemical Contaminants

³Data from CalEPA California Human Health Screening Levels in Evaluation of Contaminated Properties

- Indicates no guidance concentration was available for the compound

TABLE 3. Soil Sample Analytical Results for Dioxin and Furan Detections
Tierra del Sol, Boulevard

Analyte	Reporting Limit	Result	Industrial RSL ¹	Industrial CHHSL ²
	ng/kg			
2,3,7,8-TCDF	1.0	ND		
1,2,3,7,8-PeCDF	2.0	ND		
2,3,4,7,8-PeCDF	2.0	ND		
1,2,3,4,7,8-HxCDF	2.0	ND		
1,2,3,6,7,8-HxCDF	2.0	ND		
2,3,4,6,7,8-HxCDF	2.0	ND		
1,2,3,7,8,9-HxCDF	2.0	ND		
1,2,3,4,6,7,8-HpCDF	2.0	ND		
1,2,3,4,7,8,9-HpCDF	2.0	ND		
OCDF	3.9	ND		
2,3,7,8-TCDD	1.0	ND		
1,2,3,7,8-PeCDD	2.0	ND		
1,2,3,4,7,8-HxCDD	2.0	ND		
1,2,3,6,7,8-HxCDD	2.0	ND		
1,2,3,7,8,9-HxCDD	2.0	ND		
1,2,3,4,6,7,8-HpCDD	2.0	7.35		
OCDD	3.9	63.56		
Total TCDF	4.0	ND		
Total TCDD	4.0	ND		
Total PeCDF	4.0	ND		
TotalPeCDD	4.0	ND		
TotalHxCDF	4.0	ND		
TotalHxCDD	4.0	ND		
Total HpCDF	4.0	ND		
Total HpCDD	4.0	20.3		
TEQ (based on 2,3,7,8-TCDD)		0.093	18	19

Notes:

Samples were analyzed by EPA Method 1613B

ND = Non Detect, result is below reporting limit

ng/kg - nanograms per kilogram

¹Data from EPA Regional Screening Levels - Screening Levels for Chemical Contaminants

²Data from CalEPA California Human Health Screening Levels in Evaluation of Contaminated Properties

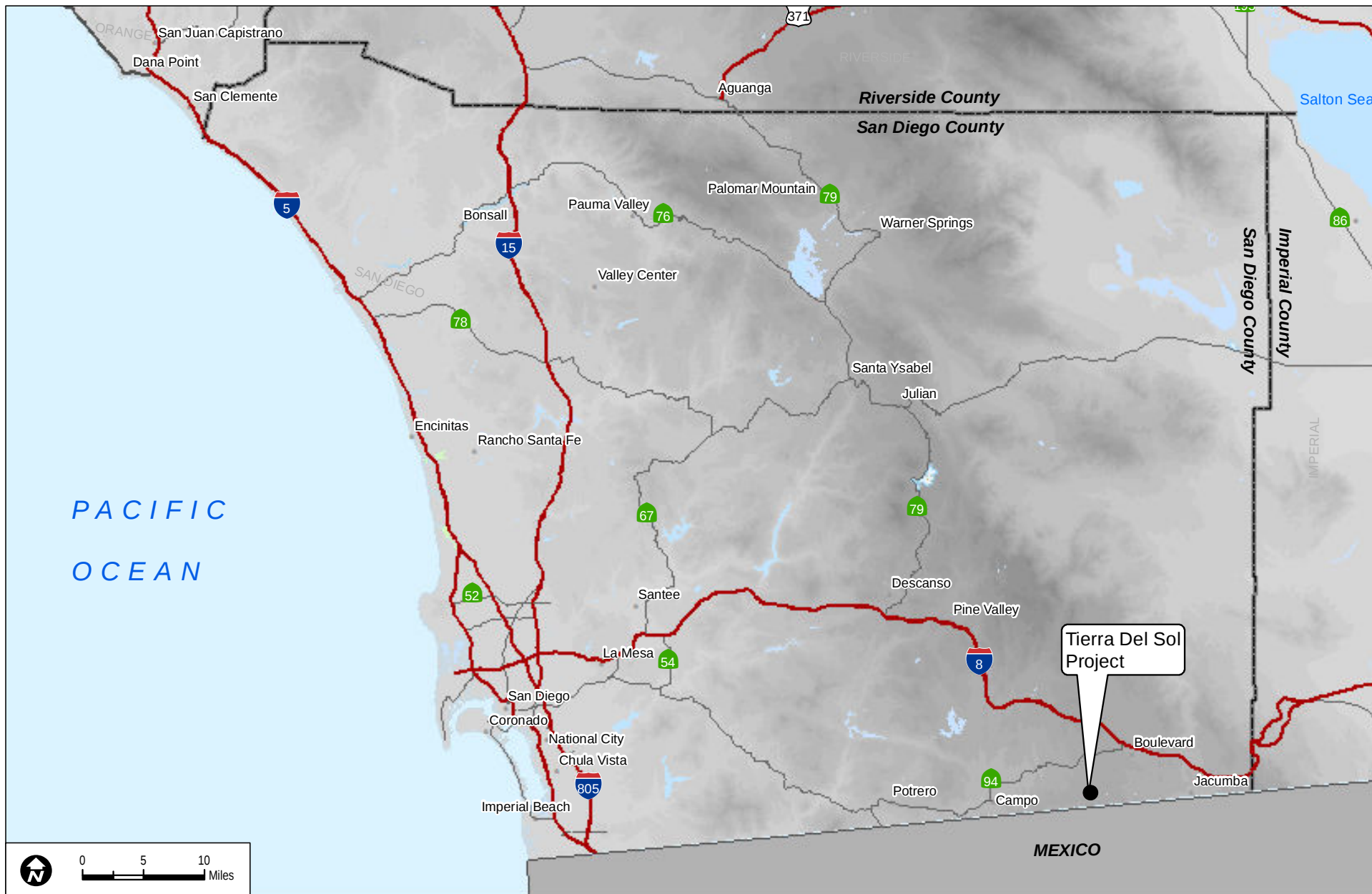
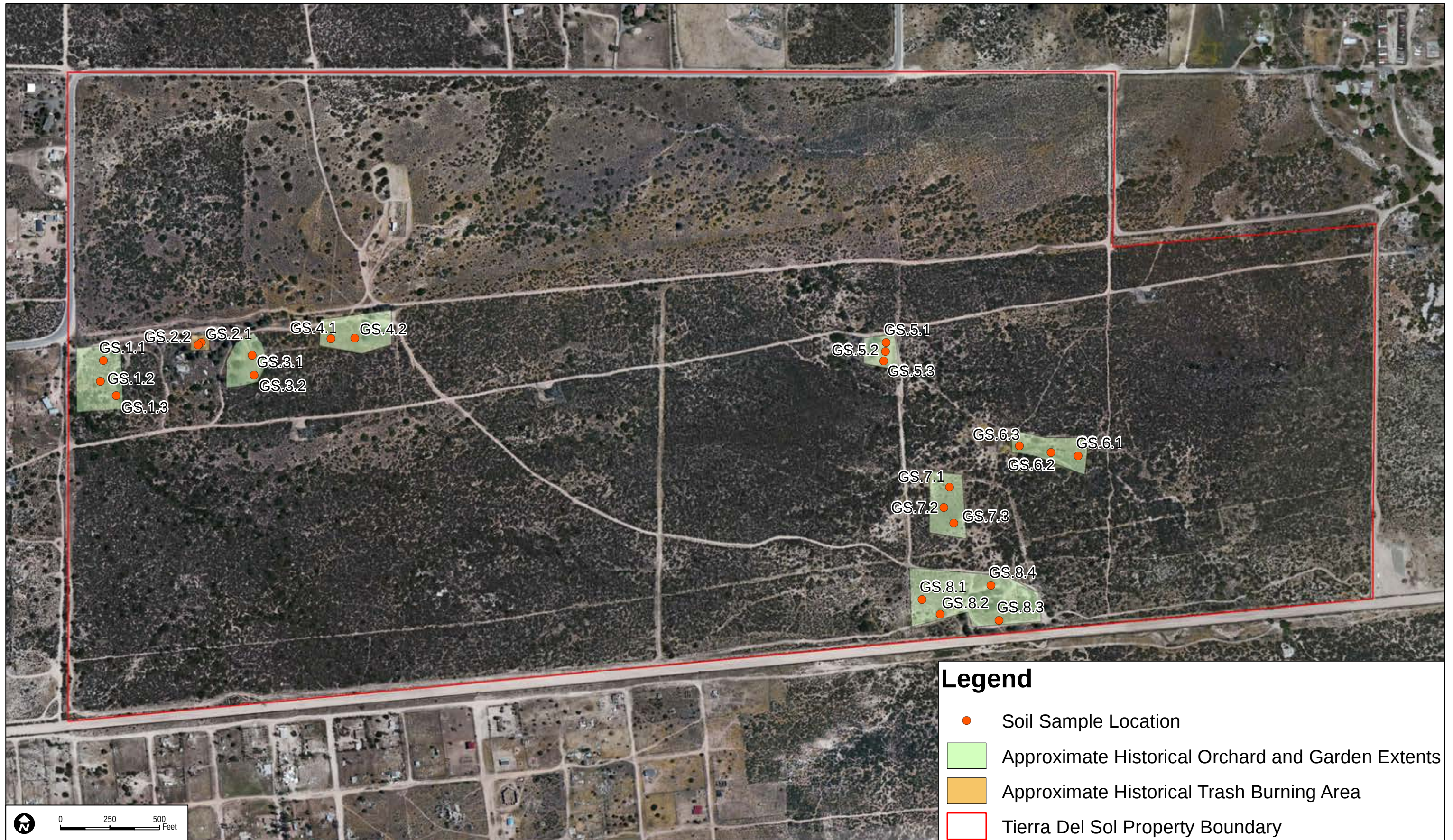


FIGURE 1
Regional Location Map

DUDEK

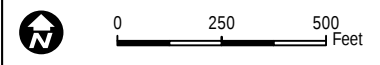
7123
AUGUST 2012

TIERRA DEL SOL



Legend

- Soil Sample Location
- Approximate Historical Orchard and Garden Extents
- Approximate Historical Trash Burning Area
- Tierra Del Sol Property Boundary



DUDEK

SOURCE: Digital Globe 2008, SanGIS 2010 NOTE: Approximate Historical Extents Indicated by Owner Joe Brown

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Tierra Del Sol

FIGURE 2
Soil Sample Locations

APPENDIX A

*Orchard and Trash Burning Locations
Identified by Owner*

Date EDR Searched Historical Sources:

Aerial Photography January 04, 2012

Target Property:

Unincorporated County, San Diego

Boulevard, CA 91905

<u>Year</u>	<u>Scale</u>	<u>Details</u>	<u>Source</u>
1953	Aerial Photograph. Scale: 1"=1000'	Flight Year: 1953	Park
1980	Aerial Photograph. Scale: 1"=1000'	Flight Year: 1980	Pacific Air
1989	Aerial Photograph. Scale: 1"=1000'	Flight Year: 1989	USGS
1994	Aerial Photograph. Scale: 1"=500'	/Composite DOQQ - acquisition dates: 1994	EDR
2005	Aerial Photograph. Scale: 1"=500'	Flight Year: 2005	EDR

