APPENDIX L

HEALTH RISK ASSESSMENT

Air Quality, Health Risk, and Noise Technical Memorandum
(Addendum to the Certified Final Environmental Impact Report for Gregory Canyon Landfill)

Prepared by:

PCR SERVICES CORPORATION
Mark Hagmann, P.E.

December 2009

Table of Contents

BACKGROUND **1**

AIR QUALITY **1**
Construction 1
Gregory Canyon Landfill Site 1
Off-Site 2
Operation 7
Gregory Canyon Landfill Site 7
Off-Site 8
Health Risk Impacts 11
Cumulative Impacts 11

NOISE 12
Construction 12
Gregory Canyon Landfill Site 12
Off-Site 13
Operation 14
Gregory Canyon Landfill Site 14
Offsite (Recycled Water Haul Route Traffic Noise) 15
Cumulative Impacts 18

CONCLUSION **19**

List of Figures

Figure 1 Loading Area Locations 3

List of Tables

Table 1 Unmitigated Estimate of Construction Emissions [a] (pounds per day) 6
Table 2 Maximum Increase in Project-Related Operational Emissions within the South Coast Air Basin [a] (pounds per day) 9
Table 3 Worst-Case Projections of Peak-Hour Carbon Monoxide Concentrations 10
Table 4 City of South El Monte Land Use Compatibility for Community Noise 15
Table 5 Estimated Traffic Noise Level Increases Along the Recycled Water Haul Route 17
Table 6 FTA Noise Levels Defining Significant Impact 19
Table 7 Estimated Cumulative Traffic Noise Level Increases Along the Recycled Water Haul Route 20

AIR QUALITY, HEALTH RISK, AND NOISE TECHNICAL MEMORANDUM

The purpose of this technical memorandum is to evaluate and identify any new potential air quality, health risk, and noise impacts based on refinements to the Project's water supply and demand analysis that were not identified in the 2003 Draft EIR, the Revised Final Environmental Impact Report (RFEIR) or the 2008 Addendum. It has been determined herein that none of the conditions requiring preparation of a Subsequent or Supplemental EIR have occurred related to air quality, health risk, or noise impacts.

BACKGROUND

As permitting has proceeded for the Project, the water demand estimates have been updated. The water demand estimates have been reduced based on two operational changes, the clay liner and a soil sealant. The water demand at the landfill property for liner construction can be eliminated by changing the product specification so that no water would need to be added to the clay following its delivery to the landfill property. Based on this change in product specification, it is expected that the estimated water demand for liner construction described in the 2003 Draft EIR, RFEIR and 2008 Addendum (125,000 gpd) is no longer required. In addition, as permitting proceeded, Gregory Canyon realized the benefit of increased use of a chemical soil sealant, which would provide for significant dust control (PM_{10} and $PM_{2.5}$) with less water usage. The applicant intends to utilize SOILTAC®, manufactured by Soilworks, LLC.

A report has been prepared by Kleinfelder & Associates (Kleinfelder) providing updated water demand analysis, which is included as Appendix F of the Addendum. The average daily water demand ranges from 34,753 gpd to 66,785 gpd. There is a very substantial likelihood that the available water supply from on-site wells would be adequate to meet the estimated demand at all times during the period of construction, operation, closure and post-closure maintenance of the landfill, based on the usage estimates in the Kleinfelder report. However, in the event that additional water is needed, Gregory Canyon has entered into a contract with the San Gabriel Valley Water Company (SGVWC) to supply up to 80,000 gallons per day (gpd) of recycled water to be used for construction, operation and closure of the landfill.

Thus, this technical memorandum provides an analysis of potential air quality, health risk, and noise impacts from on-site wells, the transportation of recycled water from SGVWC to the landfill site, and the use of a soil sealant on the site.

AIR QUALITY

Construction

Gregory Canyon Landfill Site

As discussed in the GeoLogic Associates report included as Appendix J, there are three watersheds within the landfill property that have a similar surface topography and underlying geology as the Gregory Canyon watershed. Each of these watersheds produces percolating groundwater in the underlying fractured bedrock system that can be accessed by installing one or more pumping wells. GeoLogic Associates has completed an analysis regarding this water source,. The location of the three watersheds is depicted on Figure 1 of Appendix J. The three areas are identified as: Area 1, an 82.5 acre basin on the north side of SR

76 directly north of the former Lucio Dairy; Area 2, a 98.5 acre basin that drains to Couser Canyon and includes portions of Borrow/Stockpile Area B; and Area 3, a 37.8 acre basin that includes portions of Borrow/Stockpile Area A. All are in locations that could be accessed for installation of one or more pumping wells.

Water from wells in Area 1 and Area 3 would be conveyed by pipeline to water tanks located on the ancillary facilities area. Water from wells in Area 2 would be conveyed by pipeline to a smaller storage tank (approximately 10,000 gallons) located within the area to be disturbed for Borrow/Stockpile Area B. Installation of this tank is proposed since there will be an ongoing need for water for dust control related to excavation of daily cover from Borrow/Stockpile Area B. Placement of a tank at this location would minimize the length of the pipeline, pumping costs and use of energy, and the cost and use of energy related to transporting water to Borrow/Stockpile Area B.

A pipeline from the well location in Area 1 and Area 3 to the landfill facilities area or into any pipelines from the existing riparian underflow wells would need to be constructed. This construction would occur concurrently with construction of the landfill access road and bridge, and in the case of Area 1 the relocation of the SR 76 right of way. Construction of the Area 2 well, the pipeline, and the proposed 10,000 gallon storage tank would be concurrent with initial construction.

The ancillary facilities would include facilities necessary to use recycled water for the project, which were previously evaluated in the RFEIR. The initial construction for the project evaluated in Section 4.7 of the 2003 Draft EIR included the construction of the access road, bridge, ancillary facilities, excavation of the landfill footprint and the installation of the waste containment system for Phase I. Pieces of equipment assigned to the initial construction period were conservatively assumed to operate the entire work day and would also be available for the additional improvements. As an example, a backhoe or crane used in the construction of the landfill access road and bridge could also be used during the same time period to trench and place a pipeline. As another example, a drilling rig used to install additional monitoring wells could also be used to install the groundwater wells. Delivery of equipment and materials for landfill construction including pipeline, water tanks, and water well pumps would be coordinated to limit truck trips to less than a total of 2,085 PCE trips per day, which is consistent with the PCE trips analyzed in the 2003 Draft EIR and RFEIR. This same logic holds true in discussing the initial construction related to Borrow/Stockpile Area B. Equipment assigned during this time period would be sufficient to construct the secondary road to this area and place the pipeline from the Area 2 wells to Borrow/Stockpile Area B as well as conduct the initial excavation of Borrow/Stockpile Area B. Thus, the analysis of potential air pollutant emissions provided in the 2003 Draft EIR reflects a conservative estimate of construction equipment and is sufficient to account for the proposed improvements, including the installation of the improvements necessary for the proposed wells, and receipt, storage and use of recycled water.

Off-Site

Gregory Canyon has entered into a contract with the San Gabriel Valley Water Company (SGVWC) to supply up to 80,000 gallons per day (gpd) of recycled water to be used for construction, operation and closure of the landfill. Loading of recycled water would take place at an existing facility located at 2701 North Loma Street, El Monte, CA, and immediately adjacent to their 18-inch pipeline. This location is in an area primarily consisting of light industrial businesses, such as salvage yards or auto body shops. The location of the loading area is shown on **Figure 1**, *Loading Area Location*. The facilities required to deliver recycled water to Gregory Canyon would consist of installation of a pressure regulator (to reduce water pressure), meter,

PCR

N

0 250 500 Feet

Figure 1
Loading Area Locations

Source: Google Earth, 2009 and PCR Services Corporation, 2009.

Back of Figure 1 Loading Area Locations

standpipe, and possibly a pump, from which recycled water trucks could be filled. SGVWC would access the 18-inch recycled water pipeline by constructing a "T" perpendicular to the pipeline, which would bring the recycled water onto its property.

The recycled water site is located within the 6,745 square mile South Coast Air Basin. California is divided geographically into air basins for the purpose of managing the air resources of the State on a regional basis. The air basins are subject to separate air quality plans and emission budgets/thresholds. An air basin generally has similar meteorological and geographic conditions throughout. The State is currently divided into 15 air basins. The recycled water site is within the South Coast Air Basin and the landfill site is located within the San Diego County Air Basin.

The South Coast Air Quality Management District (SCAQMD) is required, pursuant to the Clean Air Act, to reduce emissions of criteria pollutants for which the South Coast Air Basin is in non-attainment (i.e., ozone, PM_{10}, and $PM_{2.5}$). State and federal air quality standards are often exceeded in many parts of the basin. The monitoring stations nearest to the recycled water site exceed the most stringent ambient air quality standard for ozone and particulate matter. Construction activities associated with the improvements at the recycled water site would contribute to local and regional air pollutant emissions within the South Coast Air Basin.

Based on criteria set forth in the SCAQMD's CEQA Air Quality Handbook,[1] the project would have a significant impact with regard to construction emissions if the following would occur:

- Regional emissions from both direct and indirect sources would exceed any of the following SCAQMD prescribed threshold levels: (1) 100 pounds per day for nitrogen oxides (NO_X), (2) 75 pounds a day for volatile organic compounds (VOCs), (3) 150 pounds per day for particulate matter less than 10 microns (PM_{10}) or sulfur oxides (SO_X), (4) 55 pounds per day of particulate matter less than 2.5 microns ($PM_{2.5}$) and (5) 550 pounds per day for carbon monoxide (CO).
- Maximum daily localized emissions are greater than the Localized Significance Thresholds (LST), resulting in predicted ambient concentrations in the vicinity of the project site greater than the most stringent ambient air quality standards for CO and NO_2. [2]
- Maximum localized PM_{10} or $PM_{2.5}$ emissions during construction are greater than the applicable LSTs, resulting in predicted ambient concentrations in the vicinity of the site to exceed 10.4 μg/m3.

Construction of the recycled water loading area has the potential to create regional air quality impacts through the use of heavy-duty construction equipment and through vehicle trips generated by construction workers traveling to and from the recycled water site. In addition, fugitive dust emissions would result from trenching activities. Mobile source emissions, primarily particulate matter (PM) and NO_X, would result from the use of construction equipment such as trenchers, skid steer loaders, and delivery trucks. Construction emissions can vary substantially from day to day, depending on the level of activity, the specific type of operation and, for dust, the prevailing weather conditions.

Regional construction-related emissions associated with heavy construction equipment and fugitive dust were calculated using the URBEMIS2007 emissions inventory model originally developed by the California

[1] *http://www.aqmd.gov/ceqa/handbook/signthres.pdf*

[2] *South Coast Air Quality Management, LST Methodology: http://www.aqmd.gov/ceqa/handbook/lst/ Method_final.pdf.*

Air Resources Board (CARB). Model results are provided in Appendix A of this memorandum. The analysis assumed that all construction activities would comply with SCAQMD Rule 403 regarding the control of fugitive dust. A summary of unmitigated maximum daily regional emissions are presented in **Table 1**, *Unmitigated Estimate of Construction Emissions*, along with the SCAQMD regional significance thresholds for each air pollutant. As shown therein, maximum regional construction emissions would not exceed the thresholds for VOC, NO_X, CO, SO_X, PM_{10}, or $PM_{2.5}$.

Table 1

Unmitigated Estimate of Construction Emissions [a]
(pounds per day)

Regional Emissions	VOC	NO_X	CO	SO_X	PM_{10} [b]	$PM_{2.5}$ [b]
Maximum Daily Regional Emissions	**7**	**13**	**6**	**<1**	**1**	**1**
SCAQMD Daily Significance Thresholds	75	100	550	150	150	55
Over/(Under)	(68)	(87)	(544)	(150)	(149)	(54)
Exceed Threshold?	**No**	**No**	**No**	**No**	**No**	**No**
Localized Emissions						
	VOC	**NOx**	**CO**	**SO_X**	**PM_{10} [b]**	**$PM_{2.5}$ [b]**
Maximum Daily Localized Emissions	**7**	**9**	**3**	**<1**	**<1**	**<1**
SCAQMD Daily Significance Thresholds	-	96	1,113	-	29	9
Over/(Under)	-	(87)	(1,110)	-	(29)	(9)
Exceed Threshold?	**-**	**No**	**No**	**-**	**No**	**No**

[a] *Emission quantities are rounded to "whole number" values. As such, the "total" values presented herein may be one unit more or less than actual values. Exact values (i.e., non-rounded) are provided in the URBEMIS model printout sheets and/or calculation worksheets that are presented in Appendix A.*

[b] *PM_{10} and $PM_{2.5}$ emissions estimates are based on compliance with SCAQMD Rule 403 requirements for fugitive dust suppression.*

[c] *The SCAQMD LSTs are based on Source Receptor Area 11 (South San Gabriel Valley) for a one acre site with sensitive receptors located 100 meters from construction activity.*

Source: PCR Services Corporation, 2009.

The localized effects of daily construction emissions generated at the recycled water site were evaluated for sensitive receptor locations potentially impacted by the project according to the SCAQMD's localized significance threshold (LST) methodology, which utilizes on-site mass emissions rate look-up tables and project specific modeling, where appropriate. LSTs are only applicable to the following criteria pollutants: NO_X, CO, PM_{10}, and $PM_{2.5}$. LSTs represent the maximum emissions from a project that are not expected to cause or contribute to an exceedance of the most stringent applicable federal or State ambient air quality standard, and are developed based on the ambient concentrations of that pollutant for each source receptor area (SRA) and distance to the nearest sensitive receptor. For PM_{10} and $PM_{2.5}$, LSTs were derived based on the requirements of SCAQMD Rule 403, Fugitive Dust. The mass rate look-up tables were developed for each SRA and can be used to determine whether or not a project may generate significant adverse localized air quality impacts. The LST mass rate look-up tables only apply to projects that have active construction areas that are less than or equal to five acres in size.

