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CONESTOGA-ROVERS & ASSOCIATES



SITE CONCEPTUAL MODEL

FORMER GI TRUCKING COMPANY (ESTES EXPRESS LINES) 1750 ADAMS AVENUE SAN LEANDRO, CALIFORNIA

AGENCY CASE NO. RO00000442

Prepared by: Conestoga-Rovers & Associates

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1.0 INTRODUCTION

On behalf of Estes Express Lines, Inc. (Estes), Conestoga-Rovers & Associates (CRA) has prepared this Site Conceptual Model (SCM) for the site referenced above. This document was prepared in response to a letter request from the Alameda County Environmental Health Services Agency (ACEH). A copy of the ACEH's letter, dated January 22, 2009 is included as Appendix A.

The SCM provides a description of the site history, distribution of contaminants, and the relationship between the source area, transport pathways, and potential receptors. This SCM should be considered an initial draft document that will be updated and refined as new data becomes available.

1.1 <u>SITE BACKGROUND</u>

Site Description: The property is located on the southwest corner of the intersection of Adams Avenue and Bigge Street, in a mixed commercial/industrial area of San Leandro, California (Figure 1). Development on the site consists of a warehouse building used for freight storage and loading, a maintenance shop and an office. A set of five underground storage tanks (USTs) (four 12,000-gallon diesel and one 800-gallon used oil) were once operated at the site and were removed and properly disposed of. The 800-gallon used oil UST was removed in December 1986 and the four remaining USTs were removed in June 1999. The surrounding properties consist of light industrial and commercial businesses, with residential development approximately 850 feet northeast of the site, in the cross-gradient direction.

Site Ownership and Leasing: The property is owned by Estes Terminals California LLC and operated by Estes Express Lines of Richmond, Virginia.

Current Site Use: The site is used as an operating freight storage and transfer facility.

1.2 <u>PREVIOUS INVESTIGATIONS</u>

Environmental activities have been conducted at this site since July 1986 and are summarized below. Due to the transfer of property ownership, the current property owner was not able to provide copies of all previous reports. Therefore, although a review ACEH files were completed, CRA was unable to locate all the previous reports from the client and during a file review at ACEH. Present groundwater analytical data are presented in Table 1. Available soil analytical data are presented in Table 2. Boring/well construction logs for wells MW-1/RW-1, MW-2, MW-3, MW-4 and RW-2 are presented as Appendix B. Figure 2 illustrates the former tankpit, excavation limits and well locations.

1986 Used-Oil UST Removal and Monitoring Well Installation: On July 29, 1986, Blymyer Engineers, Inc. (Blymyer) attempted a tank tightness test on the five USTs at the site. The 800-gallon fiberglass used-oil UST would not maintain a constant product level. On September 29, 1986 Xerxes Fiberglass Inc, the UST manufacturer, inspected the tank and determined that the bottom had ruptured and could not be repaired. On December 4, 1986, the used-oil UST was removed from the site and light non-aqueous phase liquid (LNAPL) and petroleum hydrocarbon saturated soil were observed in the excavation area. Approximately 45 cubic yards of petroleum hydrocarbon impacted soil was excavated and disposed of at a Class 1 disposal facility. LNAPL and groundwater were purged from the excavation multiple times until only a sheen of petroleum hydrocarbons was observed. No estimates of the amount of LNAPL or groundwater were provided. Due to the discovery of the petroleum hydrocarbon impact, recovery well MW-1/RW-1 and monitoring wells MW-2 through MW-5 were installed around the UST cavity. Waste oil was detected (EPA Method 3550) in soil samples from borings MW-2 through MW-5 at concentrations ranging from 71 milligrams per kilogram (mg/kg) to 210 mg/kg. No petroleum hydrocarbons were detected in groundwater after the installation of wells MW-2 through MW-5.

1993 *Passive Skimmer Installation:* In October 1993, Blymyer installed a passive LNAPL recovery skimmer in well MW-1/RW-1.

1996 *Recovery Well Installation:* In June 1996, Blymyer installed recovery well RW-2 near the four existing 12,000-gallon diesel USTs. A passive LNAPL recovery skimmer was installed in well RW-2 to accelerate recovery of free phase diesel product. According to Blymyer, a second diesel release had occurred at the site from a leaking gasket in the diesel fuel pump. Blymyer estimated the volume of the release to be approximately 250-gallons of diesel. In November 1996, site personnel estimated the inventory loss as approximately 165-gallons. Since 1996, approximately 178-gallons of diesel have been recovered from the site.

1999 UST Removal: In June 1999, Blymyer removed the four 12,000-gallon USTs from the site. Confirmation soil samples EX-1 through EX-10 were collected from the sidewalls of the excavation at the approximate soil-groundwater interface. During a period of several days LNAPL was pumped from the UST excavation, drummed onsite,

and properly disposed of. Due to elevated petroleum hydrocarbon concentrations detected in soil confirmation samples, the UST excavation was over-excavated by 2 linear feet in the northern and southern corners, and also along the southeastern and northeastern sidewalls. Over-excavation soil confirmation samples EX-11 through EX-15 were collected at the approximate soil-groundwater interface to verify remaining concentrations of petroleum hydrocarbons. Residual concentrations of total petroleum hydrocarbons as diesel (TPHd) in confirmation samples ranged from <1 to 2,400 mg/kg. Well MW-4 was destroyed as a result of the over-excavation. Approximately 427 tons of impacted soil was excavated and properly disposed of during these field activities.

Groundwater Monitoring and Sampling: Depth to water measurements and groundwater samples were collected from each of the wells quarterly since well installation in November 1988 through February 1996. These samples were analyzed for TPHd only through May 1993. Beginning in August 1993, the samples were also analyzed for benzene, toluene, ethylbenzene and xylenes (BTEX). In November 1994, samples collected from wells MW-2 and MW-3 were analyzed for TPH as gasoline (TPHg), and in February 1995 samples from these two wells were also analyzed for TPHg and TPH as motor oil (TPHmo). In August 1993, well MW-2 was also analyzed for MTBE. Beginning in August 1996, monitoring and sampling frequency was reduced to semi-annually through March 1999. Sampling then ceased until annual sampling occurred from 2002 through 2005. Another monitoring and sampling event occurred in March 2007. The most recent sampling event occurred on April 21, 2009. Semi-annual sampling had been requested by ACEH in the January 22, 2009 letter, and as a result, another event is scheduled to occur in October 2009.

3

2.0 <u>SITE CHARACTERIZATION</u>

2.1 <u>REGIONAL AND LOCAL GEOLOGY</u>

The site is located in the San Francisco Bay region, a structural depression that is bounded by northwest trending mountains of the Coast Range geomorphic province of California. The regional geologic map indicates that Quaternary alluvium exists beneath the site. Soils encountered during previous subsurface investigations were silty clay, sandy clay, sandy silt, clayey sand, and silty sand to the maximum explored depth of 26.5 feet below grade (fbg).

2.2 <u>REGIONAL AND LOCAL HYDROGEOLOGY</u>

The site resides within the East Bay Plain Groundwater Sub-Basin. The California Regional Water Quality Control Board – San Francisco Bay Region (RWQCB) has designated groundwater within this basin suitable for municipal and domestic water supply. The regional site topography gradually slopes west towards the San Francisco Bay, located approximately 1 mile southwest of the site. San Leandro Creek is located approximately 800 feet north and 1,500 feet east of the site and flows toward the northwest into San Leandro Bay, which is located approximately 1 mile northwest of the site.

Groundwater has been, more or less, regularly monitored and sampled at the site since 1988. Groundwater flows consistently towards the east to southeast at a gradient ranging between approximately 0.02 and 0.125. Calculated from the April 2009 monitoring and sampling event, groundwater flows toward the southeast at a gradient of 0.03 (Figure 3). The depth to groundwater has historically ranged from approximately 3.18 to 9.46 fbg. Historical groundwater level measurements are summarized in Table 1. Well construction details are included as Table 3.

2.3 <u>SOIL HYDROCARBON DISTRIBUTION</u>

Due to the shallow water table, soil samples were collected during excavation sampling at depths of 5 to 6 fbg. Soil samples collected during soil boring/well installation were collected at 4 and 8 fbg. Petroleum hydrocarbons were detected in 7 of 10 samples collected from the sidewalls of the UST tankpit in June 1999. The primary compound observed was diesel, ranging from <1.0 to 4,500 mg/kg. The samples were also analyzed for TPHg, BTEX and MTBE. TPHg was observed at concentrations ranging from <1.0 to 390 mg/kg. Only very minor BTEX and no MTBE were reported. Overexcavation samples were analyzed for TPHd, BTEX and MTBE, with results showing TPHd ranging from 620 to 2,400 mg/kg, less BTEX than previously and no MTBE. Soil samples collected during soil boring/well installation were analyzed only for oil and grease. Due to the shallow water table and fine grained nature of subsurface sediments, it is anticipated that minimal additional hydrocarbon impacts exist below 10 fbg, the maximum soil depth analyzed. The lateral and vertical extent of petroleum hydrocarbons in soil appears to be adequately defined. However, ACEH has requested additional site characterization to confirm this. Soil analytical data are presented in Table 2.

2.4 <u>GROUNDWATER HYDROCARBON DISTRIBUTION</u>

The highest historical petroleum hydrocarbon concentrations detected in groundwater were 9,300 micrograms per liter (μ g/l) TPHmo (RW-1), 280,000 μ g/l TPHd (RW-2) and 17 μ g/l MTBE (MW-3). Currently, no detected concentrations of petroleum hydrocarbons are present in groundwater at the site, except in wells RW-1 and RW-2 where only TPHmo and TPHd appear to be of concern. TPHg was reported in well RW-1 at 160 μ g/l, but the laboratory notation suggests that the gasoline range chromatogram may be the lighter end of diesel, rather than actual gasoline. As requested by ACEH, groundwater samples were analyzed for naphthalene. No naphthalene was reported above the detection limit of 0.5 μ g/l in any site well. The current network of wells defines the horizontal extent of dissolved petroleum hydrocarbons in all directions, except upgradient where MW-4 was located (Figure 3). Groundwater analytical data are presented on Table 1.

2.5 <u>NON-AQUEOUS PHASE LIQUID DISTRIBUTION</u>

During the 1986 waste oil UST removal, LNAPL was observed in the excavation pit. This prompted the installation of recovery well RW-1 in the excavation and a skimmer was placed in the well for LNAPL recovery. LNAPL had been observed in RW-1 since its installation in 1986, with a maximum thickness of 0.35 ft during the Third Quarter 1996. This has decreased to a sheen or no measurable accumulations of LNAPL since the August 1996 observation referenced above. On June 6, 1996, 4-inch diameter recovery well RW-2 was installed in the tank excavation and a skimmer was placed in the well for LNAPL recovery. LNAPL was observed in RW-2 at an initial thickness of 0.31 ft in the Third Quarter 1996. No LNAPL has been seen in well RW-2 since this initial observation. LNAPL data are available in Table 1.

3.0 FIRST QUARTER 2009 GROUNDWATER MONITORING & SAMPLING

On April 21, 2009, wells MW-2, MW-3, MW-5, RW-1 and RW-2 were monitored and sampled. The wells were purged of an appropriate volume prior to sampling and parameters were checked for stabilization to insure a representative sample.

3.1 <u>CURRENT QUARTER RESULTS</u>

Groundwater Flow Direction	Southeast
Hydraulic Gradient	0.03
Average Depth to Water	6.02 fbg
Is Free Product Present on Site	"Immiscible Sheen" reported

3.2 <u>GROUNDWATER ACTIVITIES</u>

Groundwater was encountered at depths between 5.65 (MW-5) and 6.38 (MW-2) feet below top of casing during this sampling event (Table 1). The groundwater gradient was calculated at 0.03 toward the southeast (Figure 3).

The laboratory analytical report is presented as Appendix C. This quarter, no TPHd or TPHmo were detected in any of the wells with the exception of RW-1 and RW-2. TPHd were reported at 6,000 and 50,000 μ g/l in RW-2 and RW-1, respectively. TPHmo was reported at 3,000 and 23,000 μ g/l in RW-2 and RW-1, respectively. No TPHg was detected above the laboratory reporting limit (also referred to as the practical quantitation limit (PQL)) of 50 μ g/l in any well except RW-1 at 160 μ g/l. No benzene, toluene, ethylbenzene, xylenes or naphthalene were detected in any of the wells. A lighter than water immiscible sheen was reported on samples from RW-1 and RW-2. However, with the reported analytic results, this sheen may be biologically derived as opposed to hydrocarbon derived.

The hydrocarbon plume appears to be contained within the former tankpit, as indicated by wells RW-1 and RW-2, and is delineated to the east (cross-gradient) by MW-5, to the southeast (downgradient) by MW-2, to the south (crossgradient) by MW-3 and to the west (upgradient) by former well MW-4. Well MW-4 was drilled and constructed in native material directly adjacent to the tankpit and was destroyed during the 1999 UST removal and overexcavation. Despite its close proximity to the tankpit, records indicate that no hydrocarbons were detected in either soil samples or groundwater from the time of its first sampling in 1988 up to its destruction in 1999.

4.0 HYDROCARBON SOURCE AND REMEDIATION STATUS

The primary chemical of concern (COC) at the site is TPHd. The ACEH has requested analysis for naphthalene, resulting from elevated detection limits reported in the UST soil sample analyses laboratory report.

4.1 <u>RELEASE SOURCE AND VOLUME</u>

The onsite petroleum hydrocarbon source has been defined as the former UST tankpit. The location of the former tanks is illustrated on Figure 2. The former USTs were located just west (northwest) of the maintenance building, with the edge of the tankpit approximately 12 feet from the building. Blymyer Engineers, Inc., reported two separate releases at the site. One release, from the former used oil UST was reported in September 1986, resulting from a failed tank tightness test. The other release was reported by Blymyer in their July 1996 report titled, *Installation of Recovery Well RW-2*. Blymyer's report stated that during the April 1987 retesting of the diesel USTs, site personnel reported that a diesel dispenser had been knocked over which may have caused damage to subsurface product piping. No time frame as to when this occurred was stated in the report. It has been estimated that up to 250 gallons may have been released, although there are no solid data to back that up. Soil samples collected from wells installed around the perimeter of the tankpit suggest that hydrocarbons are isolated to, or remain in close proximity of, the tankpit.