① = ORCHARDS AND GARDEN

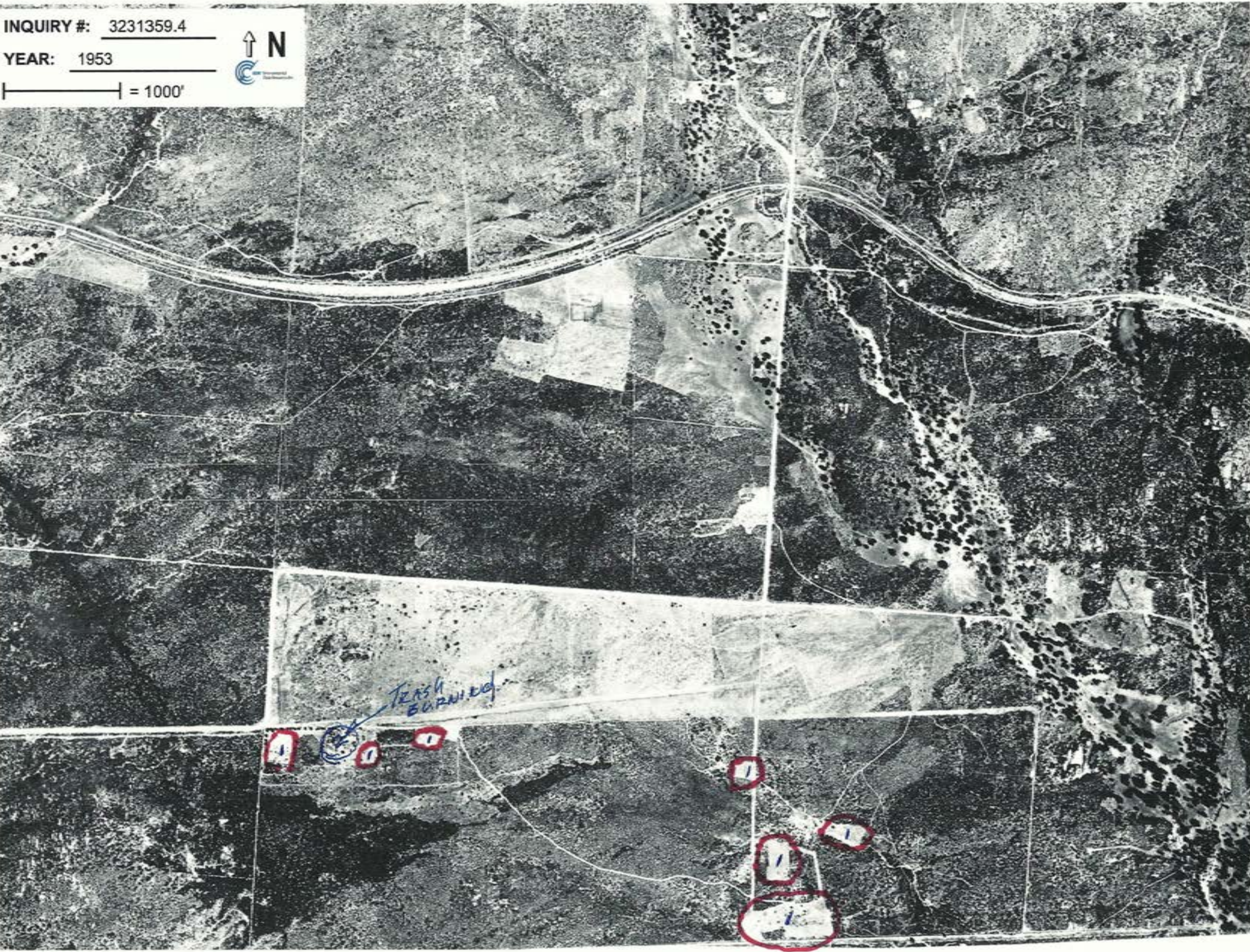
② = AREA AROUND OLD HOME SITE
WHERE TRASH WAS BURNED

↙ = SEPTIC 3

INQUIRY #: 3231359.4

YEAR: 1953

| = 1000'



APPENDIX B

Laboratory Results

EnviroMatrix



Analytical, Inc.

09 August 2012

Dudek & Associates, Inc.

EMA Log #: 12G0619

Attn: Glenna McMahon

605 Third Street

Encinitas, CA 92024

Project Name: Tierra Del Sol/7123

Enclosed are the results of analyses for samples received by the laboratory on 07/25/12 08:50. 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.

A handwritten signature in black ink, appearing to read 'Dan Verdon', is written over a faint, light-colored rectangular stamp.

Dan Verdon

Laboratory Director

CA ELAP Certification #: 2564

4340 Viewridge Avenue, Suite A - San Diego, California 92123 - (858) 560-7717 - Fax (858) 560-7763
Analytical Chemistry Laboratory

Client Name: Dudek & Associates, Inc.
Project Name: Tierra Del Sol/7123

EMA Log #: 12G0619

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
GS.3.1	12G0619-01	Soil	07/24/12 15:30	07/25/12 08:50
GS.3.2	12G0619-02	Soil	07/24/12 15:31	07/25/12 08:50
GS.2.1	12G0619-03	Soil	07/24/12 15:13	07/25/12 08:50
GS.2.2	12G0619-04	Soil	07/24/12 15:14	07/25/12 08:50
GS.2.2	12G0619-06	Soil	07/24/12 15:14	07/25/12 08:50
GS.5.1	12G0619-07	Soil	07/24/12 16:11	07/25/12 08:50
GS.5.2	12G0619-08	Soil	07/24/12 16:12	07/25/12 08:50
GS.5.3	12G0619-09	Soil	07/24/12 16:13	07/25/12 08:50
GS.4.1	12G0619-10	Soil	07/24/12 15:51	07/25/12 08:50
GS.4.2	12G0619-11	Soil	07/24/12 15:50	07/25/12 08:50
GS.6.1	12G0619-12	Soil	07/24/12 17:03	07/25/12 08:50
GS.6.2	12G0619-13	Soil	07/24/12 17:04	07/25/12 08:50
GS.6.3	12G0619-14	Soil	07/24/12 17:05	07/25/12 08:50
GS.1.1	12G0619-15	Soil	07/24/12 14:20	07/25/12 08:50
GS.1.2	12G0619-16	Soil	07/24/12 14:21	07/25/12 08:50
GS.1.3	12G0619-17	Soil	07/24/12 14:22	07/25/12 08:50
GS.7.1	12G0619-18	Soil	07/24/12 17:12	07/25/12 08:50
GS.7.2	12G0619-19	Soil	07/24/12 17:13	07/25/12 08:50
GS.7.3	12G0619-20	Soil	07/24/12 17:14	07/25/12 08:50
GS.8.1	12G0619-21	Soil	07/24/12 18:07	07/25/12 08:50
GS.8.2	12G0619-22	Soil	07/24/12 18:06	07/25/12 08:50
GS.8.3	12G0619-23	Soil	07/24/12 18:05	07/25/12 08:50
GS.8.4	12G0619-24	Soil	07/24/12 18:08	07/25/12 08:50

NOTE: The Dioxin/Furan/2,3,7,8-TCDD analyses were performed by a sub-contract laboratory, results to follow in a separate report.

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.

EnviroMatrix Analytical, Inc.



Client Name: Dudek & Associates, Inc.
Project Name: Tierra Del Sol/7123

EMA Log #: 12G0619

Total Metals by EPA 6000/7000 Series Methods

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
GS.3.1 (12G0619-01) Soil Sampled: 07/24/12 15:30 Received: 07/25/12 08:50									
Arsenic	ND	1.00	mg/kg	1	2073021	07/30/12	07/30/12	EPA 6010	
GS.3.2 (12G0619-02) Soil Sampled: 07/24/12 15:31 Received: 07/25/12 08:50									
Arsenic	ND	1.00	mg/kg	1	2073021	07/30/12	07/30/12	EPA 6010	
GS.2.1 (12G0619-03) Soil Sampled: 07/24/12 15:13 Received: 07/25/12 08:50									
Lead	15.5	1.00	mg/kg	1	2073021	07/30/12	07/30/12	EPA 6010	
GS.2.2 (12G0619-04) Soil Sampled: 07/24/12 15:14 Received: 07/25/12 08:50									
Lead	4.74	1.00	mg/kg	1	2073021	07/30/12	07/30/12	EPA 6010	
GS.5.1 (12G0619-07) Soil Sampled: 07/24/12 16:11 Received: 07/25/12 08:50									
Arsenic	ND	1.00	mg/kg	1	2073021	07/30/12	07/30/12	EPA 6010	
GS.5.2 (12G0619-08) Soil Sampled: 07/24/12 16:12 Received: 07/25/12 08:50									
Arsenic	ND	1.00	mg/kg	1	2073021	07/30/12	07/30/12	EPA 6010	
GS.5.3 (12G0619-09) Soil Sampled: 07/24/12 16:13 Received: 07/25/12 08:50									
Arsenic	ND	1.00	mg/kg	1	2073021	07/30/12	07/30/12	EPA 6010	
GS.4.1 (12G0619-10) Soil Sampled: 07/24/12 15:51 Received: 07/25/12 08:50									
Arsenic	ND	1.00	mg/kg	1	2073021	07/30/12	07/30/12	EPA 6010	
GS.4.2 (12G0619-11) Soil Sampled: 07/24/12 15:50 Received: 07/25/12 08:50									
Arsenic	ND	1.00	mg/kg	1	2073021	07/30/12	07/30/12	EPA 6010	

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EnviroMatrix



Analytical, Inc.

Client Name: Dudek & Associates, Inc.
Project Name: Tierra Del Sol/7123

EMA Log #: 12G0619

Total Metals by EPA 6000/7000 Series Methods

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
GS.6.1 (12G0619-12) Soil Sampled: 07/24/12 17:03 Received: 07/25/12 08:50									
Arsenic	ND	1.00	mg/kg	1	2073021	07/30/12	07/30/12	EPA 6010	
GS.6.2 (12G0619-13) Soil Sampled: 07/24/12 17:04 Received: 07/25/12 08:50									
Arsenic	ND	1.00	mg/kg	1	2073021	07/30/12	07/30/12	EPA 6010	
GS.6.3 (12G0619-14) Soil Sampled: 07/24/12 17:05 Received: 07/25/12 08:50									
Arsenic	ND	1.00	mg/kg	1	2073021	07/30/12	07/30/12	EPA 6010	
GS.1.1 (12G0619-15) Soil Sampled: 07/24/12 14:20 Received: 07/25/12 08:50									
Arsenic	ND	1.00	mg/kg	1	2073021	07/30/12	07/30/12	EPA 6010	
GS.1.2 (12G0619-16) Soil Sampled: 07/24/12 14:21 Received: 07/25/12 08:50									
Arsenic	ND	1.00	mg/kg	1	2073021	07/30/12	07/30/12	EPA 6010	
GS.1.3 (12G0619-17) Soil Sampled: 07/24/12 14:22 Received: 07/25/12 08:50									
Arsenic	ND	1.00	mg/kg	1	2073021	07/30/12	07/30/12	EPA 6010	
GS.7.1 (12G0619-18) Soil Sampled: 07/24/12 17:12 Received: 07/25/12 08:50									
Arsenic	ND	1.00	mg/kg	1	2073021	07/30/12	07/30/12	EPA 6010	
GS.7.2 (12G0619-19) Soil Sampled: 07/24/12 17:13 Received: 07/25/12 08:50									
Arsenic	ND	1.00	mg/kg	1	2073021	07/30/12	07/30/12	EPA 6010	
GS.7.3 (12G0619-20) Soil Sampled: 07/24/12 17:14 Received: 07/25/12 08:50									
Arsenic	ND	1.00	mg/kg	1	2073021	07/30/12	07/30/12	EPA 6010	

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.

EnviroMatrix Analytical, Inc.



Client Name: Dudek & Associates, Inc.
Project Name: Tierra Del Sol/7123

EMA Log #: 12G0619

Total Metals by EPA 6000/7000 Series Methods

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
GS.8.1 (12G0619-21) Soil Sampled: 07/24/12 18:07 Received: 07/25/12 08:50									
Arsenic	ND	1.00	mg/kg	1	2073021	07/30/12	07/30/12	EPA 6010	
GS.8.2 (12G0619-22) Soil Sampled: 07/24/12 18:06 Received: 07/25/12 08:50									
Arsenic	ND	1.00	mg/kg	1	2073021	07/30/12	07/30/12	EPA 6010	
GS.8.3 (12G0619-23) Soil Sampled: 07/24/12 18:05 Received: 07/25/12 08:50									
Arsenic	ND	1.00	mg/kg	1	2073152	07/31/12	08/01/12	EPA 6010	
GS.8.4 (12G0619-24) Soil Sampled: 07/24/12 18:08 Received: 07/25/12 08:50									
Arsenic	ND	1.00	mg/kg	1	2073152	07/31/12	08/01/12	EPA 6010	

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Analytical, Inc.