A conservative estimate of maximum local (on-site) daily emissions for NO_X, PM_{10}, $PM_{2.5}$, and CO for construction is presented in **Table 1**. Localized construction emissions thresholds, based on the

construction site acreage and distance to the closest off-site sensitive receptor, were obtained from the LST look-up tables and are also listed in **Table 1**. The nearest sensitive receptors are multi-family uses located approximately 100 meters (330 feet) to the northeast of the water facility along Mabel Avenue.

As presented in **Table 1**, construction-related daily maximum localized emissions would not exceed the SCAQMD daily significance thresholds for NO_X, CO, PM_{10}, and $PM_{2.5}$. Therefore, localized construction emissions resulting from construction activities at the recycled water site would not result in a significant short-term impact and no mitigation measures would be required. These emissions would contribute to combined construction emissions assuming the timing of the activities at the recycled water site and the landfill project site occur concurrently. However, the emissions at the recycled water site would occur within a separate Air Basin and would be subject to separate significance thresholds. The pollutant emissions associated with proposed construction activities at the recycled water site would be less than significant in comparison to SCAQMD significance thresholds (i.e., separate Air Basin). In addition, construction emissions associated with the recycled water site in comparison to construction emissions disclosed in the RFEIR for the Olivenhain Municipal Water District's (OMWDs) Santa Fe Valley Reservoir and Pump Station site (the Reservoir Site) would be substantially less.

Operation

Gregory Canyon Landfill Site

The use and delivery of recycled water was addressed in the RFEIR. Although the number of recycled water truck trips is anticipated to decrease as a result of recycled water being obtained from SGVWC, consistent with the 2003 Draft EIR and the RFEIR, the total project trips from all sources including recycled water would be limited to 2,085 trips per day PCE. The SWFP issued for the project would limit the project to a total of 2,085 trips per day from all sources. As the air quality analysis presented in the 2003 Draft EIR and the RFEIR analyzed potential air quality impacts based on a 2,085 trips per day PCE, no changes in operational emissions are anticipated related to recycled water as part of this Addendum. With regard to pumping of additional groundwater at the landfill site, all well pumps would be electrical and would not be a source of additional combustion emissions.

As permitting of the landfill has proceeded, the water demand estimates have been updated. Gregory Canyon realized the benefit of increased use of a chemical soil sealant, which would provide for significant dust control (PM_{10} and $PM_{2.5}$) with less water usage. The applicant intends to utilize SOILTAC®, manufactured by Soilworks, LLC. SOILTAC® is a polymer-based product which creates a flexible solid mass at the soil surface. Typical uses of SOILTAC® include dust control on unpaved dirt roads. The soil sealant would be mixed into the uppermost 6 inches of the road surface and compacted at the time of initial construction, and the completed road surface would be maintained though a topical application of the soil sealant on a periodic basis between quarterly to biannually. Water is used for the application of SOILTAC®. Depending on the rate of application, SOILTAC® can provide a soil crust or at heavier application rates generate qualities similar to cement.

Appendix B of this Technical Memorandum provides product information (e.g., application, use examples, and material safety data sheets (MSDSs) for SOILTAC®. As shown in the MSDS, SOILTAC® does not contain any components with acute, chronic, or carcinogenic exposure limits and are not considered hazardous according to the OSHA Hazardous Communication Standard (29 CFR 1910.1200), Toxic Substance Control Act, or EPA SARA Title III 312 and 313. As a result, storage, application, and use of SOILTAC® would not contribute to any potential air toxic impacts not disclosed in the 2003 Draft EIR and the RFEIR.

Soil sealants when applied also have the potential to contribute to water quality impacts. Environmental studies prepared by the soil sealant manufacturers have been reviewed to determine potential impacts to water quality resulting from runoff. In addition to reviewing the MSDS available for SOILTAC®, laboratory and toxicity tests using EPA methods that were performed by the manufacturer to determine if other pollutants may contribute to a water quality impact were also reviewed.

Laboratory test data for SOILTAC® indicates no detections of pesticides, PCBs, herbicides, or heavy metals, but indicates the presence of vinyl acetate and acetone. Toxicity tests were also performed for SOILTAC® that demonstrates no significant morality or effects on survival.[3] Although organic compounds were detected in SOILTAC®, real world studies indicate that soil sealants are likely to sorb to soils and sediments and therefore unlikely to be transported in water off-site.[4] Although the San Luis Rey River runs through the project site, project components are designed so that runoff would not discharge directly to the river. In addition, the areas in which the soil sealant would be applied are not located within close proximity to the river. The implementation of stormwater Best Management Practices (BMPs), such as desilting basins, bioswales, and percolation areas, as provided in the Storm Water Pollution Prevention Plan (SWPPP) (URS, 2008), would substantially minimize runoff from directly discharging to the river. Therefore, use of soil sealants would not result in significant impacts to surface water quality or beneficial uses of the San Luis Rey River.

Off-Site

Recycled water would be transported from the SGVWC to the landfill site in single-tank, double-axle recycled water trucks with a capacity of between 6,500 gallons and 7,000 gallons. Gregory Canyon would contract with a private water hauler to supply the recycled water trucks. Recycled water trucks would enter the north driveway from Loma Avenue, load at the standpipe, and then exit the south driveway onto Loma Avenue. No turning movements inside the loading facility would be required. At the maximum delivery amount of 80,000 gpd, 12 round trips or 24 one-way truck trips would be required. Recycled water would either be placed into the recycled water storage tank on the landfill property, placed into temporary recycled water storage tanks, or would be left in the truck for temporary storage. Emptied recycled water trucks would depart the landfill property for use by Gregory Canyon to pick up additional loads at SGVWC, or released to service other customers of the recycled water hauler. Truck trip calculations to and from the SGVWC are provided as Appendix C to this technical memorandum.

Regional Impacts

As discussed in the 2003 Draft EIR and the RFEIR, total project trips from all sources including recycled water would be limited to 2,085 trips per day in terms of Passenger Car Equivalents (PCE). The SWFP issued for the project would limit the project to a total of 2,085 trips per day from all sources. When the project reaches a total of 2,085 trips in any day, project facilities would be shut down. Accordingly, on days when more trips are used to truck recycled water to the project site, less trips would be available for other types of vehicles including waste collection trucks. The impacts of the project based upon a total of 2,085 total daily PCE trips were analyzed in detail in the 2003 Draft EIR and the RFEIR. The total limit on daily trips would not change and no additional regional air quality impacts not disclosed in the 2003 Draft EIR and the RFEIR would occur within the San Diego Air Basin. However, additional analysis (provided below) of the haul

[3] *http://www.soiltac.com/environmental-data.aspx*

[4] *Environmental Evaluation of Dust Stabilizer Products. US Army Corps of Engineers. August 2007.*

trucks trips was conducted to demonstrate that no regional impacts would occur within the South Coast Air Basin.

The SCAQMD has established significance thresholds to evaluate potential impacts associated with the incremental increase in criteria air pollutants associated with long-term operations of projects within the Basin. Project operations could result in mobile source emissions from 24 one-way haul truck trips with a trip distance of 80.9 miles within the South Coast Air Basin.[5] Operational emissions were computed using the URBEMIS2007 emissions inventory model. The results of the detailed emissions calculations are provided in **Table 2**, *Maximum Increase in Project-Related Operational Emissions within the South Coast Air Basin),* and URBEMIS2007 model output files are contained in Appendix A. As shown therein, maximum regional operation emissions would not exceed the thresholds for VOC, NO_X, CO, SO_X, PM_{10}, or $PM_{2.5}$. Therefore, no new impacts associated with regional operational emissions would occur as a result of recycled water truck trips, and no new mitigation measures would be required.

Table 2

Maximum Increase in Project-Related Operational Emissions within the South Coast Air Basin [a]
(pounds per day)

Emission Source	VOC	NO_X	CO	SO_X	PM_{10}	$PM_{2.5}$
Recycled Water Truck Trips [a]	**4**	**53**	**14**	**<1**	**3**	**3**
SCAQMD Significance Threshold	55	55	550	150	150	55
Difference	(51)	(2)	(536)	(150)	(147)	(52)
Significant?	**No**	**No**	**No**	**No**	**No**	**No**

[a] *Mobile source emissions are calculated using the URBEMIS2007 emissions model. Model output files are provided in Appendix A.*

Source: PCR Services Corporation, 2009.

Localized Impacts

Similar to the analysis provided in the 2003 Draft EIR, the RFEIR provided an analysis of CO concentrations at a location near the landfill site. The County of San Diego recommends that assessment methodologies for microscale CO impacts from project-related traffic should follow the current guidance from the Transportation Project-Level Carbon Monoxide Protocol (Protocol) (Institute of Transportation Studies, 1997).[6] Consistent with the Protocol, intersections with LOS of E or F are generally the most appropriate candidates for detailed analysis. Simulations were performed for both the near term cumulative and near term cumulative with project scenarios in order to demonstrate the incremental effect of project emissions as accurately as possible. The near term cumulative scenarios took into account cumulative traffic volumes to assess the impact of project traffic in conjunction with traffic generated by nearby planned projects. The results of the CALINE4 CO modeling were summarized in Table 3 of Appendix D of the RFEIR, in which the maximum one-hour and eight-hour CO concentration levels were well below ambient air quality standards.

[5] *Google Earth, 2009 (Trip distance from 2676 Loma Avenue, South El Monte to the San Diego County Line along Interstate 15).*

[6] *County of San Diego, Guidelines for Determining Significance and Report Format and Content Requirements (Air Quality), 2007.*

The RFEIR analyzed potential localized CO impacts based on substantially more water delivery trucks (i.e., 178 two-way truck trips) occurring along Interstate 15 than the number of trips that would occur with deliveries from the proposed recycled water facility (i.e., 24 one-way truck trips). However, the water delivery trucks would be coming from the north along Interstate 15 instead of from the south. Although it is not expected that this shift in traffic distribution would substantially change the results of the analysis presented in the RFEIR, additional analysis is warranted and is provided below.

The CALINE4 model simulations used A.M. peak-hour traffic volumes at the critical intersections as determined by LLG (2009). The background CO level was obtained from the Escondido monitoring station using the highest one-hour measurement over the last three years of available data (5.7 ppm for the one-hour CO level, and 3.6 ppm for the eight-hour CO level). The results of the CALINE4 CO modeling are summarized in **Table 3**, *Worst-Case Projections of Peak-Hour Carbon Monoxide Concentrations,* for the near term cumulative one-hour and eight-hour CO concentration levels. The future one-hour and eight-hour CO levels for both scenarios are projected to comply with the one-hour and eight-hour CO California and federal standards at all analyzed locations. Therefore, similar to the findings of the 2003 Draft EIR and RFEIR, the proposed project would not create a significant localized air quality impact as a result of project-generated traffic.

Table 3

Worst-Case Projections of Peak-Hour Carbon Monoxide Concentrations

	Estimated CO Concentrations a			
	Near Term Cumulative (No Project)		Near Term Cumulative (With Project)	
Intersection	1 Hour (ppm)	8 Hour (ppm)	1 Hour (ppm)	8 Hour (ppm)
SR 76/I-15 northbound ramp	6.8	4.1	6.8	4.1
SR 76/I-15 southbound ramp	8.4	4.9	8.4	4.9
Federal standard	35	9	35	9
State standard	20	9.0	20	9.0
Exceedances	None	None	None	None

[a] *CO concentrations shown above include the maximum background CO levels of 5.7 ppm for the one-hour level, and 3.6 ppm for the eight-hour level.*

Source: PCR Services Corporation, 2009

Consideration was also given to potential localized CO impacts within the South Coast Air Basin related to the recycled water truck trips. The SCAQMD recommends a hot-spot evaluation of potential localized CO impacts when vehicle to capacity (V/C) ratios are increased by two percent or more at intersections with a level of service (LOS) of D or worse during peak hours. Recycled water trips would add no more than 2 truck trips at any intersection within the South Coast Air Basin during a peak hour or increase the V/C ratio by two percent or more at any intersections with a LOS of D or worse during peak hours (LLG (2009)). As a result, no additional analysis of this issue is necessary. Thus, the recycled water truck trips would not cause any new or exacerbate any existing CO hotspots, and, as a result, no impacts related to localized mobile-source CO emissions would occur within the South Coast Air Basin. Therefore, no mitigation measures would be required.

Health Risk Impacts

When considering potential air quality impacts under CEQA, consideration is given to the location of sensitive receptors within close proximity of land uses that emit toxic air contaminants (TACs). The SCAQMD adopted recommendations in their "Guidance Document for Addressing Air Quality Issues in General Plans and Local Planning (2005)," which provides recommendations regarding the siting of new sensitive land uses near potential sources of air toxic emissions (e.g., freeways, distribution centers, rail yards, ports, refineries, chrome plating facilities, dry cleaners, and gasoline dispensing facilities). The SCAQMD guidelines recommend siting distances for both the development of sensitive land uses in proximity to TAC sources, and the addition of new TAC sources in proximity to existing sensitive land uses. As an example, the SCAQMD recommends that the siting of new sensitive land uses within 1,000 feet of a distribution center that accommodates more than 100 diesel trucks per day be avoided.

As discussed above, residential uses are located approximately 100 meters (330 feet) from the water recycling site. Given the distance from the water recycling site to the sensitive receptors and that the project would only result in 12 round trips (24 one-way trips), the project would be consistent with the guidelines and would not require a detailed health risk assessment

Cumulative Impacts

Since the Applicant has no control over the timing or sequencing of any related projects, any quantitative analysis to ascertain daily construction and operation emissions that assumes multiple, concurrent construction projects would be entirely speculative. For this reason, the SDAPCD's methodology to assess a project's cumulative impact differs from the cumulative impacts methodology employed elsewhere in the EIR.