4.2 POLYNUCLEAR AROMATIC HYDROCARBONS (PAH/PNA)

Two of the soil samples collected during the UST removal confirmation sampling were analyzed by EPA Method 8270. The laboratory report states that these two samples were diluted due to a high organic content, thereby raising the detection limits of the analysis. ACEH has referred to a naphthalene ESL of 1.3 mg/kg for shallow soils where groundwater is or potentially a drinking water source. For these two samples, no compounds were reported above the detection limits of 20 mg/kg (EX-2) and 10 mg/kg (EX-10). The ACEH has requested further site characterization, specifically for naphthalene, as a result of these elevated detection limits for the 1999 sample analyses. Groundwater samples collected April 21, 2009 have shown no naphthalene present above the normal VOC detection limit of $0.5 \,\mu g/l$. A workplan for the requested additional characterization will be submitted simultaneously with this document.

4.3 STEPS TAKEN TO STOP RELEASE

A passive LNAPL recovery skimmer was installed in well RW-1 in 1993 and another in RW-2 in 1996 to accelerate recovery of diesel LNAPL. Previous reports had stated that since 1996, approximately 178-gallons of diesel have been recovered from the tankpit. However, groundwater monitoring data have not indicated a continuing presence of LNAPL after the August 1996 event. The USTs, underground piping and dispenser island were removed in 1986 (waste oil) and 1999 (diesel). Removal of the USTs, piping and impacted backfill material, along with the overexcavation of sidewall soils removed the primary source of the release; however, residual petroleum hydrocarbons continue to exist in soil around the perimeter of the former UST tankpit.

5.0 WELL AND SENSITIVE RECEPTOR SURVEY

5.1 DESIGNATED BENEFICIAL GROUNDWATER USE

The site lies within the East Bay Plain subbasin of the South Bay Groundwater Basin. Groundwater in this basin is designated beneficial for municipal and domestic supply, industrial process supply, industrial service water supply, and agricultural water supply.

5.2 WELL AND SURFACE WATER SURVEY RESULTS

In 2007, Cambria requested Well Completion Reports for all wells within a ¹/₂-mile radius of the site from the California State Department of Water Resources (DWR). In addition, Cambria requested a search of all wells within a ¹/₂-mile radius of the site from Alameda County Public Works Agency (ACPWA). The search identified a total of 80 wells located on 20 different sites. Figure 4 presents the locations of the 20 sites containing wells within the search radius. The 80 wells included 76 groundwater monitoring wells, two irrigation wells, one cathodic protection well, and one well of unknown use. The two irrigation wells are located 0.24 and 0.34 miles upgradient of the subject site. One well is screened from 25 to 305 feet below grade (fbg). No information regarding well construction is available for the other, except its total depth of 250 feet. The current use of these wells is unknown. The one well of unknown usage is actually located beyond the ¹/₂ mile radius, downgradient of the subject site. The one well identified as a cathodic protection well was constructed in the manner that constitutes appropriate well destruction methods by filling the borehole with grout, or in this case, concrete to the surface.

Historically, groundwater on the site has flowed toward the east and southeast. Site A through D (one unknown well, four monitoring wells, and one cathodic protection well) are located on the northeast side of San Leandro Creek and the site is located on the southwest side of the creek. San Leandro Creek, intermittently lined and unlined, likely acts as a hydrologic barrier between sites A through D and the site. Therefore, wells at sites A through D likely could not be impacted by the diesel plume onsite.

Sites H, I, J, L, and M (two irrigation wells and 13 monitoring wells) are located over 1,250 feet upgradient of the site. No petroleum hydrocarbons were ever detected in upgradient well MW-4 and the diesel plume onsite at its maximum extent likely never migrated offsite. Therefore, it is extremely unlikely that wells at these sites could ever be impacted by the diesel plume onsite.

For the purpose of this well survey and to be conservative, all wells located east, south, and southwest of the site are considered to be downgradient of the site, this includes sites E, F, G, K, and N through T. These 11 sites contain 59 monitoring wells and the majority of these sites are registered with the State as current or former leaking underground fuel tank (LUFT) sites. The closest downgradient monitoring wells are located at site K (10700 Bigge Avenue, San Leandro), which is approximately 0.19 miles (1,003 ft) east of the site. Site K is a former LUFT site that is now closed. Due to the distance between site K and the subject site, it is unlikely that any of the wells at K or any other downgradient site have been or are could become impacted by the onsite groundwater plume. Table 3 includes information obtained from the DWR and ACPWA well search pertaining to the 59 wells noted above.

5.3 <u>LIKELIHOOD OF IMPACT TO WELLS</u>

Based on the locations and distance of the wells, no wells were identified that are likely to be impacted by the limited hydrocarbon plume onsite.

5.4 **PREFERENTIAL FLOW PATHWAYS**

As documented below, the only utility trenches appearing capable of providing for preferential flow are the sanitary sewer and the storm drain trenches running parallel beneath Adams Avenue, more or less perpendicular to the historical flow direction of groundwater. However, as inferred by the fine-grained composition of subsurface sediments and the 90 ft distance to the closest trench (Figures 2 and 5), it is highly unlikely that groundwater has migrated to the point of intersecting either of these trenches.

5.4.1 <u>UTILITY SURVEY</u>

In 2007, Cambria completed a conduit study to assess whether utility trenches could be acting as potential preferential pathways for groundwater and petroleum hydrocarbon migration. To identify utilities in the site vicinity, Cambria marked the site and notified Underground Service Alert (USA). USA then notified all utility purveyors to mark out any utilities in the public right-of-way along the site perimeter, including Adams Avenue and Bigge Street. Next, Cambria retained OHJ Subsurface Utility Locator to perform a utility survey onsite and to verify USA markings along Adams Avenue and Bigge Street. Additionally, Cambria obtained and reviewed maps from East Bay Municipal Utility District for water lines and from the City of San Leandro for sanitary sewer and storm drain lines to verify that all nearby utilities had been identified. Cambria was unable to obtain the depths of many of the utilities from the geophysical survey or utility maps. The locations of utility conduits in the vicinity of the site are identified in plan view on Figure 2. Figure 5 illustrates a geologic cross-section showing the locations of utility conduits downgradient of the former USTs beneath Adams Avenue.

Water Lines: A 12-inch diameter water main runs beneath Adams Avenue approximately 45 ft southeast of the site property boundary. This line trends northeast-southwest and runs perpendicular into the 12-inch water main running below Bigge Street. The Bigge Street water main is located approximately 36 ft northeast of the site property boundary and trends northwest-southeast. A water lateral enters the site at the warehouse building located northeast of the source area onsite. The maintenance building that is directly downgradient of the former USTs receives its water from a water lateral that originates from the warehouse building. In the San Francisco Bay Area, water lines are rarely buried deeper than 4 fbg.

Sewer Lines: An 8-inch sanitary sewer line is located beneath Adams Avenue approximately 22 ft southeast of the property boundary. The sewer line trends northeast-southwest and flows toward the southwest (Figure 2). Another 8-inch sanitary sewer line runs beneath Bigge Avenue, approximately 45 ft northeast of the property line and is indicated to flow into the line beneath Adams. No elevations for these sewer lines were provided by the City of San Leandro. Sewer lines are gravity fed and the flow has been identified southwest, below Adams Avenue. Since the property is located at the head of Adams Avenue, it is anticipated that the line passes by the property at a relatively shallow depth, probably less than 6 fbg.

Storm Drains: A 24-inch diameter storm drain begins just east of the intersection of Bigge Street and Adams Avenue, flowing northwesterly to the intersection. Beneath the intersection of Bigge and Adams, the line makes a 90 degree turn and flows southwesterly beneath Adams Avenue, approximately 10 ft southeast of the property line. The location of this line is illustrated on Figures 2 and 5. Onsite, a storm drain drop inlet catch basin is located approximately eight feet north of the UST excavation area. This catch basin drains towards Adams Avenue (east-southeast) and comes within 10 feet of well MW-5. Like sewer lines described above, storm drains are gravity fed and the flow of this line has also been identified as southwesterly, below Adams Avenue.

Since the property is located at the head of Adams Avenue, it is anticipated that the line passes by the property at a relatively shallow depth, again probably less than 6 fbg.

Gas, Communication and Electrical Lines: A trench containing gas and communication lines and possibly electrical lines exists beneath the southeast sidewalk of Adams Avenue. The utility trench runs parallel to the street and is approximately 56 feet southeast of the property line. Electrical and communication lines are located overhead and enter the site from a power drop located near the driveway along the northwestern side of Adams Avenue. From this power drop electrical and communication lines run northwest to a junction box onsite. From the onsite junction box a buried electrical line runs south-southwesterly, to the maintenance building. This buried line runs approximately 6 ft southeast (downgradient) of well MW-5. In the vicinity of the former USTs, an asphalt patch covers the trench of the former vent lines. Two other lines identified between the excavation and maintenance building are thought to be old electrical lines that provided power to the USTs and former dispenser island. These types of utilities are usually very shallow and generally their depths range between 2 and 5 fbg.

5.5 <u>LIKELIHOOD OF IMPACT TO UTILITY TRENCHES</u>

Historical depth to groundwater has ranged from approximately 3.18 to 9.46 fbg and flow direction has been calculated toward the southeast. The average depth to groundwater is approximately 5.7 fbg. An evaluation of concentration vs. distance, as observed between source area wells RW-1 and RW-2 and downgradient wells MW-2, MW-3 and MW-5, indicates that it is unlikely the diesel plume has ever migrated offsite. Therefore, it is unlikely that any offsite utilities have been impacted by the onsite diesel plume.

Onsite, only the former vent line trench, two inferred electrical lines, the electrical line to the building and the storm drain north of the UST excavation could possibly act as preferential pathways for LNAPL and groundwater migration. The former vent line trench and the two inferred electrical lines would likely be buried at approximately the same depth as the top of the USTs, estimated to have been approximately 3 fbg. Considering this, it is unlikely that any of these lines could act as preferential pathways.

The electrical line that powers the maintenance building is located downgradient of well MW-5 and the geophysical survey identified that this utility at its deepest was 5 fbg. The storm drain is located approximately eight feet north (crossgradient-upgradient) of the UST excavation and runs eastward past well MW-5 to a catch basin located in

Adams Avenue. This storm drain line has measured at approximately 4 fbg in the catch basin onsite. Petroleum hydrocarbons have been detected only once in wells MW-5 ($61 \mu g/L$ TPHd). It is possible that both of these utilities have occasionally intercepted groundwater; however, due to the historical groundwater flow direction, low soil permeability and historical low to non-detected groundwater analyses outside the tankpit, it is unlikely that elevated dissolved-phase petroleum hydrocarbons and especially LNAPL have ever migrated along to or along these utilities.

6.0 <u>RISK ASSESSMENT</u>

To evaluate the potential health risk to onsite commercial occupants, hypothetical residents and future construction workers, CRA conducted a Tier 1 risk assessment following the guidelines outlined in the San Francisco Bay Region-RWQCB's Screening for Environmental Concerns at sites with Contaminated Soil and Groundwater, Interim Final November 2007 (revised May 2008) document. The RWQCB approach compares representative chemical concentrations to environmental screening levels (ESLs). The ESLs are used as screening levels in determining if further evaluation is warranted, in prioritizing areas of concern, in establishing initial cleanup goals, and in estimation of potential health risks. The presence of a chemical at concentrations in excess of an ESL does not necessarily indicate that adverse impacts to human health or the environment are occurring; this simply indicates that additional assessment may be warranted. Tables 1 and 2 present the RWQCB ESLs that were evaluated and the soil and groundwater analytical data collected at the site.

6.1 <u>POTENTIAL EXPOSURE ROUTES</u>

Groundwater: No offsite wells were identified that are likely to be impacted by the hydrocarbon plume onsite. However, as a conservative measure, CRA compared groundwater concentrations to ESLs established for groundwater that is a current or potential drinking water resource (ESL Table F-1A), presented on Table 1.

Soil: The entire source area on the site is capped with concrete and asphalt, and therefore no soil is exposed at the surface. However, as a conservative measure, CRA compared soil analytical data to residential (ESL Table K-1), commercial/industrial (ESL Table K-2), and construction/trench worker (ESL Table K-3) ESLs for direct exposure (Table 2). In addition, CRA compared vadose zone soil concentrations to soil leaching ESLs (ESL Table G) for groundwater that is a current or potential drinking water resource.

Indoor & Outdoor Soil Vapor Intrusion: The onsite maintenance building is adjacent to the source area, but not located directly over it. However, as a conservative measure, CRA evaluated volatilization of hydrocarbon vapors from groundwater and soil (ESL Tables E-1, E-2 and E-3) into indoor air for both residential and commercial/industrial exposure scenarios. Tables 1 and 2 present the soil and groundwater analytical data and ESLs comparison.

6.2 <u>SUMMARY OF ESL COMPARISON</u>

Soil: Petroleum hydrocarbon concentrations in soil exceed the RWQCB ESLs for potential vapor intrusion, leaching concerns and direct-exposure for residential, commercial/industrial and construction/trench worker.

Groundwater: Dissolved-phase petroleum hydrocarbons exceed the ESLs for groundwater that is a potential source of drinking water. No ESLs related to potential vapor intrusion concerns are exceeded by the dissolved-phase petroleum hydrocarbons concentrations.

However, it is CRA's intention to present an argument for a finding that groundwater in this specific vicinity should not be viewed as a potential source of drinking water and should be subject to less stringent cleanup standards. That argument will be submitted in a separate document.