Client Name: Dudek & Associates, Inc.
Project Name: Tierra Del Sol/7123

EMA Log #: 12G0619

Organochlorine Pesticides by EPA Method 8081B

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
GS.3.1 (12G0619-01) Soil Sampled: 07/24/12 15:30 Received: 07/25/12 08:50									SD-05
Aldrin	ND	10.0	ug/kg	5	2080662	08/06/12	08/07/12	EPA 8081	
alpha-BHC	ND	10.0	"	"	"	"	"	"	
beta-BHC	ND	10.0	"	"	"	"	"	"	
gamma-BHC (Lindane)	ND	10.0	"	"	"	"	"	"	
delta-BHC	ND	10.0	"	"	"	"	"	"	
alpha-Chlordane	ND	25.0	"	"	"	"	"	"	
gamma-Chlordane	ND	25.0	"	"	"	"	"	"	
Chlordane (Total)	ND	25.0	"	"	"	"	"	"	
4,4'-DDD	ND	10.0	"	"	"	"	"	"	
4,4'-DDE	ND	10.0	"	"	"	"	"	"	
4,4'-DDT	ND	10.0	"	"	"	"	"	"	
Dieldrin	ND	10.0	"	"	"	"	"	"	
Endosulfan I	ND	10.0	"	"	"	"	"	"	
Endosulfan II	ND	10.0	"	"	"	"	"	"	
Endosulfan sulfate	ND	10.0	"	"	"	"	"	"	
Endrin	ND	10.0	"	"	"	"	"	"	
Endrin aldehyde	ND	10.0	"	"	"	"	"	"	
Endrin ketone	ND	10.0	"	"	"	"	"	"	
Heptachlor	ND	10.0	"	"	"	"	"	"	
Heptachlor epoxide	ND	10.0	"	"	"	"	"	"	
Methoxychlor	ND	25.0	"	"	"	"	"	"	
Toxaphene	ND	125	"	"	"	"	"	"	
Surrogate: TCMX		104 %	26-146		"	"	"	"	

GS.3.2 (12G0619-02) Soil Sampled: 07/24/12 15:31 Received: 07/25/12 08:50									SD-05
Aldrin	ND	10.0	ug/kg	5	2080662	08/06/12	08/07/12	EPA 8081	
alpha-BHC	ND	10.0	"	"	"	"	"	"	
beta-BHC	ND	10.0	"	"	"	"	"	"	
gamma-BHC (Lindane)	ND	10.0	"	"	"	"	"	"	
delta-BHC	ND	10.0	"	"	"	"	"	"	
alpha-Chlordane	ND	25.0	"	"	"	"	"	"	
gamma-Chlordane	ND	25.0	"	"	"	"	"	"	
Chlordane (Total)	ND	25.0	"	"	"	"	"	"	
4,4'-DDD	ND	10.0	"	"	"	"	"	"	
4,4'-DDE	ND	10.0	"	"	"	"	"	"	
4,4'-DDT	ND	10.0	"	"	"	"	"	"	
Dieldrin	ND	10.0	"	"	"	"	"	"	
Endosulfan I	ND	10.0	"	"	"	"	"	"	
Endosulfan II	ND	10.0	"	"	"	"	"	"	
Endosulfan sulfate	ND	10.0	"	"	"	"	"	"	
Endrin	ND	10.0	"	"	"	"	"	"	
Endrin aldehyde	ND	10.0	"	"	"	"	"	"	

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Analytical, Inc.

Client Name: Dudek & Associates, Inc.
Project Name: Tierra Del Sol/7123

EMA Log #: 12G0619

Organochlorine Pesticides by EPA Method 8081B

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
GS.3.2 (12G0619-02) Soil Sampled: 07/24/12 15:31 Received: 07/25/12 08:50									SD-05
Endrin ketone	ND	10.0	ug/kg	5	2080662	08/06/12	08/07/12	EPA 8081	
Heptachlor	ND	10.0	"	"	"	"	"	"	
Heptachlor epoxide	ND	10.0	"	"	"	"	"	"	
Methoxychlor	ND	25.0	"	"	"	"	"	"	
Toxaphene	ND	125	"	"	"	"	"	"	
Surrogate: TCMX		107 %	26-146		"	"	"	"	
GS.5.1 (12G0619-07) Soil Sampled: 07/24/12 16:11 Received: 07/25/12 08:50									SD-05
Aldrin	ND	10.0	ug/kg	5	2080662	08/06/12	08/07/12	EPA 8081	
alpha-BHC	ND	10.0	"	"	"	"	"	"	
beta-BHC	ND	10.0	"	"	"	"	"	"	
gamma-BHC (Lindane)	ND	10.0	"	"	"	"	"	"	
delta-BHC	ND	10.0	"	"	"	"	"	"	
alpha-Chlordane	ND	25.0	"	"	"	"	"	"	
gamma-Chlordane	ND	25.0	"	"	"	"	"	"	
Chlordane (Total)	ND	25.0	"	"	"	"	"	"	
4,4'-DDD	ND	10.0	"	"	"	"	"	"	
4,4'-DDE	ND	10.0	"	"	"	"	"	"	
4,4'-DDT	ND	10.0	"	"	"	"	"	"	
Dieldrin	ND	10.0	"	"	"	"	"	"	
Endosulfan I	ND	10.0	"	"	"	"	"	"	
Endosulfan II	ND	10.0	"	"	"	"	"	"	
Endosulfan sulfate	ND	10.0	"	"	"	"	"	"	
Endrin	ND	10.0	"	"	"	"	"	"	
Endrin aldehyde	ND	10.0	"	"	"	"	"	"	
Endrin ketone	ND	10.0	"	"	"	"	"	"	
Heptachlor	ND	10.0	"	"	"	"	"	"	
Heptachlor epoxide	ND	10.0	"	"	"	"	"	"	
Methoxychlor	ND	25.0	"	"	"	"	"	"	
Toxaphene	ND	125	"	"	"	"	"	"	
Surrogate: TCMX		105 %	26-146		"	"	"	"	

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Analytical, Inc.

Client Name: Dudek & Associates, Inc.
Project Name: Tierra Del Sol/7123

EMA Log #: 12G0619

Organochlorine Pesticides by EPA Method 8081B

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
GS.5.2 (12G0619-08) Soil Sampled: 07/24/12 16:12 Received: 07/25/12 08:50									SD-05
Aldrin	ND	10.0	ug/kg	5	2080662	08/06/12	08/07/12	EPA 8081	
alpha-BHC	ND	10.0	"	"	"	"	"	"	
beta-BHC	ND	10.0	"	"	"	"	"	"	
gamma-BHC (Lindane)	ND	10.0	"	"	"	"	"	"	
delta-BHC	ND	10.0	"	"	"	"	"	"	
alpha-Chlordane	ND	25.0	"	"	"	"	"	"	
gamma-Chlordane	ND	25.0	"	"	"	"	"	"	
Chlordane (Total)	ND	25.0	"	"	"	"	"	"	
4,4'-DDD	ND	10.0	"	"	"	"	"	"	
4,4'-DDE	ND	10.0	"	"	"	"	"	"	
4,4'-DDT	ND	10.0	"	"	"	"	"	"	
Dieldrin	ND	10.0	"	"	"	"	"	"	
Endosulfan I	ND	10.0	"	"	"	"	"	"	
Endosulfan II	ND	10.0	"	"	"	"	"	"	
Endosulfan sulfate	ND	10.0	"	"	"	"	"	"	
Endrin	ND	10.0	"	"	"	"	"	"	
Endrin aldehyde	ND	10.0	"	"	"	"	"	"	
Endrin ketone	ND	10.0	"	"	"	"	"	"	
Heptachlor	ND	10.0	"	"	"	"	"	"	
Heptachlor epoxide	ND	10.0	"	"	"	"	"	"	
Methoxychlor	ND	25.0	"	"	"	"	"	"	
Toxaphene	ND	125	"	"	"	"	"	"	
Surrogate: TCMX		100 %	26-146		"	"	"	"	

GS.5.3 (12G0619-09) Soil Sampled: 07/24/12 16:13 Received: 07/25/12 08:50									SD-05
Aldrin	ND	10.0	ug/kg	5	2080662	08/06/12	08/07/12	EPA 8081	
alpha-BHC	ND	10.0	"	"	"	"	"	"	
beta-BHC	ND	10.0	"	"	"	"	"	"	
gamma-BHC (Lindane)	ND	10.0	"	"	"	"	"	"	
delta-BHC	ND	10.0	"	"	"	"	"	"	
alpha-Chlordane	ND	25.0	"	"	"	"	"	"	
gamma-Chlordane	ND	25.0	"	"	"	"	"	"	
Chlordane (Total)	ND	25.0	"	"	"	"	"	"	
4,4'-DDD	ND	10.0	"	"	"	"	"	"	
4,4'-DDE	ND	10.0	"	"	"	"	"	"	
4,4'-DDT	ND	10.0	"	"	"	"	"	"	
Dieldrin	ND	10.0	"	"	"	"	"	"	
Endosulfan I	ND	10.0	"	"	"	"	"	"	
Endosulfan II	ND	10.0	"	"	"	"	"	"	
Endosulfan sulfate	ND	10.0	"	"	"	"	"	"	
Endrin	ND	10.0	"	"	"	"	"	"	
Endrin aldehyde	ND	10.0	"	"	"	"	"	"	

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Client Name: Dudek & Associates, Inc.
Project Name: Tierra Del Sol/7123

EMA Log #: 12G0619

Organochlorine Pesticides by EPA Method 8081B

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
GS.5.3 (12G0619-09) Soil Sampled: 07/24/12 16:13 Received: 07/25/12 08:50									SD-05
Endrin ketone	ND	10.0	ug/kg	5	2080662	08/06/12	08/07/12	EPA 8081	
Heptachlor	ND	10.0	"	"	"	"	"	"	
Heptachlor epoxide	ND	10.0	"	"	"	"	"	"	
Methoxychlor	ND	25.0	"	"	"	"	"	"	
Toxaphene	ND	125	"	"	"	"	"	"	
Surrogate: TCMX		137 %	26-146		"	"	"	"	
GS.4.1 (12G0619-10) Soil Sampled: 07/24/12 15:51 Received: 07/25/12 08:50									SD-05
Aldrin	ND	10.0	ug/kg	5	2080662	08/06/12	08/07/12	EPA 8081	
alpha-BHC	ND	10.0	"	"	"	"	"	"	
beta-BHC	ND	10.0	"	"	"	"	"	"	
gamma-BHC (Lindane)	ND	10.0	"	"	"	"	"	"	
delta-BHC	ND	10.0	"	"	"	"	"	"	
alpha-Chlordane	ND	25.0	"	"	"	"	"	"	
gamma-Chlordane	ND	25.0	"	"	"	"	"	"	
Chlordane (Total)	ND	25.0	"	"	"	"	"	"	
4,4'-DDD	ND	10.0	"	"	"	"	"	"	
4,4'-DDE	ND	10.0	"	"	"	"	"	"	
4,4'-DDT	ND	10.0	"	"	"	"	"	"	
Dieldrin	ND	10.0	"	"	"	"	"	"	
Endosulfan I	ND	10.0	"	"	"	"	"	"	
Endosulfan II	ND	10.0	"	"	"	"	"	"	
Endosulfan sulfate	ND	10.0	"	"	"	"	"	"	
Endrin	ND	10.0	"	"	"	"	"	"	
Endrin aldehyde	ND	10.0	"	"	"	"	"	"	
Endrin ketone	ND	10.0	"	"	"	"	"	"	
Heptachlor	ND	10.0	"	"	"	"	"	"	
Heptachlor epoxide	ND	10.0	"	"	"	"	"	"	
Methoxychlor	ND	25.0	"	"	"	"	"	"	
Toxaphene	ND	125	"	"	"	"	"	"	
Surrogate: TCMX		99 %	26-146		"	"	"	"	

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Analytical, Inc.

EMA Log #: 12G0619

Organochlorine Pesticides by EPA Method 8081B

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
GS.4.2 (12G0619-11) Soil	Sampled: 07/24/12 15:50	Received: 07/25/12 08:50							SD-05
Aldrin	ND	10.0	ug/kg	5	2080662	08/06/12	08/08/12	EPA 8081	
alpha-BHC	ND	10.0	"	"	"	"	"	"	
beta-BHC	ND	10.0	"	"	"	"	"	"	
gamma-BHC (Lindane)	ND	10.0	"	"	"	"	"	"	
delta-BHC	ND	10.0	"	"	"	"	"	"	
alpha-Chlordane	ND	25.0	"	"	"	"	"	"	
gamma-Chlordane	ND	25.0	"	"	"	"	"	"	
Chlordane (Total)	ND	25.0	"	"	"	"	"	"	
4,4'-DDD	ND	10.0	"	"	"	"	"	"	
4,4'-DDE	ND	10.0	"	"	"	"	"	"	
4,4'-DDT	ND	10.0	"	"	"	"	"	"	
Dieldrin	ND	10.0	"	"	"	"	"	"	
Endosulfan I	ND	10.0	"	"	"	"	"	"	
Endosulfan II	ND	10.0	"	"	"	"	"	"	
Endosulfan sulfate	ND	10.0	"	"	"	"	"	"	
Endrin	ND	10.0	"	"	"	"	"	"	
Endrin aldehyde	ND	10.0	"	"	"	"	"	"	
Endrin ketone	ND	10.0	"	"	"	"	"	"	
Heptachlor	ND	10.0	"	"	"	"	"	"	
Heptachlor epoxide	ND	10.0	"	"	"	"	"	"	
Methoxychlor	ND	25.0	"	"	"	"	"	"	
Toxaphene	ND	125	"	"	"	"	"	"	
Surrogate: TCMX		107 %	26-146	"	"	"	"	"	

