Environmental Investigation Services, Inc.

May 23, 2007

Livermore-Pleasanton Fire Department
Mr. John Rigter, Hazardous Materials Inspector
3560 Nevada Street
Pleasanton, CA 94566

Subject: Clarification of Revised Workplan for Site Investigation and Remedial Action, 461 McGraw Avenue, Livermore, California
Issued May 18, 2007
EIS Project # 717-2

Dear Mr. Rigter:

Environmental Investigation Services, Inc. (EIS) is issuing this letter to clarify three details of the above-referenced workplan that were discussed in a telephone conversation this morning between you and Jennifer Morris, Staff Geologist of EIS:

1) EIS will follow the workplan Applied Remedial Technologies (ART) issued on April 2, 2007, *Workplan to Remove the Three Remaining Storage Tanks, 461 McGraw Avenue, Livermore, California 94550,* to remove the three aboveground storage tanks (ASTs) from the property. This workplan has already been approved by the Livermore-Pleasanton Fire Department.

2) Macoy Resources Corporation will be the Tank Removal Contractor, as stated on the existing Aboveground Tank Closure Plan. All of the information in the Aboveground Tank Closure Plan is current and accurate.

3) In addition to the analyses listed for the samples collected in the vicinity of the ASTs/former AST location in the May 18, 2007 workplan, EIS will also analyze these samples for pH using Environmental Protection Agency Method 150.1, as specified ART's April 2, 2007 workplan.

Sincerely,

Environmental Investigation Services, Inc.

PROFESSIONAL GEOLOGIST
ALLEN J. WALDMAN
exp. 10/07
No. 6323
STATE OF CALIFORNIA

Jennifer Morris
Staff Geologist

A. Waldman
Allen Waldman, P.G. #6323
Project Geologist

cc: Mr. Jerry Wickham, Alameda County Environmental Health Department, 1131 Harbor Bay Parkway, Suite 250, Alameda, CA 94502-6577
Mr. Scott Fooks, Weldon & Hass, Attorneys at Law, 205 East Anapamu Street, Santa Barbara, California 93101

RECEIVED

12:36 pm, May 23, 2007

Alameda County
Environmental Health

May 18, 2007

Alameda County Environmental Health Services
Mr. Jerry Wickham
1131 Harbor Bay Parkway, Suite 250
Alameda, CA 94502-6577

Subject: Revised Workplan for Site Investigation and Remedial Action
461 McGraw Avenue, Livermore, California 94550
EIS Project # 717-2

Dear Mr. Wickham,

On behalf of Whitney Newland, administrator of the Estate of Crandal Mackey, Environmental Investigation Services Inc. (EIS) is submitting this Revised Work Plan for Site Investigation and Remedial Action at 461 McGraw Avenue, Livermore, California (the site) for your approval.

BACKGROUND

The site is located northeast of the intersection of McGraw Avenue and Preston Road in Livermore, Alameda County, California. The nearest surface water is Arroyo Seco, located approximately ½ mile south of the site and flows to the northwest. The site location is shown on Figure 1. The attached Figure 2 depicts the site layout and features of concern. The site is currently vacant, but was formerly used by Call Mac Transportation as a truck storage and salvage yard.

According to Applied Remedial Technologies' (ART's) *Proposed Work Plan to Conduct Soil Removal and Confirmation Sampling of the Impacted Soils at the Former Diesel UST Dispenser Island, Below the Former Above Ground Storage Tanks, and at the Recent Diesel Spill Areas, 461 McGraw Avenue, Livermore, California, 94550,* issued to Alameda County Environmental Health Services (ACEH) April 2, 2007, an underground storage tank (UST) was removed from the site in 1995. A visual inspection of the UST after it had been removed revealed that it was generally in good condition, with no visible holes. No hydrocarbon odor or staining was reported in the former UST pit, and the three soil samples collected from the tank pit contained no detectable petroleum hydrocarbons. Both the field observations and the soil sample analytical results (soil samples S-1 through S-3) reported that no petroleum hydrocarbons were detected. In addition, one water sample was collected from the excavation from approximately 13 to 14 feet below ground surface (bgs). There were no detectable concentrations of any of the constituents analyzed.

One soil sample was collected below the dispenser island (S-4), and was found to contain 17,000 milligrams per kilograms (mg/kg) total petroleum hydrocarbons as diesel (TPH-d). This sample was

collected from an area of obvious over-spillage. No benzene, toluene, ethylbenzene or xylenes (collectively BTEX) was detected.

According to information gathered during the development of this work plan, there are three ASTs (T-1 through T-3) located at the site. In previous site documents, AST (T-3) has also been referred to as a tank car. AST (T-1) appears to have been moved from another location on the site, shown on Figure 2 as T-4. ART submitted *Work Plan to Remove the Three Remaining Storage Tanks, 461 McGraw Avenue, Livermore, California 94550* to the Livermore-Pleasanton Fire Department (LPFD) on April 2, 2007 outlining procedures for decommissioning and disposing of the ASTs and their contents, and for sampling the soil beneath the ASTs. According to the work plan ART submitted to ACEH, the Department of Toxic Substances Control (DTSC) has conducted soil sampling activities below two of the existing ASTs. The soil analytical data show that the ASTs have impacted the soil below them, and excavation will be necessary in the area.

There are also a total of 34 small areas where petroleum hydrocarbon staining has been noted. There are also 7 larger areas of petroleum hydrocarbon staining that were the results of unauthorized releases during Golden State Metal's crushing of vehicles at the site.

WORKPLAN

The Site Remediation and Investigation Activities will consist of the following tasks:

- Remove the concrete pad, dispenser island, and piping associated with the former UST. Over excavate the impacted soil and collect confirmation soil samples from the sidewalls and bottom of the excavation. Dispose of excavated soil according to state and local regulations. Backfill the excavation to a minimum 90% relative compaction with clean imported fill material.
- Remove and dispose of three ASTs and their contents per ART's April 2, 2007 *Work Plan to Remove the Three Remaining Storage Tanks, 461 McGraw Avenue, Livermore, California 94550*. Over excavate the soil below and nearby the ASTs and former AST location to remove impacted soil. Collect a minimum of two confirmation soil samples from the excavations below each of the former AST locations T-1, T-3, and T-4, and a minimum of one soil sample from the excavation below the AST location T-2 for laboratory analysis. Dispose of excavated soil according to state and local regulations. Backfill the excavation to a minimum 90% relative compaction with clean imported fill material.
- Excavate 34 small areas where soil has been stained by petroleum hydrocarbons. Determine extents of the excavations using field observations and data from a handheld photoionization detector (PID).
- Excavate seven larger areas where soil has been impacted by unauthorized releases of petroleum hydrocarbons during Golden State Metal's dismantling and removal of vehicles at the site. Note field observations and PID data. Collect at least one confirmation soil sample from each of these seven areas.
- Collect a total of eight soil samples from the soil loading dock: four surface soil samples and four shallow (2-3 feet bgs) soil samples.
- Collect two surface or near-surface soil samples adjacent to the storage container on the building pad to determine whether the soil has been impacted by former drum storage.
- Collect two surface or near-surface soil samples of the building pad to verify that the soil used in its construction is clean.

- Collect eight surface or near-surface soil samples in the vicinity of the former battery storage area near former trailer two to determine whether the soil has been impacted by lead.
- Purge and sample water well 3S/2E-3H4, in the northeastern portion of the property.
- Repair well 3S/2E-3H4 to Zone 7 Water District standards.
- Advance three soil borings to depths of approximately 5 feet below first encountered groundwater: one near the former UST and associated piping and dispenser island, one adjacent to AST T-3, and one between the ASTs T-1 and T-2. Continuously log soils using the Unified Soil Classification System (USCS) as a guide, and screen the soils with a PID. Collect discrete soil samples for laboratory analysis from approximately 5 feet bgs, one sample from between 10 and 20 feet bgs (with the exact depth to be determined in the field based on soil conditions, lithologic changes, and other factors), and the capillary fringe. If evidence of petroleum hydrocarbon contamination is observed in the field, collect additional soil samples may be collected for laboratory analysis to characterize the petroleum hydrocarbon concentrations. Collect grab groundwater samples from the soil borings for laboratory analysis.
- Advance three soil borings to depths of approximately 5 feet below first encountered groundwater, along the western property boundary adjacent to McGraw Avenue, including one in the southwestern corner of the property near the intersection of McGraw Avenue and Preston Avenue. Continuously log soils using the Unified Soil Classification System (USCS) as a guide, and screen the soils with a PID. Collect no soil samples for laboratory analysis unless evidence of petroleum hydrocarbon contamination is observed in the field. Collect grab groundwater samples from the soil borings for laboratory analysis.