7.0 DATA GAPS

Per the request of ACEHS, soil borings and grab groundwater samples will be collected downgradient of the former tankpit to investigate the possible migration of hydrocarbon impacts away from the source area. A workplan for further investigation will be submitted simultaneously with this SCM. All of Which is Respectfully Submitted, CONESTOGA-ROVERS & ASSOCIATES

Chst Oubool

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FIGURES



1750 Adams Avenue San Leandro, California



Vicinity Map



I:\IR\6-chars\6310--\631000-Estes Express Lines\631000-FIGURES\631000-EM002-SITEPLAN.DWG

Figure 2

FORMER GI TRUCKING COMPANY (ESTES EXPRESS LINES) SITE PLAN 1750 ADAMS AVENUE San Leandro, California



I:\IR\6-chars\6310--\631000-Estes Express Lines\631000-FIGURES\631000-EM003_2Q09-HCGW.DWG

	EXPLANATION
•	Monitoring well location
Ø	Destroyed well location
ά.χχ	Groundwater elevation contour, in feet above mean sea level (msl)
D —	-Well designation
_	Groundwater elevation (msl)
	Hydrocarbon concentrations in groundwater, in micrograms per liter (μg/L)
*	RW-2 not surveyed
0.03	Groundwater flow direction and gradient
	Storm Drain line Sanitary Sewer line Water line Gas line Communications line Electrical line Utility flow direction

Figure 3

GROUNDWATER ELEVATION CONTOUR AND HYDROCARBON CONCENTRATION MAP 1750 ADAMS AVENUE San Leandro, California April 21, 2009



1/2 Mile Search Radius

San Leandro, California







20-

0



20

FIGURE 5

Former GI Trucking Company (Estes Express Lines) 1750 Adams Avenue San Leandro, California



Sample ID TOC	Date Sampled	Depth to Water (ft btoc)	SPH Thickness (ft)	Groundwater Elevation (arbitrary)	TPHmo	TPHd	TPHg	Benzene	Toluene	Ethylbenzene	Xylenes	MTBE	ETBE Recorded in u	TAME	DIPE	TBA	1,2-DCA	EDB	Ethanol	Napthalene
Final Groun	dwater ESL (T	able E-1), Po	otential Vapo	or Intrusion Con	cerns															
Residen	tial				NE	use so	oil gas	540	380.000	170.000	160.000	24.000	NE	NE	NE	use soil gas	200	NE	NE	3.200
0					NE			1 000	53 0,000	150.000	1(0,000	,	NE	NE	NE		600	NE	NE	11 000
Commen	rcial/Industrial				NE	use so	oil gas	1,800	530,000	170,000	160,000	80,000	NE	NE	NE	use soil gas	690	NE	NE	11,000
Final Groun	dwater ESL (T	able F-1), Gr	oundwater i	s a Current or P	otential Dri	nking Water	r Resource	2												
					100	100	100	1.0	40	30	20	5.0	NE	NE	NE	12	0.5	0.05	NE	17
MW-1	11/15/1988		0.22		-													_		
100.00	2/16/1989	6.03	0.22	94.13		_	_		_								_	_		
100.00	5/19/1989	6 31	0.20	93.85																
	8/22/1989	6.72	0.18	93.42																
	11/21/1989	6.51	Sheen	93.49														_		
	2/23/1990	5 74	Sheen	94.26																
	5/23/1990	6.34	0.15	93.78																
	8/27/1990	6.27	Sheen	93.73																
	12/3/1990	6.49	Sheen	93.51																
	3/13/1991	4.94	Sheen	95.06																
	5/29/1991	9.46	Sheen	90.54																
	8/28/1991	6.31	0.09	93.76																
	12/9/1991	6.49	0.20	93.67																
	2/18/1992	4.19	0.10	95.89																
	5/15/1992	5.72	0.17	94.42																
	8/13/1992	6.12	0.19	94.03																
	12/3/1992	5.65	0.10	94.43																
	3/25/1993	4.60	Sheen	95.40																
	5/21/1993	5.56	0.09	94.51																
	8/17/1993	6.07	0.13	94.03																
	12/13/1993		Sheen																	
	2/24/1994	4.97	Sheen	95.63																
	5/11/1994	5.20	Sheen	94.80																
	8/23/1994	6.06	0.08	94.00																
	11/29/1994	5.98	Sheen	94.02																
	2/15/1995	4.93	Sheen	95.07																
	5/18/1995	4.99	Sheen	95.01																
	8/16/1995	6.46	Sheen	93.54																
	11/16/1995	5.21	Sheen	94.79																
	2/15/1996	4.68	Sheen	95.32																
	July 1996	-									MW-1 Recon	structed as	well RW-1 —							
	8/5/1996	6.05	0.35	94.23																
	2/6/1997	4.40	Sheen	95.60																
	8/22/1997	4.90	Sheen	95.10																
	2/12/1998	3.18	0.00	96.82		89,000														
	8/27/1998	5.95	Sheen	94.05																
	3/4/1999*	4.98	Sheen	95.02																
	5/30/2001		Sheen																	
	6/18/2002	6.28	0.00	93.72																
	3/13/2003	6.15	0.00	93.85																
	3/17/2004	5.60	0.00	94.40																
RW-1	3/17/2005	5.39	0.00	94.61																

Sample ID TOC	Date Sampled	Depth to Water (ft btoc)	SPH Thickness (ft)	Groundwater Elevation (arbitrary)	TPHmo	TPHd	TPHg	Benzene	Toluene	Ethylbenzene	Xylenes	MTBE	ETBE Recorded in ug	TAME	DIPE	TBA	1,2-DCA	EDB	Ethanol	Napthalene ►
Final Groun	dwater ESL (Ti	able E-1), Po	tential Vap	or Intrusion Con	cerns								0							
Residen	tial				NF	1158 50	il gas	540	380.000	170.000	160.000	24 000	NF	NF	NF	use soil gas	200	NF	NF	3 200
Commen					NE	450 50	.1 and	1 800	500,000	170,000	160,000	24,000	NE	NE	NE	use soli gus	200	NE	NE	11 000
Comme	ciayinaustriai				NE	use so	11 gas	1,800	530,000	170,000	160,000	80,000	NE	NE	NE	use son gas	690	NE	NE	11,000
Final Groun	dwater ESL (T	able F-1), Gr	oundwater i	s a Current or Po	otential Dri	inking Water	Resource													
					100	100	100	1.0	40	30	20	5.0	NE	NE	NE	12	0.5	0.05	NE	17
100.00	3/2/2007	5.22	Sheen	94.78	9,300	16.000 c	140 g	< 0.5	< 0.5	<0.5	<0.5	< 0.5	<0.5	< 0.5	<0.5	<5.0	<0.5	< 0.5	<50	
	4/21/2009	5.91	Sheen	94.09	23,000	50,000 c, d	160 b, d	<0.5	<0.5	<0.5	<0.5									<0.5 d
MW-2	11/15/1988					<200														
100.24	2/16/1989	6.13	0.00	94.11		<90														
	5/19/1989	6.24	0.00	94.00		<80														
	8/22/1989	6.68	0.00	93.56		<30														
	11/21/1989	6.64	0.00	93.60		<30														
	2/23/1990	6.04	0.00	94.20		<50														
	5/23/1990	6.40	0.00	93.84		<50														
	8/27/1990	6.70	0.00	93.54		<50														
	12/3/1990	6.83	0.00	93.41		<50														
	3/13/1991	5.64	0.00	94.60		<50														
	5/29/1991 8/28/1001	6.31	0.00	93.93		<50														
	0/20/1991 12/0/1001	6.60	0.00	93.56		<50														
	2/18/1002	4.96	0.00	95.33		<50														
	5/15/1992	4.90 6.07	0.00	94.17		<50														
	8/13/1992	6.42	0.00	93.82		<50														
	12/3/1992	6.25	0.00	93.99		<50														
	3/25/1993	5.40	0.00	94.84		<50														
	5/21/1993	6.04	0.00	94.20		<50														
	8/17/1993	6.42	0.00	93.82		<50		< 0.5	< 0.5	< 0.5	< 0.5	< 0.5								
	12/13/1993	6.09	0.00	94.15		<50		<0.5	< 0.5	<0.5	< 0.5									
	2/24/1994	5.57	0.00	94.67		<50		< 0.5	< 0.5	< 0.5	< 0.5									
	5/11/1994	5.94	0.00	94.30		<50		<0.5	< 0.5	<0.5	<0.5									
	8/23/1994	6.44	0.00	93.80		<50		<0.5	< 0.5	<0.5	< 0.5									
	11/29/1994	5.82	0.00	94.42		90	<50	<0.5	< 0.5	<0.5	< 0.5									
	2/15/1995	5.68	0.00	94.56	<500	100	<50	<0.5	1.2	<0.5	<0.5									
	5/18/1995																			
	8/16/1995	6.19	0.00	94.05		63		<0.5	<0.5	<0.5	<0.5									
	11/16/1995																			
	2/15/1996	5.62	0.00	94.62		79		<0.5	<0.5	<0.5	<0.5									
	8/5/1996	6.22	0.00	94.02		100		<0.5	<0.5	<0.5	<0.5									
	2/0/1997	5.50	0.00	94.74		140		<0.5	<0.5	<0.5	<0.5									
	0/22/199/ 2/12/1009	0.37	0.00	93.07		<100		<0.5	<0.5	<0.5	<0.5									
	2/12/1998	+.00 6.42	0.00	93.80		~100		<0.5	<0.5	<0.5	<0.5					-				
	3/4/1999*	6 39	0.00	93.85		<50		<0.5	<0.5	<0.5	<0.5	<5								
	5/30/2001																			
MW-2	6/18/2002	7.14	0.00	93.10		<50		< 0.5	< 0.5	<0.5	< 0.5	<2.5								
100.24	3/13/2003	6.64	0.00	93.60		<48		< 0.5	< 0.5	<0.5	< 0.5	<2.0								

Sample ID TOC	Date Sampled	Depth to Water (ft btoc)	SPH Thickness (ft)	Groundwater Elevation (arbitrary)	TPHmo	TPHd	TPHg	Benzene	Toluene	Ethylbenzene	Xylenes	MTBE	ETBE Recorded in ug/	TAME	DIPE	TBA	1,2-DCA	EDB	Ethanol	Napthalene
Final Groun	dwater ESL (T	able E-1), Po	otential Vapo	or Intrusion Con	cerns								0							
Residen	tial		-		NE	use so	oil gas	540	380.000	170.000	160.000	24.000	NE	NE	NE	use soil gas	200	NE	NE	3.200
Comme	cial/Inductrial				NE	1160 60	oil ane	1 800	530,000	170.000	160,000	80.000	NE	NE	NE	100 001 000	690	NE	NE	11 000
Commen					NE.	436 50	ni gas	1,000	330,000	170,000	100,000	00,000	INE.	NE	INE.	use son gas	050	NE	INL	11,000
Final Groun	dwater ESL (T	able F-1), Gr	oundwater i	s a Current or Po	otential Drii	nking Water	r Resource	2												
					100	100	100	1.0	40	30	20	5.0	NE	NE	NE	12	0.5	0.05	NE	17
	3/17/2004	6.63	0.00	93.61		<500		< 0.5	< 0.5	<0.5	< 0.5	<2.5								
	3/17/2005	6.76	0.00	93.48		<50		< 0.5	< 0.5	< 0.5	< 0.5	<5								
	3/2/2007	5.77	0.00	94.47	<250	<50	<50	< 0.5	< 0.5	<0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	<5.0	< 0.5	< 0.5	<50	
	4/21/2009	6.38	0.00	93.86	<250	<50	<50	<0.5	<0.5	<0.5	<0.5									<0.5
MW 2	11/15/1099					<200														
100 22	2/16/1989	6.00	0.00	94.22		<90														
100.22	5/10/1909	6.20	0.00	94.02		<80											-	-	-	
	8/22/1989	6.60	0.00	93.62		<30														
	11/21/1989	6.55	0.00	93.67		<30														
	2/23/1990	5.83	0.00	94.39		340														
	5/23/1990	6.38	0.00	93.84		640														
	8/27/1990	6.67	0.00	93.55		410														
	12/3/1990	6.75	0.00	93.47		<50														
	3/13/1991	5.42	0.00	94.80		1,300														
	5/29/1991	6.28	0.00	93.94		540														
	8/28/1991	6.62	0.00	93.60		240														
	12/9/1991	6.65	0.00	93.57		200														
	2/18/1992	4.73	0.00	95.49		890														
	5/15/1992	5.99	0.00	94.23		380														
	8/13/1992	6.32	0.00	93.90		200														
	12/3/1992	6.23	0.00	93.99		<50														
	3/25/1993	5.27	0.00	94.95		1,600														
	5/21/1993	5.97	0.00	94.25		720														
	8/17/1993	6.59	0.00	93.63		480		< 0.5	< 0.5	<0.5	< 0.5									
	12/13/1993	6.33	0.00	93.89		190		<0.5	<0.5	<0.5	< 0.5									
	2/24/1994	5.76	0.00	94.46		380		<0.5	<0.5	<0.5	< 0.5									
100.18	5/11/1994	5.84	0.00	94.34		580		<0.5	<0.5	<0.5	<0.5									
	8/23/1994	6.38	0.00	93.80		450		<0.5	0.6	<0.5	<0.5									
	11/29/1994	5.76	0.00	94.42		960	<50	<0.5	<0.5	<0.5	<0.5									
	2/15/1995	5.60	0.00	94.58	<500	1,700	<50	<0.5	<0.5	<0.5	<0.5									
	5/18/1995																			
	8/16/1995	6.11	0.00	94.07		1,100		<0.5	<0.5	<0.5	<0.5									
	11/16/1995					1 200		-0.5	-0.5	-0.5	-0.5									
	2/15/1996	5.48	0.00	94.70		1,300		<0.5	<0.5	<0.5	<0.5									
	8/5/1996	6.16 5.26	0.00	94.02		2,400		<0.5	<0.5	< 0.5	<0.5									
	2/6/1997 8/22/1007	5.36	0.00	94.82		2,400		<0.5	<0.5	< 0.5	<0.5									
	0/22/199/	5.65 4.91	0.00	94.33		2,000		<0.5	<0.5	<0.5	<0.5									
MW-3	2/12/1998	4.01	0.00	93.37		410		<0.5	<0.5	<0.5	<0.5									
100.18	3/4/1999*	6.14	0.00	94.04		330		<0.5	<0.5	<0.5	<0.5	17								
130.10	5/30/2001							-0.0	-0.0	-0.0	-0.0									
	5/ 50/ 2001																			