GS.6.1 (12G0619-12) Soil	Sampled: 07/24/12 17:03	Received: 07/25/12 08:50							SD-05
Aldrin	ND	10.0	ug/kg	5	2080662	08/06/12	08/08/12	EPA 8081	
alpha-BHC	ND	10.0	"	"	"	"	"	"	
beta-BHC	ND	10.0	"	"	"	"	"	"	
gamma-BHC (Lindane)	ND	10.0	"	"	"	"	"	"	
delta-BHC	ND	10.0	"	"	"	"	"	"	
alpha-Chlordane	ND	25.0	"	"	"	"	"	"	
gamma-Chlordane	ND	25.0	"	"	"	"	"	"	
Chlordane (Total)	ND	25.0	"	"	"	"	"	"	
4,4'-DDD	ND	10.0	"	"	"	"	"	"	
4,4'-DDE	ND	10.0	"	"	"	"	"	"	
4,4'-DDT	ND	10.0	"	"	"	"	"	"	
Dieldrin	ND	10.0	"	"	"	"	"	"	
Endosulfan I	ND	10.0	"	"	"	"	"	"	
Endosulfan II	ND	10.0	"	"	"	"	"	"	
Endosulfan sulfate	ND	10.0	"	"	"	"	"	"	
Endrin	ND	10.0	"	"	"	"	"	"	
Endrin aldehyde	ND	10.0	"	"	"	"	"	"	

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Client Name: Dudek & Associates, Inc.
Project Name: Tierra Del Sol/7123

EMA Log #: 12G0619

Organochlorine Pesticides by EPA Method 8081B

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
GS.6.1 (12G0619-12) Soil Sampled: 07/24/12 17:03 Received: 07/25/12 08:50									SD-05
Endrin ketone	ND	10.0	ug/kg	5	2080662	08/06/12	08/08/12	EPA 8081	
Heptachlor	ND	10.0	"	"	"	"	"	"	
Heptachlor epoxide	ND	10.0	"	"	"	"	"	"	
Methoxychlor	ND	25.0	"	"	"	"	"	"	
Toxaphene	ND	125	"	"	"	"	"	"	
Surrogate: TCMX		108 %	26-146		"	"	"	"	
GS.6.2 (12G0619-13) Soil Sampled: 07/24/12 17:04 Received: 07/25/12 08:50									SD-05
Aldrin	ND	20.0	ug/kg	10	2080662	08/06/12	08/08/12	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		97 %	26-146		"	"	"	"	

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Analytical, Inc.

Client Name: Dudek & Associates, Inc.
Project Name: Tierra Del Sol/7123

EMA Log #: 12G0619

Organochlorine Pesticides by EPA Method 8081B

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
GS.6.3 (12G0619-14) Soil Sampled: 07/24/12 17:05 Received: 07/25/12 08:50									SD-05
Aldrin	ND	10.0	ug/kg	5	2080662	08/06/12	08/08/12	EPA 8081	
alpha-BHC	ND	10.0	"	"	"	"	"	"	
beta-BHC	ND	10.0	"	"	"	"	"	"	
gamma-BHC (Lindane)	ND	10.0	"	"	"	"	"	"	
delta-BHC	ND	10.0	"	"	"	"	"	"	
alpha-Chlordane	ND	25.0	"	"	"	"	"	"	
gamma-Chlordane	ND	25.0	"	"	"	"	"	"	
Chlordane (Total)	ND	25.0	"	"	"	"	"	"	
4,4'-DDD	ND	10.0	"	"	"	"	"	"	
4,4'-DDE	ND	10.0	"	"	"	"	"	"	
4,4'-DDT	ND	10.0	"	"	"	"	"	"	
Dieldrin	ND	10.0	"	"	"	"	"	"	
Endosulfan I	ND	10.0	"	"	"	"	"	"	
Endosulfan II	ND	10.0	"	"	"	"	"	"	
Endosulfan sulfate	ND	10.0	"	"	"	"	"	"	
Endrin	ND	10.0	"	"	"	"	"	"	
Endrin aldehyde	ND	10.0	"	"	"	"	"	"	
Endrin ketone	ND	10.0	"	"	"	"	"	"	
Heptachlor	ND	10.0	"	"	"	"	"	"	
Heptachlor epoxide	ND	10.0	"	"	"	"	"	"	
Methoxychlor	ND	25.0	"	"	"	"	"	"	
Toxaphene	ND	125	"	"	"	"	"	"	
Surrogate: TCMX		99 %	26-146		"	"	"	"	
GS.1.1 (12G0619-15) Soil Sampled: 07/24/12 14:20 Received: 07/25/12 08:50									SD-05
Aldrin	ND	20.0	ug/kg	10	2080662	08/06/12	08/08/12	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	"	"	"	"	"	"	

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Analytical, Inc.

Client Name: Dudek & Associates, Inc.

EMA Log #: 12G0619

Project Name: Tierra Del Sol/7123

Organochlorine Pesticides by EPA Method 8081B

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
GS.1.1 (12G0619-15) Soil Sampled: 07/24/12 14:20 Received: 07/25/12 08:50									SD-05
Endrin ketone	ND	20.0	ug/kg	10	2080662	08/06/12	08/08/12	EPA 8081	
Heptachlor	ND	20.0	"	"	"	"	"	"	
Heptachlor epoxide	ND	20.0	"	"	"	"	"	"	
Methoxychlor	ND	50.0	"	"	"	"	"	"	
Toxaphene	ND	250	"	"	"	"	"	"	
Surrogate: TCMX		133 %	26-146		"	"	"	"	
GS.1.2 (12G0619-16) Soil Sampled: 07/24/12 14:21 Received: 07/25/12 08:50									SD-05
Aldrin	ND	10.0	ug/kg	5	2080662	08/06/12	08/09/12	EPA 8081	
alpha-BHC	ND	10.0	"	"	"	"	"	"	
beta-BHC	ND	10.0	"	"	"	"	"	"	
gamma-BHC (Lindane)	ND	10.0	"	"	"	"	"	"	
delta-BHC	ND	10.0	"	"	"	"	"	"	
alpha-Chlordane	ND	25.0	"	"	"	"	"	"	
gamma-Chlordane	ND	25.0	"	"	"	"	"	"	
Chlordane (Total)	ND	25.0	"	"	"	"	"	"	
4,4'-DDD	ND	10.0	"	"	"	"	"	"	
4,4'-DDE	ND	10.0	"	"	"	"	"	"	
4,4'-DDT	ND	10.0	"	"	"	"	"	"	
Dieldrin	ND	10.0	"	"	"	"	"	"	
Endosulfan I	ND	10.0	"	"	"	"	"	"	
Endosulfan II	ND	10.0	"	"	"	"	"	"	
Endosulfan sulfate	ND	10.0	"	"	"	"	"	"	
Endrin	ND	10.0	"	"	"	"	"	"	
Endrin aldehyde	ND	10.0	"	"	"	"	"	"	
Endrin ketone	ND	10.0	"	"	"	"	"	"	
Heptachlor	ND	10.0	"	"	"	"	"	"	
Heptachlor epoxide	ND	10.0	"	"	"	"	"	"	
Methoxychlor	ND	25.0	"	"	"	"	"	"	
Toxaphene	ND	125	"	"	"	"	"	"	
Surrogate: TCMX		85 %	26-146		"	"	"	"	

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Analytical, Inc.

EMA Log #: 12G0619

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
GS.1.3 (12G0619-17) Soil Sampled: 07/24/12 14:22 Received: 07/25/12 08:50									SD-05
Aldrin	ND	10.0	ug/kg	5	2080662	08/06/12	08/09/12	EPA 8081	
alpha-BHC	ND	10.0	"	"	"	"	"	"	
beta-BHC	ND	10.0	"	"	"	"	"	"	
gamma-BHC (Lindane)	ND	10.0	"	"	"	"	"	"	
delta-BHC	ND	10.0	"	"	"	"	"	"	
alpha-Chlordane	ND	25.0	"	"	"	"	"	"	
gamma-Chlordane	ND	25.0	"	"	"	"	"	"	
Chlordane (Total)	ND	25.0	"	"	"	"	"	"	
4,4'-DDD	ND	10.0	"	"	"	"	"	"	
4,4'-DDE	ND	10.0	"	"	"	"	"	"	
4,4'-DDT	ND	10.0	"	"	"	"	"	"	
Dieldrin	ND	10.0	"	"	"	"	"	"	
Endosulfan I	ND	10.0	"	"	"	"	"	"	
Endosulfan II	ND	10.0	"	"	"	"	"	"	
Endosulfan sulfate	ND	10.0	"	"	"	"	"	"	
Endrin	ND	10.0	"	"	"	"	"	"	
Endrin aldehyde	ND	10.0	"	"	"	"	"	"	
Endrin ketone	ND	10.0	"	"	"	"	"	"	
Heptachlor	ND	10.0	"	"	"	"	"	"	
Heptachlor epoxide	ND	10.0	"	"	"	"	"	"	
Methoxychlor	ND	25.0	"	"	"	"	"	"	
Toxaphene	ND	125	"	"	"	"	"	"	
Surrogate: TCMX		79 %	26-146		"	"	"	"	
GS.7.1 (12G0619-18) Soil Sampled: 07/24/12 17:12 Received: 07/25/12 08:50									SD-05
Aldrin	ND	10.0	ug/kg	5	2080662	08/06/12	08/09/12	EPA 8081	
alpha-BHC	ND	10.0	"	"	"	"	"	"	
beta-BHC	ND	10.0	"	"	"	"	"	"	
gamma-BHC (Lindane)	ND	10.0	"	"	"	"	"	"	
delta-BHC	ND	10.0	"	"	"	"	"	"	
alpha-Chlordane	ND	25.0	"	"	"	"	"	"	
gamma-Chlordane	ND	25.0	"	"	"	"	"	"	
Chlordane (Total)	ND	25.0	"	"	"	"	"	"	
4,4'-DDD	ND	10.0	"	"	"	"	"	"	
4,4'-DDE	ND	10.0	"	"	"	"	"	"	
4,4'-DDT	ND	10.0	"	"	"	"	"	"	
Dieldrin	ND	10.0	"	"	"	"	"	"	
Endosulfan I	ND	10.0	"	"	"	"	"	"	
Endosulfan II	ND	10.0	"	"	"	"	"	"	
Endosulfan sulfate	ND	10.0	"	"	"	"	"	"	
Endrin	ND	10.0	"	"	"	"	"	"	
Endrin aldehyde	ND	10.0	"	"	"	"	"	"	

-EnviroMatrix Analytical, Inc.

Client Name: Dudek & Associates, Inc.
Project Name: Tierra Del Sol/7123

EMA Log #: 12G0619

Organochlorine Pesticides by EPA Method 8081B

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
GS.7.1 (12G0619-18) Soil Sampled: 07/24/12 17:12 Received: 07/25/12 08:50									SD-05
Endrin ketone	ND	10.0	ug/kg	5	2080662	08/06/12	08/09/12	EPA 8081	
Heptachlor	ND	10.0	"	"	"	"	"	"	
Heptachlor epoxide	ND	10.0	"	"	"	"	"	"	
Methoxychlor	ND	25.0	"	"	"	"	"	"	
Toxaphene	ND	125	"	"	"	"	"	"	
Surrogate: TCMX		87 %	26-146		"	"	"	"	
GS.7.2 (12G0619-19) Soil Sampled: 07/24/12 17:13 Received: 07/25/12 08:50									SD-05
Aldrin	ND	10.0	ug/kg	5	2080662	08/06/12	08/09/12	EPA 8081	
alpha-BHC	ND	10.0	"	"	"	"	"	"	
beta-BHC	ND	10.0	"	"	"	"	"	"	
gamma-BHC (Lindane)	ND	10.0	"	"	"	"	"	"	
delta-BHC	ND	10.0	"	"	"	"	"	"	
alpha-Chlordane	ND	25.0	"	"	"	"	"	"	
gamma-Chlordane	ND	25.0	"	"	"	"	"	"	
Chlordane (Total)	ND	25.0	"	"	"	"	"	"	
4,4'-DDD	ND	10.0	"	"	"	"	"	"	
4,4'-DDE	ND	10.0	"	"	"	"	"	"	
4,4'-DDT	ND	10.0	"	"	"	"	"	"	
Dieldrin	ND	10.0	"	"	"	"	"	"	
Endosulfan I	ND	10.0	"	"	"	"	"	"	
Endosulfan II	ND	10.0	"	"	"	"	"	"	
Endosulfan sulfate	ND	10.0	"	"	"	"	"	"	
Endrin	ND	10.0	"	"	"	"	"	"	
Endrin aldehyde	ND	10.0	"	"	"	"	"	"	
Endrin ketone	ND	10.0	"	"	"	"	"	"	
Heptachlor	ND	10.0	"	"	"	"	"	"	
Heptachlor epoxide	ND	10.0	"	"	"	"	"	"	
Methoxychlor	ND	25.0	"	"	"	"	"	"	
Toxaphene	ND	125	"	"	"	"	"	"	
Surrogate: TCMX		96 %	26-146		"	"	"	"	

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Analytical, Inc.