These tasks are further detailed below.

Pre-Field Activities

EIS will prepare and submit a soil boring permit application to Zone 7 Water Agency. Upon receipt of soil boring permits and work plan approvals, EIS will coordinate site activities with Zone 7 Water Agency, ACEH, and LPFD, as required.

EIS will prepare a site-specific health and safety plan (SSP) describing potential hazards at the site (including potential contaminants and their characteristics and health effects), and personnel responsible for site safety, personal protective equipment, emergency phone numbers, the location of the nearest hospital, etc.

EIS will outline the site with white paint and mark all excavation, boring, and sampling locations with white paint and contact Underground Services Alert (USA) 48 hours before beginning work onsite, as required by law, so that companies with buried utilities in the vicinity of the property may mark the locations of their underground facilities. In addition, EIS will contract with a private utility locator to identify and mark the locations of any buried utilities within the property boundaries.

Removal of Concrete Pad, Dispenser Island, and Piping Associated with the Former UST; Excavation of Impacted Soil; and Confirmation Sampling

EIS will supervise and direct site activities as Macoy Resources Corporation (MRC) of Paso Robles, California, removes the approximately 800-square-foot concrete pad, the dispenser island,

and the piping (Figure 2). The concrete will be profiled for disposal, then broken up and sent to an appropriate disposal or recycling facility. The dispenser island and piping will be disposed of at a permitted recycling facility.

Under the direction of EIS, MRC will over excavate soil that has been impacted by leaks from the pipes or from the dispenser island. While the actual size of the excavation will be determined by the extent of the soil contamination and the subsurface conditions encountered at the site, EIS estimates that the excavation in the vicinity of the piping and dispenser island may be approximately 15 feet long, 10 feet wide, and 8 to 12 feet deep (75 cubic yards/100 tons). For the estimated excavation, EIS proposes to collect six confirmation samples from the excavation (Figure 2): CS-1 through CS-4 will each be collected from one of the sidewalls, and CS-5 and CS-6 will both be collected from the bottom of the excavation. Additional confirmation soil samples will be required if any backfilled utility trenches that could potentially act as preferential pathways are encountered or if the excavation is expanded beyond the currently estimated extent. Furthermore, additional soil sampling may be requested based on field inspection by either LPFD or ACEH. While EIS does not anticipate encountering groundwater in this excavation, EIS will use a disposable bailer to collect one grab groundwater sample for laboratory analysis if the excavation extends below the water table.

Soil samples will be collected from the excavation sidewalls and bottom with assistance from the backhoe bucket. All soil samples will be placed into clean 2-inch diameter by 6-inch long stainless steel sleeves. The stainless steel sleeves will be sealed with Teflon sheets and plastic caps, labeled, logged onto a chain of custody document, and placed into a chilled ice chest for transport to a California-certified analytical laboratory.

All samples collected from the excavation in the vicinity of the concrete pad, dispenser island, and piping will be analyzed by the following methods:

- Environmental Protection Agency (EPA) Method 8015M for total petroleum hydrocarbons as diesel (TPH-d) and for total petroleum hydrocarbons as oil (TPH-o),
- EPA Method 8260B for volatile organic compounds (VOCs), including total petroleum hydrocarbons as gasoline (TPH-g), 1,2-dichloroethane (DCA), ethylene dibromide (EDB), and fuel oxygenates including methyl tert-butyl ether (MTBE), and
- EPA Method 6010B for lead.

Removal of Three ASTs, Excavation of Impacted Soil, and Confirmation Sampling

EIS will supervise and direct site activities as Macoy Resources Corporation (MRC) of Paso Robles, California, removes the three ASTs in the southeastern portion of the site according to *Work plan to Remove The Three Remaining Storage Tanks, 461 McGraw Avenue, Livermore, California 94550*, issued by ART on April 2, 2007 (Attachment A).

Once the ASTs and their contents have been properly decommissioned and disposed, Macoy will excavate the impacted soil from the AST locations under EIS' direction. The lateral extents of each of the excavations under tanks T-1 through T-3 and in former tank location T-4 are estimated based on visible staining on the ground surface. The excavation under tank T-1 will be approximately 34 feet long and 8 feet wide, the excavation under tank T-2 will be approximately 15 feet long and 10 feet wide, the excavation under tank T-3 will be approximately 28 feet long and 11 feet wide, and

the excavation in former tank location T-4 will be approximately 34 feet long and 12 feet wide. Each of the excavations in the vicinity of the ASTs is estimated to extend to approximately three feet bgs. An estimated 125 cubic yards of impacted soil will be excavated from beneath the ASTs and the former AST location.

As with the excavation in the vicinity of the former dispenser island, the actual size of the excavations in the AST areas will be determined by the extent of the contamination and the subsurface conditions encountered at the site. Once field observations and PID data suggest that the contaminated soil has been excavated, EIS will collect one confirmation sample from beneath AST T-2 and two confirmation samples between each of ASTs T-1, T-3, and T-4. The samples will be collected from soil below areas where the heaviest staining was observed at the surface, or where directed by LPFD or ACEH personnel. Additional confirmation soil samples will be required if any of the excavations are expanded beyond the currently estimated extents. Furthermore, additional soil sampling may be requested based on field inspections by either LPFD or ACEH. While EIS does not anticipate encountering groundwater in these excavations, EIS will use a disposable bailer to collect one grab groundwater sample for laboratory analysis from any excavation that extends below the water table.

Soil samples will be collected within two business days of the AST removals. Soil samples will be collected from the excavation with assistance from the backhoe bucket. All soil samples will be placed into clean 2-inch diameter by 6-inch long stainless steel sleeves. The stainless steel sleeves will be sealed with Teflon sheets and plastic caps, labeled, logged onto a chain of custody document, and placed into a chilled ice chest for transport to a California-certified analytical laboratory.

All samples collected from the excavation in the vicinity of the ASTs and the former AST location will be analyzed by the following methods:

- EPA Method 8015M for TPH-d and TPH-o,
- EPA Method 8260B for VOCs, including TPH-g, DCA, EDB and fuel oxygenates including MTBE,
- EPA Method 8270C for semi-volatile organic compounds (SVOCs),
- EPA Method 8082A for Polychlorinated Biphenyls (PCBs), and
- EPA Method 6010B for Title 22 Metals

Excavation of Petroleum Hydrocarbon-Stained Areas

In the thirty-four small areas (L-1 through L-34) stained by petroleum hydrocarbons by the vehicle demolition and removal activities conducted onsite by Golden State Metals, Inc., MRC will excavate a small volume of soil, approximately two feet wide, two feet across, and two feet deep (Figure 2). In these areas, EIS will use a combination of field observations (staining and odor) and PID data to determine when the excavation of the contaminated soil has been completed. EIS estimates that approximately 11 cubic yards (16 tons) of soil will be excavated from the small stained areas.

In each of the seven larger petroleum hydrocarbon-stained areas, DO-1 through DO-7, MRC will excavate an area approximately ten feet long and six feet wide (Figure 2). All of the excavations are anticipated to extend to 2 feet bgs. EIS estimates that a total of approximately 31 cubic yards (47

tons) of soil will be excavated in the vicinity of the larger petroleum hydrocarbon-stained areas.

When EIS personnel find that field observations and PID data indicate that the contaminated soil has been completely excavated from an area, EIS will collect one soil confirmation sample from the bottom of each of the excavation areas, below the location of the surface soil that appeared to be most heavily impacted, or as directed by ACEH personnel.

As with the other excavation locations, the actual size of the excavations in the petroleum hydrocarbon-stained areas will be determined by the extent of the contamination and the subsurface conditions encountered at the site, and additional samples may be required depending on field observations, regulatory requirements, or actual extent of the contamination.

All soil samples will be placed into clean 2-inch diameter by 6-inch long stainless steel sleeves. The stainless steel sleeves will be sealed with Teflon sheets and plastic caps, labeled, logged onto a chain of custody document, and placed into a chilled ice chest for transport to a California-certified analytical laboratory.

The samples collected from the excavations for the larger petroleum-hydrocarbon stained soil will be analyzed by EPA Method 8015M for TPH-d and TPH-o.

Loading Dock, Storage Container, and Building Pad Sampling

EIS will collect eight soil samples from the loading dock in the central portion of the property, LD-1 through LD-8 (Figure 2). Four soil samples will be collected from the surface soil (approximately 0.0-0.5 feet), and four will be collected from the subsurface, from approximately (2.0-2.5 feet bgs).