With respect to the project's construction-period air quality emissions and cumulative Basin-wide conditions, the SDAPCD has developed strategies to reduce criteria pollutant emissions outlined in the Air Quality Attainment Plan (AQAP) pursuant to Federal Clean Air Act mandates. As such, the project would comply with SDAPCD rules and regulations, and implement feasible mitigation measures. Per SDAPCD rules and mandates as well as the CEQA requirement that significant impacts be mitigated to the extent feasible, these same requirements (i.e., compliance with rules and regulations, the implementation of all feasible mitigation measures, and compliance with adopted AQAP emissions control measures) would also be imposed on projects Basin-wide. Nevertheless, PM_{10} and NO_X emissions associated with the project are already projected to result in a significant impact to air quality. As such, consistent with the 2003 Draft EIR cumulative impacts to air quality would also be significant and unavoidable.

Within the South Coast Air Basin, the SCAQMD recommends that project specific air quality impacts be used to determine the potential cumulative impacts to regional air quality.[7] As discussed above, peak daily emissions of construction and operation-related pollutants within the South Coast Air Basin would not exceed SCAQMD regional significance thresholds. By applying SCAQMD's cumulative air quality impact methodology, implementation of the revised project would not result in cumulative air quality impacts within the South Coast Air Basin.

[7] *White Paper on Potential Control Strategies to Address Cumulative Impacts from Air Pollution. South Coast Air Quality Management District, August 2003.*

NOISE

Construction

Gregory Canyon Landfill Site

As discussed in the 2009 Addendum, there are three watersheds within the landfill property that have a similar surface topography and underlying geology as the Gregory Canyon watershed. Each of these watersheds produces percolating groundwater in the underlying fractured bedrock system that can be accessed by installing one or more pumping wells. GeoLogic Associates has completed an analysis regarding this water source, which is included as Appendix J. The location of the three watersheds is depicted on Figure 1 of Appendix J. The three areas are identified as: Area 1, an 82.5 acre basin on the north side of SR 76 directly north of the former Lucio Dairy; Area 2, a 98.5 acre basin that drains to Couser Canyon and includes portions of Borrow/Stockpile Area B; and Area 3, a 37.8 acre basin that includes portions of Borrow/Stockpile Area A. All are in locations that could be accessed for installation of one or more pumping wells.

Water from wells in Area 1 and Area 3 would be conveyed by pipeline to water tanks located on the ancillary facilities area. Water from wells in Area 2 would be conveyed by pipeline to a smaller storage tank (approximately 10,000 gallons) located within the area to be disturbed for Borrow/Stockpile Area B. Installation of this tank is proposed since there will be an ongoing need for water for dust control related to excavation of daily cover from Borrow/Stockpile Area B. Placement of a tank at this location would minimize the length of the pipeline, pumping costs and use of energy, and the cost and use of energy related to transporting water to Borrow/Stockpile Area B.

A pipeline from the well location in Area 1 and Area 3 to the landfill facilities area or into any pipelines from the existing riparian underflow wells would need to be constructed. This construction would occur concurrently with construction of the landfill access road and bridge, and in the case of Area 1 the relocation of the SR 76 right of way. Construction of the Area 2 well, the pipeline, and the proposed 10,000 gallon storage tank would be concurrent with initial construction.

The ancillary facilities would include facilities necessary to use recycled water for the project, which were previously evaluated in the RFEIR. The initial construction for the project evaluated in Section 4.6 of the 2003 Draft EIR included the construction of the access road, bridge, ancillary facilities, excavation of the landfill footprint and the installation of the waste containment system for Phase I. Pieces of equipment assigned to the initial construction period were conservatively assumed to operate the entire work day and would also be available for the additional improvements. As an example, a backhoe or crane used in the construction of the landfill access road and bridge could also be used during the same time period to trench and place a pipeline or install a well. This same logic holds true in discussing the initial construction related to Borrow/Stockpile Area B. Equipment assigned during this time period would be sufficient to construct the secondary road to this area and place the pipeline from the Area 2 wells to Borrow/Stockpile Area B as well as conduct the initial excavation of Borrow/Stockpile Area B.

The analysis provided in Section 4.6 of the 2003 Draft EIR was based on the methodology outlined by the Construction Engineering Research Laboratory (CERL), which is based on representative data from individual construction projects and accounts for the type of construction project (e.g., commercial,

residential, public works, etc.), equipment used, individual equipment noise emissions, and time-usage factors for each phase of construction.[8] The construction noise analysis presented in the 2003 Draft EIR was based on CERL data for public works projects and, therefore, changes in specific activities would not change the construction noise level at a reference distance.[9] In addition, the analysis in the 2003 Draft EIR evaluated noise impacts based on the shortest distance between construction activities and sensitive receptors (e.g., residential uses and biological resources). With the exception of the Area 1 well and Area 2 well and a portion of the associated pipelines, the additional improvements would be within the same footprint of the initial construction period activities (distance to closest receptor would not change) and the initial construction period reflects a conservative estimate of construction equipment and is sufficient to account for the proposed improvements, potential construction noise levels provided in the 2003 Draft EIR and RFEIR would not change. The Area 1 well (north side of SR 76 directly north of the former Lucio Dairy) and Area 2 well (west of Stockpile B) are located approximately 400 feet from the property boundary. The closest residence to the Area 1 well and Area 2 well are located approximately 1,150 feet to the southeast and 3,200 feet to the northeast, respectively with intervening topography between the well site and the residences.[10] Based on the CERL construction noise level used in the 2003 Draft EIR, potential construction noise levels related to Area 1 well and Area 2 well could reach 42 dBA L_{eq} and 51 dBA $L_{eq,}$ respectively or 58 dBA L_{eq} at the property boundary.[11] These construction related noise levels would not exceed the County Noise Ordinance standard of 62.5 dBA L_{eq}. Actual noise levels would likely be less given that the equipment necessary to construct the wells would be minimal.

The Area 1 well and the Area 2 well are located outside of areas previously analyzed. The Area 3 well is located within Borrow/Stockpile Area A. The Area 1 well would be located in an already disturbed area (i.e., location of houses). Based on the biological resource maps for the site, the Area 2 well is located within areas that are vegetated with coastal sage scrub. As indicated in the 2003 Draft EIR, the coastal sage scrub in the project area is considered of low to marginal value for gnatcatchers based on the limited sightings and the absence of nearby core populations. The construction of the wells would not increase the amount or intensity of work on any construction day given the need to protect existing biological resources, but rather would extend the time required to complete the work. As a result, no noise impacts to biological resources would occur. **[Note to County: Please advise if a stand-alone biological resources technical memorandum is warranted]**

Off-Site

As discussed above, Gregory Canyon has entered into a contract with the San Gabriel Valley Water Company (SGVWC) to supply up to 80,000 gpd of recycled water to be used for construction, operation and closure of the landfill. Loading of recycled water would take place at an existing facility located at 2701 North Loma Street, El Monte, CA, and immediately adjacent to their 18-inch pipeline. This location is in an area primarily consisting of light industrial businesses, such as salvage yards or auto body shops. The location of the loading area is shown on Figure 1. The improvements necessary to deliver recycled water to Gregory

[8] *CERL reference data represents a composite of public works projects, there is no way to directly compare with any other specific public works project, and so the CERL methodology is the most appropriate analytical tool.*

[9] *Construction Engineering Research Laboratory, Report N-36, Construction-Site Noise: Specification and Control, Table 10, Page 25, January 1978.*

[10] *The location of sensitive receptors and distances to the receptors is taken from Google Earth, 2009.*

[11] *Predicted construction noise levels include a minimum 10 dBA reduction in noise levels when accounting for the intervening topography. Source: Caltrans, Technical Noise Supplement, 1998 (http://www.dot.ca.gov/hq/env/noise/pub/Technical%20Noise%20Supplement.pdf)*

Canyon would consist of installation of a pressure regulator (to reduce water pressure), meter, standpipe, and possibly a pump, from which recycled water trucks could be filled. SGVWC would access the 18-inch recycled water pipeline by constructing a "T" perpendicular to the pipeline, which would bring the recycled water onto its property. The use of heavy-duty construction equipment or impact noise generating equipment would be limited in implementing these improvements at the SGVWC facility.

The City of South El Monte does not have an established significance threshold for construction noise. Therefore, compliance with the City's Code (Section 8.20.030(D)), which requires that "no person shall operate or cause or authorize the operation of any tool or equipment used in construction, drilling, repair, alteration or demolition work between the hours of 10 P.M and 7 A.M, or at any time on weekends or holidays, such that the sound therefrom creates a noise disturbance across the real property line of an adjacent or nearby property developed entirely or partially for residential use" shall be considered to result in a less than significant impact.[12]

Noise from the construction activities would be generated by various equipment (e.g., air compressor, backhoe, and truck) during construction operations. Noise levels generated by construction equipment would range from 74 to 81 dBA at a distance of 50 feet from the construction equipment.[13] The nearest residential properties are located approximately 330 feet from the proposed construction activities. Therefore, it is estimated that the maximum aggregated construction related noise levels at the nearest residential receptors (multi-family residences located northeast of the facility along Mabel Avenue) would be up to 65 dBA. Project construction would result in a short-term temporary increase in ambient noise levels at the nearby residential uses. However, construction noise impacts would be less than significant because of the limited nature of this construction work and all construction activity would comply with City's construction hour limits.

Operation

Gregory Canyon Landfill Site

The use and delivery of recycled water was addressed in the RFEIR. Although the number of recycled water truck trips is anticipated to decrease from the number of recycled water trips analyzed in the RFEIR, consistent with the 2003 Draft EIR and the RFEIR, the total project trips from all sources including recycled water would be limited to 2,085 trips per day PCE. The SWFP issued for the project would limit the project to a total of 2,085 trips per day from all sources. As the noise analysis presented in the 2003 Draft EIR and the RFEIR analyzed potential noise impacts based on a 2,085 trips per day PCE, no changes in operational noise levels on site are anticipated related to recycled water as part of the 2009 Addendum. With regard to pumping of additional groundwater at the landfill site, all proposed well pumps would be electrical submersible. Given that the pumps would be within the well and underground, the pumps would not be a source of additional noise at the landfill site.

[12] *Matt Sanchez, Planner, City of South El Monte,, personal communication, September 9, 2009.*

[13] *FHWA Roadway Construction Noise Model User's Guide, 2006*

Offsite (Recycled Water Haul Route Traffic Noise)

As the project would be limited to a total of 2,085 PCE trips per day, which was analyzed in the 2003 Draft EIR and the RFEIR, no additional project-related traffic noise impacts along SR 76 not disclosed in the 2003 Draft EIR or the RFEIR would occur. However, the source of recycled water has changed, and, therefore, additional analysis was conducted to demonstrate whether operational noise impacts would occur.

Recycled water trucks would enter the north driveway of the SGVWC loading site from Loma Avenue, load at the standpipe, and then exit the south driveway along Loma Avenue. Trucks would travel north on Loma Avenue which transitions to Mabel Avenue; turn right onto Rosemead Boulevard; proceed east on SR 60; south on I-15; and east on SR 76 to the landfill access road. As the haul route includes surface streets and freeway segments, the traffic noise analysis reflects the applicable methodology and significance thresholds for each roadway segment.

Surface Streets

Recycled water trucks traveling along Mabel Avenue and Rosemead Boulevard would occur within the City of South El Monte. The City of South El Monte does not have an established significance threshold for traffic noise. However, for the purpose of CEQA evaluation the City does recommend use of the City of Los Angeles CEQA Threshold (2006).[14] The following factors are set forth for determining on a case-by-case basis whether the proposed project would have a potential impact:

- The proposed project would cause ambient noise levels to increase by 5 dBA CNEL or more and the resulting noise falls on a land use within an area categorized as either "clearly compatible" or "normally compatible" (see **Table 4**, *City of South El Monte Land Use Compatibility for Community Noise,* for description of these categories);
- The proposed project would cause ambient noise levels to increase by 3 dBA CNEL or more and the resulting noise falls on a land use within an area categorized as either "requires analysis and mitigation or normally incompatible" or "clearly incompatible";

Table 4

City of South El Monte Land Use Compatibility for Community Noise

	Community Noise Exposure CNEL, dBA			
Land Use	**Clearly Compatible**	**Normally Compatible**	**Requires Analysis & Mitigation**	**Clearly Incompatible**
Single-Family, Duplex, Mobile Homes	50 to 55	55 to 60	60 to 75	Above 75
Residential, Retail, and Service Commercial	50 to 55	55 to 65	65 to 75	Above 75
Hotel, Motel, Transient Lodging	50 to 60	60 to 70	70 to 80	Above 80
General Retail, Bank, Restaurant, Entertainment	50 to 65	65 to 80	Above 80	—

[14] *Matt Sanchez, Planner, City of South El Monte,, personal communication, September 9, 2009.*

Table 4

City of South El Monte Land Use Compatibility for Community Noise

	Community Noise Exposure CNEL, dBA			
Land Use	**Clearly Compatible**	**Normally Compatible**	**Requires Analysis & Mitigation**	**Clearly Incompatible**
Professional Offices, Research and Development, City Hall	50 to 65	50 to 75	75 to 80	Above 80
Automobile Sales and Services, Manufacturing, Warehousing, Wholesale, Utilities	50 to 75	Above 75	—	—
Hospital, Church, Library, School	50 to 55	55 to 65	65 to 75	Above 75
Parks	50 to 65	65 to 70	70 to 75	Above 75

Clearly Compatible: Specified land use is satisfactory, based upon the assumption that any buildings involved are of normal conventional construction without any special noise insulation requirements.

Normally Compatible: New construction or development should be undertaken only after a detailed analysis of the noise reduction requirements is made and needed noise insulation features included in the design. Conventional construction, but with closed windows and fresh air supply systems or air conditioning will normally suffice.

Requires Analysis and Mitigation: Potential noise impacts exist. If new construction or development is proposed, a detailed analysis of the noise reduction requirements must be made and needed noise insulation features included in the design.

Clearly Incompatible: New construction or development should generally not be undertaken.

Source: City of South El Monte, General Plan, Public Safety Element, Table PS-1, 2000.