Client Name: Dudek & Associates, Inc.
Project Name: Tierra Del Sol/7123

EMA Log #: 12G0619

Organochlorine Pesticides by EPA Method 8081B

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
GS.7.3 (12G0619-20) Soil Sampled: 07/24/12 17:14 Received: 07/25/12 08:50									SD-05
Aldrin	ND	10.0	ug/kg	5	2080662	08/06/12	08/09/12	EPA 8081	
alpha-BHC	ND	10.0	"	"	"	"	"	"	
beta-BHC	ND	10.0	"	"	"	"	"	"	
gamma-BHC (Lindane)	ND	10.0	"	"	"	"	"	"	
delta-BHC	ND	10.0	"	"	"	"	"	"	
alpha-Chlordane	ND	25.0	"	"	"	"	"	"	
gamma-Chlordane	ND	25.0	"	"	"	"	"	"	
Chlordane (Total)	ND	25.0	"	"	"	"	"	"	
4,4'-DDD	ND	10.0	"	"	"	"	"	"	
4,4'-DDE	ND	10.0	"	"	"	"	"	"	
4,4'-DDT	ND	10.0	"	"	"	"	"	"	
Dieldrin	ND	10.0	"	"	"	"	"	"	
Endosulfan I	ND	10.0	"	"	"	"	"	"	
Endosulfan II	ND	10.0	"	"	"	"	"	"	
Endosulfan sulfate	ND	10.0	"	"	"	"	"	"	
Endrin	ND	10.0	"	"	"	"	"	"	
Endrin aldehyde	ND	10.0	"	"	"	"	"	"	
Endrin ketone	ND	10.0	"	"	"	"	"	"	
Heptachlor	ND	10.0	"	"	"	"	"	"	
Heptachlor epoxide	ND	10.0	"	"	"	"	"	"	
Methoxychlor	ND	25.0	"	"	"	"	"	"	
Toxaphene	ND	125	"	"	"	"	"	"	
Surrogate: TCMX		88 %	26-146		"	"	"	"	
GS.8.1 (12G0619-21) Soil Sampled: 07/24/12 18:07 Received: 07/25/12 08:50									SD-05
Aldrin	ND	10.0	ug/kg	5	2080662	08/06/12	08/09/12	EPA 8081	
alpha-BHC	ND	10.0	"	"	"	"	"	"	
beta-BHC	ND	10.0	"	"	"	"	"	"	
gamma-BHC (Lindane)	ND	10.0	"	"	"	"	"	"	
delta-BHC	ND	10.0	"	"	"	"	"	"	
alpha-Chlordane	ND	25.0	"	"	"	"	"	"	
gamma-Chlordane	ND	25.0	"	"	"	"	"	"	
Chlordane (Total)	ND	25.0	"	"	"	"	"	"	
4,4'-DDD	ND	10.0	"	"	"	"	"	"	
4,4'-DDE	ND	10.0	"	"	"	"	"	"	
4,4'-DDT	ND	10.0	"	"	"	"	"	"	
Dieldrin	ND	10.0	"	"	"	"	"	"	
Endosulfan I	ND	10.0	"	"	"	"	"	"	
Endosulfan II	ND	10.0	"	"	"	"	"	"	
Endosulfan sulfate	ND	10.0	"	"	"	"	"	"	
Endrin	ND	10.0	"	"	"	"	"	"	
Endrin aldehyde	ND	10.0	"	"	"	"	"	"	

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Analytical, Inc.

Client Name: Dudek & Associates, Inc.
Project Name: Tierra Del Sol/7123

EMA Log #: 12G0619

Organochlorine Pesticides by EPA Method 8081B

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
GS.8.1 (12G0619-21) Soil Sampled: 07/24/12 18:07 Received: 07/25/12 08:50									SD-05
Endrin ketone	ND	10.0	ug/kg	5	2080662	08/06/12	08/09/12	EPA 8081	
Heptachlor	ND	10.0	"	"	"	"	"	"	
Heptachlor epoxide	ND	10.0	"	"	"	"	"	"	
Methoxychlor	ND	25.0	"	"	"	"	"	"	
Toxaphene	ND	125	"	"	"	"	"	"	
Surrogate: TCMX		76 %	26-146		"	"	"	"	
GS.8.2 (12G0619-22) Soil Sampled: 07/24/12 18:06 Received: 07/25/12 08:50									SD-05
Aldrin	ND	10.0	ug/kg	5	2080662	08/06/12	08/09/12	EPA 8081	
alpha-BHC	ND	10.0	"	"	"	"	"	"	
beta-BHC	ND	10.0	"	"	"	"	"	"	
gamma-BHC (Lindane)	ND	10.0	"	"	"	"	"	"	
delta-BHC	ND	10.0	"	"	"	"	"	"	
alpha-Chlordane	ND	25.0	"	"	"	"	"	"	
gamma-Chlordane	ND	25.0	"	"	"	"	"	"	
Chlordane (Total)	ND	25.0	"	"	"	"	"	"	
4,4'-DDD	ND	10.0	"	"	"	"	"	"	
4,4'-DDE	ND	10.0	"	"	"	"	"	"	
4,4'-DDT	ND	10.0	"	"	"	"	"	"	
Dieldrin	ND	10.0	"	"	"	"	"	"	
Endosulfan I	ND	10.0	"	"	"	"	"	"	
Endosulfan II	ND	10.0	"	"	"	"	"	"	
Endosulfan sulfate	ND	10.0	"	"	"	"	"	"	
Endrin	ND	10.0	"	"	"	"	"	"	
Endrin aldehyde	ND	10.0	"	"	"	"	"	"	
Endrin ketone	ND	10.0	"	"	"	"	"	"	
Heptachlor	ND	10.0	"	"	"	"	"	"	
Heptachlor epoxide	ND	10.0	"	"	"	"	"	"	
Methoxychlor	ND	25.0	"	"	"	"	"	"	
Toxaphene	ND	125	"	"	"	"	"	"	
Surrogate: TCMX		89 %	26-146		"	"	"	"	

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EMA Log #: 12G0619

Organochlorine Pesticides by EPA Method 8081B

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
GS.8.3 (12G0619-23) Soil		Sampled: 07/24/12 18:05	Received: 07/25/12 08:50		SD-05				
Aldrin	ND	10.0	ug/kg	5	2080662	08/06/12	08/09/12	EPA 8081	
alpha-BHC	ND	10.0	"	"	"	"	"	"	
beta-BHC	ND	10.0	"	"	"	"	"	"	
gamma-BHC (Lindane)	ND	10.0	"	"	"	"	"	"	
delta-BHC	ND	10.0	"	"	"	"	"	"	
alpha-Chlordane	ND	25.0	"	"	"	"	"	"	
gamma-Chlordane	ND	25.0	"	"	"	"	"	"	
Chlordane (Total)	ND	25.0	"	"	"	"	"	"	
4,4'-DDD	ND	10.0	"	"	"	"	"	"	
4,4'-DDE	ND	10.0	"	"	"	"	"	"	
4,4'-DDT	ND	10.0	"	"	"	"	"	"	
Dieldrin	ND	10.0	"	"	"	"	"	"	
Endosulfan I	ND	10.0	"	"	"	"	"	"	
Endosulfan II	ND	10.0	"	"	"	"	"	"	
Endosulfan sulfate	ND	10.0	"	"	"	"	"	"	
Endrin	ND	10.0	"	"	"	"	"	"	
Endrin aldehyde	ND	10.0	"	"	"	"	"	"	
Endrin ketone	ND	10.0	"	"	"	"	"	"	
Heptachlor	ND	10.0	"	"	"	"	"	"	
Heptachlor epoxide	ND	10.0	"	"	"	"	"	"	
Methoxychlor	ND	25.0	"	"	"	"	"	"	
Toxaphene	ND	125	"	"	"	"	"	"	
Surrogate: TCMX		94 %	26-146		"	"	"	"	
GS.8.4 (12G0619-24) Soil		Sampled: 07/24/12 18:08	Received: 07/25/12 08:50		SD-05				
Aldrin	ND	10.0	ug/kg	5	2080662	08/06/12	08/09/12	EPA 8081	
alpha-BHC	ND	10.0	"	"	"	"	"	"	
beta-BHC	ND	10.0	"	"	"	"	"	"	
gamma-BHC (Lindane)	ND	10.0	"	"	"	"	"	"	
delta-BHC	ND	10.0	"	"	"	"	"	"	
alpha-Chlordane	ND	25.0	"	"	"	"	"	"	
gamma-Chlordane	ND	25.0	"	"	"	"	"	"	
Chlordane (Total)	ND	25.0	"	"	"	"	"	"	
4,4'-DDD	ND	10.0	"	"	"	"	"	"	
4,4'-DDE	ND	10.0	"	"	"	"	"	"	
4,4'-DDT	ND	10.0	"	"	"	"	"	"	
Dieldrin	ND	10.0	"	"	"	"	"	"	
Endosulfan I	ND	10.0	"	"	"	"	"	"	
Endosulfan II	ND	10.0	"	"	"	"	"	"	
Endosulfan sulfate	ND	10.0	"	"	"	"	"	"	
Endrin	ND	10.0	"	"	"	"	"	"	
Endrin aldehyde	ND	10.0	"	"	"	"	"	"	

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Client Name: Dudek & Associates, Inc.
Project Name: Tierra Del Sol/7123

EMA Log #: 12G0619

Organochlorine Pesticides by EPA Method 8081B

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
GS.8.4 (12G0619-24) Soil Sampled: 07/24/12 18:08 Received: 07/25/12 08:50									SD-05
Endrin ketone	ND	10.0	ug/kg	5	2080662	08/06/12	08/09/12	EPA 8081	
Heptachlor	ND	10.0	"	"	"	"	"	"	
Heptachlor epoxide	ND	10.0	"	"	"	"	"	"	
Methoxychlor	ND	25.0	"	"	"	"	"	"	
Toxaphene	ND	125	"	"	"	"	"	"	
Surrogate: TCMX		89 %	26-146		"	"	"	"	

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EnviroMatrix



Analytical, Inc.

Client Name: Dudek & Associates, Inc.
Project Name: Tierra Del Sol/7123

EMA Log #: 12G0619

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
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Batch 2073021

Blank (2073021-BLK1)

Prepared & Analyzed: 07/30/12

Lead	ND	1.00	mg/kg							
Arsenic	ND	1.00	"							

LCS (2073021-BS1)

Prepared & Analyzed: 07/30/12

Lead	106	1.00	mg/kg	100		106	75-125			
Arsenic	106	1.00	"	100		106	75-125			

LCS Dup (2073021-BSD1)

Prepared & Analyzed: 07/30/12

Lead	106	1.00	mg/kg	100		106	75-125	0	20	
Arsenic	106	1.00	"	100		106	75-125	0.2	20	

Duplicate (2073021-DUP1)

Source: 12G0619-01

Prepared & Analyzed: 07/30/12

Lead	4.20	1.00	mg/kg		3.80			10	20	
Arsenic	ND	1.00	"		ND				20	

Matrix Spike (2073021-MS1)

Source: 12G0619-01

Prepared & Analyzed: 07/30/12

Lead	92.8	1.00	mg/kg	98.0	3.80	91	75-125			
Arsenic	87.4	1.00	"	98.0	ND	89	75-125			

Matrix Spike Dup (2073021-MSD1)

Source: 12G0619-01

Prepared & Analyzed: 07/30/12

Lead	95.2	1.00	mg/kg	94.3	3.80	97	75-125	3	20	
Arsenic	90.1	1.00	"	94.3	ND	95	75-125	3	20	

Batch 2073152

Blank (2073152-BLK1)

Prepared: 07/31/12 Analyzed: 08/01/12

Arsenic	ND	1.00	mg/kg							
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Analytical, Inc.

Client Name: Dudek & Associates, Inc.
Project Name: Tierra Del Sol/7123

EMA Log #: 12G0619

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
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Batch 2073152

LCS (2073152-BS1)

Prepared: 07/31/12 Analyzed: 08/01/12

Arsenic	102	1.00	mg/kg	100	102	75-125
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LCS Dup (2073152-BSD1)

Prepared: 07/31/12 Analyzed: 08/01/12

Arsenic	102	1.00	mg/kg	100	102	75-125	0.5	20
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Duplicate (2073152-DUP1)

Source: 12G0619-23

Prepared: 07/31/12 Analyzed: 08/01/12

Arsenic	ND	1.00	mg/kg	ND	20
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Matrix Spike (2073152-MS1)

Source: 12G0619-23

Prepared: 07/31/12 Analyzed: 08/01/12

Arsenic	82.7	1.00	mg/kg	89.3	ND	93	75-125
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Matrix Spike Dup (2073152-MSD1)

Source: 12G0619-23

Prepared: 07/31/12 Analyzed: 08/01/12

Arsenic	85.5	1.00	mg/kg	92.6	ND	92	75-125	3	20
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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.