EIS will collect two soil samples from depths between 0.0-1.0 feet bgs immediately southeast of the storage container on the southeastern portion of the building pad, SC-1 and SC-2 (Figure 2).

EIS will collect two soil samples from depths between 0.0-1.0 feet bgs from two discrete locations on the building pad, BP-1 and BP-2 (Figure 2).

If necessary, soil samples will be collected with the assistance of the backhoe bucket. All soil samples will be placed into clean 2-inch diameter by 6-inch long stainless steel sleeves. The stainless steel sleeves will be sealed with Teflon sheets and plastic caps, labeled, logged onto a chain of custody document, and placed into a chilled ice chest for transport to a California-certified analytical laboratory.

All soil samples collected from the loading dock, storage container, and building pad areas will be analyzed by the following methods:

- EPA Method 8015M for TPH-d and TPH-o
- EPA Method 6010B for Title 22 Metals

Sampling in the Vicinity of Former Lead-Acid Batteries

EIS will collect eight soil samples from depths of 0.0-0.5 feet bgs from the vicinity of the former lead-acid battery storage pallet reported to be near former trailer number two in 2003 inspection

reports from DTSC and LPFD. The eight samples will be arranged in a grid pattern over an area twenty feet long and ten feet wide in the approximate location of the former pallet, LB-1 through LB-8 (Figure 2). The soil samples will be placed into clean 2-inch diameter by 6-inch long stainless steel sleeves. The stainless steel sleeves will be sealed with Teflon sheets and plastic caps, labeled, logged onto a chain of custody document, and placed into a chilled ice chest for transport to a California-certified analytical laboratory.

The soil samples will be analyzed by EPA Method 6010B for lead.

Water Supply Well Sampling and Repair

EIS will collect a water sample, WW-1, from the water well in the northeastern corner of the property (Figure 2). If well design information can be obtained, then a low-flow purge and sampling technique will be used for sampling the well according to ASTM Standard D6771-02. Otherwise standard sampling methods of purging at least three casing volumes from the well prior to collecting the groundwater sample will be used. After purging the well, EIS will collect the water sample and seal it within EPA-approved containers provided by the analytical laboratory. The water sample will be labeled, logged onto a chain-of-custody form, and transported on ice to a California-certified analytical laboratory.

The water sample will be analyzed by the following methods:

- EPA Method 8015M for TPH-d and TPH-o,
- EPA Method 8260B for VOCs, chlorinated solvents, fuel oxygenates, EDB, DCA, and TPH-g, and
- EPA Method E200.8 for Title 22 Metals.

In addition to collecting a water sample from the well, EIS will direct a licensed contractor to repair the well according to Zone 7 Water Agency requirements.

Soil Borings

EIS will contract with a C-57 licensed contractor to install six soil borings, B-1 through B-6, to depths 5 feet below first-encountered groundwater using truck-mounted Geoprobe™ direct-push technology. Soil cores will be obtained from each borehole using a 4-foot long Geoprobe™ Macro-Core sampler fitted with acetate liners. After each sample drive, the sampler will be removed from the borehole, the acetate liner removed, and the sampler decontaminated by washing it using non-phosphate detergent and triple-rinsing it before fitting it with a new acetate liner. The sampler will then be inserted back into the borehole and hydraulically pushed through the next sample interval.

The soil encountered in each borehole will be logged using the Unified Soil Classification System (USCS) as a guide, and for relative moisture content, odor, and other observable characteristics. Soil encountered in the boreholes will also be monitored for the presence of VOCs using a PID.

Three soil borings will be placed so as to determine whether the former UST or the ASTs have impacted the groundwater at the site; one soil boring will be located near the former UST and

associated facilities, one will be located near AST (T-3), and one will be located between AST (T-1) and AST (T-2). The locations of these borings, B-1 through B-3, are shown on Figure 2. For these borings, if there is no evidence of contamination in either field observations or according to PID data, three soil samples will be collected for analysis: one sample from five feet bgs, one sample from between ten and twenty feet bgs (with the exact depth to be determined in the field based on soil conditions, lithologic changes, and other factors), and one sample from the capillary fringe. If evidence of soil contamination is observed in the soil, soil samples will be collected at depth intervals that EIS field personnel determine to be necessary for the most accurate characterization of the impacted area.

Three soil borings will be placed along the southwestern property boundary, along McGraw Avenue, with one of the borings in the southwestern corner of the property. These three borings, B-4 through B-6 (Figure 2), will be logged and screened with a PID, but soil samples will not be collected unless field observations or PID data indicate that the soil may be contaminated. If soil contaminated is suspected, EIS field personnel will collect soil samples at depth intervals necessary for accurate identification and characterization of the potentially impacted soil.

For all six of the soil borings, grab groundwater samples will be collected either by installing temporary well screens or using a Hydropunch^{TM} device. The grab groundwater samples will be sealed within EPA-approved containers provided by the analytical laboratory. The water samples will be labeled, logged onto a chain-of-custody form, and transported on ice to a California-certified analytical laboratory.

The soil samples collected from the borings will be analyzed by the following methods:

- EPA Method 8015M for TPH-d and for TPH-o,
- EPA Method 8260B for VOCs, including TPH-g, DCA, EDB), and fuel oxygenates including MTBE, and
- EPA Method 6010B for lead.

The grab groundwater samples will be analyzed by the following methods:

- EPA Method 8015M for TPH-d and TPH-o,
- EPA Method 8260B for VOCs, chlorinated solvents, fuel oxygenates, EDB, DCA, and TPH-g, and
- EPA Method E200.8 for Title 22 Metals.

All soil borings will be backfilled to grade with neat cement grout.

Laboratory Analyses

A summary of the proposed soil samples and the associated analyses is shown in Table 2. All water samples will be analyzed by EPA Method 8015M for TPH-d and TPH-o; EPA Method 8260B for VOCs, chlorinated solvents, fuel oxygenates, EDB, DCA, and TPH-g; and EPA Method E200.8 for Title 22 Metals.

REPORT

A report of the activities described in this workplan will be prepared following receipt of all laboratory results. The report will include a description of all work performed, site and vicinity maps showing sampling locations, tabulation of all soil analytical data (with sampling depths clearly indicated), boring logs, laboratory analytical sheets, field sampling and laboratory QA/QC procedures, additional information requested by the regulatory agencies, and all other findings and recommendations.

SCHEDULE

Upon receipt of the approved workplan and permits EIS will be prepared to initiate the field activities described in this workplan. We anticipate the field portion of this work plan to require two weeks. Normal laboratory turn-around is seven working days. The technical report will be prepared and submitted within two weeks of receipt of the laboratory results.

Please call if you have any questions regarding the proposed work plan and schedule.

Sincerely,

Environmental Investigation Services, Inc.

Jennifer Morris
Staff Geologist

Allen Waldman, P.G. #6323
Project Geologist

Attachments:

Table 1
Figure 1 – Site Location Map
Figure 2 – Site Plan
Attachment A – *Work Plan to Remove the Three Remaining Storage Tanks*
Attachment B – Site-Specific Health and Safety Plan

Table 1
Summary of Proposed Soil Samples and Associated Analyses
461 McGraw Avenue
Livermore, California