The above thresholds are based on the fact that people judge the relative magnitude of sound sensation by subjective terms such as "loudness" or "noisiness." A change in sound level of 3 dB is considered "just perceptible," a change in sound level of 5 dB is considered "clearly noticeable," and a change of 10 dB is recognized as "twice as loud."[15] In addition, the Community Noise Equivalent Level (CNEL) descriptor is used to assess noise levels over a given 24-hour time period. CNEL is the time average of all A-weighted sound levels for a 24-hour period with a 10 dBA adjustment (upward) added to the sound levels which occur in the night (10 P.M. to 7 A.M.) and a 5 dBA adjustment (upward) added to the sound levels which occur in the evening (7 P.M. to 10 P.M.). These penalties attempt to account for increased human sensitivity to noise during the quieter nighttime periods, particularly where sleep is the most probable activity.

Land along the haul route within the city of South El Monte is generally designated in the City's General Plan as Commercial-Manufacturing and Industrial. The area is zoned Commercial-Manufacturing and Industrial with a normally acceptable noise level of 75 dBA CNEL. However, several residences are located along Mabel Avenue and Rosemead Avenue. Therefore, this analysis assumed a normally acceptable noise level of 65 dBA CNEL, which is consistent with mixed use (see **Table 4**). The CNEL generated by traffic on the roadways was established using roadway noise equations provided in the California Department of Transportation (Caltrans) Technical Noise Supplement (TeNS) document and traffic data (e.g., average daily trips, vehicle

[15] *Engineering Noise Control, Bies & Hansen, 1988.*

mix, and day/evening/night distribution) provided by the project traffic consultant.[16] This methodology allows for the definition of roadway configurations, barrier information (if any), and receiver locations.

Estimates of roadway noise levels in terms of CNEL were computed for the surface streets that would be used for the recycled water haul route and are shown in **Table 5**, *Estimated Traffic Noise Level Increases Along the Recycled Water Haul Route*. (Noise worksheets are provided in Appendix D of this technical memorandum.) The values do not take into account the possible effects of existing noise barriers or topography. The table indicates that the area along Rosemead Boulevard has an estimated existing noise level without the project in excess of 65 CNEL. The area along Mabel Avenue has an estimated existing noise level without the project of 57 CNEL. Based on the existing noise levels along these roadway segments, the applicable traffic-related incremental noise increase significance threshold for Rosemead Boulevard and Mabel Avenue are 3 dBA and 5 dBA, respectively.

Table 5

Estimated Traffic Noise Level Increases Along the Recycled Water Haul Route

Highway/Road Segment	Ambient Traffic Noise Level (CNEL, dBA)	Recycled Water Truck Noise Level (CNEL, dBA)	Combined Noise Level (CNEL, dBA)	Incremental Noise Increase Due Solely to the Landfill (CNEL, dBA)[a]	Threshold of Significance	Exceed Significance Threshold?
Surface Streets						
Mabel Avenue						
West of Rosemead Blvd.	57.3	53.6	58.8	1.5	5.0 dBA	No
Rosemead Boulevard						
Mabel Avenue to SR 60	74.0	52.9	74.0	0.0	3.0 dBA	No
Highway						
State Route 60						
I-605 to SR 57	80.3	50.1	80.3	0.0	Allowable Project Noise Exposure of 66 dBA or Increment of 0.1 dBA	No
SR 57 to I-15	80.9	50.0	80.9	0.0		No
Interstate 15						
SR 60 to SR 91	78.7	49.8	78.7	0.0		No
SR 91 to SR 215	77.3	49.8	77.3	0.0		No
SR 79 to SR 76	78.1	50.0	78.1	0.0		No

Noise worksheets are presented in Appendix D.

[a] The incremental noise levels assume water haul trucks park at the recycled water facility. In the event that haul trucks would access the site from a remote location, the incremental traffic noise level along Mabel Avenue would increase from 1.5 dBA to 1.7 dBA. Incremental noise levels along all other analyzed roadway segments would remain 0.0 dBA. Traffic related noise levels along all analyzed roadway segments in this technical memorandum would remain less than significant.

Source: PCR Services Corporation, 2009

[16] *The roadway noise calculation procedures provided in TeNS are consistent with Federal Highway Administration RD-77-108 "industry standard" roadway noise prediction methodologies.*

Table 5 shows the estimated change in roadway noise levels that would result from existing traffic, recycled water truck trips alone, and the combined traffic noise levels. Column 4 of this table shows that project-generated traffic (24 one-way trips) would result in estimated CNEL noise level increase over existing noise levels of 1.5 dBA along Mabel Avenue and 0.0 dBA along Rosemead Boulevard. As these noise level increases are well below the City of South El Monte incremental increase significance threshold (3 dBA), recycled water truck activity along surface streets would result in a less than significant noise impact.

Freeway Segments

As discussed above, recycled water trucks would travel along SR 60 and Interstate 15. Potential noise impacts along the freeway segments were analyzed based on guidance from the Federal Transit Administration (FTA) (Transit Noise and Vibration Impact Assessment, May 2006). The FTA's noise significance thresholds account for the existing traffic noise level as well as the project's contribution to the overall noise level. As the existing level of ambient noise increases, the allowable level of transit noise increases, but the total amount of community noise exposure allowed to increase is reduced. This accounts for the unexpected result that a project noise exposure which is less than the existing noise exposure can still cause an impact. **Table 6**, *FTA Noise Levels Defining Significant Impact,* shows the level of transit noise allowed for different existing levels of exposure. As shown in **Table 6**, a noise exposure increase of 3.5 dBA could result in no impact if the existing noise exposure is 55 dBA or less, but only a 1.2 dBA increase when the existing nose exposure is 70 dBA.

Table 5 shows the estimated change in freeway noise levels that would result from existing traffic, recycled water truck trips alone, and the combined traffic noise levels. Column 3 of this table shows that recycled water-generated traffic would result in a maximum estimated CNEL noise level of 50.1 dBA, which is well below the FTA's allowable project noise exposure of 66 dBA for an existing noise exposure of 80 dBA. Column 4 of this table shows that project-generated traffic would not change the overall CNEL noise level along any of the analyzed freeway segments. Therefore, the recycled water trucks would result in a less than significant noise impact along the freeway haul route.

Cumulative Impacts

Noise from construction of the recycled water loading facility and the landfill would be localized, thereby potentially affecting areas immediately surrounding or between each particular project site. Construction noise generated from the SGVWC and landfill sites are located sufficiently distant from sensitive receptors such that distance attenuation and intervening topography would reduce construction noise and would not result in a noticeable increase in noise at sensitive receptors near the project site. In addition, each site would comply with conditions set forth in the Municipal Code or County Code, to the extent feasible. Consistent with the 2003 Draft EIR and RFEIR, cumulative construction and onsite operational noise impacts to adjacent sensitive receptors would be less than significant. However, as discussed in the 2003 Draft EIR and the RFEIR cumulative traffic noise levels would remain significant and unavoidable for roadway segments analyzed in the 2003 Draft EIR and the RFEIR. An analysis for roadway segments near the SGVWC site was performed to determine potential cumulative noise impacts. Project level thresholds were used in the cumulative analysis in order to provide a more conservative comparison. As shown in Table 7, *Estimated Cumulative Traffic Noise Level Increases Along the Recycled Water Haul Route*, no roadway segments analyzed as part of this Addendum for the recycled water haul route would result in a cumulative traffic noise impact.

Table 6

FTA Noise Levels Defining Significant Impact

CNEL in dBA

Existing Noise Exposure	Allowable Project Noise Exposure	Allowable Combined Total Noise Exposure	Allowable Noise Exposure Increase
55	<56	58.5	3.5
56	<56	59.0	3.0
57	<57	60.0	3.0
58	<57	60.5	2.5
59	<58	61.5	2.5
60	<58	62.1	2.1
61	<59	63.1	2.1
62	<59	63.8	1.8
63	<60	64.8	1.8
64	<61	65.8	1.8
65	<61	66.5	1.5
66	<62	67.5	1.5
67	<63	68.5	1.5
68	<63	69.2	1.2
69	<64	70.2	1.2
70	<65	71.2	1.2
71	<66	72.2	1.2
72	<66	73.0	1.0
73	<66	73.8	0.8
74	<66	74.6	0.6
75	<66	75.5	0.5
76	<66	76.4	0.4
77	<66	77.3	0.3
78	<66	78.3	0.3
79	<66	79.2	0.2
80	<66	80.2	0.2
81	<66	81.1	0.1
82	<66	82.1	0.1
83	<66	83.1	0.1

Source: FTA, Transit Noise and Vibration Impact Assessment, 2006 and PCR Services Corporation, 2009

CONCLUSION

Based on the above analysis, changes in the Gregory Canyon Landfill project would not result in any new or substantially different project-related cumulative or secondary air quality, health risk, or noise impacts not disclosed in the 2003 Draft EIR or the RFEIR.

Table 7

Estimated Cumulative Traffic Noise Level Increases Along the Recycled Water Haul Route

Highway/Road Segment	Ambient Traffic Noise Level (CNEL, dBA)	Recycled Water Truck Noise Level (CNEL, dBA)	Ambient Growth Traffic Noise Level (CNEL, dBA)	Combined (Cumulative) Noise Level (CNEL, dBA)	Incremental Cumulative Noise Increase (CNEL, dBA)[a]	Threshold of Significance	Exceed Significance Threshold?
Surface Streets							
Mabel Avenue							
West of Rosemead Blvd.	57.3	53.6	57.5	59.3	1.8	5.0 dBA	No
Rosemead Boulevard							
Mabel Avenue to SR 60	74.0	52.9	74.3	74.4	0.1	3.0 dBA	No
Highway							
State Route 60							
I-605 to SR 57	80.3	50.1	80.7	80.7	0.0	Allowable Project Noise Exposure of 66 dBA or Increment of 0.1 dBA	No
SR 57 to I-15	80.9	50.0	81.3	81.3	0.0		No
Interstate 15							
SR 60 to SR 91	78.7	49.8	79.1	79.1	0.0		No
SR 91 to SR 215	77.3	49.8	77.7	77.7	0.0		No
SR 79 to SR 76	78.1	50.0	78.5	78.5	0.0		No

Noise worksheets are presented in Appendix D.

[a] The incremental noise levels assume water haul trucks park at the recycled water facility. In the event that haul trucks would access the site from a remote location, the incremental traffic noise level along Mabel Avenue would increase from 1.8 dBA to 2.0 dBA. Incremental noise levels along all other analyzed roadway segments would less than 0.1 dBA. Traffic related noise levels along all analyzed roadway segments in this technical memorandum would remain less than significant.

Source: PCR Services Corporation, 2009

Appendix A – Air Quality Analysis Worksheets

9/24/2009 10:13:18 AM

Urbemis 2007 Version 9.2.4

Detail Report for Summer Construction Unmitigated Emissions (Pounds/Day)

File Name: S:\ACTIVE\PROJECTS\Gregory Canyon\Addendum Water 2009\Working\AQ Noise HRA\gclf.urb924

Project Name: GCLF Recyled Water Site (Operations)

Project Location: South Coast AQMD

On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006

Off-Road Vehicle Emissions Based on: OFFROAD2007

CONSTRUCTION EMISSION ESTIMATES (Summer Pounds Per Day, Unmitigated)

	ROG	NOx	CO	SO2	PM10 Dust	PM10 Exhaust	PM10 Total	PM2.5 Dust	PM2.5 Exhaust	PM2.5 Total	CO2
Time Slice 7/1/2011-7/1/2011 Active	3.69	**52.97**	**13.57**	**0.07**	**0.27**	**2.74**	**3.01**	**0.09**	**2.52**	**2.61**	**7,176.74**
Mass Grading 07/01/2011-	3.69	52.97	13.57	0.07	0.27	2.74	3.01	0.09	2.52	2.61	7,176.74
Mass Grading Dust	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Mass Grading Off Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Mass Grading On Road Diesel	3.69	52.97	13.57	0.07	0.27	2.74	3.01	0.09	2.52	2.61	7,176.74
Mass Grading Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Phase Assumptions

Phase: Mass Grading 7/1/2011 - 7/1/2011 - Type Your Description Here

Total Acres Disturbed: 0

Maximum Daily Acreage Disturbed: 0

Fugitive Dust Level of Detail: Default

20 lbs per acre-day

On Road Truck Travel (VMT): 1944

Off-Road Equipment:

Gregory Canyon Reclaimed Water Station

CALINE4 Modeling Results and Estimated Local 1-Hour Carbon Monoxide Concentrations (ppm)

Projected Background 1-Hour CO Concentrations (ppm) [a]

Monitoring Station: San Diego

Year	1-Hr Concentration
2006	5.7

Intersection and Receptor Locations	Future Without Project		Future With Project		
	Traffic CO Contribution [b]	Estimated Local CO Concentration [c]	Traffic CO Contribution [b]	Estimated Local CO Concentration [c]	Exceedance of Significance Threshold [d]
NB I-15 AND SR-76 AM					
NE	1.0	6.7	1.0	6.7	NO
SE	1.1	6.8	1.1	6.8	NO
SW	0.9	6.6	0.9	6.6	NO
NW	0.8	6.5	0.8	6.5	NO
SB I-15 AND SR-76 AM					
NE	2.5	8.2	2.5	8.2	NO
SE	2.4	8.1	2.4	8.1	NO
SW	2.7	8.4	2.7	8.4	NO
NW	2.1	7.8	2.1	7.8	NO

a Based on guidance provided by the AQMD Air Quality Analysis Guidance Handbook.

b The 1-hour traffic contribution (ppm) is determined by inputing total traffic volumes into the CALINE4 model.

c The estimated local concentration is the traffic contribution + the background concentration.

d The California Ambient Air Quality Standard for 1-hour CO concentrations is 20 ppm.