EnviroMatrix



Analytical, Inc.

Client Name: Dudek & Associates, Inc.
Project Name: Tierra Del Sol/7123

EMA Log #: 12G0619

Organochlorine Pesticides by EPA Method 8081B - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 2080662

Blank (2080662-BLK1)

Prepared: 08/06/12 Analyzed: 08/07/12

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
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LCS (2080662-BS1)

Prepared: 08/06/12 Analyzed: 08/07/12

Aldrin	19.7	2.00	ug/kg	16.7	118	42-122
gamma-BHC (Lindane)	18.8	2.00	"	16.7	113	32-127
4,4'-DDT	21.5	2.00	"	16.7	129	25-160
Dieldrin	19.0	2.00	"	16.7	114	36-146
Endrin	21.9	2.00	"	16.7	131	30-147
Heptachlor	18.1	2.00	"	16.7	109	34-111

Surrogate: TCMX	16.9		"	16.7	101	26-146
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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.

EnviroMatrix Analytical, Inc.



Client Name: Dudek & Associates, Inc.
Project Name: Tierra Del Sol/7123

EMA Log #: 12G0619

Organochlorine Pesticides by EPA Method 8081B - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 2080662

LCS Dup (2080662-BSD1)

Prepared: 08/06/12 Analyzed: 08/07/12

Aldrin	17.8	2.00	ug/kg	16.7		107	42-122	10	30	
gamma-BHC (Lindane)	17.0	2.00	"	16.7		102	32-127	10	30	
4,4'-DDT	21.0	2.00	"	16.7		126	25-160	2	30	
Dieldrin	18.9	2.00	"	16.7		113	36-146	0.5	30	
Endrin	21.2	2.00	"	16.7		127	30-147	3	30	
Heptachlor	17.3	2.00	"	16.7		104	34-111	5	30	
Surrogate: TCMX	15.0		"	16.7		90	26-146			

Duplicate (2080662-DUP1)

Source: 12G0619-10

Prepared: 08/06/12 Analyzed: 08/09/12

SD-05

Aldrin	ND	10.0	ug/kg		ND				30	
alpha-BHC	ND	10.0	"		ND				30	
beta-BHC	ND	10.0	"		ND				30	
gamma-BHC (Lindane)	ND	10.0	"		ND				30	
delta-BHC	ND	10.0	"		ND				30	
alpha-Chlordane	ND	25.0	"		ND				30	
gamma-Chlordane	ND	25.0	"		ND				30	
Chlordane (Total)	ND	25.0	"		ND				30	
4,4'-DDD	ND	10.0	"		ND				30	
4,4'-DDE	ND	10.0	"		ND				30	
4,4'-DDT	ND	10.0	"		ND				30	
Dieldrin	ND	10.0	"		ND				30	
Endosulfan I	ND	10.0	"		ND				30	
Endosulfan II	ND	10.0	"		ND				30	
Endosulfan sulfate	ND	10.0	"		ND				30	
Endrin	ND	10.0	"		ND				30	
Endrin aldehyde	ND	10.0	"		ND				30	
Endrin ketone	ND	10.0	"		ND				30	
Heptachlor	ND	10.0	"		ND				30	
Heptachlor epoxide	ND	10.0	"		ND				30	
Methoxychlor	ND	25.0	"		ND				30	
Toxaphene	ND	125	"		ND				30	
Surrogate: TCMX	14.0		"	16.7		84	26-146			

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.

EnviroMatrix Analytical, Inc.



Client Name: Dudek & Associates, Inc.
Project Name: Tierra Del Sol/7123

EMA Log #: 12G0619

Organochlorine Pesticides by EPA Method 8081B - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 2080662

Matrix Spike (2080662-MS1)		Source: 12G0619-10		Prepared: 08/06/12		Analyzed: 08/09/12			
Aldrin	16.3	10.0	ug/kg	16.7	ND	98	42-122		
gamma-BHC (Lindane)	14.9	10.0	"	16.7	ND	89	32-127		
4,4'-DDT	15.7	10.0	"	16.7	ND	94	25-160		
Dieldrin	16.7	10.0	"	16.7	ND	100	36-146		
Endrin	15.1	10.0	"	16.7	ND	90	30-147		
Heptachlor	16.0	10.0	"	16.7	ND	96	34-111		
Surrogate: TCMX	13.3		"	16.7		80	26-146		

Matrix Spike Dup (2080662-MSD1)		Source: 12G0619-10		Prepared: 08/06/12		Analyzed: 08/09/12			
Aldrin	17.2	10.0	ug/kg	16.7	ND	103	42-122	5	30
gamma-BHC (Lindane)	15.2	10.0	"	16.7	ND	91	32-127	2	30
4,4'-DDT	15.0	10.0	"	16.7	ND	90	25-160	5	30
Dieldrin	17.2	10.0	"	16.7	ND	103	36-146	3	30
Endrin	15.4	10.0	"	16.7	ND	93	30-147	2	30
Heptachlor	16.4	10.0	"	16.7	ND	99	34-111	3	30
Surrogate: TCMX	14.6		"	16.7		87	26-146		

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.

EnviroMatrix



Analytical, Inc.

Client Name: Dudek & Associates, Inc.
Project Name: Tierra Del Sol/7123

EMA Log #: 12G0619

Notes and Definitions

SD-05 Sample dilution required due to the nature of the sample matrix.

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.

EnviroMatrix Analytical, Inc.



605 Third Street
Encinitas, CA 92024
Tel: 760-942-5147
Fax: 760-942-5206

Chain - of - Custody Form

COC # _____ Page 1 of 3

Project Name

Tierra Del Sol

Job Number:

7123

Sampled by:

Pattick Rantz

Sampler Signature

[Signature]

Sample ID	Sample Collection		Matrix	Method Preserved					Number of Sample Containers			
	Date	Time	Water	Vapor	HCL	HNO ₃	H ₂ SO ₄	Filtered (Y/N)	40 mL glass	VOA	4 oz. Glass Jar	Amber
G5.3.1	7-24-12	1530		X				X			4	
G5.3.2		1531										
G5.2.1		1513										
G5.2.2		1514										
G5.2.1		1513										
G5.2.2		1514										
G5.5.1		1611										
G5.5.2		1612										
G5.5.3		1613										
G5.4.1		1551										
G5.4.2		1550										

Total # of containers per type: 9 2

Laboratory: _____ Lab Job #: _____
 Lab Contact: _____ Shipping Method: _____
 Project Manager: _____ PM Email: _____
 Gilman McManen _____

Type of Analysis to be Performed: _____
 EPA 8260B VOCs
 EPA 8270 SVOCs
 Chlorinated Pesticides
 EPA 8081A TPH
 EPA 8015 TDS
 Lead (Pb)
 Arsenic 6010
 Dioxin/Furan
 Standard Turn-Around Time: 24 hr 48 hr 72 hr
 Other: _____
 Special Instruction: NOTE: 802 g for Dioxin analysis. The samples, and TBD. For Dioxin, 16000 CA PR.

Relinquished by: Patt Rantz Company: EMMA Date: 7-25-12 Time: 8:50
 Received by: DAVID NGUYEN Company: EMMA Date: 7-25-12 Time: 2:50
 Total # of containers: 11
 Please return original COC to Duxek
 Sample Receipt: ☐ Samples Intact ☐ Cooler Temp: _____ °C ☐ Conforms to COC

12°C Rev 1/07

Louis Luick

From: Glenna McMahon [gmcmahon@dudek.com]
Sent: Thursday, July 26, 2012 11:36 AM
To: Louis Luick (lluick@enviromatrixinc.com)
Subject: Tierra del Sol - dioxins/furans

Hi Louis,

Let's run "GS.2.2" for the full dioxin/furan list + equivalency calcs.

After we get those results, we'll decide if we want to run GS.2.1 for the one dioxin or full list.

Thanks,

GLENNA MCMAHON, P.E.
ASSOCIATE ENVIRONMENTAL ENGINEER

DUDEK

ENGINEERING + ENVIRONMENTAL
750 SECOND STREET
ENCINITAS, CALIFORNIA 92024
T 760 479.4130 F 760 942.5206
WWW.DUDEK.COM

7/26/2012



13 August 2012

Dudek & Associates, Inc.
Attn: Glenna McMahon
605 Third Street
Encinitas, CA 92024

EMA Log #: 12G0619

Project Name: Terra Del Sol

Enclosed with this letter are the test results performed by subcontract laboratory for the following analyses:

- 2,3,7,8 – TCDD : Equiv.

The samples were received by EnviroMatrix Analytical, Inc. intact and with chain-of-custody documentation. The test results and pertinent quality assurance/quality control data are listed on the attached tables.

I certify that this data report is in compliance both technically and for completeness. Release of the data contained in this hard copy data report has been authorized by the following signature.

A handwritten signature in black ink, appearing to read 'Dan Verdon', written in a cursive style.

Dan Verdon
Laboratory Director



LABORATORY REPORT

Client

EnviroMatrix Analytical, Inc
4340 Viewridge Ave., Ste A
San Diego, CA 92123

Order Number

1217562

Project Number

12G0619

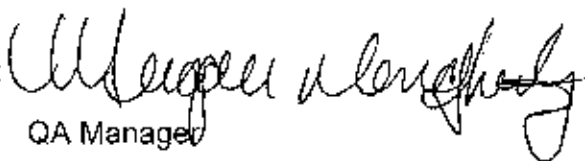
Issued

Monday, August 13, 2012

Total Number of Pages

5 (excluding C.O.C. and cooler receipt form)

Approved By :


QA Manager

1217562

Certifications: A2LA/DOD 0724.01, Alabama 41600, Arkansas 88-0735, California 07256CA, Colorado, Connecticut PH-0105, Delaware, Florida NELAP E87688, Georgia E87688 and 943, Idaho OH00923, Illinois 200061 and Reg.5, Indiana C-OH-13, Kansas E-10347, Kentucky (underground Storage Tank) 3, Kentucky 90146, Louisiana 04061 and LA12004, Maine 2012015, Maryland 339, Massachusetts M-OPH923, Michigan (Reg.5), Minnesota 409711, Montana CERT0099, New Hampshire 2996, New Jersey OH006, New York 11777, North Carolina 39705 and 631, Ohio 4170, Ohio VAP CL0052, Oklahoma 9940, Oregon OH200001, Pennsylvania 68-01335, Rhode Island LA000317, South Carolina 92016001, Tennessee TND4018, Texas T104704466-11-5, Region 5 WG-15J, Region 8 BTMS-L, USDA/APHIS P330-11-00244, Utah OH009232011-1, Vermont VT-87688, Virginia 00440 and 1581, Washington C891, West Virginia 248 and 9957C and E87688, Wisconsin 399013010

"Analytical Integrity" • EPA Certified • NELAP Certified

5310 Win Street • Cuyahoga Falls, Ohio 44223 • Phone: 330-253-8211 • Fax: 330-253-4489

Web Site: www.sctek.com

Sample Summary

Client: EnviroMatrix Analytical, Inc

Order Number: 1217562

Laboratory ID	Client ID	Matrix	Sampling Date
1217562-01	12G0619-01	Solid	7/24/2012

Report Narrative

Client: EnviroMatrix Analytical, Inc

Order Number: 1217562

No problems were encountered during analysis of this order number, except as noted.

Data Qualifiers:

R = Analyte found in the method blank
J = Estimated concentration of analyte between MDL (LOD) and Reporting Limit (LOQ)
C = Analyte has been confirmed by another instrument or method
E = Analyte exceeds the upper limit of the calibration curve.
D = Sample or extract was analyzed at a higher dilution
X = User defined data qualifier.
S = Surrogate out of control limits
U = Undetected
a = Not Accredited by NELAC

ND = Non Detected at LOQ

DF = Dilution Factor

Limit Of Quantitation (LOQ) = Laboratory Reporting Limit (not adjusted for dilution factor)

Limit Of Detection (LOD) = Laboratory Detection Limit

Matrices
A = Air
C = Cream
DW = Drinking Water
L = Liquid
O = Oil
SL = Sludge
SO = Soil
S = Solid
T = Tablet
TC = TCLP Extract
WW = Waste Water
W = Wipe

Estimated uncertainty values are available upon request.