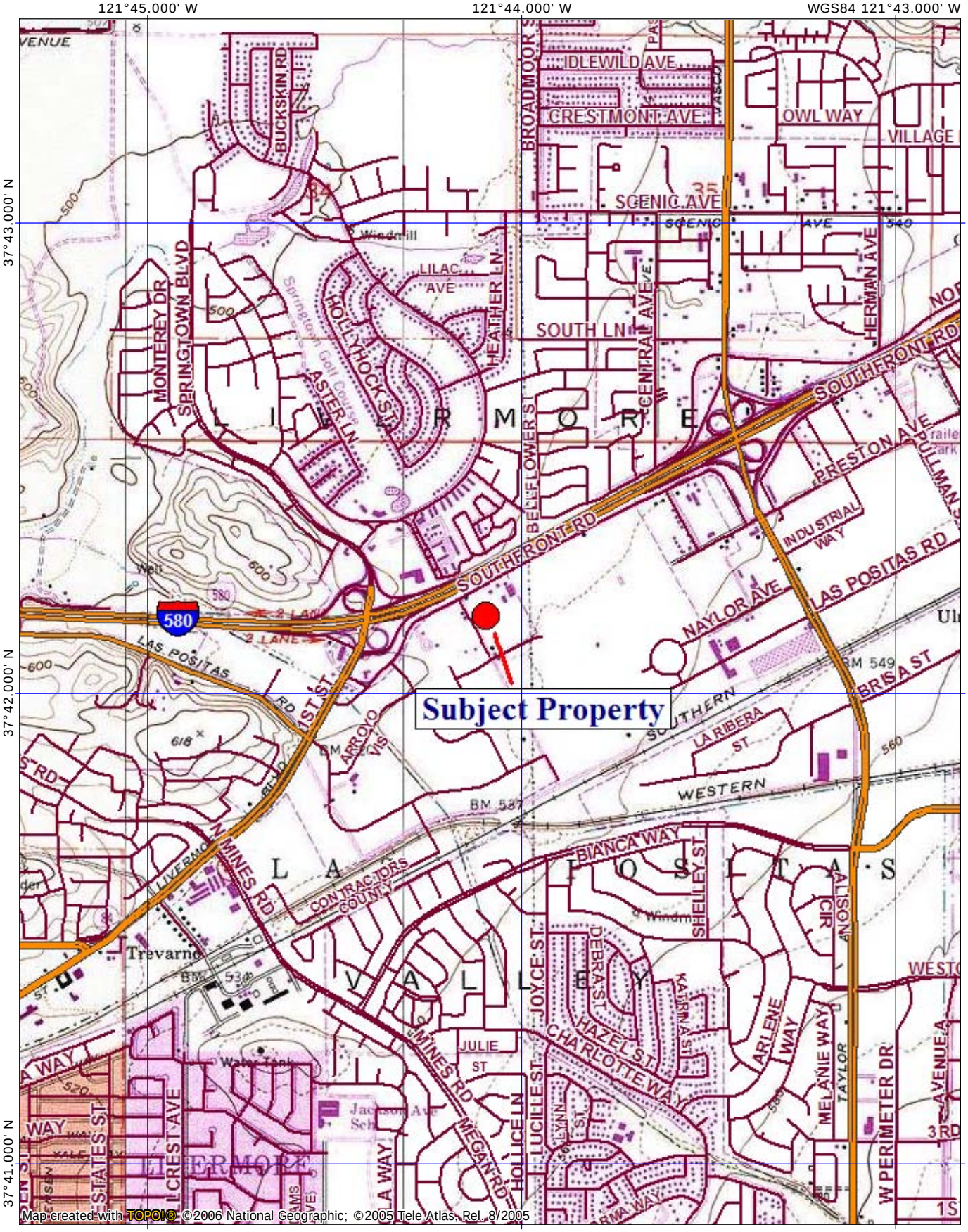
Proposed Sample Location	Proposed Sample Depth (feet)	Method and Analytes					
		8015M	8260B	6010B	6010B	8270C	8081A
		TPH-d, TPH-o	VOCs, TPH-g, fuel oxygenates (MTBE), EDB, DCA	Title 22 Metals	Lead Only	SVOCs	PCBs
CS-1		X	X		X		
CS-2		X	X		X		
CS-3		X	X		X		
CS-4		X	X		X		
CS-5		X	X		X		
CS-6		X	X		X		
T-1-1	3	X	X	X		X	X
T-1-2	3	X	X	X		X	X
T-2-1	3	X	X	X		X	X
T-3-1	3	X	X	X		X	X
T-3-2	3	X	X	X		X	X
T-4-1	3	X	X	X		X	X
T-4-2	3	X	X	X		X	X
DO-1	3	X	X	X		X	X
DO-2	3	X	X	X		X	X
DO-3	3	X	X	X		X	X
DO-4	3	X	X	X		X	X
DO-5	3	X	X	X		X	X
DO-6	3	X	X	X		X	X
DO-7	3	X	X	X		X	X
LD-1	0.0-0.5	X		X			
LD-2	0.0-0.5	X		X			
LD-3	0.0-0.5	X		X			
LD-4	0.0-0.5	X		X			
LD-5	2.0-2.5	X		X			
LD-6	2.0-2.5	X		X			
LD-7	2.0-2.5	X		X			
LD-8	2.0-2.5	X		X			
SC-1	0.0-1.0	X		X			
SC-2	0.0-1.0	X		X			
BP-1	0.0-1.0	X		X			
BP-2	0.0-1.0	X		X			
LB-1	0.0-0.5				X		
LB-2	0.0-0.5				X		
LB-3	0.0-0.5				X		
LB-4	0.0-0.5				X		
LB-5	0.0-0.5				X		
LB-6	0.0-0.5				X		
LB-7	0.0-0.5				X		
LB-8	0.0-0.5				X		
B-1	4.5-5.0	X	X	X			
B-1	from 10 to 20	X	X	X			
B-1	capillary fringe	X	X	X			
B-2	4.5-5.0	X	X	X			

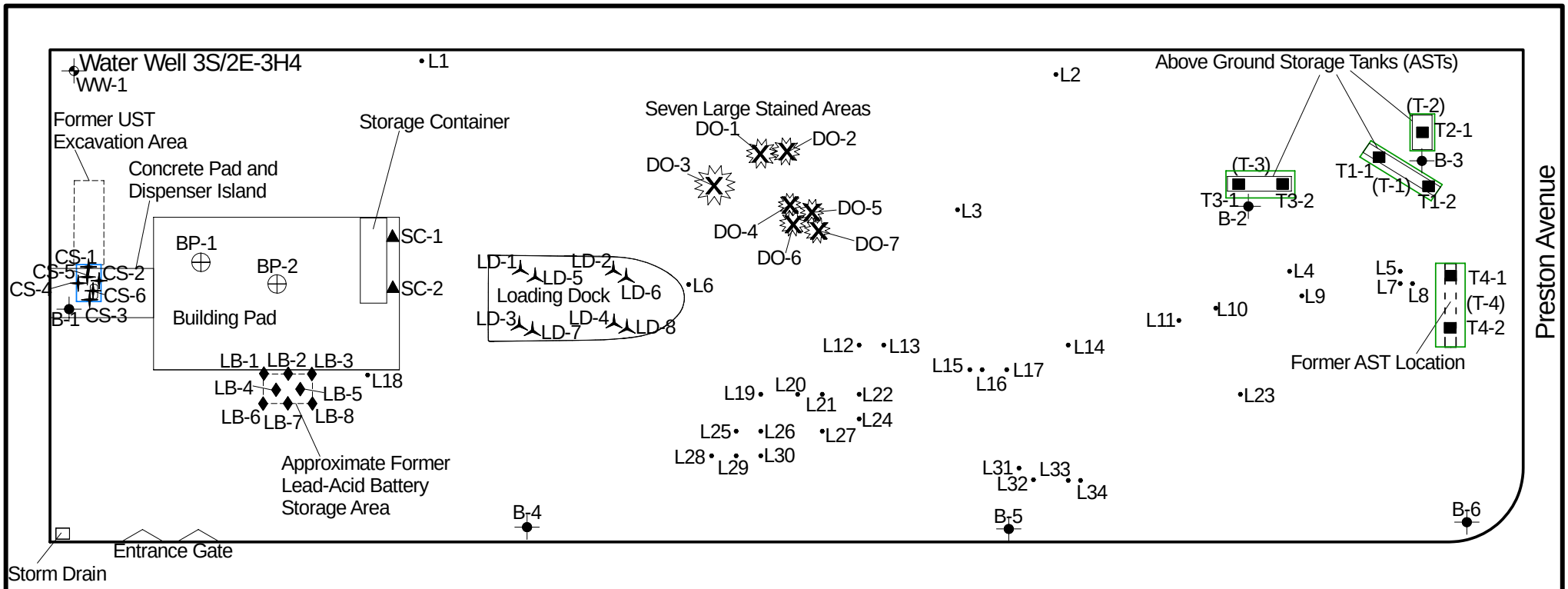
Table 1
Summary of Proposed Soil Samples and Associated Analyses
461 McGraw Avenue
Livermore, California

Proposed Sample Location	Proposed Sample Depth (feet)	Method and Analytes					
		8015M	8260B	6010B	6010B	8270C	8081A
		TPH-d, TPH-o	VOCs, TPH-g, fuel oxygenates (MTBE), EDB, DCA	Title 22 Metals	Lead Only	SVOCs	PCBs
B-2	from 10 to 20	X	X	X			
B-2	capillary fringe	X	X	X			
B-3	4.5-5.0	X	X	X			
B-3	from 10 to 20	X	X	X			
B-3	capillary fringe	X	X	X			