Gregory Canyon Reclaimed Water Station

CALINE4 Modeling Results and Estimated Local 8-Hour Carbon Monoxide Concentrations (ppm)

Projected Background 8-Hour CO Concentrations (ppm) [a]	
Monitoring Station: San Diego	Average Persistence Factor = 0.70
Year: 2006 — 8-Hr Concentration: 3.6	

Intersection and Receptor Locations	Future Without Project		Future With Project		
	Traffic CO Contribution [b]	Estimated Local CO Concentration [c]	Traffic CO Contribution [b]	Estimated Local CO Concentration [c]	Exceedance of Significance Threshold [d]
NB I-15 AND SR-76 AM					
NE	0.5	4.1	0.5	4.1	NO
SE	0.5	4.1	0.5	4.1	NO
SW	0.5	4.1	0.5	4.1	NO
NW	0.4	4.0	0.4	4.0	NO
SB I-15 AND SR-76 AM					
NE	1.3	4.9	1.3	4.9	NO
SE	1.1	4.7	1.1	4.7	NO
SW	1.3	4.9	1.3	4.9	NO
NW	1.0	4.6	1.0	4.6	NO

a Based on guidance provided by the AQMD Air Quality Analysis Guidance Handbook.

b The persistence factor is calculated as recommended in Table B.15 in the Transportation Project-Level Carbon Monoxide Protocol (Institute of Transportation Stud UC Davis, Revised 1997). This is a generalized persistence factor likely to provide a conservative estimate in most situations.

c The estimated local concentration is the traffic contribution + the background concentration.

d The California Ambient Air Quality Standard for 8-hour CO concentrations is 9 ppm.

CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
JUNE 1989 VERSION
PAGE 1

JOB: NB I-15 AND SR-76 AM NP
RUN: (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

I. SITE VARIABLES

U= .5 M/S Z0= 100. CM ALT= 0. (FT)
BRG= WORST CASE VD= .0 CM/S
CLAS= 7 (G) VS= .0 CM/S
MIXH= 1000. M AMB= .0 PPM
SIGTH= 5. DEGREES TEMP= 15.6 DEGREE (C)

II. LINK VARIABLES

LINK DESCRIPTION	LINK COORDINATES (FT) X1	Y1	X2	Y2	TYPE	VPH	EF (G/MI)	H (FT)	W (FT)
A. NF	8	-1500	8	-500	AG	338	.3	.0	35.0
B. NA	8	-500	8	0	AG	146	9.2	.0	33.0
C. ND	8	0	8	500	AG	519	9.6	.0	33.0
D. NE	8	500	8	1500	AG	519	.3	.0	35.0
E. SF	-8	1500	-8	500	AG	0	.3	.0	35.0
F. SA	-8	500	-8	0	AG	0	9.2	.0	33.0
G. SD	-8	0	-8	-500	AG	0	6.0	.0	33.0
H. SE	-8	-500	-8	-1500	AG	0	.3	.0	35.0
I. WF	1500	15	500	15	AG	259	.3	.0	35.0
J. WA	500	15	0	15	AG	259	6.7	.0	33.0
K. WD	0	15	-500	15	AG	392	.3	.0	33.0
L. WE	-500	15	-1500	15	AG	392	.3	.0	35.0
M. EF	-1500	-15	-500	-15	AG	706	.3	.0	35.0
N. EA	-500	-15	0	-15	AG	246	6.5	.0	33.0
O. ED	0	-15	500	-15	AG	392	.3	.0	33.0
P. EE	500	-15	1500	-15	AG	392	.3	.0	35.0
Q. NL	0	0	8	-500	AG	192	9.2	.0	33.0
R. SL	0	0	-8	500	AG	0	9.2	.0	33.0
S. WL	0	0	500	15	AG	0	6.5	.0	33.0
T. EL	0	0	-500	-15	AG	460	6.9	.0	33.0

III. RECEPTOR LOCATIONS

RECEPTOR	COORDINATES (FT) X	Y	Z
1. NE3	25	33	6.0
2. SE3	25	-33	6.0
3. SW3	-25	-33	6.0
4. NW3	-25	33	6.0
5. NE7	38	46	6.0
6. SE7	38	-46	6.0
7. SW7	-38	-46	6.0
8. NW7	-38	46	6.0

IV. MODEL RESULTS (WORST CASE WIND ANGLE)

RECEPTOR	PRED BRG (DEG)	CONC (PPM)	CONC/LINK (PPM) A	B	C	D	E	F	G	H
1. NE3	260.	1.0	.0	.0	.4	.0	.0	.0	.0	.0
2. SE3	355.	1.1	.0	.0	1.0	.0	.0	.0	.0	.0
3. SW3	8.	.9	.0	.0	.6	.0	.0	.0	.0	.0
4. NW3	173.	.8	.0	.2	.0	.0	.0	.0	.0	.0
5. NE7	259.	.7	.0	.0	.3	.0	.0	.0	.0	.0
6. SE7	353.	.7	.0	.0	.6	.0	.0	.0	.0	.0
7. SW7	10.	.7	.0	.0	.5	.0	.0	.0	.0	.0
8. NW7	171.	.6	.0	.2	.0	.0	.0	.0	.0	.0

IV. MODEL RESULTS (WORST CASE WIND ANGLE) (CONT.)

RECEPTOR	CONC/LINK (PPM) I	J	K	L	M	N	O	P	Q	R	S	T
1. NE3	.0	.0	.0	.0	.0	.2	.0	.0	.0	.0	.0	.4
2. SE3	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
3. SW3	.0	.0	.0	.0	.0	.1	.0	.0	.0	.0	.0	.2
4. NW3	.0	.0	.0	.0	.0	.0	.0	.0	.3	.0	.0	.2
5. NE7	.0	.0	.0	.0	.0	.1	.0	.0	.0	.0	.0	.3
6. SE7	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
7. SW7	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.1
8. NW7	.0	.0	.0	.0	.0	.0	.0	.0	.2	.0	.0	.1

CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
JUNE 1989 VERSION
PAGE 1

JOB: NB I-15 AND SR-76 AM WP
RUN: (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

I. SITE VARIABLES

U= .5 M/S Z0= 100. CM ALT= 0. (FT)
BRG= WORST CASE VD= .0 CM/S
CLAS= 7 (G) VS= .0 CM/S
MIXH= 1000. M AMB= .0 PPM
SIGTH= 5. DEGREES TEMP= 15.6 DEGREE (C)

II. LINK VARIABLES

LINK DESCRIPTION	LINK COORDINATES (FT) X1	Y1	X2	Y2	TYPE	VPH	EF (G/MI)	H (FT)	W (FT)
A. NF	8	-1500	8	-500	AG	338	.3	.0	35.0
B. NA	8	-500	8	0	AG	146	9.2	.0	33.0
C. ND	8	0	8	500	AG	521	9.6	.0	33.0
D. NE	8	500	8	1500	AG	521	.3	.0	35.0
E. SF	-8	1500	-8	500	AG	0	.3	.0	35.0
F. SA	-8	500	-8	0	AG	0	9.2	.0	33.0
G. SD	-8	0	-8	-500	AG	0	6.0	.0	33.0
H. SE	-8	-500	-8	-1500	AG	0	.3	.0	35.0
I. WF	1500	15	500	15	AG	261	.3	.0	35.0
J. WA	500	15	0	15	AG	261	6.7	.0	33.0
K. WD	0	15	-500	15	AG	392	.3	.0	33.0
L. WE	-500	15	-1500	15	AG	392	.3	.0	35.0
M. EF	-1500	-15	-500	-15	AG	708	.3	.0	35.0
N. EA	-500	-15	0	-15	AG	248	6.5	.0	33.0
O. ED	0	-15	500	-15	AG	394	.3	.0	33.0
P. EE	500	-15	1500	-15	AG	394	.3	.0	35.0
Q. NL	0	0	8	-500	AG	192	9.2	.0	33.0
R. SL	0	0	-8	500	AG	0	9.2	.0	33.0
S. WL	0	0	500	15	AG	0	6.5	.0	33.0
T. EL	0	0	-500	-15	AG	460	6.9	.0	33.0

III. RECEPTOR LOCATIONS

RECEPTOR	COORDINATES (FT) X	Y	Z
1. NE3	25	33	6.0
2. SE3	25	-33	6.0
3. SW3	-25	-33	6.0
4. NW3	-25	33	6.0
5. NE7	38	46	6.0
6. SE7	38	-46	6.0
7. SW7	-38	-46	6.0
8. NW7	-38	46	6.0

IV. MODEL RESULTS (WORST CASE WIND ANGLE)

RECEPTOR	BRG (DEG)	PRED CONC (PPM)	CONC/LINK (PPM) A	B	C	D	E	F	G	H
1. NE3	260.	1.0	.0	.0	.4	.0	.0	.0	.0	.0
2. SE3	355.	1.1	.0	.0	1.0	.0	.0	.0	.0	.0
3. SW3	8.	.9	.0	.0	.6	.0	.0	.0	.0	.0
4. NW3	173.	.8	.0	.2	.0	.0	.0	.0	.0	.0
5. NE7	259.	.7	.0	.0	.3	.0	.0	.0	.0	.0
6. SE7	353.	.7	.0	.0	.6	.0	.0	.0	.0	.0
7. SW7	10.	.7	.0	.0	.5	.0	.0	.0	.0	.0
8. NW7	171.	.6	.0	.2	.0	.0	.0	.0	.0	.0

IV. MODEL RESULTS (WORST CASE WIND ANGLE) (CONT.)

RECEPTOR	CONC/LINK (PPM) I	J	K	L	M	N	O	P	Q	R	S	T
1. NE3	.0	.0	.0	.0	.0	.2	.0	.0	.0	.0	.0	.4
2. SE3	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
3. SW3	.0	.0	.0	.0	.0	.1	.0	.0	.0	.0	.0	.2
4. NW3	.0	.0	.0	.0	.0	.0	.0	.0	.3	.0	.0	.2
5. NE7	.0	.0	.0	.0	.0	.1	.0	.0	.0	.0	.0	.3
6. SE7	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
7. SW7	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.1
8. NW7	.0	.0	.0	.0	.0	.0	.0	.0	.2	.0	.0	.1

CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
JUNE 1989 VERSION
PAGE 1

JOB: SB I-15 AND SR-76 AM NP
RUN: (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

I. SITE VARIABLES

U= .5 M/S Z0= 100. CM ALT= 0. (FT)
BRG= WORST CASE VD= .0 CM/S
CLAS= 7 (G) VS= .0 CM/S
MIXH= 1000. M AMB= .0 PPM
SIGTH= 5. DEGREES TEMP= 15.6 DEGREE (C)

II. LINK VARIABLES

LINK DESCRIPTION	LINK COORDINATES (FT) X1	Y1	X2	Y2	TYPE	VPH	EF (G/MI)	H (FT)	W (FT)
A. NF	8	-1500	8	-500	AG	0	.3	.0	35.0
B. NA	8	-500	8	0	AG	0	8.5	.0	33.0
C. ND	8	0	8	500	AG	0	5.6	.0	33.0
D. NE	8	500	8	1500	AG	0	.3	.0	35.0
E. SF	-8	1500	-8	500	AG	830	.3	.0	35.0
F. SA	-8	500	-8	0	AG	713	10.7	.0	33.0
G. SD	-8	0	-8	-500	AG	463	6.0	.0	33.0
H. SE	-8	-500	-8	-1500	AG	463	.3	.0	35.0
I. WF	1500	15	500	15	AG	357	.3	.0	35.0
J. WA	500	15	0	15	AG	265	7.1	.0	33.0
K. WD	0	15	-500	15	AG	978	7.4	.0	33.0
L. WE	-500	15	-1500	15	AG	978	.3	.0	35.0
M. EF	-1500	-15	-500	-15	AG	895	.3	.0	35.0
N. EA	-500	-15	0	-15	AG	895	10.1	.0	33.0
O. ED	0	-15	500	-15	AG	641	5.4	.0	33.0
P. EE	500	-15	1500	-15	AG	641	.3	.0	35.0
Q. NL	0	0	8	-500	AG	0	8.5	.0	33.0
R. SL	0	0	-8	500	AG	117	8.5	.0	33.0
S. WL	0	0	500	15	AG	92	7.1	.0	33.0
T. EL	0	0	-500	-15	AG	0	7.1	.0	33.0

III. RECEPTOR LOCATIONS

RECEPTOR	COORDINATES (FT) X	Y	Z
1. NE3	25	33	6.0
2. SE3	25	-33	6.0
3. SW3	-25	-33	6.0
4. NW3	-25	33	6.0
5. NE7	38	46	6.0
6. SE7	38	-46	6.0
7. SW7	-38	-46	6.0
8. NW7	-38	46	6.0

IV. MODEL RESULTS (WORST CASE WIND ANGLE)

RECEPTOR	BRG (DEG)	PRED CONC (PPM)	CONC/LINK (PPM) A	B	C	D	E	F	G	H
1. NE3	263.	2.5	.0	.0	.0	.0	.0	.4	.0	.0
2. SE3	277.	2.4	.0	.0	.0	.0	.0	.0	.2	.0
3. SW3	5.	2.7	.0	.0	.0	.0	.0	1.4	.1	.0
4. NW3	262.	2.1	.0	.0	.0	.0	.0	.0	.0	.0
5. NE7	260.	1.8	.0	.0	.0	.0	.0	.3	.0	.0
6. SE7	280.	1.6	.0	.0	.0	.0	.0	.0	.1	.0
7. SW7	8.	1.8	.0	.0	.0	.0	.0	.9	.0	.0
8. NW7	258.	1.4	.0	.0	.0	.0	.0	.0	.0	.0

IV. MODEL RESULTS (WORST CASE WIND ANGLE) (CONT.)

RECEPTOR	CONC/LINK (PPM) I	J	K	L	M	N	O	P	Q	R	S	T
1. NE3	.0	.0	1.3	.0	.0	.6	.0	.0	.0	.0	.0	.0
2. SE3	.0	.0	.5	.0	.0	1.6	.1	.0	.0	.0	.0	.0
3. SW3	.0	.0	.3	.0	.0	.6	.0	.0	.0	.2	.0	.0
4. NW3	.0	.0	1.5	.0	.0	.6	.0	.0	.0	.0	.0	.0
5. NE7	.0	.0	.8	.0	.0	.6	.0	.0	.0	.0	.0	.0
6. SE7	.0	.0	.5	.0	.0	1.0	.0	.0	.0	.0	.0	.0
7. SW7	.0	.0	.3	.0	.0	.5	.0	.0	.0	.1	.0	.0
8. NW7	.0	.0	.8	.0	.0	.6	.0	.0	.0	.0	.0	.0

CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
JUNE 1989 VERSION
PAGE 1

JOB: SB I-15 AND SR-76 AM WP
RUN: (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

I. SITE VARIABLES

U= .5 M/S Z0= 100. CM ALT= 0. (FT)
BRG= WORST CASE VD= .0 CM/S
CLAS= 7 (G) VS= .0 CM/S
MIXH= 1000. M AMB= .0 PPM
SIGTH= 5. DEGREES TEMP= 15.6 DEGREE (C)

II. LINK VARIABLES

LINK DESCRIPTION	LINK COORDINATES (FT) X1	Y1	X2	Y2	TYPE	VPH	EF (G/MI)	H (FT)	W (FT)
A. NF	8	-1500	8	-500	AG	0	.3	.0	35.0
B. NA	8	-500	8	0	AG	0	8.5	.0	33.0
C. ND	8	0	8	500	AG	0	5.6	.0	33.0
D. NE	8	500	8	1500	AG	0	.3	.0	35.0
E. SF	-8	1500	-8	500	AG	832	.3	.0	35.0
F. SA	-8	500	-8	0	AG	713	10.7	.0	33.0
G. SD	-8	0	-8	-500	AG	463	6.0	.0	33.0
H. SE	-8	-500	-8	-1500	AG	463	.3	.0	35.0
I. WF	1500	15	500	15	AG	357	.3	.0	35.0
J. WA	500	15	0	15	AG	265	7.1	.0	33.0
K. WD	0	15	-500	15	AG	978	7.4	.0	33.0
L. WE	-500	15	-1500	15	AG	978	.3	.0	35.0
M. EF	-1500	-15	-500	-15	AG	895	.3	.0	35.0
N. EA	-500	-15	0	-15	AG	895	10.1	.0	33.0
O. ED	0	-15	500	-15	AG	643	5.4	.0	33.0
P. EE	500	-15	1500	-15	AG	643	.3	.0	35.0
Q. NL	0	0	8	-500	AG	0	8.5	.0	33.0
R. SL	0	0	-8	500	AG	119	8.5	.0	33.0
S. WL	0	0	500	15	AG	92	7.1	.0	33.0
T. EL	0	0	-500	-15	AG	0	7.1	.0	33.0

III. RECEPTOR LOCATIONS

RECEPTOR	COORDINATES (FT) X	Y	Z
1. NE3	25	33	6.0
2. SE3	25	-33	6.0
3. SW3	-25	-33	6.0
4. NW3	-25	33	6.0
5. NE7	38	46	6.0
6. SE7	38	-46	6.0
7. SW7	-38	-46	6.0
8. NW7	-38	46	6.0

IV. MODEL RESULTS (WORST CASE WIND ANGLE)

RECEPTOR	BRG (DEG)	PRED CONC (PPM)	CONC/LINK (PPM) A	B	C	D	E	F	G	H
1. NE3	263.	2.5	.0	.0	.0	.0	.0	.4	.0	.0
2. SE3	277.	2.4	.0	.0	.0	.0	.0	.0	.2	.0
3. SW3	5.	2.7	.0	.0	.0	.0	.0	1.4	.1	.0
4. NW3	262.	2.1	.0	.0	.0	.0	.0	.0	.0	.0
5. NE7	260.	1.8	.0	.0	.0	.0	.0	.3	.0	.0
6. SE7	280.	1.6	.0	.0	.0	.0	.0	.0	.1	.0
7. SW7	8.	1.8	.0	.0	.0	.0	.0	.9	.0	.0
8. NW7	258.	1.4	.0	.0	.0	.0	.0	.0	.0	.0

IV. MODEL RESULTS (WORST CASE WIND ANGLE) (CONT.)

RECEPTOR	CONC/LINK (PPM) I	J	K	L	M	N	O	P	Q	R	S	T
1. NE3	.0	.0	1.3	.0	.0	.6	.0	.0	.0	.0	.0	.0
2. SE3	.0	.0	.5	.0	.0	1.6	.1	.0	.0	.0	.0	.0
3. SW3	.0	.0	.3	.0	.0	.6	.0	.0	.0	.2	.0	.0
4. NW3	.0	.0	1.5	.0	.0	.6	.0	.0	.0	.0	.0	.0
5. NE7	.0	.0	.8	.0	.0	.6	.0	.0	.0	.0	.0	.0
6. SE7	.0	.0	.5	.0	.0	1.0	.0	.0	.0	.0	.0	.0
7. SW7	.0	.0	.3	.0	.0	.5	.0	.0	.0	.1	.0	.0
8. NW7	.0	.0	.8	.0	.0	.6	.0	.0	.0	.0	.0	.0

Los Angeles County EMFAC - Year 2014 (CO).rts
Title : Los Angeles County Avg Winter CYr 2014 Default Title
Version : Emfac2007 V2.3 Nov 1 2006
Run Date : 2009/09/24 11:57:41
Scen Year: 2014 -- All model years in the range 1970 to 2014 selected
Season : Winter
Area : Los Angeles
****
*****

Year: 2014 -- Model Years 1970 to 2014 Inclusive -- Winter
Emfac2007 Emission Factors: V2.3 Nov 1 2006

County Average Los Angeles County Average

Table 1: Running Exhaust Emissions (grams/mile)

Pollutant Name: Carbon Monoxide Temperature: 60F Relative Humidity: 50%

Speed MPH	LDA	LDT	MDT	HDT	UBUS	MCY	ALL
3	2.875	4.688	7.268	16.185	27.401	28.940	4.756
4	2.791	4.537	7.086	16.185	27.401	28.940	4.644
5	2.712	4.395	6.917	16.185	27.401	28.940	4.540
6	2.638	4.261	6.561	14.977	25.011	27.838	4.350
7	2.567	4.134	6.236	13.867	22.883	26.826	4.173
8	2.499	4.015	5.939	12.846	20.985	25.897	4.009
9	2.435	3.902	5.667	11.907	19.289	25.043	3.857
10	2.375	3.795	5.417	11.043	17.772	24.260	3.715
11	2.317	3.694	5.188	10.250	16.411	23.542	3.583
12	2.261	3.598	4.976	9.523	15.190	22.884	3.459
13	2.208	3.507	4.781	8.857	14.093	22.283	3.344
14	2.158	3.420	4.601	8.248	13.105	21.733	3.236
15	2.110	3.338	4.434	7.694	12.214	21.232	3.135
16	2.064	3.259	4.280	7.192	11.411	20.778	3.041
17	2.019	3.184	4.136	6.738	10.685	20.367	2.953
18	1.977	3.113	4.003	6.331	10.028	19.996	2.871
19	1.936	3.045	3.879	5.959	9.433	19.665	2.794
20	1.897	2.979	3.763	5.709	8.894	19.371	2.725
21	1.860	2.917	3.655	5.477	8.405	19.113	2.661
22	1.823	2.857	3.554	5.261	7.962	18.890	2.599
23	1.789	2.800	3.460	5.059	7.559	18.700	2.541
24	1.755	2.746	3.372	4.871	7.193	18.543	2.486
25	1.723	2.693	3.289	4.696	6.860	18.418	2.434
26	1.692	2.643	3.212	4.533	6.558	18.324	2.385
27	1.662	2.595	3.140	4.381	6.284	18.262	2.338
28	1.634	2.549	3.072	4.240	6.035	18.231	2.293
29	1.606	2.505	3.008	4.108	5.809	18.232	2.251
30	1.579	2.463	2.949	3.985	5.604	18.264	2.211
31	1.554	2.422	2.893	3.871	5.419	18.328	2.173
32	1.529	2.384	2.841	3.765	5.253	18.426	2.138
33	1.505	2.346	2.792	3.667	5.103	18.557	2.104
34	1.482	2.311	2.747	3.577	4.968	18.723	2.072
35	1.460	2.277	2.705	3.494	4.849	18.926	2.042
36	1.439	2.244	2.665	3.418	4.742	19.167	2.014
37	1.419	2.213	2.629	3.348	4.649	19.447	1.987
38	1.399	2.184	2.595	3.285	4.569	19.769	1.962
39	1.380	2.155	2.564	3.228	4.499	20.136	1.939
40	1.362	2.128	2.536	3.178	4.442	20.550	1.918

Appendix B – SOILTAC® Manufacturer Specifications

Soilworks®,LLC
2450 S. Gilbert Rd., Ste 210, Gilbert, AZ 85286-1583
T: 800-545-5420 O: 480-545-5454 F: 480-545-5456
www.Soilworks.com Info@Soilworks.com
Specializing in Soil Stabilization and Dust Control

Global Manufacturer & Distributor of
Soiltac® / Powdered Soiltac®
Durasoil® AND Gorilla-Snot®

MATERIAL SAFETY DATA SHEET

SECTION 1 - MATERIAL IDENTIFICATION

PRODUCT NAME	**SOILTAC***
	*SOILTAC is a registered trademark of Soilworks, LLC.
MANUFACTURER	Soilworks, LLC. 681 North Monterey Street Gilbert, Arizona 85233-8318 USA www.soilworks.com
TELEPHONE NUMBER	800-545-5420
ONLINE INFORMATION	www.Soiltac.com
EMERGENCY TELEPHONE NUMBERS	800-545-5420 (National & International)
REVISION DATE	November 2006 *(supersedes March 2006)*
PHYSICAL FORM	Mobile liquid
COLOR	Milky White (transparent once cured)
ODOR	Mild / Slight (no odor once cured)
C.A.S. CHEMICAL NAME	Mixture
SYNONYMS	Soil stabilizer, soil stabilization agent, soil solidifier, soil amendment, soil additive, soil crusting agent, dust control agent, dust inhibitor, dust palliative, dust suppressant, dust retardant
CHEMICAL FAMILY	Vinyl Copolymer Emulsion
EMPIRICAL FORMULA	Mixture
INTENDED USE	Soil stabilization, soil solidification, fugitive dust control, dust suppression, dust abatement, tackifier, dust abatement, PM_{10} and $PM_{2.5}$ air quality control and erosion control

SECTION 2 - INGREDIENTS

	%	CAS Number	Chemical Name
1.	50-60	Proprietary	Vinyl Copolymer
2.	40-60	7732-18-5	Water

SECTION 3 - HEALTH HAZARDS

ROUTES OF ENTRY

Eye Contact, Skin Contact, Ingestion and Inhalation

SIGNS AND SYMPTOMS OF ACUTE EXPOSURE

Eyes: Direct contact with this material may cause eye irritation including lachrymation (tearing).
Inhalation: Inhalation of vapor or aerosol may cause irritation to the respiratory tract (nose, throat, and lungs).
Skin: Contact may cause skin irritation.
Ingestion: No hazard in normal industrial use.

SIGNS AND SYMPTOMS OF CHRONIC EXPOSURE

Prolonged or repeated contact with skin may cause irritation and dermatitis (inflammation).

CARCINOGENICITY

This material **does not** contain 0.1% or more of any chemical listed by the International Agency for Research on Cancer (IARC), the National Toxicology Program (NTP), or regulated by the Occupational Safety and Health Administration (OSHA) as a carcinogen.

SECTION 4 - FIRST AID

EYE CONTACT

Flush eyes with clean water for at least 15 minutes. Get immediate medical attention.

SKIN CONTACT

Remove contaminated clothing and shoes. Wash affected area with soap and water. Get medical attention if irritation develops or persists.

INHALATION

Move patient to fresh air. If breathing has stopped or is labored give assisted respiration (e.g. mouth-to-mouth). Supplemental oxygen may be indicated. Seek medical advice.

INGESTION

Give the victim one or two glasses of water or milk to drink. Get immediate medical attention. Never give anything by mouth to an unconscious person.

SECTION 5 - FIRE AND EXPLOSION DATA

FLASH POINT (closed cup)	Not applicable
UPPER EXPLOSION LIMIT (UEL)	Not applicable
LOWER EXPLOSION LIMIT (LEL)	Not applicable
AUTOIGNITION TEMPERATURE	Not applicable
FIRE HAZARD CLASSIFICATION (OSHA/NFPA)	Non-Combustible

EXTINGUISHING MEDIA

Product does not burn. The product will only burn after the water it contains is driven off. For dry polymer use carbon dioxide, foam, dry chemical or water fog to extinguish fire. Aqueous solution **is not flammable**.

FIRE FIGHTING EQUIPMENT

Wear self-contained breathing apparatus (SCBA) and full fire-fighting protective clothing. Thoroughly decontaminate all protective equipment after use.

FIRE FIGHTING INSTRUCTIONS

Containers of this material may build up pressure if exposed to heat (fire). Use water spray to cool fire-exposed containers.

FIRE AND EXPLOSION HAZARDS

This material **will not burn** unless it is evaporated to dryness. Closed containers may rupture when exposed to extreme heat.

HAZARDOUS COMBUSTION PRODUCTS

When dried polymer burns, water (H_2O), carbon dioxide (CO_2), carbon monoxide (CO) and smoke are produced.

SECTION 6 - ACCIDENTAL RELEASE MEASURES

CONTAINMENT TECHNIQUES (Removal of ignition sources, diking etc)

Stop the leak, if possible. Ventilate the space involved.

CLEAN-UP PROCEDURES

Wear suitable protective equipment. If recovery is not feasible, admix with dry soil, sand or non-reactive absorbent and place in an appropriate chemical waste container. Prevent spilled material from entering sanitary sewers, storm sewers, drainage systems and from entering bodies of water or ditches that lead to waterways. Transfer to containers by suction, preparatory for later disposal. Place in metal containers for recovery or disposal. Flush area with water spray. Wash contaminated property (e.g., automobiles) quickly before the material dries. For large spills, recover spilled material with a vacuum truck.

OTHER EMERGENCY ADVICE

Spilled polymer emulsion is very slippery. Use care to avoid falls. A film will form on drying. Remove saturated clothing and wash contacted skin area with soap and water. Product imparts a milky white color to contaminated waters. Foaming may result. Sewage treatment plants may not be able to remove the white color imparted to the water.