The test results meet the requirements of the NELAC standard, except where noted. The information contained in this analytical report is the sole property of Summit Environmental Technologies, Inc. and that of the client. It cannot be reproduced in any form without the consent of Summit Environmental Technologies, Inc. or the client for which this report was issued. The results contained in this report are only representative of the samples received. Conditions can vary at different times and at different sampling conditions. Summit Environmental Technologies, Inc. is not responsible for use or interpretation of the data included herein.



August 13, 2012

4

Client: EnviroMatrix Analytical, Inc
Address: 4340 Viewridge Ave., Ste A
San Diego, CA 92123

Date Collected: 7/24/2012
Date Received: 7/27/2012
Project #: 12G0619
Client ID #: 12G0619-01
Laboratory ID #: 1217562-01
Analysis: Dioxin/Furan (1613B)
Method: 1613B
Matrix: Solid
Date of Analysis: 8/9/2012
Analyst: AJG

Dioxin/Furan (1613B)

<u>Parameter</u>	<u>Reporting Limit (ng/kg)</u>	<u>Results (ng/kg)</u>
2,3,7,8-TCDF	1.0	ND
1,2,3,7,8-PeCDF	2.0	ND
2,3,4,7,8-PeCDF	2.0	ND
1,2,3,4,7,8-HxCDF	2.0	ND
1,2,3,6,7,8-HxCDF	2.0	ND
2,3,4,6,7,8-HxCDF	2.0	ND
1,2,3,7,8,9-HxCDF	2.0	ND
1,2,3,4,6,7,8-HpCDF	2.0	ND
1,2,3,4,7,8,9-HpCDF	2.0	ND
OCDF	3.9	ND
2,3,7,8-TCDD	1.0	ND
1,2,3,7,8-PeCDD	2.0	ND
1,2,3,4,7,8-HxCDD	2.0	ND
1,2,3,6,7,8-HxCDD	2.0	ND
1,2,3,7,8,9-HxCDD	2.0	ND
1,2,3,4,6,7,8-HpCDD	2.0	7.35
OCDD	3.9	63.56
Total TCDF	4.0	ND
Total TCDD	4.0	ND
Total PeCDF	4.0	ND
Total PeCDD	4.0	ND
Total HxCDF	4.0	ND



August 13, 2012

5

Client: EnviroMatrix Analytical, Inc
 Address: 4340 Viewridge Ave., Ste A
 San Diego, CA 92123

Date Collected: 7/24/2012
 Date Received: 7/27/2012
 Project #: 12G0619
 Client ID #: 12G0619-01
 Laboratory ID #: 1217562-01
 Analysis: Dioxin/Furan (1613B)
 Method: 1613B
 Matrix: Solid
 Date of Analysis: 8/9/2012
 Analyst: AJG

Dioxin/Furan (1613B)

<u>Parameter</u>	<u>Reporting Limit (ng/kg)</u>	<u>Results (ng/kg)</u>
Total HxCDD	4.0	ND
Total IipCDF	4.0	ND
Total HpCDD	4.0	20.3
ND: Not Detected		
TEQ		0.093ng/kg
(limit of detection)		
% Solids		98.59
Results reported on dry wt.		



Method 1613
QC Report

Batch ID: 852
Extraction Date: 8/1/2012
ICAL Date : 3/8/2011

Parameter	1217562-01	
	Labeled Compound % Recovery	Acceptance Limits
13C-2,3,7,8-TCDF	86.4	24-169
13C-1,2,3,7,8-PeCDF	94.1	24-185
13C-2,3,4,7,8-PeCDF	105.4	21-178
13C-1,2,3,4,7,8-HxCDF	78.9	25-152
13C-1,2,3,6,7,8-HxCDF	84.0	26-123
13C-2,3,4,6,7,8-HxCDF	84.1	28-136
13C-1,2,3,7,8,9-HxCDF	91.4	29-147
13C-1,2,3,4,6,7,8-HpCDF	86.2	28-143
13C-1,2,3,4,7,8,9-HpCDF	95.4	26-138
13C-2,3,7,8-TCDD	85.9	25-164
13C-1,2,3,7,8-PeCDD	96.0	25-181
13C-1,2,3,4,7,8-HxCDD	80.3	32-141
13C-1,2,3,6,7,8-HxCDD	74.4	28-130
13C-1,2,3,4,6,7,8-HpCDD	81.2	23-140
13C-OCDD	79.7	17-167
37Cl-2,3,7,8-TCDD	91.8	35-197



**Method 1613
QC Report**

Batch ID: 755
Extraction Date: 8/1/2012
ICAL Date : 3/8/2011

Parameter	Analysis Date	Blank, ng/kg	Labeled Compound	Labeled Compound %	Acceptance Limits
				Recovery	
2,3,7,8-TCDF	8/8/2012	<1.0	13C-2,3,7,8-TCDF	78.2	24-169
1,2,3,7,8-PeCDF	8/8/2012	<2.0	13C-1,2,3,7,8-PeCDF	72.1	24-185
2,3,4,7,8-PeCDF	8/8/2012	<2.0	13C-2,3,4,7,8-PeCDF	77.2	21-178
1,2,3,4,7,8-HxCDF	8/8/2012	<2.0	13C-1,2,3,4,7,8-HxCDF	79.5	26-152
1,2,3,6,7,8-HxCDF	8/8/2012	<2.0	13C-1,2,3,6,7,8-HxCDF	84.7	26-123
2,3,4,6,7,8-HxCDF	8/8/2012	<2.0	13C-2,3,4,6,7,8-HxCDF	75.1	28-136
1,2,3,7,8,9-HxCDF	8/8/2012	<2.0	13C-1,2,3,7,8,9-HxCDF	76.5	29-147
1,2,3,4,6,7,8-HpCDF	8/8/2012	<2.0	13C-1,2,3,4,6,7,8-HpCDF	75.6	28-143
1,2,3,4,7,8,9-HpCDF	8/8/2012	<2.0	13C-1,2,3,4,7,8,9-HpCDF	87.1	26-138
OCDF	8/8/2012	<5.0	13C-2,3,7,8-TCDD	73.2	25-164
2,3,7,8-TCDD	8/8/2012	<1.0	13C-1,2,3,7,8-PeCDD	71.1	25-181
1,2,3,7,8-PeCDD	8/8/2012	<2.0	13C-1,2,3,4,7,8-HxCDD	71.0	32-141
1,2,3,4,7,8-HxCDD	8/8/2012	<2.0	13C-1,2,3,6,7,8-HxCDD	71.2	28-130
1,2,3,6,7,8-HxCDD	8/8/2012	<2.0	13C-1,2,3,4,6,7,8-HpCDD	71.0	23-140
1,2,3,7,8,9-HxCDD	8/8/2012	<2.0	13C-OCDD	67.2	17-157
1,2,3,4,6,7,8-HpCDD	8/8/2012	<2.0	37CL-2,3,7,8-TCDD	85.2	35-197
OCDD	8/8/2012	<15.0			
Totals-TCDF	8/8/2012	<5.0			
Totals-TCDD	8/8/2012	<5.0			
Totals-PeCDF	8/8/2012	<5.0			
Totals-PeCDD	8/8/2012	<5.0			
Totals-HxCDF	8/8/2012	<5.0			
Totals-HxCDD	8/8/2012	<5.0			
Totals-HpCDF	8/8/2012	<5.0			
Totals-HpCDD	8/8/2012	<5.0			



**Method 1613
QC Report**

Batch ID: 852
Extraction Date: 8/1/2012
ICAL Date : 3/8/2011

Parameter	LCS,%	Analysis Date	Acceptance Limits
2,3,7,8-TCDF	92.7	8/8/2012	75-158
1,2,3,7,8-PeCDF	110.8	8/8/2012	80-134
2,3,4,7,8-PeCDF	97.6	8/8/2012	68-160
1,2,3,4,7,8-HxCDF	103.6	8/8/2012	73-134
1,2,3,6,7,8-HxCDF	95.4	8/8/2012	84-130
2,3,4,6,7,8-HxCDF	103.5	8/8/2012	70-156
1,2,3,7,8,9-HxCDF	103.0	8/8/2012	78-130
1,2,3,4,6,7,8-HpCDF	103.9	8/8/2012	82-122
1,2,3,4,7,8,9-HpCDF	97.0	8/8/2012	78-138
OCDF	119.3	8/8/2012	63-170
2,3,7,8-TCDD	92.6	8/8/2012	67-158
1,2,3,7,8-PeCDD	108.2	8/8/2012	70-130
1,2,3,4,7,8-HxCDD	93.7	8/8/2012	70-164
1,2,3,6,7,8-HxCDD	115.0	8/8/2012	70-134
1,2,3,7,8,9-HxCDD	102.4	8/8/2012	64-162
1,2,3,4,6,7,8-HpCDD	113.4	8/8/2012	70-140
OCDD	120.5	8/8/2012	78-144
13C-2,3,7,8-TCDF	73.5	8/8/2012	22-152
13C-1,2,3,7,8-PeCDF	67.7	8/8/2012	21-192
13C-2,3,4,7,8-PeCDF	72.7	8/8/2012	13-328
13C-1,2,3,4,7,8-HxCDF	73.2	8/8/2012	19-202
13C-1,2,3,6,7,8-HxCDF	82.3	8/8/2012	21-159
13C-2,3,4,6,7,8-HxCDF	72.4	8/8/2012	17-205
13C-1,2,3,7,8,9-HxCDF	77.8	8/8/2012	22-176
13C-1,2,3,4,6,7,8-HpCDF	76.6	8/8/2012	21-158
13C-1,2,3,4,7,8,9-HpCDF	89.0	8/8/2012	20-186
13C-2,3,7,8-TCDD	72.1	8/8/2012	20-175
13C-1,2,3,7,8-PeCDD	66.7	8/8/2012	21-227
13C-1,2,3,4,7,8-HxCDD	68.4	8/8/2012	21-193
13C-1,2,3,6,7,8-HxCDD	68.2	8/8/2012	25-163
13C-1,2,3,4,6,7,8-HpCDD	72.6	8/8/2012	26-166
13C-OCDD	69.4	8/8/2012	13-199
37CL-2,3,7,8-TCDD	89.2	8/8/2012	31-191

Analytical Integrity" • EPA Certified • NELAP Certified

3310 Wm. Street • Gayahoga Falls, Ohio 44223 • Phone: 330-253-8211 • Fax: 330-253-7459
Web Site: www.stmtek.com



Parameter	WHO 2005 TEF
2,3,7,8-TCDF	0.1
1,2,3,7,8-PeCDF	0.03
2,3,4,7,8-PeCDF	0.3
1,2,3,4,7,8-HxCDF	0.1
1,2,3,6,7,8-HxCDF	0.1
2,3,4,6,7,8-HxCDF	0.1
1,2,3,7,8,9-HxCDF	0.1
1,2,3,4,6,7,8-HpCDF	0.01
1,2,3,4,7,8,9-HpCDF	0.01
OCDF	0.0003
2,3,7,8-TCDD	1
1,2,3,7,8-PeCDD	1
1,2,3,4,7,8-HxCDD	0.1
1,2,3,6,7,8-HxCDD	0.1
1,2,3,7,8,9-HxCDD	0.1
1,2,3,4,6,7,8-HpCDD	0.01
OCDD	0.0003

SUBCONTRACT ORDER
EnviroMatrix Analytical, Inc.
12G0619

SENDING LABORATORY:

EnviroMatrix Analytical, Inc.
4340 Viewridge Ave., Ste. A
San Diego, CA 92123
Phone: (858) 560-7717
Fax: (858) 560-7763
Project Manager: Michael Giangiorlando

RECEIVING LABORATORY:

Summit Environmental Technologies, Inc.
595 East Tallmadge Avenue
Akron, OH 44310
Phone: (330) 253-8211
Fax: (330) 253-4489

PLEASE SEND REPORTS TO:
jbeyer@enviromatrixinc.com;
luick@enviromatrixinc.com;
reports@enviromatrixinc.com.
Use comments as sample ID on report.