Notes:
TPH-d = Total Petroleum Hydrocarbons as diesel
TPH-o = Total Petroleum Hydrocarbons as oil
VOCs = Volatile Organic Compounds
TPH-g = Total Petroleum Hydrocarbons as gasoline
MTBE = Methyl tert-Butyl Ether
DBA = ethylene dibromide
DCA = 1,2-dichloroethane
SVOCs = Semi-Volatile Organic Compounds
PCBs = Polychlorinated Biphenyls

Figure 1 : Site Location Map





N

Scale:
1" = 60"
0 60

LEGEND

- Water Well
- WW-1 — Proposed Well Water Sample
- B-4 — Proposed Soil Boring
- CS-1 — Proposed UST Dispenser Island Confirmation Sample
- BP-2 — Proposed Building Pad Sample
- LB-1 — Proposed Former Lead-Acid Battery Storage Area Sample
- LD-4 — Proposed Loading Dock Sample
- Large Petroleum Hydrocarbon-Stained Area
- X — Proposed Sample for Petroleum Hydrocarbon-Stained Area
- L23 — Small Petroleum Hydrocarbon-Stained Area
- Proposed Excavation Boundaries For Former UST Facilities
- Proposed Excavation Boundaries For AST/Former AST Locations
- T2-1 — Proposed AST Excavation Confirmation Sample
- SC-2 — Proposed Storage Container Sample

Environmental Investigation Services, Inc.
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Phone: (408) 871-1470 Fax: (408) 871-1520

Project Number 717-2

May 17, 2007

Figure 2

Site Plan
461 McGraw Avenue
Livermore, California

ATTACHMENT A

Work Plan to Remove the Three Remaining Storage Tanks, 461 McGraw Avenue, Livermore, California. Applied Remedial Technologies, April 2, 2007.

Applied Remedial Technologies
Environmental | Radiological | Geotechnical | Construction Services

April 2, 2007

Mr. John Rigter
Livermore, Pleasanton Fire Department –Hazardous Materials Division
3560 Nevada Street
Pleasanton CA 94566

jrigter@lpfire.org

RE: WORK PLAN TO REMOVE THE THREE REMAINING STORAGE TANKS
461 MCGRAW AVENUE, LIVERMORE, CALIFORNIA 94550

Dear Mr. Rigter:

Applied Remedial Technologies, Inc (ART) is pleased to submit this workplan to remove the three remaining aboveground storage tanks (ASTs) at the Site including removing the residual solids and liquids from the ASTs and preparing them for offsite disposal. The purpose of this workplan is to describe the profiling and removal procedures to be undertaken in removing the remaining three ASTs from the site.

Macoy Resource Corporation (Macoy) will perform field activities for the decommissioning of the ASTs, and removal and proper disposal of any residual solids or liquids in the tanks. ART will provide field direction, oversight, profile sampling, and reporting to be submitted to the Livermore Pleasanton Fire Department (LPFD).

BACKGROUND

According to information gathered during the development of this workplan, there are three aboveground storage tanks located at the site. A summary of the storage tank information is presented below:

Tank Number	Tank T-1	Tank T-2	Tank T-3
Description	34 feet long by 54 inches diameter	Taller tank – appears to be a former UST. Not the UST removed in 1995	Truck tank trailer with wheels
Current Conditions	Solids in tank	Petroleum oil	empty
Potential Disposal Class and Disposal Methods	AST & any contents likely as Haz. See attached table and analytical profile data. This tank has several large holes in the top part of the tank, and has been open to the elements for some time. Once the contents are	AST & any contents as Haz.	AST & any contents as Haz.

Tank Number	Tank T-1	Tank T-2	Tank T-3
	removed, the tank will be dismantled and disposed off site.		
Size (gallons)	4,000	5,000	5,500
***TPH – total, interior sample**	17,000 ppm	380,000 ppm	Not sampled, due to being empty
***TPH-total, soil below**	Non detect	23,000 ppm	16,000 ppm
***TPH-d soil below**	NS	840 ppm	210 ppm
***PCBs and VOCs in sludge sample**	NS	ND	ND

* = Sampling Results as previously reported by the DTSC. More recent profiling analytical data for T-1 is included as an attachment.

The interior solids from Tank T-1 were sampled March 16, 2007. A discrete sample was obtained from each of the three sections of the tank. The sample was then composited in the laboratory. Based on the initial metals concentrations results for chromium and arsenic, additional testing was performed on the sample between March 26-29, 2007.

The solids sample for Tank T-1 was submitted to a California state-certified laboratory, and analyzed in accordance with procedures referenced in EPA SW 846 "Test Methods for Evaluating Solid Waste; Physical/Chemical Methods" as amended. Analysis included the following for waste oil or unknown oils:

- Total petroleum hydrocarbons as gasoline, diesel and motor oil (TPH-g, TPH-d and TPH-mo) using EPA Method 8015M,
- Aromatic Volatile Organic Compounds including BTEX and fuel oxygenates using EPA Method 8260,
- LUFT metals list by EPA Method 6000/7000 Series,
- Semivolatile organic compounds using EPA Method 8270c,
- Pesticides, herbicides, PCBs using EPA Method 8000 series,
- and pH.

A table summarizing the results is included as an attachment. Analytical data sheets and chain of custody record are included in the following attached table and laboratory data sheets.

Site Information

The site is located north east of the intersection of McGraw Avenue and Preston Road in Livermore, Alameda County, California. The nearest surface water is Arroyo Seco located approximately ½ mile south of the site. The Arroyo Seco flows to the northwest, and groundwater is anticipated to occur at depths of 10 to 15 feet below ground surface. There is a storm drain located on the northwestern corner of the Site. The attached Figure depicts the depicts the site layout and features of concern

At the present time the site is vacant, but was formerly used by Cal Mac Transportation as a truck storage and salvage yard.

SCOPE OF WORK

To address the above-mentioned issues, ART proposes to coordinate with Macoy who will prepare the storage tanks for offsite disposal, disposing of the residual solids or liquids, and offsite disposal of the storage tanks. The mitigation of subsurface issues is addressed under a separate workplan submitted to the Alameda County Department of Environmental Health (ACDEH).

TASK 1 – Pre-Field Activities

ART will conduct pre-field activities for the proposed sampling. These activities will include the development of a Health and Safety Plan (HASP). Additionally, ART will coordinate all workplan approvals and field inspections with the ACDEH and LPFD prior to initiating the field investigation.

TASK 2 – Site Work and Confirmation Sampling

The following describes the proposed plan of action:

Hazardous or Non-Hazardous Waste

1. Tanks as Hazardous Waste

Tanks to be removed and transported as hazardous waste will be rendered inert by placement of dry ice into the tanks at a ratio of not less than 20 pounds dry ice per 1,000 gallons of tank capacity. A tank may not be lifted until it has been demonstrated to the Fire Department representative that the atmosphere in the tank is less than 10% LEL or 5% oxygen. The ASTs and interior contents, if any, shall be manifested and transported to a licensed hazardous waste disposal site or a licensed treatment, storage, and disposal facility (TSDF) by a licensed hazardous waste transporter, subject to all applicable government regulations.

2. ASTs as Non-Hazardous Waste

In the event that the ASTs are not transported as hazardous waste, the ASTs to be removed and transported as non-hazardous waste must be first approved. A supplemental plan must be attached to this proposed plan demonstrating how the requirements of California Code of Regulations Title 22, Chapter 32 *Management of Tanks* Sections §67383.1 - §67383.5 will be satisfied. This supplemental plan must be reviewed and approved in advance of transport disposal by Livermore-Pleasanton Fire Department.

Tank Decommissioning

For the Tank removals the following will be conducted by Macoy;

- A properly calibrated and serviced Combustible Gas Indicator must be provided for determining LEL and/or oxygen concentrations. Prior to removing liquids or solids from the ASTs, oxygen and LEL measurements will be verified to be below the required 5% oxygen

and 10% LEL values. Only cold cutting on top of tanks with an atmosphere of less than 10% LEL or 5% oxygen will be approved.