SECTION 7 - HANDLING AND STORAGE

STORAGE

Keep from freezing. Store in a dry area. Keep containers closed when not in use to minimize contact with atmospheric air and prevent inoculation with microorganisms.

HANDLING

Use only in well-ventilated areas. Avoid contact with eyes. Avoid breathing vapors. Avoid prolonged or repeated contact with skin. Wash hands thoroughly after handling and before eating or drinking.

SECTION 8 - PERSONAL PROTECTION / EXPOSURE CONTROLS

EXPOSURE GUIDELINES

There are no Occupational Safety and Health (OSHA) Permissible Exposure Limits (PEL) or American Conference of Governmental Industrial Hygienists (ACGIH) Threshold Limit Values (TLV) or Short Term Exposure Limits (STEL) established for the component(s) of this product.

EYE PROTECTION

Chemical safety glasses.

HAND PROTECTION

Rubber Gloves. The breakthrough time of the selected glove(s) must be greater than the intended use period.

RESPIRATORY PROTECTION

Not required under normal use.

PROTECTIVE CLOTHING

No specific recommendation.

ENGINEERING CONTROLS

Good general ventilation should be sufficient to control airborne levels of irritating vapors.

SECTION 9 - TYPICAL PHYSICAL AND CHEMICAL PROPERTIES

PHYSICAL FORM	liquid
COLOR	Milky White (transparent once cured)
ODOR	Mild / Slight (no odor once cured)
pH	4.5-6.0
EVAPORATION RATE	< 1 (BuAc=1)
VAPOR DENSITY	> 1 (Air = 1)
BOILING POINT	>100.00°C (>212.00°F)
FREEZING POINT	<0°C (<32°F)
SOLUBILITY IN WATER	Completely (100%) (until cured)
SPECIFIC GRAVITY (Water = 1)	1.05-1.10

SECTION 10 - STABILITY AND REACTIVITY

STABILITY

Stable at ambient temperatures. Coagulation may occur following freezing, thawing or boiling.

INCOMPATIBILITY (Materials to Avoid)

No incompatibilities have been identified.

HAZARDOUS DECOMPOSITION PRODUCTS

Thermal decomposition may form: Acetic acid and Acrolein. Thermal decomposition may produce various hydrocarbons and irritating, acrid vapors.

HAZARDOUS POLYMERIZATION

Will not occur

CONDITIONS TO AVOID

Freezing temperatures (until cured).

SECTION 11 - TOXICOLOGICAL PROPERTIES

ACUTE EYE TOXICITY

No Information is available.

ACUTE ORAL TOXICITY

No Information is available.

ACUTE SKIN TOXICITY

No Information is available.

ACUTE INHALATION TOXICITY

No Information is available.

CHRONIC/CARCINOGENICY

This material **does not** contain 0.1% or more of any chemical listed by the International Agency for Research on Cancer (IARC), the National Toxicology Program (NTP), or regulated by the Occupational Safety and Health Administration (OSHA) as a carcinogen.

SECTION 12 - ECOLOGICAL INFORMATION

ECOTOXICITY

Common Name	Species	Test	Result	Concentration
Green Algae	Raphidocelus Subcapitata	96-hr chronic LC50	>1,000	Undiluted
Fathead Minnow	Pimephales Promelas	96-hr acute LC50	>1,208	Undiluted
Rainbow Trout	Oncorhynchus Mykiss	96-hr acute LC50	>1,000	Undiluted

ENVIRONMENTAL FATE

No data is available.

SECTION 13 - DISPOSAL CONSIDERATIONS

WASTE DISPOSAL METHOD

This material **is not** a RCRA hazardous waste. Disposal of this material is not regulated under RCRA. Consult federal, state and local regulations to ensure that this material and its containers, if discarded, is disposed of in compliance with all regulatory requirements. NOTE: As supplied or diluted, product material (foam included), when splashed on automobiles or other personal property, is difficult to remove if allowed to dry.

RCRA HAZARD CLASS

This material **is not** a RCRA hazardous waste. When discarded in its purchased form, this material would not be regulated as a RCRA Hazardous waste under 40 CFR 261.

SECTION 14 - TRANSPORT INFORMATION

DOT NON-BULK SHIPPING NAME	Refer to Bill of Lading - Not DOT Regulated // Keep From Freezing // Not dangerous goods
DOT BULK SHIPPING NAME	Refer to Bill of Lading.
IMO SHIPPING DATA	Refer to Bill of Lading.
ICAO/IATA SHIPPING DATA	Refer to Bill of Lading - Not IATA Regulated // Keep From Freezing // Not dangerous goods
CFR	Not Regulated // Keep From Freezing // Not dangerous goods
IMDG	Not Regulated // Keep From Freezing // Not dangerous goods
CTC	Not Regulated // Keep From Freezing // Not dangerous goods

SECTION 15 - REGULATORY INFORMATION

TSCA SECTION 8(b) INVENTORY STATUS

All components are included in the EPA Toxic Substances Control Act (TSCA) Chemical Substance Inventory.

TSCA SECTION 12(b) EXPORT NOTIFICATION

This material **does not** contain any components that are subject to the U.S. Toxic Substances Control Act (TSCA) Section 12 (b) Export Notification requirements.

OSHA Hazard Communication Standard (29CFR1910.1200) hazard class(es)

This material **is not** classified as hazardous under the criteria of the U.S. Occupational Safety and Health Administration (OSHA) Hazard Communication Standard, 29 CFR 1910.1200

EPA SARA Title III Section 304 CERCLA

Reportable quantities have not been established for any of this material's components.

EPA SARA Title III Section 311/312 HAZARD COMMUNICATION STANDARD (HCS)

This material **is not** a hazardous chemical.

EPA SARA Title III Section 313 TOXIC CHEMICAL LIST (TCL)

This product **does not** contain Section 313 Reportable Ingredients.

CANADIAN INVENTORY STATUS

All components of this material are listed on the Canadian Domestic Substances List (DSL)

CANADIAN WHMIS

This material **is not** classified as a controlled product under the Canadian Workplace Hazardous Material Information System.

ADDITIONAL CANADIAN REGULATORY INFORMATION

This product **does not** contain a substance present on the WHMIS Ingredient Disclosure List (IDL) which is at or above the specified concentration limit.

EUROPEAN INVENTORY STATUS (EINECS)

The polymer portion of this product is manufactured from reactants which are listed on EINECS and meets the EINECS definition of an exempt polymer.

AICS (Australia)

Included on inventory

ENCS (Japan)

Included on inventory

ECL (South Korea)

Included on inventory

SEPA (China)

Included on inventory

SECTION 16 – OTHER INFORMATION

HMIS and NFPA Classification

Health	: 1
Flammability	: 0
Reactivity	: 0
Special Hazard	: 0

McAfee SECURE
TESTED 14-OCT

Environmental Data

Soiltac® copolymer emulsion is proud to be a biodegradable and environmentally safe innovation. As the manufacturer of Soiltac®, Soilworks®, LLC is dedicated to protecting our environment through continued research and development. Soiltac® is specifically engineered to balance environmental friendliness with superior industry performance.

Toxicity Analysis

Common Name	Species	Test	Result (mg/L)		
			Undiluted	1:4 Dilution	1:9 Dilution
GreenAlgae	RaphidocelusSubcapitata (Selenastrum capricornutum)	96-hrchronic LC50	>1,000	>5,000	>10,000
FatheadMinnow	PimephalesPromelas	96-hracute LC50	1,208	6,040	12,080
RainbowTrout	OncorhynchusMykiss	96-hracute LC50	>1,000	>5,000	>10,000

Microbiological and Biological Properties

Constituent	Result		
	Undiluted	1:4 Dilution	1:9 Dilution
Fecal Coliform Bacteria	NoneDetected		
E. Coli Bacteria	NoneDetected		
Fecal Streptococcus Bacteria	NoneDetected		
Mold and Fungus	NoneDetected		

Chemical Properties

Constituent	Result (mg/L)		
	Undiluted	1:4 Dilution	1:9 Dilution
Phenol,total	None Detected (detection limit:0.13 mg/L)		
Cyanide	None Detected (detection limit:0.50 mg/L)		
Fluoride	0.2	.04mg/L	0.02mg/L
Acetone	110mg/L	22mg/L	11mg/L
VinylAcetate	230mg/L	46mg/L	23mg/L
VolatileOrganics (other compounds)	None Detected		
OrganochlorinePesticides	None Detected		
PolychlorinatedBiphenyls (PCBs)	None Detected		
ChlorinatedHerbicides	NoneDetected		
CarbamatePesticides	NoneDetected		
OrganophosphoursPesticides	NoneDetected		

Nutrients

Constituent	Result (mg/L)		
	Undiluted	1:4 Dilution	1:9 Dilution
Phosphorus,total	None Detected (detection limit:1.0 mg/L)		
KjeldahlNitrogen	None Detected (detection limit:10 mg/L)		
Ammonia-N	None Detected (detection limit:10 mg/L)		

Nitrate+Nitrite-N	None Detected (detection limit: 10 mg/L)

Metals (total)			
Constituent	**Result (mg/L)**		
	Undiluted	**1:4 Dilution**	**1:9 Dilution**
Aluminum	None Detected (detection limit:0.2 mg/L)		
Antimony	None Detected (detection limit:0.08 mg/L)		
Arsenic	None Detected (detection limit:0.06 mg/L)		
Barium	None Detected (detection limit:0.05 mg/L)		
Beryllium	None Detected (detection limit:0.005 mg/L)		
Boron	None Detected (detection limit:0.04 mg/L)		
Cadmium	None Detected (detection limit:0.005 mg/L)		
Chromium	None Detected (detection limit:0.02 mg/L)		
Cobalt	None Detected (detection limit:0.006 mg/L)		
Copper	None Detected (detection limit:0.01 mg/L)		
Iron	None Detected (detection limit:0.006 mg/L)		
Lead	None Detected (detection limit:0.08 mg/L)		
Magnesium	None Detected (detection limit:0.007 mg/L)		
Manganese	None Detected (detection limit:0.003 mg/L)		
Mercury	None Detected (detection limit:0.5 mg/L)		
Molybedenum	None Detected (detection limit:0.03 mg/L)		
Nickel	None Detected (detection limit:0.01 mg/L)		
Selenium	None Detected (detection limit:0.08 mg/L)		
Silver	None Detected (detection limit:0.04 mg/L)		
Thallium	None Detected (detection limit:0.08 mg/L)		
Tin	None Detected (detection limit:0.04 mg/L)		
Titanium	None Detected (detection limit:0.04 mg/L)		
Vanadium	None Detected (detection limit:0.01 mg/L)		
Zinc	None Detected (detection limit:0.01 mg/L)		

Leachable (TCLP) Metals	
Constituent	**Leachate Metal Concentration (mg/L)**
	Undiluted (Wet/Liquid)
Arsenic	None Detected (detection limit:0.02 mg/L)
Barium	None Detected (detection limit:0.001 mg/L)
Cadmium	None Detected (detection limit:0.002 mg/L)
Chromium	None Detected (detection limit:0.002 mg/L)
Lead	None Detected (detection limit:0.02 mg/L)
Mercury	None Detected (detection limit:0.001 mg/L)
Selenium	None Detected (detection limit:0.03 mg/L)
Silver	None Detected (detection limit:0.01 mg/L)

Leachable (TCLP) Organics	
Constituent	**Result (total)**
VolatileOrganics	NoneDetected
Semi-VolatileOrganics	NoneDetected

Copyright © Soilworks, LLC 2006-2008. All Rights Reserved. Soilworks®, Soiltac®, Gorilla-Snot®, Durasoil®, the Durasoil® logo and the Soiltac® logo are registered trademarks of Soilworks, LLC. Last modified 04/01/2008 - Privacy Policy.

Soilworks®, LLC
2450 S. Gilbert Rd., Ste 210, Gilbert, AZ 85286-1583
T: 800-545-5420 O: 480-545-5454 F: 480-545-5456
www.Soilworks.com Info@Soilworks.com
Specializing in Soil Stabilization and Dust Control

SOILTAC®

Topical Traffic Area Application Overview

1.) Prepare the Site:

Dry Soil: The site should be completely dry and free from water.
Weather: The site must be free from rain for a minimum of 72 hours after the application.
Temperature must be at least 40°F (4°C).
Compaction: Compact the site to a minimum of 95%.
(per ASTM D 698 D 1557 modified Proctor Density).
Drainage: Contour and crown the site to provide for proper drainage.
Loose Aggregate: Remove any loose aggregate, soil or debris from the treatment area.

2.) Prepare Application Equipment

Spray Nozzles: Set spray nozzles to the desired width, height and output rate.
Test equipment (off-site) if necessary.
Coverage: The spray nozzles should provide an even coat over the treatment area with each pass.
Spray Rate: Set the spray rate high enough to allow even coverage with multiple coats and low enough to prevent material from draining away from the treatment area.
Pre-Wetting (Optional): Optimally, pre-wet the treatment area with water (only) to break the surface tension and increase penetration depth. Pre-wet at a rate of 100 SF/gallon (2.5m²/liter) of water.
Release Agent (Optional): Optionally, a form release agent (like Durasoil®) can be sprayed onto the equipment to prevent Soiltac® overspray from adhering onto the outside of the equipment

3.) Prepare the Soiltac® Dilution:

Water: Fill the application equipment with the recommended volume of water.
Reference the "application coverage rates" chart.

Example: Roads (Light Traffic) = 70 ft²/gallons (1.7m²/liter) +7 parts water.
Equipment: 4,000 gallon (15,142 liters) water truck
Calculation: 7+1 = 8 parts dilution total.
4,000 gallons / 8 parts = 500 gallons (1,893 liters) per part
Volume of Water: 500 gallons X 7 parts = 3,500 gallons (13,249 liters) of water
Volume of Soiltac®: 500 gallons X 1 part = 500 gallons (1,893 liters) of Soiltac® concentrate
Volume of Dilution: 500 gallons X 8 parts = 4,000 gallons (15,142 liters) of Soiltac® dilution

Soiltac®: Fill the application equipment with the recommended volume of Soiltac® concentrate.
Foaming: To prevent foaming, add the Soiltac® concentrate last, directly into the water.