Sample ID TOC	Date Sampled	Depth to Water (ft btoc)	SPH Thickness (ft)	Groundwater Elevation (arbitrary)	TPHmo	TPHd	TPHg	Benzene	Toluene	Ethylbenzene	Xylenes	MTBE	ETBE Recorded in u	TAME	DIPE	TBA	1,2-DCA	EDB	Ethanol	Napthalene ►
Final Groun	dwater ESL (T	able E-1), Po	otential Vapo	or Intrusion Cond	cerns									-						
Residen	tial				NE	use so	oil gas	540	380,000	170,000	160,000	24,000	NE	NE	NE	use soil gas	200	NE	NE	3,200
Comme	rcial/Industrial				NE	use so	oil gas	1,800	530,000	170,000	160,000	80,000	NE	NE	NE	use soil gas	690	NE	NE	11,000
Timel Comm	Jan at an FOL (T	-H-T 1) C		Cumut - D		.1.:		,	,	.,						3.1				
Final Groui	uwuter LSL (1	<i>uble</i> F- 1), Gi	rounuwuter i	s a current or Ft	nentiui Drii	iking wuter	Resource													
					100	100	100	1.0	40	30	20	5.0	NE	NE	NE	12	0.5	0.05	NE	17
	6/18/2002	7.07	0.00	93.11		1,100		<0.5	< 0.5	<0.5	< 0.5	3.6/3.1								
	3/13/2003	6.45	0.00	93.73		680		<0.5	< 0.5	<0.5	< 0.5	2.9								
	3/17/2004	5.98	0.00	94.20		450		< 0.5	< 0.5	< 0.5	< 0.5	<2.5								
	3/17/2005	5.72	0.00	94.46		160		< 0.5	< 0.5	< 0.5	< 0.5	<5.0								
	3/2/2007	5.68	0.00	94.50	<250	<50	<50	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	<5.0	< 0.5	< 0.5	<50	
	4/21/2009	6.26	0.00	93.92	<250	<50	<50	<0.5	<0.5	<0.5	<0.5									<0.5
MW-4	11/15/1988					<200														
99.48	2/16/1989	5.92	0.00	93.56		<90														
	5/19/1989	5.25	0.00	94.23		<80														
	8/22/1989	6.76	0.00	92.72		<30														
	11/21/1989	5.72	0.00	93.76		<30														
	2/23/1990	4.92	0.00	94.56		<50														
	5/23/1990	5.39	0.00	94.09		<50														
	8/27/1990	5.66	0.00	93.82		<50														
	12/3/1990	5.95	0.00	93.53		<50														
	3/13/1991	4.39	0.00	95.09		<50														
	5/29/1991	5.27	0.00	94.21		<50														
	8/28/1991	5.70	0.00	93.78		<50														
	12/9/1991	5.78	0.00	93.70		<50														
	2/18/1992	3.60	0.00	95.88		<50											_			
	5/15/1002	5.00	0.00	94.45		<50														
	8/13/1002	5.00	0.00	94.08		<50														
	12/2/1002	5.14	0.00	94.00		<50														
	2/25/1992	4.14	0.00	94.34		<50														
	5/25/1993	4.14	0.00	95.54		<50														
	5/21/1995	4.95	0.00	94.55		<50 150														
	8/17/1993	5.40	0.00	94.08		<50		<0.5	<0.5	<0.5	<0.5									
	12/13/1993	5.08	0.00	94.40		<50		<0.5	<0.5	<0.5	<0.5									
	2/24/1994	4.38	0.00	95.10		<50		<0.5	<0.5	<0.5	<0.5									
	5/11/1994	4.85	0.00	94.63		<50		<0.5	<0.5	<0.5	<0.5									
	8/23/1994	5.47	0.00	94.01		<50		<0.5	<0.5	<0.5	<0.5									
	11/29/1994	4.76	0.00	94.72																
	2/15/1995																			
	5/18/2005																			
	8/16/1995	5.16	0.00	94.32																
	11/16/1995																			
	2/15/1996	4.40	0.00	95.08																

Sample ID TOC	Date Sampled	Depth to Water (ft btoc)	SPH Thickness (ft)	Groundwater Elevation (arbitrary)	TPHmo	TPHd	TPHg	Benzene	Toluene	Ethylbenzene	Xylenes	MTBE	ETBE Recorded in ug/	TAME	DIPE	TBA	1,2-DCA	EDB	Ethanol	Napthalene
Final Groun	dwater ESL (T	able E-1), Po	tential Vapo	or Intrusion Con	cerns															
Residen	tial				NF	use so	il gas	540	380 000	170 000	160 000	24 000	NF	NE	NE	use soil gas	200	NE	NE	3.200
Comme	nial/Industrial				NE	100 00	il gao	1 800	530,000	170,000	160,000	21,000	NE	NE	NE	use soil gas	200	NE	NE	11 000
Commer	ciay inaustriai				NE	use so	ii gas	1,000	550,000	170,000	100,000	80,000	INE	NE	INE	use son gas	090	NE	INE	11,000
Final Groun	dwater ESL (T	able F-1), Gr	oundwater i	s a Current or Po	otential Drii	nking Water	Resource													
					100	100	100	1.0	40	30	20	5.0	NE	NE	NE	12	0.5	0.05	NE	17
MW-4	8/5/1996	5.27	0.00	94.21																
99.46	2/6/1997	4.26	0.00	95.20																
	8/22/1997	5.09	0.00	94.37																
	2/12/1998	3.58	0.00	95.88																
	8/27/1998	5.43	0.00	94.03																
	3/4/1999*	5.34	0.00	94.12																
	June 1999											Destroyed								
MW-5	11/15/1988					<200														
99.60	2/16/1989	5.42	0.00	94.18		<90														
	5/19/1989	5.53	0.00	94.07		<80														
	8/22/1989	5.94	0.00	93.66		<30														
	11/21/1989	5.91	0.00	93.69		<30														
	2/23/1990	5.69	0.00	93.91		<50														
	5/23/1990	5.92	0.00	93.68		<50														
	8/2//1990	6.17	0.00	93.43		<50														
	12/3/1990	6.05 E.01	0.00	93.55		<50														
	5/15/1991	5.01	0.00	94.59		<50														
	8/28/1991	5.90	0.00	94.03		<50														
	12/9/1991	5.99	0.00	93.61		<50									-		-		-	
	2/18/1992	4 45	0.00	95.01		<50														
	5/15/1992	5.33	0.00	94.27		<50														
	8/13/1992	5.62	0.00	93.98		<50														
	12/3/1992	5.58	0.00	94.02		<50														
	3/25/1993	4.34	0.00	95.26		<50														
	5/21/1993	5.28	0.00	94.32		<50														
	8/17/1993	5.61	0.00	93.99		<50		< 0.05	< 0.5	<0.5	< 0.5	< 0.5								
	12/13/1993	5.38	0.00	94.22		<50		< 0.05	< 0.5	< 0.5	< 0.5	< 0.5								
	2/24/1994	4.90	0.00	94.70		<50		< 0.05	< 0.5	< 0.5	< 0.5	< 0.5								
	5/11/1994	5.23	0.00	94.37		<50		< 0.05	< 0.5	< 0.5	< 0.5	< 0.5								
	8/23/1994	5.70	0.00	93.90		<50		< 0.05	< 0.5	<0.5	< 0.5	< 0.5								
	11/29/1994	5.12	0.00	94.48																
	2/15/1995																			
	5/18/2005																			
	8/16/1995	5.47	0.00	94.13																
	11/16/1995																			
	2/15/1996	4.90	0.00	94.70																
	8/5/1996	5.50	0.00	94.10																
	2/6/1997	4.80	0.00	94.80																
	8/22/1997	6.37	0.00	93.23																
MW-5	2/12/1998	4.32	0.00	95.28																

GROUNDWATER ELEVATION AND ANALYTICAL DATA ESTES-GI TRUCKING COMPANY 1750 ADAMS AVENUE, SAN LEANDRO, CALIFORNIA

Sample ID TOC	Date Sampled	Depth to Water (ft btoc)	SPH Thickness (ft)	Groundwater Elevation (arbitrary)	TPHmo	TPHd	TPHg	Benzene	Toluene	Ethylbenzene	Xylenes	MTBE	ETBE Recorded in ug	TAME /L	DIPE	TBA	1,2-DCA	EDB	Ethanol	Napthalene
Final Groun	dwater ESL (T	able E-1), Po	tential Vapo	or Intrusion Conc	cerns															
Resident	ial				NE	use so	il gas	540	380,000	170,000	160,000	24,000	NE	NE	NE	use soil gas	200	NE	NE	3,200
Commer	cial/Industrial	!			NE	use so	il gas	1,800	530,000	170,000	160,000	80,000	NE	NE	NE	use soil gas	690	NE	NE	11,000
Final Groun	dwater ESL (T	able F-1), Gr	oundwater i	s a Current or Po	tential Dri	inking Water	Resource	,												
					100	100	100	1.0	40	30	20	5.0	NE	NE	NE	12	0.5	0.05	NE	17
99.60	8/27/1998	5.77	0.00	93.83																
	3/4/1999*	5.88	0.00	93.72																
	6/18/2002	5.97	0.00	93.63		61		< 0.5	< 0.5	< 0.5	< 0.5	<2.5								
	3/13/2003	5.77	0.00	93.83		<47		< 0.5	< 0.5	< 0.5	< 0.5	<2.0								
	3/17/2004	5.37	0.00	94.23		<50		< 0.5	< 0.5	< 0.5	< 0.5	<2.5								
	3/17/2005	5.23	0.00	94.37		<50		< 0.5	< 0.5	< 0.5	< 0.5	<5.0								
	3/2/2007	5.12	0.00	94.48	<250	<50	<50	<0.5	< 0.5	<0.5	< 0.5	< 0.5	< 0.5	< 0.5	<0.5	<5.0	< 0.5	< 0.5	<50	
	4/21/2009	5.65	0.00	93.95	<250	<50	<50	<0.5	<0.5	<0.5	<0.5									<0.5
RW-2	8/5/1996	6.02	0.31																	
not surveye	2/6/1997	4.41	0.00																	
-	8/22/1997	4.88	0.00																	
	2/12/1998	3.21	0.00			100,000		< 0.5	< 0.5	< 0.5	< 0.5									
	8/27/1998	5.92	0.00																	
	3/4/1999*	4.95	0.00			74,000		<1.0	<1.0	<1.0	<1.0	<10								
	5/30/2001		0.00			9,000		< 0.5	< 0.5	< 0.5	< 0.5									
	6/18/2002	6.30	0.00			280,000		<10	<10	<10	<10	<50								
	3/13/2003	6.11	0.00																	
	3/17/2004	5.58	0.00																	
	3/17/2005	5.30	0.00																	
	3/2/2007	5.21	0.00		2,500	5,500 c	<50	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	<5.0	< 0.5	< 0.5	<50	
	4/21/2009	5.88	Sheen		3,000	6,000 c, d	<50 d	<0.5	<0.5	<0.5	<0.5									<0.5 d

Notes:

TOC = elevation of the top of casing relative to an abritraty elevation from well RW-1's TOC (100.00 ft)

ft btoc = measured in feet below top of casing

* = data collected on March 4 & 11, 1999 b = strongly aged gasoline or diesel range compounds are significant in the gasoline chromatogram c = aged diesel (?) is significant

d = lighter than water immisible sheen/product is present

SPH = separate phase hydrocarbons or non-aqueous phase liquid (NAPL)

ug/L = micrograms per liter

Sheen = non-measurable SPH sheen observed

-- = Not measured, not analyzed, not applicable

TPHd = total petroleum hydrocarbons as diesel analyzed by modified EPA Method 8015; beginning 3/2/2007 analyzed by EPA Method 8015C with silica gel cleanup

TPHmo = total petroleum hydrocarbons as motor oil analyzed by EPA Method 8015C with silica gel clenaup

TPHg = total petroleum hydrocarbons as gasoline analyzed by EPA Method 8015C

BTEX = benzene, toluene, ethylbenzene, xylenes analyzed by EPA Method 8020/8021B; beginning 3/2/2007 analyzed by EPA Method 8260B

MTBE = methyl tertiary-butyl ether analyzed by EPA Method 8020/8021B; beginning 3/2/2007 analyzed by EPA Method 8260B

ETBE = ethyl tertiary-butyl ether analyzed by EPA Method 8260B

TAME = tertiary-amyl methyl ether analyzed by EPA Method 8260B

DIPE = di-isopropyl ether analyzed by EPA Method 8260B

TBA = tertiary butyl alcohol analyzed by EPA Method 8260B

1,2-DCA = one, two-dichloroethane analyzed by EPA Method 8260B

EDB = ethylene dibromide analyzed by EPA Method 8260B

Ethanol analyzed by EPA Method 8260B

HISTORICAL SOIL ANALYTICAL DATA ESTES-GI TRUCKING COMPANY 1750 ADAMS AVENUE, SAN LEANDRO, CALIFORNIA

Sample ID	Date Sampled	Depth (ft)	Oil & Grease (mg/kg)	TPHd (mg/kg)		TPHg (mg/kg))	Benzene (mg/kg)	Toluene (mg/kg)	Ethylbenzene (mg/kg)	Xylenes (mg/kg)	MTBE (mg/kg)
Final ESL (1	Fable G), Soil Le	aching Scre	ening Level (Drii	nking Wa	ter Re	esource)					
		U	NE	83		83		0.044	2.9	3.3	2.3	0.023
Final ESL (1	Table K-1), Resid	lential Dire	ect Exposure									
			370	110		110		0.12	63	2.3	31	30
Final ESL (1	Table K-2), Comn	nercial/Ind	ustrial Worker E 3,700	Direct Exp 450	osure	450		0.27	210	5.0	100	65
Final ESL (1	Table K-3), Const	truction/Tr	ench Worker Exp 12,000	osure 4,200		4,200		12	650	210	420	2,800
					Exca	ivation						
EX-1	6/9/1999	5		2,300	b	81	d	<0.5	< 0.5	<0.5	<0.5	<5.0
EX-2	6/9/1999	5		4,500	а	120	d	< 0.5	< 0.5	< 0.5	<0.5	<5.0
EX-3	6/9/1999	5		2,100	а	26	d	<0.5	< 0.5	<0.5	<0.5	<5.0
EX-4	6/9/1999	5		<1.0		<1.0		<0.5	< 0.5	<0.5	<0.5	<5.0
EX-5	6/9/1999	6		<1.0		<1.0		< 0.5	< 0.5	< 0.5	< 0.5	<5.0
EX-6	6/9/1999	6.5		85	b	3.7	d	< 0.5	< 0.5	<0.5	<0.5	<5.0
<i>EX-</i> 7	6/9/1999	6		<1.0		<1.0		< 0.5	< 0.5	<0.5	<0.5	<5.0
EX-8	6/9/1999	6		2,000	b	120	d	< 0.5	< 0.01	<0.5	0.17	<5.0
EX-9	6/9/1999	6		2,000	b	120	d	<0.5	0.013	< 0.5	0.19	<5.0
EX-10	6/9/1999	6		2,900	b,c	390	d,e	< 0.03	0.45	0.45	1.5	< 0.20