- For each tank Macoy will remove the contents of any debris, solids and liquids from ASTs.
- Specifically, Macoy will remove the soil contents of AST Tank T-1 using a backhoe due to its condition and because the materials inside appear to be solid at this time. During this operation, the tank will be opened on site using the backhoe and the contents removed. Prior to this work, ART will profile these solids by collecting a sample to be submitted to the laboratory for analytical testing. Results of this sampling will be evaluated to determine the chemicals of concern in this tank and the appropriate disposal class. Prior to offsite disposal, ART and Macoy will obtain the approval of the LPFD staff oversight inspector to concur with the method of disposal and profile conditions.
- For Tank T-2 and T-3, the residual liquid contents will be pumped from the tank and collected for disposal at an approved off site facility. Based on the field assessment of the liquid in the tank, it is assumed that the contents can be transported as used petroleum motor oil. Once the oil is removed from the tank, its contents will be profiled prior to disposal. It is assumed that tanks T-2 and T-3 will be transported under a hazardous waste manifest.
- For each tank Macoy will apply at the rate of 20 pounds of dry ice per 1,000 gallons of capacity to ensure that any volatile vapors are purged prior to transportation once soil and liquids have been removed from the tanks
- The ASTs will be loaded and transported to Ecology Control Industries facility in Richmond, California. The tanks will be loaded onto a flat bed truck permitted to transport ASTs as hazardous waste.

TASK 3 – Report Results

Upon completion of the work, ART will prepare a technical report including tabulated analytical results of the samples submitted for quantitative chemical analysis, and figures depicting the site location and the sampling locations to be submitted to the agency for closure. The reports will include all manifests, transportation documents for the ASTs and interior waste contents.

This report will be submitted to the LPFD for review and comment.

CLOSING

If you have any questions regarding this proposed workplan, please do not hesitate to contact the undersigned at (925) 858-2544

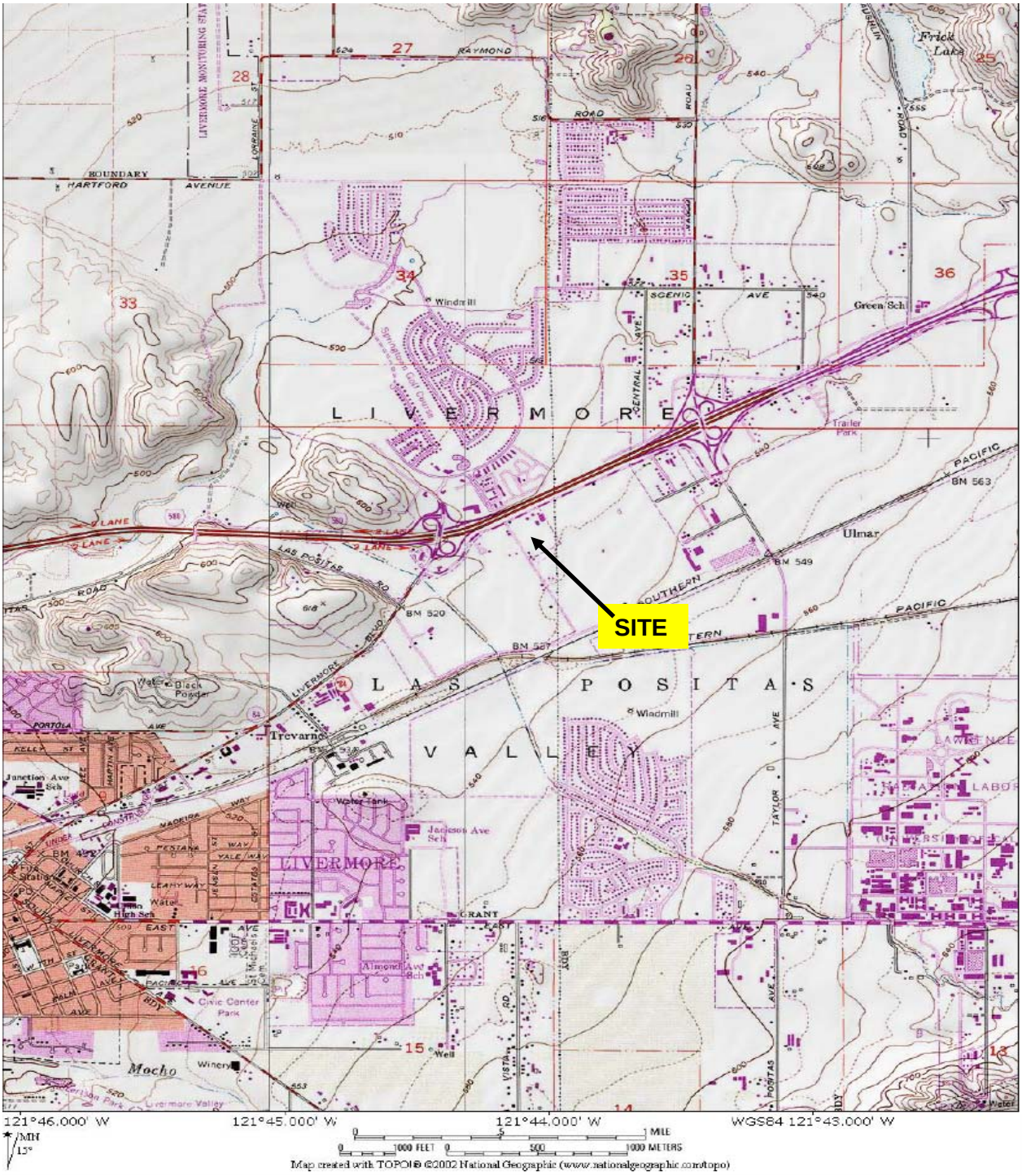
Sincerely,

Mark Williams
Staff Field Manager

Warren B. Chamberlain PE
Staff Project Manager

Cc: Administrator Whitney Newland Estate of Crandal Mackey C/O Weldon & Hass, 205 E. Anapamu Street, Santa Barbara, CA 93101

Mr. Jerry Wickham, Alameda County Department of Environmental Health 1131 Harbor Bay Parkway. Alameda, CA. 94502-6577



SOURCE: USGS SAN FRANCISCO SOUTH QUADRANGLE, CALIFORNIA (7.5 MINUTE SERIES) TOPOGRAPHIC MAP. OBTAINED FROM THE 2002 NATIONAL GEOGRAPHIC TOPO! SOFTWARE.