4.) Apply the Soiltac® Dilution

Multiple Coats: Apply the Soiltac® dilution in coats over the treatment area.

Example: (See Above) Roads (Light Traffic) typically require a minimum of 4 even coats.
500 gallons / 4 coats = 125 gallons (473 liters) (Soiltac® concentrate) per coat.
4,000 gallons / 4 coats = 1,000 gallons (3,785 liters) (Soiltac® dilution) per coat.
500 gallons (Soiltac® concentrate) X 70 ft²/gal. = 35,000 ft² (3,252 m²) treatment per water truck

Drying: Each successive coat of Soiltac® dilution should be applied in a timely manner to ensure that the surface always stays wet with the Soiltac® dilution. DO NOT allow the Soiltac® dilution to dry between the application coats. Failure to do so will result in an underperforming "skin" layer rather than a penetrating layer.

5.) Clean the Application Equipment

Rinse: Rinse off all application equipment thoroughly with water until clean. If Soiltac® is allowed to dry and cure use a hot pressure washer or steam cleaner and brush to remove residue.
Traffic: Prevent any human activity over the treated area until the site has completely cured.
Curing: Allow the treated area to dry and cure for approximately 24 hours (@70°F/21°C).

Appendix C – LLG Traffic Memo

Traffic Data Collection Methodology:

Traffic data is generally collected to determine the number, movements, and classifications of vehicles at a given location. Traffic professionals typically work with two distinct types of data: peak hour traffic counts and average daily traffic counts.

Peak hour counts are manually conducted at intersections during commuter peak hours (generally the highest one hour between 7 – 9 AM and 4 -6 PM), and identify the hourly volumes by each individual movement of the intersection (e.g., left, through, right, etc. for all approaches). The most common use of this data is for specific, engineering-level peak hour intersection analyses.

Average daily traffic counts (ADT's) are collected automatically using pneumatic road tubes, which collect directional or bi-directional count data on a roadway segment for at least 24-hours. When placed in a series, pneumatic road tubes can also provide vehicle classifications. Besides the method of collection and duration of the count, the major difference between peak hour counts and ADT counts is that the ADT counts are conducted at midblock locations, not intersections. The most common uses of ADT data is for daily street segment analysis and for making planning-level determinations of roadway network performance.

In the South El Monte portion of the study area, LLG conducted bi-directional ADT counts over a 24-hour period on September 9, 2009, when local schools were in session. Counts were conducted along the following study area roadways near the recycled water source site (*San Gabriel Valley Water Company*):

- Mable Avenue: east of Lee Avenue
- Rosemead Boulevard: between Mabel Avenue and SR 60

The street segments along Mable Avenue and Rosemead Boulevard in the City of South El Monte were counted because they are the principal roadways between the water source site and the regional freeway system, SR 60.

South El Monte Study Area Segment Analysis:

LLG has been tasked to determine what percent of traffic the proposed project would contribute to either of the study area roadways during the AM peak period. To determine this percentage, it is necessary to know the amount project traffic (the numerator) and the total peak hour segment traffic (the denominator).

LLG forecasted the recycled water truck traffic on these segments to be 3 peak hour trips, as shown in *Table 1–1* of the *Gregory Canyon Landfill Haul Route Focused Traffic Impact Study* (October 9, 2009).

The 24-hour data collected for the Mable Avenue and Rosemead Boulevard segments was reviewed, and the AM peak period volumes were examined for each peak hour (7-8 AM and 8-9 AM). ***Table A*** shows a summary of the ADT, the project contribution, and peak hour traffic volumes.

TABLE A
PROJECT CONTRIBUTION TO EXISTING TRAFFIC

Segment	ADT [b]	AM Peak Period [a]				
		Project Traffic Contribution	Peak Hour Volume [c]		Project % Contribution [d]	
			7-8 AM	8-9 AM	7-8 AM	8-9 AM
Mabel Avenue						
East of Lee Avenue	2,100	3	179	165	1.68%	1.82%
Rosemead Boulevard						
Mabel Avenue to SR 60	46,240	3	2,833	3,474	0.11%	0.08%

Footnotes:
a. The AM peak period is 7 to 9 AM.
b. ADT = Average Daily Traffic (24 hours)
c. Bi-directional segment volume for each hour in the peak period.
d. The project contribution is 3 peak hour trips. The "%-contribution" is measured by dividing 3 project trips into the peak hour volume.

Table A also shows project's percent-contribution to either study area street segment during both peak hours in the AM peak period. This table shows that the project contributes ***less than 2%*** to either location. As such, project contribution to any specific locations along these street segments in the project vicinity would be comparable – less than 2%.

Street Segment Cumulative Growth Projections:

To account for potential near-term growth in the South El Monte project area, LLG applied a 2% per year growth factor for five years to existing counts. This is consistent with the cumulative growth analysis LLG prepared for the *Gregory Canyon Landfill Haul Route Focused Traffic Impact Study* (October 9, 2009), shown in *Section 6.2*.

Table B shows daily and peak hour traffic volumes with the applied growth factor. Again, the percent of project contribution is calculated using 3 peak hour trips.

TABLE B
PROJECT CONTRIBUTION TO EXISTING + CUMULATIVE GROWTH TRAFFIC

Segment	ADT [b]	AM Peak Period [a]				
		Project Traffic Contribution	Peak Hour Volume [c]		Project % Contribution [d]	
			7-8 AM	8-9 AM	7-8 AM	8-9 AM
Mabel Avenue						
East of Lee Avenue	2,310	3	197	182	1.52%	1.65%
Rosemead Boulevard						
Mabel Avenue to SR 60	50,864	3	3,116	3,821	0.10%	0.08%

Footnotes:

a. The AM peak period is 7 to 9 AM.
b. ADT = Average Daily Traffic (24 hours) with a 2% per year increase for 5 years.
c. Bi-directional segment volume for each hour in the peak period, with a 2% per year increase for 5 years.
d. The project contribution is 3 peak hour trips. The "%-contribution" is measured by dividing 3 project trips into the peak hour volume.

Table B also shows the project's percent-contribution to either study area street segment during both peak hours in the AM peak period. This table shows that the project continues to contribute ***less than 2%*** to either location when considering potential cumulative growth. As such, project contribution to any specific locations along these street segments in the project vicinity would be comparable – less than 2%.

Appendix D – Noise Analysis Worksheets

Project: Gregory Canyon Addendum

Existing										
	Speed	Traffic Volumes			Leq			CNEL		
Roadway/Segment	MPH	AM	PM	ADT	ROW	25 Feet	50 Feet	ROW	25 Feet	50 Feet
Mabel Ave. e/o Lee Ave.	25			2098	60.5	57.5	55.7	60.2	57.3	55.5
0	40			0	-	-	-	-	-	-
0	25			0	-	-	-	-	-	-
0	25			0	-	-	-	-	-	-
0	25			0	-	-	-	-	-	-
Future No Project										
	Speed	Traffic Volumes			Leq			CNEL		
Roadway/Segment	MPH	AM	PM	ADT	ROW	25 Feet	50 Feet	ROW	25 Feet	50 Feet
Mabel Ave. e/o Lee Ave.	25			2285	60.7	57.8	56.0	60.5	57.5	55.8
0	40			0	-	-	-	-	-	-
0	25			0	-	-	-	-	-	-
0	25			0	-	-	-	-	-	-
0	25			0	-	-	-	-	-	-
Future with Project										
	Speed	Traffic Volumes			Leq			CNEL		
Roadway/Segment	MPH	AM	PM	ADT	ROW	25 Feet	50 Feet	ROW	25 Feet	50 Feet
Mabel Ave. e/o Lee Ave.	25			2310	61.8	58.9	57.1	62.3	59.3	57.6
0	40			0	-	-	-	-	-	-
0	25			0	-	-	-	-	-	-
0	25			0	-	-	-	-	-	-
0	25			0	-	-	-	-	-	-

CNEL

Summary	25 ft. from ROW		At ROW	
Roadway/Segment	Project Increment	Cumulative Increment	Project Increment	Cumulative Increment
Mabel Ave. e/o Lee Ave.	1.8	2.0	1.8	2.1
0	-	-	-	-
0	-	-	-	-
0	-	-	-	-
0	-	-	-	-

Project: Gregory Canyon Addendum

Existing										
	Speed	Traffic Volumes			Leq			CNEL		
Roadway/Segment	MPH	AM	PM	ADT	ROW	25 Feet	50 Feet	ROW	25 Feet	50 Feet
Rosemead Blvd. between Mabel Ave. and SR 60	40			46243	75.0	72.8	71.3	76.3	74.0	72.5
0	40			0	-	-	-	-	-	-
0	25			0	-	-	-	-	-	-
0	25			0	-	-	-	-	-	-
0	25			0	-	-	-	-	-	-
Fugure No Project										
	Speed	Traffic Volumes			Leq			CNEL		
Roadway/Segment	MPH	AM	PM	ADT	ROW	25 Feet	50 Feet	ROW	25 Feet	50 Feet
Rosemead Blvd. between Mabel Ave. and SR 60	40			50839	75.4	73.1	71.6	76.6	74.3	72.9
0	40			0	-	-	-	-	-	-
0	25			0	-	-	-	-	-	-
0	25			0	-	-	-	-	-	-
0	25			0	-	-	-	-	-	-
Future with Project										
	Speed	Traffic Volumes			Leq			CNEL		
Roadway/Segment	MPH	AM	PM	ADT	ROW	25 Feet	50 Feet	ROW	25 Feet	50 Feet
Rosemead Blvd. between Mabel Ave. and SR 60	40			50864	75.5	73.2	71.7	76.7	74.4	73.0
0	40			0	-	-	-	-	-	-
0	25			0	-	-	-	-	-	-
0	25			0	-	-	-	-	-	-
0	25			0	-	-	-	-	-	-

CNEL

Summary	25 ft. from ROW		At ROW	
Roadway/Segment	Project Increment	Cumulative Increment	Project Increment	Cumulative Increment
Rosemead Blvd. between Mabel Ave. and SR 60	0.1	0.4	0.1	0.4
0	-	-	-	-
0	-	-	-	-
0	-	-	-	-
0	-	-	-	-

Project: Gregory Canyon Addendum

Existing										
	Speed	Traffic Volumes			Leq			CNEL		
Roadway/Segment	MPH	AM	PM	ADT	ROW	25 Feet	100 Feet	ROW	25 Feet	100 Feet
SR60 between I-605 & SR 57 (S. Hacienda Blvd. to S. Azusa Ave.	65			174300	85.2	82.7	79.0	86.4	83.9	80.3
SR 60 between SR 57 & I-15 (S. Vineyard Ave. to S. Milliken Ave.)	65			209700	85.5	83.2	79.7	86.7	84.4	80.9
I-15 between SR 60 & SR 91 (5th St. to 3rd St.)	60			150000	83.6	81.1	77.5	84.8	82.3	78.7
I-15 between SR 91 & SR 215 (Riverside Dr. to Main St.)	60			109000	82.2	79.7	76.1	83.5	80.9	77.3
I-15 between SR 79 to Pala Rd. (SR 76)	60			128000	83.6	80.8	76.9	84.8	82.0	78.1
Project Only										
	Speed	Traffic Volumes			Leq			CNEL		
Roadway/Segment	MPH	AM	PM	ADT	ROW	25 Feet	100 Feet	ROW	25 Feet	100 Feet
SR60 between I-605 & SR 57 (S. Hacienda Blvd. to S. Azusa Ave.	65			191730	85.6	83.1	79.5	86.8	84.3	80.7
SR 60 between SR 57 & I-15 (S. Vineyard Ave. to S. Milliken Ave.)	65			230670	85.9	83.6	80.1	87.2	84.8	81.3
I-15 between SR 60 & SR 91 (5th St. to 3rd St.)	60			165000	84.0	81.5	77.9	85.3	82.7	79.1
I-15 between SR 91 & SR 215 (Riverside Dr. to Main St.)	60			119900	82.7	80.1	76.5	83.9	81.4	77.7
I-15 between SR 79 to Pala Rd. (SR 76)	60			140800	84.0	81.2	77.3	85.2	82.4	78.5
Existing With Project										
	Speed	Traffic Volumes			Leq			CNEL		
Roadway/Segment	MPH	AM	PM	ADT	ROW	25 Feet	100 Feet	ROW	25 Feet	100 Feet
SR60 between I-605 & SR 57 (S. Hacienda Blvd. to S. Azusa Ave.	65			191755	85.6	83.1	79.5	86.8	84.3	80.7
SR 60 between SR 57 & I-15 (S. Vineyard Ave. to S. Milliken Ave.)	65			230695	85.9	83.6	80.1	87.2	84.8	81.3
I-15 between SR 60 & SR 91 (5th St. to 3rd St.)	60			165025	84.0	81.5	77.9	85.3	82.7	79.1
I-15 between SR 91 & SR 215 (Riverside Dr. to Main St.)	60			119925	82.7	80.1	76.5	83.9	81.4	77.7
I-15 between SR 79 to Pala Rd. (SR 76)	60			140825	84.0	81.2	77.3	85.2	82.4	78.5

CNEL

Summary	25 ft. from ROW		At ROW	
Roadway/Segment	Project Increment	Cumulative Increment	Project Increment	Cumulative Increment
SR60 between I-605 & SR 57 (S. Hacienda Blvd. to S. Azusa Ave.	0.0	0.4	0.4	0.4
SR 60 between SR 57 & I-15 (S. Vineyard Ave. to S. Milliken Ave.)	0.0	0.4	0.5	0.5
I-15 between SR 60 & SR 91 (5th St. to 3rd St.)	0.0	0.4	0.5	0.5
I-15 between SR 91 & SR 215 (Riverside Dr. to Main St.)	0.0	0.5	0.4	0.4
I-15 between SR 79 to Pala Rd. (SR 76)	0.0	0.4	0.4	0.4