HISTORICAL SOIL ANALYTICAL DATA ESTES-GI TRUCKING COMPANY 1750 ADAMS AVENUE, SAN LEANDRO, CALIFORNIA

Sample ID	Date Sampled	Depth (ft)	Oil & Grease (mg/kg)	TPHd (mg/kg)		TPHg (mg/kg)	Benzene (mg/kg)	Toluene (mg/kg)	Ethylbenzene (mg/kg)	Xylenes (mg/kg)	MTBE (mg/kg)
Final ESL (Table G), Soil Lea	aching Scre	ening Level (Drii NE	nking Wa 83	ter F	Resource) 83	0.044	2.9	3.3	2.3	0.023
Final ESL (Table K-1), Resid	ential Dire	ect Exposure 370	110		110	0.12	63	2.3	31	30
Final ESL (Table K-2), Comn	nercial/Ind	ustrial Worker D 3,700	Direct Exp 450	osui	re 450	0.27	210	5.0	100	65
Final ESL (Table K-3), Const	truction/Tr	ench Worker Exp 12,000	osure 4,200		4,200	12	650	210	420	2,800
				0	voer-	Excuoution					
EX-11	6/11/1999	6		2,400	а		< 0.005	<0.23	< 0.005	<0.16	< 0.1
EX-12	6/11/1999	6		620	b		< 0.023	< 0.005	< 0.005	0.032	< 0.1
EX-13	6/11/1999	6		2,200	а		< 0.005	0.045	< 0.005	< 0.005	< 0.1
EX-14	6/11/1999	6		620	b		< 0.005	< 0.005	< 0.005	0.034	<0.21
EX-15	6/11/1999	5.5		2,400	а		< 0.005	< 0.005	< 0.005	0.096	< 0.1
				M	lonit	oring Wells					
M-1/R-1	12/31/1986 12/31/1986	$\frac{4}{8}$	110 80								
М-2	12/31/1986 12/31/1986	5 9	210 118								
<i>M-3</i>	12/31/1986	8	137								
<i>M-</i> 4	12/31/1986 12/31/1986	5 10	91 71								

HISTORICAL SOIL ANALYTICAL DATA ESTES-GI TRUCKING COMPANY 1750 ADAMS AVENUE, SAN LEANDRO, CALIFORNIA

Sample ID	Date	Depth	Oil & Grease	TPHd	TPHg	Benzene	Toluene	Ethylbenzene	Xylenes	MTBE
	Sampled	(ft)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)
Final ESL (Ta	ıble G), Soil Le	aching Scre	ening Level (Drir	ıking Wate	r Resource)					
			NE	83	83	0.044	2.9	3.3	2.3	0.023
Final ESL (Ta	ible K-1), Resid	lential Dire	ct Exposure							
			370	110	110	0.12	63	2.3	31	30
Final ESL (Ta	ible K-2), Com	nercial/Indi	ustrial Worker D	oirect Expos	sure					
			3,700	450	450	0.27	210	5.0	100	65
Final ESL (Ta	uble K-3), Cons	truction/Tre	ench Worker Exp	osure						
			12,000	4,200	4,200	12	650	210	420	2,800

<u>Notes:</u>

mg/kg = milligram per kilogram

-- = not analyzed

Oil & Grease (Soil/Waste Oil) by EPA Method 3550

TPHd = total petroleum hydrocarbons as diesel analyzed by modified EPA Method 8015

TPHg = total petroleum hydrocarbons as gasoline analyzed by EPA Method 8015C

BTEX = benzene, toluene, ethylbenzene, xylenes analyzed by modified EPA Method 8015/8020

MTBE = *methyl tertiary-butyl ether analyzed by EPA Method 8020*

a = *unmodified or weakly modified gasoline is significant*

b = lighter gasoline range compounds (the most mobile fraction) are significant

c = gasoline range compounds having broad chromatographic peaks are significant; biologically altered gasoline?

d = strongly aged gasoline or diesel range compounds are significant

e = *no recognizable pattern*

WELL CONSTRUCTION DETAILS ESTES-GI TRUCKING COMPANY 1750 ADAMS AVENUE, SAN LEANDRO, CALIFORNIA

Well	Status	Date	Casing Diameter	Total Depth (fbg)	Top of Screen	Bottom Screen of	Length of
		Installed	(inches)		Interval (fbg)	Interval (fbg)	Screen (fbg)
MW-1/RW-1	Active	12/31/86	2	25	6	25	19
<i>MW-2</i>	Active	12/31/86	2	25	6	25	19
<i>MW-3</i>	Active	12/31/86	2	25	6	25	19
MW-4	Destroyed	12/31/86	2	25	6	25	19
<i>MW-5</i>	Active			Unk	nown		
<i>RW-2</i>	Active	6/6/96	4	13	3	13	10

Notes/Abbreviations

fbg= feet below ground

Map ID	State Well No.	Well Owner	Approximate Well Location	Installation Date	Well Type	Current Well Use	Total Well Depth (ft bgs)	Screene d Interval (ft bgs)	Seal Interval (ft bgs)	Approximate Distance from Former USTs (ft)	Approximate Distance from Former USTs (mi)
А	2S/3W-27	G. Kindle	358 105th Ave, Oakland	8/1/1945	NA	NA	120	NA	NA	2,851	0.54
B-1	2S/3W-27L1	Verl's Construction	342 105th Avenue, Oakland	2/22/1990	Monitoring	NA	25	11-25	0-9	2,693	0.51
B-2	2S/3W-27L2	Verl's Construction	342 105th Avenue, Oakland	2/22/1990	Monitoring	NA	25	9-25	0-9	2,693	0.51
B-3	2S/3W-27L3	Verl's Construction	342 105th Avenue, Oakland	2/23/1990	Monitoring	NA	25	8-25	0-9	2,693	0.51
С	2S/3W-27F3	PG&E	St. Elmo & Hunter, Oakland	2/27/1976	Cathodic Protection	NA	120	NA	0-95	2,587	0.49
D	2S/3W-34M1	Caterpillar, Inc	Empire Road, Oakland End of Circle 400 ft South of Gibraltar Rd	5/28/1990	Monitoring	NA	65	50-65	0-47	1,637	0.31
E-1	2S/3W-28R1	Moore Business Forms	528 Whitney Street, San Leandro	7/1/1985	Monitoring (W-1)	NA	14	5-14	0-4	1,320	0.25
E-2	2S/3W-28R2	Moore Business Forms	528 Whitney Street, San Leandro	7/1/1985	Monitoring (W-2)	NA	14	5-14	0-4	1,320	0.25
E-3	2S/3W-28R3	Moore Business Forms	528 Whitney Street, San Leandro	7/1/1985	Monitoring (W-3)	NA	14	5-14	0-4	1,320	0.25
E-4	2S/3W-28R21	Principle Financial Group	528 Whitney Street, San Leandro	February 1994	Monitoring	NA	23	NA	NA	1,320	0.25
E-5	2S/3W-28R22	Principle Financial Group	528 Whitney Street, San Leandro	February 1994	Monitoring	NA	20	NA	NA	1,320	0.25

Map ID	State Well No.	Well Owner	Approximate Well Location	Installation Date	Well Type	Current Well Use	Total Well Depth (ft bgs)	Screene d Interval (ft bgs)	Seal Interval (ft bgs)	Approximate Distance from Former USTs (ft)	Approximate Distance from Former USTs (mi)
F-1	25/3W-28Q	Safeway Milk Plant	2000 Adams Street, San Leandro	10/5/1989	Monitoring (MW-1)	NA	21	6-21	0-4	1,267	0.24
F-2	2S/3W-28Q6	Safeway Milk Plant	2000 Adams Street, San Leandro	10/5/1989	Monitoring (MW-2)	NA	21	6-21	0-4	1,267	0.24
F-3	2S/3W-28Q	Safeway Milk Plant	2000 Adams Street, San Leandro	10/5/1989	Monitoring (MW-3)	NA	21	6-21	0-4	1,267	0.24
F-4	2S/3W-28Q3	Safeway Milk Plant	2000 Adams Street, San Leandro	6/30/1986	Monitoring (SM-1)	NA	27	9-27	0-4	1,267	0.24
F-5	2S/3W-28Q4	Safeway Milk Plant	2000 Adams Street, San Leandro	7/1/1986	Monitoring (SM-2)	NA	20	7-21	0-6	1,267	0.24
F-6	2S/3W-2855	Safeway Milk Plant	2000 Adams Street, San Leandro	5/12/1987	Monitoring (SMP-3)	NA	21.5	5-21.5	0-2.5	1,267	0.24
F-7	2S/3W-28J5	Safeway Milk Plant	2000 Adams Street, San Leandro	June 1987	Monitoring	NA	21	NA	NA	1,267	0.24
F-8	2S/3W-28J8	Safeway Milk Plant	2000 Adams Street, San Leandro	12/4/1997	Monitoring	NA	20	NA	NA	1,267	0.24
F-9	2S/3W-28J9	Safeway Milk Plant	2000 Adams Street, San Leandro	12/4/1997	Monitoring	NA	20	NA	NA	1,267	0.24
F-10	2S/3W-28J10	Safeway Milk Plant	2000 Adams Street, San Leandro	12/4/1997	Monitoring	NA	20	NA	NA	1,267	0.24
G-1	2S/3W-28Q1	Edgewater International Trucks	390 Doolittle Drive, San Leandro	5/2/1986	Monitoring/ Remediation (EW-1)	NA	26	6-26	0-5	1,795	0.34

Map ID	State Well No.	Well Owner	Approximate Well Location	Installation Date	Well Type	Current Well Use	Total Well Depth (ft bgs)	Screene d Interval (ft bgs)	Seal Interval (ft bgs)	Approximate Distance from Former USTs (ft)	Approximate Distance from Former USTs (mi)
G-2	2S/3W-28Q2	Edgewater International Trucks	390 Doolittle Drive, San Leandro	5/2/1986	Monitoring/ Remediation (EW-2)	NA	25	6-25	0-5	1,795	0.34
H-1	2S/3W-28G1	Ratto Bros, Inc	190 Tunis Road & 98th Avenue, Oakland	July 1956	Irrigation	NA	250	NA	NA	1,795	0.34
H-2	2S/3W-28G2	Ratto Bros, Inc	191 98th Avenue, Oakland,	6/2/1988	Irrigation	NA	305	25-305	0-25	1,267	0.24
I-1	2S/3W-28G3	California Glass Company	155 98th Avenue, Oakland	3/26/1990	Monitoring (EA-1)	NA	20	5-20	0-3.5	1,795	0.34
I-2	2S/3W-28G4	California Glass Company	155 98th Avenue, Oakland	3/26/1990	Monitoring (EA-2)	NA	20	5-20	0-3.5	1,795	0.34
I-3	2S/3W-28G5	California Glass Company	155 98th Avenue, Oakland	3/27/1990	Monitoring (EA-3)	NA	20	5-20	0-3.5	1,795	0.34
J-1	2S/3W-287	David Property	106-110 Hegenberger Road	February 1994	Monitoring	NA	23	NA	NA	2,587	0.49
J-2	2S/3W-288	David Property	106-110 Hegenberger Road	February 1994	Monitoring	NA	24	NA	NA	2,587	0.49
J-3	2S/3W-289	David Property	106-110 Hegenberger Road	February 1994	Monitoring	NA	31	NA	NA	2,587	0.49
K-1	2S/3W-28J6	Bigge Crane and Rigging	10700 Bigge Avenue, San Leandro	February 1993	Monitoring (MW-1)	NA	24	NA	NA	1,003	0.19
K-2	2S/3W-28J7	Bigge Crane and Rigging	10700 Bigge Avenue, San Leandro	February 1993	Monitoring (MW-2)	NA	24	NA	NA	1,003	0.19

Map ID	State Well No.	Well Owner	Approximate Well Location	Installation Date	Well Type	Current Well Use	Total Well Depth (ft bgs)	Screene d Interval (ft bgs)	Seal Interval (ft bgs)	Approximate Distance from Former USTs (ft)	Approximate Distance from Former USTs (mi)
L-1	2S/3W-28G6	Budget Rent-a-Car	121 98th Avenue, Oakland	May 1993	Monitoring	NA	11	NA	NA	2,059	0.39
L-2	2S/3W-28G7	Budget Rent-a-Car	121 98th Avenue, Oakland	May 1993	Monitoring	NA	11	NA	NA	2,059	0.39
L-3	2S/3W-28G8	Budget Rent-a-Car	121 98th Avenue, Oakland	May 1993	Monitoring	NA	11	NA	NA	2,059	0.39
L-4	2S/3W-28G9	Budget Rent-a-Car	121 98th Avenue, Oakland	September 1994	Monitoring	NA	11	NA	NA	2,059	0.39
M-1	2S/3W-28F4	Paramount Pest Control	20 Hegenberger Place, Oakland	July 1993	Monitoring	NA	25	NA	NA	2,165	0.41
M-2	2S/3W-28F5	Paramount Pest Control	20 Hegenberger Place, Oakland	July 1993	Monitoring	NA	25	NA	NA	2,165	0.41
M-3	2S/3W-28F6	Paramount Pest Control	20 Hegenberger Place, Oakland	July 1993	Monitoring	NA	25	NA	NA	2,165	0.41
Ν	2S/3W-28R4	Precision Founders, Inc	414 Hester Street, San Leandro	October 1990	Monitoring	NA	61	NA	NA	1,795	0.34
O-1	2S/3W-28R5	Benkiser Electric	519 Whitney Street, San Leandro	May 1991	Monitoring	NA	11	NA	NA	1,320	0.25
O-2	2S/3W-28R7	Benkiser Electric	519 Whitney Street, San Leandro	March 1991	Monitoring	NA	11	NA	NA	1,320	0.25
O-3	2S/3W-28R8	Benkiser Electric	519 Whitney Street, San Leandro	March 1991	Monitoring	NA	11	NA	NA	1,320	0.25