Applied Remedial Technologies

Environmental | Radiological | Geotechnical | Construction Services

SITE VICINITY MAP

461 McGraw Avenue
Livermore, CA

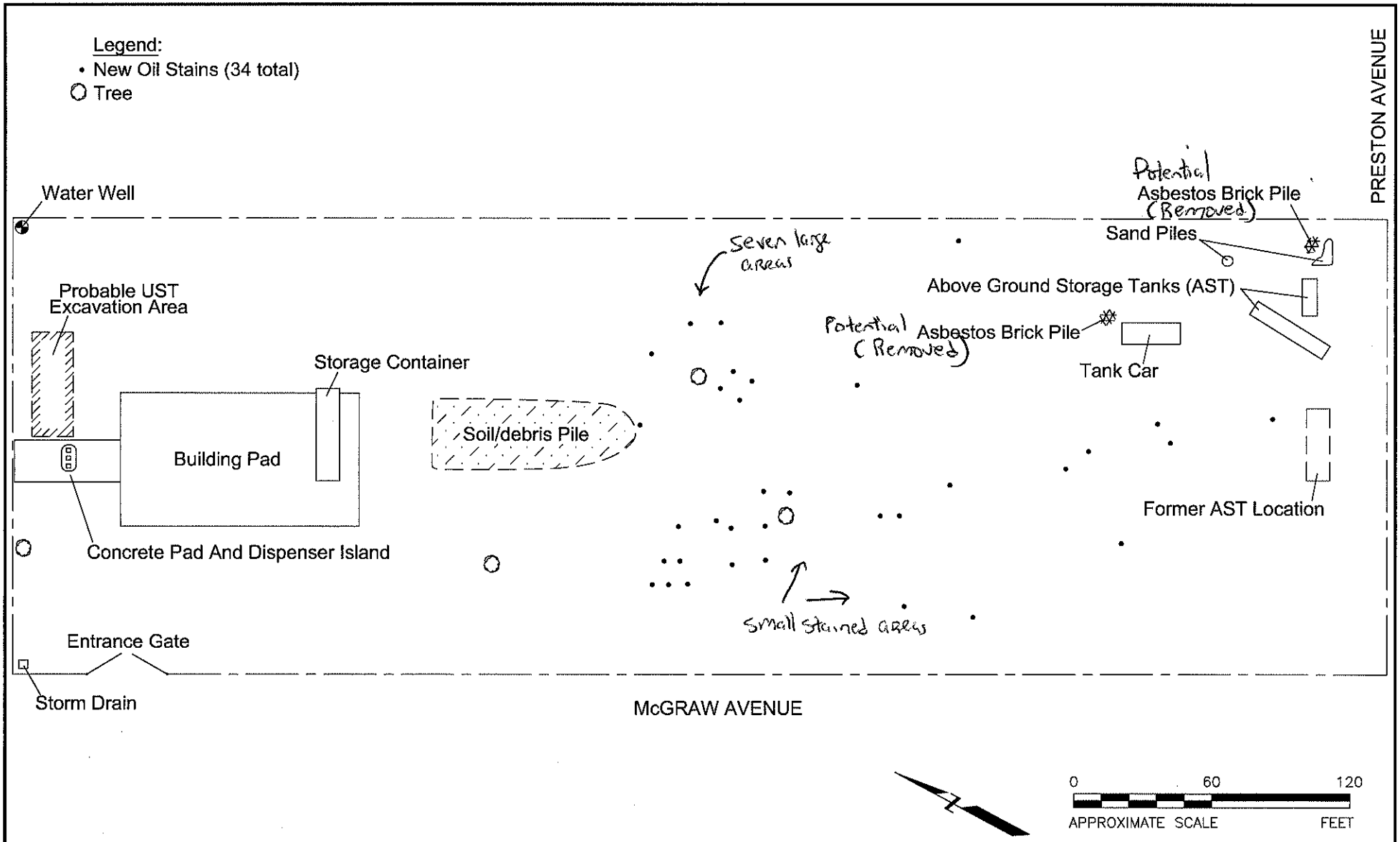


FIGURE 2
SITE PLAN

...

461 MCGRAW AVENUE
LIVERMORE, CALIFORNIA

...

Date:
01/04/07

Chapter 32. Management of Tanks

§67383.1. Applicability.

(a) This chapter establishes minimum standards for the management of all underground and aboveground tank systems that held hazardous waste or hazardous materials, and are to be disposed, reclaimed or closed in place, except as provided in subsections (b), (c) and (d) of this section.

(b) The requirements of this chapter do not apply to tank systems regulated under a hazardous waste facility permit, other than a permit by rule, or to tank systems regulated under a grant of interim status.

(c) The requirements of this chapter do not apply to a tank system or any portion thereof that meets the definition of "scrap metal" in section 66260.10 and that is excluded from regulation pursuant to section 66261.6(a)(3)(B).

(d) The requirements of this chapter do not apply to any tank that is not a hazardous waste pursuant to chapter 11 of this division.

NOTE: Authority cited: Sections 25141, 25150, 25159 and 58012, Health and Safety Code. Reference: Section 25150, Health and Safety Code.

HISTORY

1. New chapter 32 (sections 67383.1-67383.5) and section filed 8-6-98; operative 8-6-98 pursuant to Government Code section 11343.4(d) (Register 98, No. 32).

§67383.2. Definitions.

When used in this chapter, the following terms have the meanings given below:

"Closed in place" means left in place and closed without being removed.

"Disposal" has the same meaning as in section 66260.10, except that the term disposal does not include tanks that are closed in place pursuant to the requirements of this chapter or title 23, California Code of Regulations.

“LIA” means the “local implementing agency” or local agency responsible for the enforcement and regulatory oversight of hazardous material storage tanks pursuant to section 25283 of the Health and Safety Code.

"Tank" means a stationary device, designed to contain an accumulation of hazardous waste or hazardous material, which is constructed primarily of nonearthen materials (e.g., wood, concrete, steel, plastic) that provides structural support.

"Tank system" means a hazardous waste or a hazardous material transfer, storage or treatment tank and its associated ancillary equipment and containment system.

NOTE: Authority cited: Sections 25141, 25150, 25159 and 58012, Health and Safety Code. Reference: Sections 25117, 25124 and 25283, Health and Safety Code.

HISTORY

1. New Section filed 8-6-98; operative 8-6-98 pursuant to Government Code section 11343.4(d) (Register 98, No. 32).

§67383.3. General Standards for Tank Systems.

(a) Except as provided in subsections (b), (c), and (d) of section 67383.1, any tank system that is identified as a hazardous waste pursuant to chapter 11 of this division, and that is destined to be disposed, reclaimed or closed in place shall be exempt from regulation under this division if the tank system is managed in accordance with all of the requirements of this section:

(1) Prior to initiating cleaning, cutting, dismantling, or excavation of a tank system, the owner or operator of the tank system shall notify the appropriate CUPA in writing of the information specified below. If there is no CUPA, then the owner or operator shall notify the LIA and send a copy to the authorized agency. However, information already provided to the CUPA, authorized agency or LIA pursuant to compliance with another statutory or regulatory requirement need not be resubmitted:

(A) The location of the tank system;

(B) The date(s) the tank system will be cleaned and/or excavated, or closed in place;

(C) A brief description of the tank system;

(D) The identification of the hazardous material or hazardous waste last held in the tank supported by:

1. A statement signed by the tank operator certifying the identity of the material or waste last stored or accumulated in the tank; or

2. If residuals remain in the tank in sufficient quantity to be collected and analyzed, a chemical analysis of the residual in the tank;

(E) The name and credentials of the individual who will provide certification pursuant to subsection (f), when applicable; and

(F) The intended disposition and destination of the tank system.

(b) Except as provided in subsection (c), any of the following procedures may be used for the onsite cleaning and closure of a tank system:

(1) American Petroleum Institute, Recommended Practice for the Closure of Underground Petroleum Storage Tanks, API Publication 1604, Third Edition, American Petroleum Institute, 1220 L Street, N.W., Washington, DC 20005, March 1996;

(2) American Petroleum Institute, Safe Entry and Cleaning of Petroleum Storage Tanks, API Publication 2015, American Petroleum Institute, 1220 L Street, N.W., Washington, DC 20005, May 1994;

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(3) National Fire Protection Association, Standard Procedures for Cleaning or Safeguarding Small Tanks and Containers Without Entry, NFPA 327, 1993 Edition;

(4) Procedures approved by the CUPA, authorized agency or LIA.

(c) Non-sparking, cold-cutting tools or a non-sparking cold-cutting process shall be used if the tank held a flammable or combustible material, and the tank, piping and/or appurtenances are to be cut onsite, unless an alternate method is approved by the CUPA, authorized agency or LIA.

(d) All sludge, scale, debris, residue, and rinseate generated during the tank closure process shall be managed in accordance with all applicable requirements of this division.

(e) At the completion of the cleaning process the tank system shall meet all of the following:

(1) All piping and appurtenances shall be free of product, sludge, rinseate and debris to the extent that no material can be poured or drained from them when held in any orientation (e.g., tilted, inverted, etc).

(2) The tank, upon inspection, shall be visually free of product, sludge, scale (thin, flaky residual of tank contents), rinseate and debris, except that residual staining caused by soil and waste consisting of light shadows, slight streaks, or minor discolorations, and soil and waste in cracks, crevices, and pits may be present.

(A) The inspection to verify that the requirements of subsection (e)(2) are met shall be conducted

1. through an existing manhole in the tank or one newly installed in the tank, or through holes cut into the tank wall in accordance with the requirements of this section so as to allow for visual inspection of the entire tank interior, without the need to enter the tank physically or

2. if the tank is not cut, following cleaning, by using a light with an internal inspection lamp approved for Class I, Division I locations, a mirror to reflect light into the container, or other appropriate device upon approval of the CUPA, authorized agency or LIA.

(B) If the tank held a hazardous material or hazardous waste that had the potential to generate flammable vapors, and the tank was cut onsite, a combustible gas indicator (CGI) which is properly calibrated shall be used to measure the concentration of flammable vapor at the top, center and bottom of the cut tank. The concentration of flammable vapor shall be zero percent of the Lower Explosive Limit (LEL) for the material that was contained in the tank; and the oxygen concentration shall be the same as that of the ambient air, approximately 20.8%;

(C) If the tank held a hazardous material or hazardous waste that had the potential to generate flammable vapors, is intended to be transported, and was not cut onsite, the tank shall be cleaned and inerted using one of the methods listed in subsection (b), inspected pursuant to subsection (e)(2)(A)2 and transported in accordance with the provisions of section 67383.5. (The tank shall be inspected to ensure that it meets the conditions of paragraph (2) of this subsection before it is inerted.)

(D) If a tank has been cut onsite, but it is not to be transported offsite or closed in place, it shall be cleaned using one of the methods specified in subsection (b) and inspected pursuant to subsection (e)(2)(A)1.