Analysis	Due	Expires	Laboratory ID	Comments
Sample ID: 12G0619-06	Soil	Sampled: 07/24/12 15:14		
2,3,7,8-TCDD+Equiv.	08/03/12 16:00	08/23/12 15:14		GS.2.2
Containers Supplied:				
8 oz. jar (A)				

1217562-01



Order ID: 1217562

COC

Released By: DAVID Nguyen Date: 7/26/12 Received By: [Signature] Date: 7/27/12

Released By: _____ Date: _____ Received By: _____ Date: _____

Summit Environmental Technologies, Inc.
Cooler Receipt Form



Order ID: 1217562

COOLER

Client: ENVIRONMENTAL

Order ID: _____

Log in Initials: _____

Date Received: 7/27/12 Time Received: 10:00 Date opened: 7/27/12

Number of Coolers/Boxes: 1 N/A Unpacked by: AK

Shipper: FED EX UPS DHL Airborne US Postal Walk-in Pickup Other: _____

Packaging: Peanuts Bubble Wrap ✓ Paper Foam None Other: _____

Tape on cooler/box: Y N N/A

Custody Seals intact Y N N/A

C-O-C in plastic Y N N/A

Coolant: Ice ✓ Blue ice ✓ Water ✓ None ✓ * Sample Temperature 2.4 °C

C-O-C filled out properly Y N N/A

Samples in separate bags Y N N/A

Sample containers intact Y N N/A

*If no, list broken sample(s): _____

Sample label(s) complete (ID, date, etc.) Y N N/A

Label(s) agree with C-O-C Y N N/A

Correct containers used Y N N/A

Sufficient sample received Y N N/A

Samples at correct pH? (list below) Y N NA

Bubbles absent from 40 mL vials Y N N/A

** Samples with bubbles less than the size of a pea are acceptable.

Client contact: _____ Date/Time: _____

Comments: _____

Sample ID	pH	Sample ID	pH

SUBCONTRACT ORDER

EnviroMatrix Analytical, Inc.

12G0619

SENDING LABORATORY:

EnviroMatrix Analytical, Inc.

4340 Viewridge Ave., Ste. A

San Diego, CA 92123

Phone: (858) 560-7717

Fax: (858) 560-7763

Project Manager: Michael Giangiodano

RECEIVING LABORATORY:

Summit Environmental Technologies, Inc.

595 East Tallmadge Avenue

Akron, OH 44310

Phone: (330) 253-8211

Fax: (330) 253-4489

PLEASE SEND REPORTS TO:

jbeyer@enviromatrixinc.com;

lluick@enviromatrixinc.com;

reports@enviromatrixinc.com.

Use comments as sample ID on report.

Analysis	^{STUD} Due	Expires	Laboratory ID	Comments
Sample ID: 12G0619-06	Soil	Sampled: 07/24/12 15:14		
2,3,7,8-TCDD+Equiv.	08/23/12 16:00	08/23/12 15:14		GS.2.2
Containers Supplied:				
8 oz. jar (A)				

Released By

Date

Received By

Date

Released By

Date

Received By

Date

805 Third Street
Emeryville, CA 92024
Tel: 760-942-5147
Fax: 760-942-5206

Chain - of - Custody Form

COC #

Page 3 of 3

[illegible]

Chain-of-Custody Form

605 Third Street
Encinitas, CA 92024
Tel: 760-942-5147
Fax: 760-942-5205

Project Name

Tierra Del Sol

Sampled by:

Patrick Rente

Job Number

7123

Sampler Signature:

[Signature]

Laboratory:	Lab Job #:
Shipping Method:	
Project Manager:	PM Email:
Glenan McMahon	gmacmahon@dudd.com
Type of Analysis to be Performed:	Special Instructions:
EPA 8260B	
EPA 8270	
EPA 8081A	
Chlorinated Pesticides	
TPH	
TDS	
Standard Turn-Around Time	24 hr 48 hr 72 hr
Other:	

Project Name <u>Tierra Del Sol</u>		Job Number <u>7123</u>												
Sampled by: <u>Patrick Rente</u>		Sampler Signature: <u>[Signature]</u>												
Sample ID	Sample Collection		Matrix	Method Preserved					Number of Sample Containers					
	Date	Time		Water	Vapor	HCL	HNO ₃	H ₂ SO ₄	Filtered (Y/N)	40 mL glass	4 oz. Glass Jar	Amber	Poly	
G.S. 6.1	7-24-12	1703	X						None					
G.S. 6.2		1704												
G.S. 6.3		1705												
G.S. 1.1		1720												
G.S. 1.2		1721												
G.S. 1.3		1722												
G.S. 7.1		1713												
G.S. 7.2		1714												
G.S. 7.3		1807												
G.S. 8.1		1806												
G.S. 8.2		1806												
G.S. 8.3		1805												
Total # of containers per type			12		Total # of containers									
Relinquished by: <u>Pat Rente</u>			Company <u>DUDEK</u>	Date <u>7-25-12</u>	Time <u>850</u>	Received by: <u>DAVID NGUYEN</u>			Company <u>GMH</u>	Date <u>7-25</u>	Time <u>20850</u>	Sample Receipt ☐ Samples Intact ☐ Cooler Temp: _____ °C ☐ Conforms to COC		
Please return original COC to Dudek													12	
Standard Turn-Around Time 24 hr 48 hr 72 hr													X	
Other:													X	
Arsenic 6010													X	
TDS													X	
TPH													X	
Chlorinated Pesticides													X	
EPA 8081A													X	
EPA 8270													X	
EPA 8260B													X	
VOCs													X	
SVOCs													X	
EPA 8270													X	
EPA 8081A													X	
TPH													X	
TDS													X	
Arsenic 6010													X	
Standard Turn-Around Time 24 hr 48 hr 72 hr													X	
Other:													X	

12°C
on for

Rev 11/07

Rev 11/07

Chain-of-Custody Form

COC # _____ Page 1 of 3

505 Third Street
Encinitas, CA 92024
Tel: 760-942-5147
Fax: 760-942-5206

Laboratory: _____ Lab Job #: _____
Lab Contact: _____ Shipping Method: _____
Project Manager: _____ PM Email: _____
Glennda Middleton
Type of Analysis to be Performed: _____
Special Instruction: _____

Project Name: Tierra Del Sol
Job Number: 7123
Sampler Signature: [Signature]

Sampled by: Patrick Rantz

Sample ID	Sample Collection		Matrix	Method Preserved					Number of Sample Containers					VOCs EPA 8	SVOCs EPA 8	Chlorinated Pesticides EPA 8	TPH EPA 8	TDS	Arsenic 6010 Lead (Pb) Dioxin/Furan	Standard Turn-Around Time	Other:	for Dioxin, K analysis: 13. the samples, and TBD. For Dioxin, K below CAT PR	
	Date	Time		Water	Vapor	HCL	HNO ₃	H ₂ SO ₄	Filtered (Y/N)	40 mL Glass	VOA	oz. Glass Jar	Amber										Poly
GS.3.1	7-24-12	1530	X						X														
GS.3.2		1531																					
GS.2.1		1513																					
GS.2.2		1514																					
GS.2.1		1513																					
GS.2.2		1514																					
GS.5.1		1611																					
GS.5.2		1612																					
GS.5.3		1613																					
GS.4.1		1551																					
GS.4.2		1550																					

Relinquished by: Pat Rantz Company: Durham Date: 7-25-12 Time: 850
Received by: DAVID NGUYEN Company: EMA Date: 7-25-12 Time: 20850
Total # of containers per type: 9 Total # of containers: 11
Please return original COC to Durham
Sample Receipt: ☐ Samples Intact ☐ Cooler Temp: _____ °C ☐ Conforms to COC

12521

Louis Luick

From: Glenna McMahon [gmcmahon@dudek.com]
Sent: Thursday, July 26, 2012 11:36 AM
To: Louis Luick (lluick@enviromatrixinc.com)
Subject: Tierra del Sol - dioxins/furans

Hi Louis,

Let's run "G5.2.2" for the full dioxin/furan list + equivalency calcs.

After we get those results, we'll decide if we want to run G5.2.1 for the one dioxin or full list.

Thanks,

GLENNA MCMAHON, P.E.
ASSOCIATE ENVIRONMENTAL ENGINEER

DUDEK

ENGINEERING + ENVIRONMENTAL
750 SECOND STREET
ENCINITAS, CALIFORNIA 92024
T 760.479.4130 F 760.942.5206
WWW.DUDEK.COM

7/26/2012

APPENDIX C

*San Diego Department of Planning and Land Use
Attachment E of Comment Letter*

ATTACHMENT E
PHASE I ESA REVIEW AND PHASE II ESA SCOPE

Phase I ESA Review

The Phase I ESA prepared by Dudek, dated June 2012 and submitted June 15, 2012, has been reviewed by a County Hazards Specialist. The Phase I ESA indicates that the site may have been subject to a release of hazardous substances that could represent a hazard to the public or the environment.

Specifically, the Phase I ESA indicates that the project site was used as a residence, for cattle grazing, orchards and gardens, and for storage of petroleum products and miscellaneous debris. The Phase I consisted of site reconnaissance, a description of the historical site conditions, an interview with the current property owner, a review of records and a summary report. Recognized environmental conditions (REC's) identified on the site include the following: potential for burn ash from refuse burning in the vicinity of the residence; and potential for pesticide residue from the presence of orchards and gardens from the 1930's-1950's. The ESA report recommends soil testing in the vicinity of these REC's to determine whether the subsurface soil has been impacted by organochlorine and arsenical pesticides or by metals from burn ash. Additionally, five water wells were observed on the property and are recommended to be destroyed or sealed to prevent any soil contamination from impacting groundwater.

Based on the data and conclusions in the Phase I ESA report, County staff is requesting additional analysis for the Tierra del Sol Solar Farm project site. Soil testing associated with a Limited Phase II Environmental Site Assessment will be required to determine whether the site has been contaminated with chemicals at levels hazardous to future users of the site. Soil testing should be completed in the locations with the highest likelihood of contamination, as noted in the Phase I ESA. Testing locations should include the areas formerly used for orchards and those used for trash burning. A collection depth of down to approximately 2 feet is recommended. If significant contamination is discovered at this depth, then further sampling for delineation of the extent of contamination is recommended.

The Phase II shall be completed in accordance with the American Society for Testing and Materials (ASTM) Standard Practice for Phase I and II ESA Processes and the 2004 DEH SAM Manual (http://www.sdcounty.ca.gov/deh/water/sam_manual.html). Section 4.VI of the SAM Manual provides a Site Assessment Checklist for the completion of a Phase I ESA.

Note: All reports that include geologic, hydrogeologic, contaminant flow, or contaminant migration interpretation must be prepared by, or under the direct supervision of, a California Registered Geologist, Certified Hydrogeologist, Certified Engineering Geologist, or Registered Civil Engineer. This professional must take full responsibility for the content of the report by signing and/or stamping it with his/her professional seal.

Should soil testing identify contamination in excess of regulatory screening levels, the project will be required to remediate the site under the oversight of San Diego County Department of Environmental Health (DEH) Voluntary Assistance Program (VAP). See http://www.sdcountry.ca.gov/deh/lwq/sam/voluntary_assistance_program.html for more information regarding participation in the Voluntary Assistance Program.

Hazardous Materials Use/Storage Onsite

A review of your project indicates that there is a possibility for onsite storage, use or transport of hazardous materials as a part of normal operations. Solar farms typically involve the use of the following chemicals: insulating oil, lubricating oil, solvents/detergents, and gasoline. Please provide additional detail regarding the types of uses and operations that will require hazardous materials storage, use and/or transport. Detail the types of hazardous materials (i.e. gasoline, petroleum, oils, chlorine gas, solvents, pesticides etc.) that would be stored onsite and estimate the quantities that would be stored onsite at any given time.

All storage, handling, transport, emission and disposal of hazardous substances shall be in full compliance with local, State, and Federal regulations. California Government Code § 65850.2 requires that no final certificate of occupancy or its substantial equivalent be issued unless there is verification that the owner or authorized agent has met, or is meeting, the applicable requirements of the Health and Safety Code, Division 20, Chapter 6.95, Article 2, Section 25500-25520.

The San Diego County Department of Environmental Health Hazardous Materials Division (DEH HMD) is the Certified Unified Program Agency (CUPA) for San Diego County responsible for enforcing Chapter 6.95 of the Health and Safety Code. As the CUPA, the DEH HMD is required to regulate hazardous materials business plans and chemical inventory, hazardous waste and tiered permitting, underground storage tanks, and risk management plans. The Hazardous Materials Business Plan is required to contain basic information on the location, type, quantity and health risks of hazardous materials stored, used, or disposed of onsite. The plan also contains an emergency response plan which describes the procedures for mitigating a hazardous release, procedures and equipment for minimizing the potential damage of a hazardous materials release, and provisions for immediate notification of the HMD, the Office of Emergency Services, and other emergency response personnel such as the local Fire Agency having jurisdiction. Implementation of the emergency response plan facilitates rapid response in the event of an accidental spill or release, thereby reducing potential adverse impacts. Furthermore, the DEH HMD is required to conduct ongoing routine inspections to ensure compliance with existing laws and regulations; to identify safety hazards that could cause or contribute to an accidental spill or release; and to suggest preventative measures to minimize the risk of a spill or release of hazardous substances.