Map ID	State Well No.	Well Owner	Approximate Well Location	Installation Date	Well Type	Current Well Use	Total Well Depth (ft bgs)	Screene d Interval (ft bgs)	Seal Interval (ft bgs)	Approximate Distance from Former USTs (ft)	Approximate Distance from Former USTs (mi)
P-1	2S/3W-28R9	Bedford Properties	717 Whitney Street, San Leandro	October 1991	Monitoring (MW-1)	NA	17	NA	NA	1,901	0.36
P-2	2S/3W-28R10	Bedford Properties	717 Whitney Street, San Leandro	October 1991	Monitoring (MW-2)	NA	16	NA	NA	1,901	0.36
P-3	2S/3W-28R11	Bedford Properties	717 Whitney Street, San Leandro	October 1991	Monitoring (MW-3)	NA	17	NA	NA	1,901	0.36
P-4	2S/3W-28R12	Bedford Properties	717 Whitney Street, San Leandro	October 1991	Monitoring (MW-4)	NA	17	NA	NA	1,901	0.36
P-5	2S/3W-28R16	Bedford Properties	717 Whitney Street, San Leandro	October 1991	Monitoring (MW-5)	NA	14	NA	NA	1,901	0.36
P-6	2S/3W-28R17	Bedford Properties	717 Whitney Street, San Leandro	October 1991	Monitoring (MW-6)	NA	13	NA	NA	1,901	0.36
P-7	2S/3W-28R18	Eaton Corporation	717 Whitney Street, San Leandro	October 1991	Monitoring	NA	10	NA	NA	1,901	0.36
P-8	2S/3W-28R19	Eaton Corporation	717 Whitney Street, San Leandro	October 1991	Monitoring	NA	10	NA	NA	1,901	0.36
P-9	2S/3W-28R20	Eaton Corporation	717 Whitney Street, San Leandro	October 1991	Monitoring	NA	10	NA	NA	1,901	0.36
Q-1	2S/3W-28R15	С, К, М, В & L	485 Hester Street, San Leandro	January 1993	Monitoring (MW-1)	NA	15	NA	NA	2,270	0.43
Q-2	2S/3W-28R13	C, K, M, B & L	485 Hester Street, San Leandro	January 1993	Monitoring (MW-2)	NA	16	NA	NA	2,270	0.43

DWR/ACPWA WELL SURVEY SUMMARY ESTES-GI TRUCKING COMPANY 1750 ADAMS AVENUE, SAN LEANDRO, CALIFORNIA

Map ID	State Well No.	Well Owner	Approximate Well Location	Installation Date	Well Type	Current Well Use	Total Well Depth (ft bgs)	Screene d Interval (ft bgs)	Seal Interval (ft bgs)	Approximate Distance from Former USTs (ft)	Approximate Distance from Former USTs (mi)
Q-3	2S/3W-28R14	C, K, M, B & L	485 Hester Street, San Leandro	January 1993	Monitoring (MW-3)	NA	16	NA	NA	2,270	0.43
R	2S/3W-28Q11	Port of Oakland	10505 Doolittle Drive, Oakland	April 1991	Monitoring	NA	20	NA	NA	2,270	0.43
S	2S/3W-28R23	Kaiser Aerotech	480 Hester Street, San Leandro	March 1997	Monitoring	NA	10	NA	NA	2,059	0.39
T*	2S/3W-28L	Former Lew Galbraith Golf Course	Port of Oakland	November 1995	Monitoring	NA	NA	NA	NA	2,218	0.42

Notes and Abbreviations:

Well information provided by the State of California Department of Water Resources (DWR) and Alameda County Public Works Agency (ACPWA)

Map ID = Well identification letter refers to well location on Figure 4.

State Well Number = California State well identification number as recorded by the Department of Water Resources in Sacramento, California.

Approximate Well Location = Well locations plotted according to the information provided on the DWR Well Completion Reports and additional research.

Well Type = stated well use from Well Completion Report provided by DWR and ACPWA

NA = Not available

ft bgs = feet below ground surface

southwest of the site. Since the wells are scattered throughout the course, the Map ID was plotted near the northeastern boundary to be conservative.

APPENDIX A

AGENCY CORRESPONDENCE

ALAMEDA COUNTY HEALTH CARE SERVICES



JAN 2 3 2009

DAVID J. KEARS, Agency Director

AGENCY

January 22, 2009

Mike Rogers ABF Freight Systems P.O. Box 10048 Fort Smith, AR 72917-0048 ENVIRONMENTAL HEALTH SERVICES ENVIRONMENTAL PROTECTION 1131 Harbor Bay Parkway, Suite 250 Alameda, CA 94502-6577 (510) 567-6700 FAX (510) 337-9335

Treedark Real Estate Corp 3801 Greenwood Road Fort Smith, AR 72903

Estes Terminals California 3901 W. Broad Street Richmond, VA 23230

Subject: Fuel Leak Case No. RO0000442 and GeoTracker Global ID T0600100900, GI Trucking Company, 1750 Adams Avenue, San Leandro, CA 94577

Dear Responsible Parties:

Alameda County Environmental Health (ACEH) staff has reviewed the case file for the abovereferenced site including the recently submitted document entitled, "Annual 2007 Monitoring Report and Preferential Pathway Study," dated March 29, 2007, which was prepared by Cambria Environmental Technology, Inc. for the subject site. Cambria conducted groundwater sampling of the existing monitoring well network, a well survey and preferential pathway study to determine whether contaminants may be preferentially migrating off-site. Groundwater sampling analytical results detected sheen in RW-1. Cambria identified the closest well down-gradient to be over 1,000 feet away. Therefore, Cambria concluded that "it is unlikely that any of the wells at site K or any other downgradient site have been or are currently being impacted by the onsite groundwater plume." Cambria subsequently recommended that this case be considered a low risk groundwater case since "no significant migration of LNAPL or diesel plume is or has occurred at the site."

Based on the analytical results to date, which still identifies the presence of sheen on top of the groundwater at the site, ACEH cannot consider case closure for the subject site at this time since sites with sheen (i.e. free product) are not considered low risk groundwater cases. Additionally, the source area is not adequately characterized and the free and dissolved phase contaminant plumes are undefined. This decision to deny closure is subject to appeal to the State Water Resources Control Board (SWRCB), pursuant to Section 25299.39.2(b) of the Health and Safety Code (Thompson-Richter Underground Storage Tank Reform Act - Senate Bill 562). Please contact the SWRCB Underground Storage Tank Program at (916) 341-5851 for information regarding the appeal process.

ACEH requests that you address the following technical comments and send us the technical work plan and reports requested below.

TECHNICAL COMMENTS

1. <u>Contaminant Source Area Characterization</u> – In June 1999, four 12,000-gallon fiberglass USTs were removed from the site. Significantly elevated concentrations of total petroleum

hydrocarbons (TPH) as diesel (d) were detected in excavation sidewall soil samples ranging from 85 mg/kg to 4,500 mg/kg. Additional excavation of contaminated soil was conducted to remove the significantly contaminated soil. Confirmation sidewall soil samples detected TPH-d ranging from 620 mg/kg to 2,400 mg/kg. Although naphthalene was not detected at the site, the laboratory detection limit that was reported was significantly elevated ranging from <10 mg/kg to <20 mg/kg. Please note that the Regional Water Quality Control Board's (RWQCB) Environmental Screening Levels (ESLs) for naphthalene and TPH-d are 1.3 mg/kg and 83 mg/kg, respectively, indicating that the site is not adequately characterized and poses a potential risk to human health and the environment. Please propose a scope of work to address the above-mentioned concerns and submit a work plan due by the date specified below.

 Site Conceptual Model – At this time, it may be advantageous to develop a site conceptual model (SCM), which synthesizes all the analytical data and evaluates all potential exposure pathways and potential receptors that may exist at the site, including identifying or developing site cleanup objectives and goals. At a minimum, the SCM should include:

- Local and regional plan view maps that illustrate the location of sources (former facilities, piping, tanks, etc.) extent of contamination, direction and rate of groundwater flow, potential preferential pathways, and locations of receptors;
- (2) Geologic cross section maps that illustrate subsurface features, man-made conduits, and lateral and vertical extent of contamination;
- (3) Plots of chemical concentrations versus time;
- (4) Plots of chemical concentrations versus distance from the source;
- (5) Summary tables of chemical concentrations in different media (i.e. soil, groundwater, and soil vapor); and
- (6) Well logs, boring logs, and well survey maps;
- (7) Discussion of likely contaminant fate and transport.

If data gaps (i.e. potential contaminant volatilization to indoor air or contaminant leaching to groundwater, etc.) are identified in the SCM, please include a proposed scope of work to address those data gaps in the work plan due by the date specified below. Please note that the work plan must address all technical comments presented in this correspondence and all data gaps identified in the SCM.

 Groundwater Contaminant Plume Monitoring – Currently, annual groundwater sampling is being conducted. Since sheen continues to be present at the site, please increase the groundwater monitoring frequency to semi-annual and submit a report due by the dates specified below. Also, include naphthalene to the analytical sampling suite. Responsible Parties RO0000442 January 22, 2009, Page 3

NOTIFICATION OF FIELDWORK ACTIVITIES

Please schedule and complete the fieldwork activities by the date specified below and provide ACEH with at least three (3) business days notification prior to conducting the fieldwork, including routine groundwater sampling.

TECHNICAL REPORT REQUEST

Please submit technical reports to ACEH (Attention: Paresh Khatri), according to the following schedule:

- April 22, 2009 Site Conceptual Model & Soil and Water Investigation Work Plan
- April 30, 2009 Semi-annual Monitoring Report (1st Quarter 2009)
- October 30, 2009 Semi-annual Monitoring Report (3rd Quarter 2009)

These reports are being requested pursuant to California Health and Safety Code Section 25296.10. 23 CCR Sections 2652 through 2654, and 2721 through 2728 outline the responsibilities of a responsible party in response to an unauthorized release from a petroleum UST system, and require your compliance with this request.

ELECTRONIC SUBMITTAL OF REPORTS

ACEH's Environmental Cleanup Oversight Programs (LOP and SLIC) require submission of reports in electronic form. The electronic copy replaces paper copies and is expected to be used for all public information requests, regulatory review, and compliance/enforcement activities. Instructions for submission of electronic documents to the Alameda County Environmental Cleanup Oversight Program FTP site are provided on the attached "Electronic Report Upload Instructions." Submission of reports to the Alameda County FTP site is an addition to existing requirements for electronic submittal of information to the State Water Resources Control Board (SWRCB) GeoTracker website. In September 2004, the SWRCB adopted regulations that require electronic submittal of information for all groundwater cleanup programs. For several years, responsible parties for cleanup of leaks from underground storage tanks (USTs) have been required to submit groundwater analytical data, surveyed locations of monitoring wells, and other data to the GeoTracker database over the Internet. Beginning July 1, 2005, these same reporting requirements were added to Spills, Leaks, Investigations, and Cleanup (SLIC) sites. Beginning July 1, 2005, electronic submittal of a complete copy of all reports for all sites is required in GeoTracker (in PDF format). Please visit the SWRCB website for more information on these requirements (http://www.swrcb.ca.gov/ust/electronic submittal/report rgmts.shtml.

PERJURY STATEMENT

All work plans, technical reports, or technical documents submitted to ACEH must be accompanied by a cover letter from the responsible party that states, at a minimum, the following: "I declare, under penalty of perjury, that the information and/or recommendations contained in the attached document or report is true and correct to the best of my knowledge." This letter must be signed by an officer or legally authorized representative of your company. Please include a cover letter satisfying these requirements with all future reports and technical documents submitted for this fuel leak case.

Responsible Parties RO0000442 January 22, 2009, Page 4

PROFESSIONAL CERTIFICATION & CONCLUSIONS/RECOMMENDATIONS

The California Business and Professions Code (Sections 6735, 6835, and 7835.1) requires that work plans and technical or implementation reports containing geologic or engineering evaluations and/or judgments be performed under the direction of an appropriately registered or certified professional. For your submittal to be considered a valid technical report, you are to present site specific data, data interpretations, and recommendations prepared by an appropriately licensed professional and include the professional registration stamp, signature, and statement of professional certification. Please ensure all that all technical reports submitted for this fuel leak case meet this requirement.

UNDERGROUND STORAGE TANK CLEANUP FUND

Please note that delays in investigation, later reports, or enforcement actions may result in your becoming ineligible to receive grant money from the state's Underground Storage Tank Cleanup Fund (Senate Bill 2004) to reimburse you for the cost of cleanup.

AGENCY OVERSIGHT

If it appears as though significant delays are occurring or reports are not submitted as requested, we will consider referring your case to the Regional Board or other appropriate agency, including the County District Attorney, for possible enforcement actions. California Health and Safety Code, Section 25299.76 authorizes enforcement including administrative action or monetary penalties of up to \$10,000 per day for each day of violation.

If you have any questions, please call me at (510) 383-1767 or send me an electronic mail message at steven.plunkett@acgov.org.

Sincerely,

Steven Plunkett Hazardous Materials Specialist

Hazardous Materials Specialist

Donna L. Drogos, PE

Supervising Hazardous Materials Specialist

Enclosure: ACEH Electronic Report Upload (ftp) Instructions

 cc: Conestoga Rovers & Associates (formerly Cambria Environmental Technology, Inc.), 5900 Hollis Street, Suite A, Emeryville, CA 94608
 Donna Drogos, ACEH
 Steven Plunkett, ACEH
 File

(LOP and SLIC)	PREVIOUS REVISIONS: October 31, 2005
Oversight Programs	REVISION DATE: December 16, 2005
Alemada County Environmental Cleanun	ISSUE DATE: JULY 5, 2005

SECTION: Miscellaneous Administrative Topics & Procedures

| SUBJECT: Electronic Report Upload (ftp) Instructions

Effective January 31, 2006, the Alameda County Environmental Cleanup Oversight Programs (LOP and SLIC) require submission of all reports in electronic form to the county's ftp site. Paper copies of reports will no longer be accepted. The electronic copy replaces the paper copy and will be used for all public information requests, regulatory review, and compliance/enforcement activities.

REQUIREMENTS

- Entire report including cover letter must be submitted to the ftp site as a single portable document format (PDF) with no password protection. (Please do not submit reports as attachments to electronic mail.)
- It is preferable that reports be converted to PDF format from their original format, (e.g., Microsoft Word) rather than scanned.
- Signature pages and perjury statements must be included and have either original or electronic signature.
- Do not password protect the document. Once indexed and inserted into the correct electronic case file, the document will be secured in compliance with the County's current security standards and a password. Documents with password protection will not be accepted.
- Each page in the PDF document should be rotated in the direction that will make it easiest to read on a computer monitor.
- Reports must be named and saved using the following naming convention:
 - RO# Report Name_Year-Month-Date (e.g., RO#5555_WorkPlan_2005-06-14)

Additional Recommendations

A separate copy of the tables in the document should be submitted by e-mail to your Caseworker in Excel format. These are for use by assigned Caseworker only.

Submission Instructions

- 1) Obtain User Name and Password:
 - a) Contact the Alameda County Environmental Health Department to obtain a User Name and Password to upload files to the ftp site.
 - Send an e-mail to dehloptoxic@acgov.org i)

 - Send a fax on company letterhead to (510) 337-9335, to the attention of Alicia Lam-Finneke.
 - ii) b) In the subject line of your request, be sure to include "ftp PASSWORD REQUEST" and in the body of your request, include the Contact Information, Site Addresses, and the Case Numbers (RO# available in Geotracker) you will be posting for the second second

2) Upload Files to the ftp Site

- a) Using Internet Explorer (IE4+), go to ftp://alcoftp1.acgov.org
 - (i) Note: Netscape and Firefox browsers will not open the FTP site.
- b) Click on File, then on Login As.
- c) Enter your User Name and Password. (Note: Both are Case Sensitive.)
- d) Open "My Computer" on your computer and navigate to the file(s) you wish to upload to the ftp site.
- With both "My Computer" and the ftp site open in separate windows, drag and drop the file(s) from "My e) Computer" to the ftp window.
- 3) Send E-mail Notifications to the Environmental Cleanup Oversight Programs
 - a) Send email to <u>dehloptoxic@acgov.org</u> notify us that you have placed a report on our ftp site.
 - b) Copy your Caseworker on the e-mail. Your Caseworker's e-mail address is the entire first name then a period and entire last name at acgov.org. (e.g., firstname.lastname@acgov.org)
 - c) The subject line of the e-mail must start with the RO# followed by Report Upload. (e.g., Subject: RO1234 Report Upload)

APPENDIX B

BORING/ WELL LOGS

Project No. 86-1026 M

LOOG	ED I	<u>. 1</u>	DF DATE DRN D 12-31-86 BORING D	ia met	£	8*	1	ORIN	g NO
Depth, ft.	Semple No.	Symbol	SOIL DESCRIPTION	Unified Sell Classification	Diama/Tank 250 P. Har.	Qu - 1. s. f.	Dry Consity p.c.f.	Meisture S. dry wt.	MISC. LAB RESULTS
- 2 - - 4 - - 6 -	1		A.C. & A. B. Dark grey sl. sancy CLAY, moist (Dark brown, very sancy)	CL					M-I
- 10 - 12 - 12 - 14 - 14	2	11/11/11	Dark grey silty CLAY, moist (Tan mottling, wet) Buff & olive green sandy CLAY, wet	CH					
- 18-		111111111	(Light brown)	Ch					
			CLAY, moist BOH 25 feet Well Construction Details: Set 25' of 2" diameter sch.40 PVC Casing, lower 19' perforated. Aquarium sand backfill to 5', cement seal to surface. Installed vault box and locking						
			well cap.						
P		/L	AK & Associates FOURE	NO.	2 -	BOIL		LOG	

	Pro	oject	No	86-1	026-1	1	
LCOCED BY_	LDP DATE DRILLE 12-31-86 BORING DI	AMET	CR	<u>8''</u>	1	ORING	NO. <u>M-2</u>
	SOIL DESCRIPTION	Unified Sail Classification	Blows/heet 350 ft-Hee.	Qu - L S. F.	Dry Density p.c.f.	Meisture S dry wf.	MISC. LAB RESULTS
2	A.C. & A.B. Blue-green silty CLAY, moist, minor fine sand (brown)	CL					M-2
8 10 12	Grey-green, wet, minor GRAVEL	CL					
- 16- 18- 20-	Mottled grey & brown clayey fine SAND, wet	sc					
	Blue-grey silty CLAY, moist (brown) BOH 25 feet Well Construction Details: Set 25' of 2" diameter sch.40 PVC casing, lower 19' perforated aquarium sand backfill to 5', concrete seal to surface.	CH					
	well cap.						
PAV	LAK & Associates FIGUR	E NO.	3 -	ьсл	ING	LOG	

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			T.K	P	ORING	G NO.
Centh. T. Sent type Ro.	SOIL DESCRIPTION	United Self Classification	Blenz/Teet 356 ft-lik. Qu - t. s. f.	Producting Dry Domaity P.C.I.	Moisture S dry will.	MISC. LAB RESULTS
2 4 1	A.C. & A.B. Blue-grey very silty CLAY, mo	oist CH				M-3
8 2	<pre>F(Mottled olive green and gre very moist) Buff and olive green sanay Ci</pre>	ey,				
14 16 18	(ter.)					
22 24 2€	Clive green and grey silty Cl moist BOH 25 feet	LAY, CH				
	Well Construction Details: Set 25' of 2" diameter sch. FVC casing, lower 19" perform Aquarium sand backfill to 5' cement seal to surface. Inst vault box and locking well co	40 atea. talled ap.				
	AK & Associates			ETNC 3		

1000		T	LLF DATE DEN , 12-21-96 BORDED			<u>- دور</u>			
Days, R.		Ţ	SOIL DESCRIPTION	Unified Seli Classification	Diame/Yant X6 A-Inc.	20 - L. S. L.	Dry Density p.c.f.	Moistare % dry wt.	MISC. LAB. RESULTS
	1 2 3 5		A.C. & A.E. <pre>brown cleyey med. GFAVEL, moist brown very sangy SILT, moist Ek. brown silty CLAY, moist F(Grey-green, Very moist, minor GFAVEL, minor orange oxige staining) Wottled buff, olive green, olive trown, very sangy CLAY with minor ine gravel, wet It. trown silty very fine SAME very moist to wet Olive green silty CLAY, moist, (Brown, minor fine GFAVEL) BOF 26% feet Well Construction Details: Set 25' of 2" diameter, Sch. 40 PVC cestre, lower 19' perforated. Acuanium send backfill to 5', Cenent seal to surface. Installed vault bey and looking well cep.</pre>	GC FI CF		3	E E		RESULTS
P		/L	AK & Associates mounts	10.	 ŧ -	новл	NG 1		

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Inst date: 6/6/96





APPENDIX C

CERTIFIED ANALYTICAL REPORTS AND CHAIN OF CUSTODY DOCUMENTATION

McCampbell An "When Ouality	nalytical, Inc.	1534 Willow Pass Road, Pittsburg, CA 94565-1701 Web: www.mccampbell.com E-mail: main@mccampbell.com Telephone: 877-252-9262 Fax: 925-252-9269					
Conestoga-Rovers & Associates	Client Project ID: #63100	0; Estes-GI	Date Sampled:	04/21/09			
5900 Hollis St, Suite A	Trucking Company		Date Received:	04/21/09			
Emervville, CA 94608	Client Contact: Bob Foss		Date Reported:	04/27/09			
	Client P.O.:		Date Completed:	04/24/09			

WorkOrder: 0904518

April 27, 2009

Dear Bob:

Enclosed within are:

- 1) The results of the 5 analyzed samples from your project: #631000; Estes-GI Trucking Compa
- 2) A QC report for the above samples,
- 3) A copy of the chain of custody, and
- 4) An invoice for analytical services.

All analyses were completed satisfactorily and all QC samples were found to be within our control limits.

If you have any questions or concerns, please feel free to give me a call. Thank you for choosing

McCampbell Analytical Laboratories for your analytical needs.

Best regards,

Angela Rydelius Laboratory Manager McCampbell Analytical, Inc.

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Website: www.r Telephone: (87	rccampbel 7) 252-920	<u>l.com</u> Em 52	ail: m	ain@ Fax:	mcca (925	mpbe 5) 25	ell.com 2-920	m 69				1	≸ G	eo	Гra	cke	er E	DF			PE	RUS)F if sa	SH C amp	24 E Ie is	HR xce effl	e l luen	48 F	IR Wi d "J	72 H rite O " flag	R 5 DAY n (DW) is required
Report To: Bob FOSS		В	ill To	: (00	esto	an-R	ever	st	Asso	cia	tes						A	nal	ysis	Rec	ues	t	-		-			0	ther	Comment
Company: Conestage-R 5900 Hollis Emeryui M Tele: (510) 420 - 3349 Project #: 631000 Project Location: 1750 Al Sampler Signature: Mus SAMPLE ID	Kan E SAMI	Asso Ste F P Jue PLING	Anii ax: (Sources	1: 510 t Nar Les	ne: 2 N	ste ex(417 417 S-G CA RIX	d.C.	da Inch ME PRES	دور نط THO ER	Geny OD VED	TPH as Gas (602 / 8021 + 8015) / 400 area	Diesel (8015) And with Silica gel	troleum Oil & Grease (1664 / 5520 E/B&F)	troleum Hydrocarbons (418.1)	.2 / 601 / 8010 / 8021 (HVOCs)	BTEX ONLY (EPA 602 / 8021)	/ 608 / 8081 (Cl Pesticides)	//8082 PCB's ONLY; Aroclors / Congeners	/ 8141 (NP Pesticides)	[7] 8151 (Acidic Cl Herbicides)	.2 / 624 / 8260 (VOCs)	.2 / 625 / 8270 (SVOCs)	70 SIM / 8310 (PAHs / PNAs)	Metals (200.7 / 200.8 / 6010 / 6020)	Metals (200.7 / 200.8 / 6010 / 6020)	0.7 / 200.8 / 6010 / 6020)	halene by 2260B	•	Filter Samples for Metals analysis: Yes / No
Name	Date	Time	# Cont	Type C	Water	Soil	Sludge	Other	ICE	HNO	Other	BTEX &	TPH as I	Total Pet	Total Pet	EPA 502.	MTBE /	EPA 505	EPA 608	EPA 507	EPA 515	EPA 524.	EPA 525.	EPA 827	CAM 17	LUFT 5 /	Lead (20)	Nept	-	
Mhv-2.	4-21-09	11:30	52	Amb	T			-	1	-	-	1	1	-	-	-	_		_				-			-	-	X	-	
MH-3	+	12:00				-	-	-	11	+	-			-		1			_		-	-	-	-	_	-	-		-	
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MW-5

RW-1

RW-2

1534 Willow Pass Rd Pitteburg CA 94565-1701

CHAIN-OF-CUSTODY RECORD

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Page 1 of 1

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Bob Foss Conestoga-Re 5900 Hollis St Emeryville, CA (510) 420-0700	overs & Associates t, Suite A A 94608 FAX (510) 420-9170	Email: cc: PO: ProjectNo	bfoss@crawc #631000; Est	orld.com, mwerne es-GI Trucking Co	r@cra ompar	wo ıy	Ac Cc 59 En	counts mestoga 00 Holli neryville	Payable a-Rovers & Ass s St, Ste. A a, CA 94608	ociates	Dat Dat	te Recei te Print	ived: ed:	04/21/ 04/21/	2009 '2009
									Requested T	ests (See le	egend b	oelow)			
Lab ID	Client ID		Matrix	Collection Date	Hold	1	2	3	4 5	6 7	8	9	10	11	12
0904518-001	MW-2		Water	4/21/2009 11:30		С	А	А	В						
0904518-002	MW-3		Water	4/21/2009 12:00		С	Α		В						
0904518-003	MW-5		Water	4/21/2009 11:00		С	А		В						

С

С

С

А

А

А

4/21/2009 11:00

4/21/2009 13:00

4/21/2009 12:30

Г

Test Legend:

0904518-003

0904518-004

0904518-005

1	8260VOC_W
6	
11	

2	G-MBTEX_W	
7		
12		

Water

Water

Water

3	PREDF REPORT
8	

Γ	4	TPH(DMO)WSG_W
Γ	9	

5				
10		 		

Prepared by: Maria Venegas

Comments:

NOTE: Soil samples are discarded 60 days after results are reported unless other arrangements are made (Water samples are 30 days). Hazardous samples will be returned to client or disposed of at client expense.



"When Ouality Counts"

Sample Receipt Checklist

Client Name:	Conestoga-Rove	rs & Associates			Date a	nd Time Received:	04/21/09 2	:42:00 PM
Project Name:	#631000; Estes-G	I Trucking Comp	bany		Check	list completed and re	eviewed by:	Maria Venegas
WorkOrder N°:	0904518	Matrix <u>Water</u>			Carrie	r: <u>Client Drop-In</u>		
		<u>Chai</u>	n of Cu	stody (C	OC) Informa	tion		
Chain of custody	v present?		Yes	✓	No 🗆			
Chain of custody	v signed when relinqui	shed and received?	Yes	✓	No 🗆			
Chain of custody	agrees with sample I	abels?	Yes	✓	No 🗌			
Sample IDs noted	by Client on COC?		Yes	✓	No 🗆			
Date and Time of	collection noted by Cli	ent on COC?	Yes	✓	No 🗆			
Sampler's name r	noted on COC?		Yes	✓	No 🗆			
		<u> </u>	Sample	Receipt	Information			
Custody seals int	tact on shipping conta	iner/cooler?	Yes		No 🗆		NA 🔽	
Shipping containe	er/cooler in good cond	ition?	Yes	✓	No 🗆			
Samples in prope	er containers/bottles?		Yes	✓	No 🗆			
Sample containe	ers intact?		Yes	✓	No 🗆			
Sufficient sample	e volume for indicated	test?	Yes	✓	No 🗌			
		Sample Prese	ervation	and Ho	ld Time (HT)	Information		
All samples recei	ived within holding tim	e?	Yes	✓	No 🗌			
Container/Temp E	Blank temperature		Coole	r Temp:	4.2°C		NA 🗆	
Water - VOA vial	ls have zero headspa	ce / no bubbles?	Yes	✓	No 🗆	No VOA vials submi	itted	
Sample labels ch	necked for correct pres	servation?	Yes	✓	No 🗌			
TTLC Metal - pH	acceptable upon recei	pt (pH<2)?	Yes		No 🗆		NA 🗹	
Samples Receive	ed on Ice?		Yes	\checkmark	No 🗆			
		(Ice Ty	be: WE	TICE))			
* NOTE: If the "N	No" box is checked, se	e comments below.						

Client contacted:

Date contacted:

Contacted by:

Comments:

	McCampbell Analyti	cal, Inc.	1534 Willow Pass Road, Pittsburg, CA 94565-1701 Web: www.mccampbell.com E-mail: main@mccampbell.com Telephone: 877-252-9262 Fax: 925-252-9269						
Conestog	ga-Rovers & Associates	Client Project ID:	#631000; Estes-GI	Date Sampled: 04/21	/09				
5900 Hol	lis St, Suite A	Trucking Company	/	Date Received: 04/21/09					
	,	Client Contact: Bo	ob Foss	Date Extracted: 04/22	d: 04/22/09-04/24				
Emeryvill	e, CA 94608	Client P.O.:		Date Analyzed 04/22	2/09-04/24/09				
Extraction me	thod: SW5030B	Volatile Organics by Analytical m	y P&T and GC/MS*	Work (order: 090)4518			
Lab ID	Client ID	Matrix	Naphth	alene	DF	% SS			
001C	MW-2	W	NI)	1	95			
002C	MW-3	W	NI)	1	95			
003C	MW-5	W	NI)	1	95			
004C	RW-1	W	ND,	1	100				
005C	RW-2	w	ND,	b6	1	99			
	Reporting Limit for DF =1;	W	0.5	5	μ	g/L			
	above the reporting limit	S	NA	A	N	A			

* water and vapor samples and all TCLP & SPLP extracts are reported in µg/L, soil/sludge/solid samples in µg/kg, wipe samples in µg/wipe, product/oil/non-aqueous liquid samples in mg/L.

ND means not detected above the reporting limit; N/A means analyte not applicable to this analysis.

surrogate diluted out of range or surrogate coelutes with another peak.

b6) lighter than water immiscible sheen/product is present

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Angela Rydelius, Lab Manager

	McCampbo	ell An en Ouality (alytical, Inc. ^{Counts"}		1534 Willo Web: www.mcca Telephon	w Pass Road, F ampbell.com ie: 877-252-926	Pittsburg, CA 9456 E-mail: main@mcc 52 Fax: 925-252	55-1701 campbell.com -9269					
Cones	stoga-Rovers & Asso	ciates	Client Project ID Trucking Compa	: #631000; any	; Estes-GI	Date Sa Date R	ampled: 04/2 eceived: 04/2	21/09 21/09					
59001	Hollis St, Suite A		Client Contact:	Client Contact: Bob Foss				Date Extracted: 04/22/09-04/24/09					
Emery	ville, CA 94608		Client P.O.:			Date A	nalyzed 04/2	22/09-04/24/	09				
	Gas	oline Ra	nge (C6-C12) Volatile H	ydrocarboi	ns as Gasolin	e with BTH	EX and MTB	E*					
Extraction	Client ID	Matrix	TPH(g)	MTBE	Benzene	Toluene	Ethylbenzene	Work Ord Xylenes	ler: 090	4518 % SS			
001A	MW-2	w	ND		ND	ND	ND	ND	1	105			
002A	MW-3	w	ND		ND	ND	ND	ND	1	106			
003A	MW-5	w	ND		ND	ND	ND	ND	1	92			
004A	RW-1	w	160,d7,b6		ND	ND	ND	ND	1	99			
005A	RW-2	w	ND,b6		ND	ND	ND	ND	1	105			
Repo	I rting Limit for DF =1;	w	50	5.0	0.5	0.5	0.5	0.5		<u>.</u>			
ND m aboy	eans not detected at or ve the reporting limit	1.0	0.05	0.005	0.005	0.005	0.005	mg	/Kg				

* water and vapor samples and all TCLP & SPLP extracts are reported in ug/L, soil/sludge/solid samples in mg/kg, wipe samples in µg/wipe, product/oil/non-aqueous liquid samples in mg/L.

cluttered chromatogram; sample peak coelutes with surrogate peak.

+The following descriptions of the TPH chromatogram are cursory in nature and McCampbell Analytical is not responsible for their interpretation:

b6) lighter than water immiscible sheen/product is present

d7) strongly aged gasoline or diesel range compounds are significant in the TPH(g) chromatogram

<u> </u>	Campbell Analyti	ical, Inc.	1534 Willow Pass Road, Pittsburg, CA 94565-1701 Web: www.mccampbell.com E-mail: main@mccampbell.com Telephone: 877-252-9262 Fax: 925-252-9269					
Conestoga-Ro	vers & Associates	Client Project ID	#631000; Estes-GI Date Sampled: 04/21/09					
5900 Hollis St	Suite A	Trucking Compa	any	Date Received: 04/	21/09			
5500 1101113 51,	Suite A	Client Contact:	Bob Foss	Date Extracted: 04/	21/09			
Emeryville, CA	94608	Client P.O.:		Date Analyzed: 04/	21/09-04/	22/09		
Extraction method:	Total Extracta SW3510C/3630C	ble Petroleum Hy Analytical n	drocarbons with Silica (nethods: SW8015B	Gel Clean-Up* Wo	rk Order: 0	904518		
Lab ID	Client ID	TPH-Diesel (C10-C23)	TPH-Motor Oil (C18-C36)	DF	% SS			
0904518-001B	MW-2	W	ND	ND	1	103		
0904518-002B	MW-3	W	ND	ND	1	103		
0904518-003B	MW-5	W	ND	ND	1	104		
0904518-004B	RW-1	W	50,000,e3,b6	23,000	10	101		
0904518-005B	RW-2	W	6000,e3,b6	3000	1	105		

Reporting Limit for DF =1;	W	50	250	μg/L
ND means not detected at or above the reporting limit	S	NA	NA	mg/Kg

* water samples are reported in µg/L, wipe samples in µg/wipe, soil/solid/sludge samples in mg/kg, product/oil/non-aqueous liquid samples in mg/L, and all DISTLC / STLC / SPLP / TCLP extracts are reported in µg/L.

#) cluttered chromatogram resulting in coeluted surrogate and sample peaks, or; surrogate peak is on elevated baseline, or; surrogate has been diminished by dilution of original extract; &) low or no surrogate due to matrix interference.

+The following descriptions of the TPH chromatogram are cursory in nature and McCampbell Analytical is not responsible for their interpretation:

b6) lighter than water immiscible sheen/product is present e3) aged diesel is significant

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QC SUMMARY REPORT FOR SW8015B

W.O. Sample Matrix: Water			QC Matrix: Water				Batch		WorkOrder: 0904518			
EPA Method SW8015B	ction SW	SW3510C/3630C					Spiked Sample ID: N/A					
Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	LCSD	LCS-LCSD	Acceptance Criteria (%))
, analy to	µg/L	µg/L	% Rec.	% Rec.	% RPD	% Rec.	% Rec.	% RPD	MS / MSD	RPD	LCS/LCSD	RPD
TPH-Diesel (C10-C23)	N/A	1000	N/A	N/A	N/A	100	100	0	N/A	N/A	70 - 130	30
%SS:	N/A	2500	N/A	N/A	N/A	107	107	0	N/A	N/A	70 - 130	30
All target compounds in the Method Blank of this extraction batch were ND less than the method RL with the following exceptions: NONE												

BATCH 42773 SUMMARY

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed
0904518-001B	04/21/09 11:30 AM	04/21/09	04/21/09 9:41 PM	0904518-002B	04/21/09 12:00 PM	04/21/09	04/21/09 10:49 PM
0904518-003B	04/21/09 11:00 AM	04/21/09	04/21/09 11:57 PM	0904518-004B	04/21/09 1:00 PM	04/21/09	04/22/09 2:14 AM
0904518-005B	04/21/09 12:30 PM	04/21/09	04/22/09 4:31 AM				

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation.

% Recovery = 100 * (MS-Sample) / (Amount Spiked); RPD = 100 * (MS - MSD) / ((MS + MSD) / 2).

MS / MSD spike recoveries and / or %RPD may fall outside of laboratory acceptance criteria due to one or more of the following reasons: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) the spiked sample's matrix interferes with the spike recovery.

N/A = not enough sample to perform matrix spike and matrix spike duplicate.

NR = analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix or sample diluted due to high matrix or analyte content.

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QA/QC Officer



"When Ouality Counts"

QC SUMMARY REPORT FOR SW8260B

W.O. Sample Matrix: Water	QC Matrix: Water						BatchID: 42801 WorkOrder: 0904			18		
EPA Method SW8260B	Extraction SW5030B								Spiked Sample ID: 0904493-002D			
Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	LCSD	LCS-LCSD	Acc)		
Analyte	µg/L	µg/L	% Rec.	% Rec.	% RPD	% Rec.	% Rec.	% RPD	MS / MSD	RPD	LCS/LCSD	RPD
tert-Amyl methyl ether (TAME)	ND<100	10	95.6	96	0.392	97.2	99.1	1.92	70 - 130	30	70 - 130	30
Benzene	ND<100	10	113	112	0.539	105	105	0	70 - 130	30	70 - 130	30
t-Butyl alcohol (TBA)	ND<400	50	73.2	77.3	5.43	91.7	94	2.58	70 - 130	30	70 - 130	30
Chlorobenzene	ND<100	10	114	115	0.658	107	106	1.23	70 - 130	30	70 - 130	30
1,2-Dibromoethane (EDB)	ND<100	10	123	126	2.14	115	115	0	70 - 130	30	70 - 130	30
1,2-Dichloroethane (1,2-DCA)	ND<100	10	90.7	90.1	0.662	104	107	2.21	70 - 130	30	70 - 130	30
1,1-Dichloroethene	ND<100	10	70.7	71.6	1.34	88.4	87.5	0.982	70 - 130	30	70 - 130	30
Diisopropyl ether (DIPE)	ND<100	10	103	103	0	94.3	95.7	1.47	70 - 130	30	70 - 130	30
Ethyl tert-butyl ether (ETBE)	ND<100	10	114	113	0.216	104	106	2.08	70 - 130	30	70 - 130	30
Methyl-t-butyl ether (MTBE)	ND<100	10	102	101	0.756	97.4	101	3.25	70 - 130	30	70 - 130	30
Toluene	ND<100	10	125	125	0	115	115	0	70 - 130	30	70 - 130	30
Trichloroethene	ND<100	10	119	121	1.25	123	125	2.03	70 - 130	30	70 - 130	30
%SS1:	79	25	76	77	0.655	76	77	0.779	70 - 130	30	70 - 130	30
%SS2:	100	25	89	88	0.804	103	103	0	70 - 130	30	70 - 130	30
%SS3:	94	2.5	91	94	2.65	97	97	0	70 - 130	30	70 - 130	30
All target compounds in the Method Blank of this extraction batch were ND less than the method RL with the following exceptions: NONE												

BATCH 42801 SUMMARY

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed
0904518-001C	04/21/09 11:30 AM	04/22/09	04/22/09 9:15 PM	0904518-002C	04/21/09 12:00 PM	04/22/09	04/22/09 10:02 PM
0904518-003C	04/21/09 11:00 AM	04/22/09	04/22/09 10:45 PM	0904518-004C	04/21/09 1:00 PM	04/24/09	04/24/09 6:24 AM
0904518-005C	04/21/09 12:30 PM	04/24/09	04/24/09 7:07 AM				

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation.

% Recovery = 100 * (MS-Sample) / (Amount Spiked); RPD = 100 * (MS - MSD) / ((MS + MSD) / 2).

* MS and / or MSD spike recoveries may not be near 100% or the RPDs near 0% if: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) if that specific sample matrix interferes with spike recovery.

N/A = not enough sample to perform matrix spike and matrix spike duplicate. NR = analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix or sample diluted due to high matrix or analyte content.

Laboratory extraction solvents such as methylene chloride and acetone may occasionally appear in the method blank at low levels.



R_QA/QC Officer

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"When Ouality Counts"

QC SUMMARY REPORT FOR SW8021B/8015Bm

QC Matrix: Water W.O. Sample Matrix: Water BatchID: 42818 WorkOrder: 0904518 EPA Method SW8021B/8015Bm Extraction SW5030B Spiked Sample ID: 0904518-003A MSD MS-MSD LCS LCSD LCS-LCSD Spiked MS Sample Acceptance Criteria (%) Analyte % RPD MS / MSD LCS/LCSD RPD µg/L µg/L % Rec. % Rec. % Rec. % Rec. % RPD RPD TPH(btex) 1.37 103 9.35 70 - 130 70 - 130 ND 60 100 101 113 20 20 10 96.9 MTBE ND 94.8 2.21 112 106 5.34 70 - 130 2.0 70 - 130 20 Benzene ND 10 92.1 92.2 0.141 91.4 98.6 7.56 70 - 130 20 70 - 130 20 Toluene ND 10 90.1 90.5 0.338 93.7 103 9.42 70 - 130 20 70 - 13020 Ethylbenzene ND 10 89.6 89 0.749 94.4 98.1 3.91 70 - 130 20 70 - 130 20 Xylenes ND 30 90.8 89.8 1.08 106 114 7.68 70 - 130 2.0 70 - 130 20 99 20 %SS: 92 10 98 1.31 101 106 4.65 70 - 130 20 70 - 130 All target compounds in the Method Blank of this extraction batch were ND less than the method RL with the following exceptions: NONE

BATCH 42818 SUMMARY

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed
0904518-001A	04/21/09 11:30 AM	04/23/09	04/23/09 6:44 AM	0904518-002A	04/21/09 12:00 PM	04/23/09	04/23/09 7:13 AM
0904518-003A	04/21/09 11:00 AM	04/22/09	04/22/09 6:40 PM	0904518-004A	04/21/09 1:00 PM	04/24/09	04/24/09 2:00 AM
0904518-005A	04/21/09 12:30 PM	04/24/09	04/24/09 2:30 AM				

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation.

% Recovery = 100 * (MS-Sample) / (Amount Spiked); RPD = 100 * (MS - MSD) / ((MS + MSD) / 2).

MS / MSD spike recoveries and / or %RPD may fall outside of laboratory acceptance criteria due to one or more of the following reasons: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) the spiked sample's matrix interferes with the spike recovery.

£ TPH(btex) = sum of BTEX areas from the FID.

cluttered chromatogram; sample peak coelutes with surrogate peak.

N/A = not enough sample to perform matrix spike and matrix spike duplicate.

NR = matrix interference and/or analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix or sample diluted due to high matrix or analyte content, or inconsistency in sample containers.