(f) The cleaned tank system shall be certified as meeting the standards of paragraphs (e)(1) and (2) of this section by the CUPA, authorized agency or LIA, or one of the following professionals, certified or registered in California:

(1) certified industrial hygienist;

(2) certified safety professional;

(3) certified marine chemist;

(4) registered environmental health specialist;

(5) registered professional engineer; or

(6) registered environmental assessor, Class II, as defined in section 25570.3, Health and Safety Code; or

(7) a contractor properly licensed by the Contractor's State License Board (CSLB) to contract for the removal of underground storage tanks and who holds a Hazardous Substance Removal Certification issued by the CSLB.

(g) The certificate issued pursuant to subsection (f) of this section shall be submitted on the Hazardous Waste Tank Closure Certification page of the Unified Program Consolidated Form (x/99)), Appendix E of Title 27 CCR, or an alternative version or a computer generated facsimile as allowed pursuant to Title 27, CCR, Sections 15610 and 15620. The submittal must include the Business Activities Page, and the Business Owner/Operator pages of the Unified Program Consolidated Form (x/99)). The certificate shall include the following:

(1) the tank owner's name and address;

(2) the address of tank closure site;

(3) the tank's State identification number, if applicable;

(4) the statement that the tank is visually free of product, sludge, scale, rinseate and debris;

(5) if applicable, the tank's interior atmosphere readings for concentrations of flammable vapor and oxygen;

(6) the name, professional classification, registration or certification number if applicable, signature, address and phone number of the certifying person; and

(7) the date and time of certification.

(h) Copies of the certificate shall be provided to the following:

(1) CUPA, authorized agency or LIA;

(2) owner and/or operator of the tank system;

(3) the contractor responsible for the removal of the tank system; and

(4) the recycling or disposal facility to which the tank is transported.

(i) A copy of the certificate shall accompany the tank to the recycling/disposal facility.

(j) A person who treats a tank by employing physical methods to satisfy the standard in subsection (e)(2) is authorized to perform such treatment for purposes of Health and Safety Code Section 25201.

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NOTE: Authority cited: Sections 25141, 25150, 25159 and 58012, Health and Safety Code. Reference: Sections 25117, 25124 and 25201, Health and Safety Code.

HISTORY

1. New section filed 8-6-98; operative 8-6-98 pursuant to Government Code section 11343.4(d) (Register 98, No. 32).
2. Amendment of subsections (a)(1), (b)(4), (c), (e)(2)(A)2., (g) and (h)(1) filed 1-8-99 as an emergency; operative 1-8-99 (Register 99, No. 2). A Certificate of Compliance must be transmitted to OAL by 5-10-99 or emergency language will be repealed by operation of law on the following day.
3. Amendment of subsections (a)(1), (b)(4), (c), (e)(2)(A)2., (g) and (h)(1) refiled 5-7-99 as an emergency; operative 5-7-99 (Register 99, No. 19). A Certificate of Compliance must be transmitted to OAL by 9-7-99 or emergency language will be repealed by operation of law on the following day.
4. Amendment of subsections (a)(1), (b)(4), (c), (e)(2)(A)2., (g) and (h)(1) refiled 9-3-99 as an emergency; operative 9-3-99 (Register 99, No. 36). A Certificate of Compliance must be transmitted to OAL by 1-3-2000 or emergency language will be repealed by operation of law on the following day.
5. Amendment of subsections (a)(1), (b)(4), (c), (e)(2)(A)2., (g) and (h)(1) refiled 12-29-99 as an emergency; operative 1-3-2000 (Register 99, No. 53). A Certificate of Compliance must be transmitted to OAL by 5-2-2000 or emergency language will be repealed by operation of law on the following day.
6. Certificate of Compliance as to 12-29-99 order transmitted to OAL 2-29-2000 and filed 4-11-2000 (Register 2000, No. 15).

§67383.4. Management Procedure to Close Hazardous Material or Hazardous Waste Tank Systems in Place.

The owner or operator of a tank system to be closed in place shall do all of the following:

(a) Comply with Section 25298 of the Health and Safety Code, if applicable.

(b) Obtain CUPA, authorized agency or LIA approval to close the tank system pursuant to Title 23, CCR, section 2672(c), if applicable.

(c) Clean the tank and comply with all of the requirements of section 67383.3.

(d) After the provisions of section 67383.3 are met, fill the tank with a solid inert material.

NOTE: Authority cited: Sections 25141, 25150, 25159 and 58012, Health and Safety Code. Reference: Sections 25117 and 25124, Health and Safety Code.

HISTORY

1. New section filed 8-6-98; operative 8-6-98 pursuant to Government Code section 11343.4(d) (Register 98, No. 32).
2. Amendment of subsection (b) filed 1-8-99 as an emergency; operative 1-8-99 (Register 99, No. 2). A Certificate of Compliance must be transmitted to OAL by 5-10-99 or emergency language will be repealed by operation of law on the following day.
3. Amendment of subsection (b) refiled 5-7-99 as an emergency; operative 5-7-99 (Register 99, No. 19). A Certificate of Compliance must be transmitted to OAL by 9-7-99 or emergency language will be repealed by operation of law on the following day.
4. Amendment of subsection (b) refiled 9-3-99 as an emergency; operative 9-3-99 (Register 99, No. 36). A Certificate of Compliance must be transmitted to OAL by 1-3-2000 or emergency language will be repealed by operation of law on the following day.
5. Amendment of subsection (b) refiled 12-29-99 as an emergency; operative 1-3-2000 (Register 99, No. 53). A Certificate of Compliance must be transmitted to OAL by 5-2-2000 or emergency language will be repealed by operation of law on the following day.
6. Certificate of Compliance as to 12-29-99 order transmitted to OAL 2-29-2000 and filed 4-11-2000 (Register 2000, No. 15).

§67383.5. Transportation of Uncut Tanks that Contained Hazardous Material or Hazardous Waste.

Any tank intended to be transported, that is not cut onsite, has been cleaned pursuant to the provisions of section 67383.3, and has the potential to generate flammable vapors, shall be subject to the following requirements for transportation:

(a) The tank's interior atmosphere shall be inerted with carbon dioxide or with another inert gas approved by the CUPA, authorized agency or LIA to levels sufficient to preclude explosion or to lower levels as required by the local agency;

(1) If the tank will be inerted with carbon dioxide, dry ice may be used at a minimum of 1 pound of dry ice per 45 gallons of tank volume (22.2 pounds per 1000 gallons of tank capacity) or bottled CO_2 may be used to inert the tank until the tank meets the required levels.

(2) All LEL readings shall be taken with a CGI that has been properly calibrated. The readings shall be taken at the top, center and bottom of the tank before the tank is loaded onto the transport vehicle.

(b) All openings in the tank shall be plugged, except for a 1/8 inch vent.

(c) All cracks, holes, or other damaged sections shall be plugged. If holes or cracks in the tank walls, piping or appurtenances could allow the release of hazardous constituents, the tank, piping and/or appurtenances shall be wrapped in plastic sheeting or another appropriate barrier compatible with and capable of containing the release. If the barrier becomes contaminated during use, it shall be managed in accordance with the applicable requirements of this division.

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NOTE: Authority cited: Sections 25150, 25159 and 58012, Health and Safety Code. Reference: Section 25150, Health and Safety Code.

HISTORY

1. New section and new form filed 8-6-98; operative 8-6-98 pursuant to Government Code section 11343.4(d) (Register 98, No. 32).
2. Amendment of subsection (a) filed 1-8-99 as an emergency; operative 1-8-99 (Register 99, No. 2). A Certificate of Compliance must be transmitted to OAL by 5-10-99 or emergency language will be repealed by operation of law on the following day.
3. Amendment of subsection (a) refiled 5-7-99 as an emergency; operative 5-7-99 (Register 99, No. 19). A Certificate of Compliance must be transmitted to OAL by 9-7-99 or emergency language will be repealed by operation of law on the following day.
4. Amendment of subsection (a) refiled 9-3-99 as an emergency; operative 9-3-99 (Register 99, No. 36). A Certificate of Compliance must be transmitted to OAL by 1-3-2000 or emergency language will be repealed by operation of law on the following day.
5. Amendment of subsection (a) refiled 12-29-99 as an emergency; operative 1-3-2000 (Register 99, No. 53). A Certificate of Compliance must be transmitted to OAL by 5-2-2000 or emergency language will be repealed by operation of law on the following day.
6. Certificate of Compliance as to 12-29-99 order transmitted to OAL 2-29-2000 and filed 4-11-2000 (Register 2000, No. 15).

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Applied Remedial Technologies
Environmental / Radiological / Geotechnical / Construction Services

CERTIFICATION PAGE

Proposed Work plan to Conduct Field Oversight and Confirmation Soil Sampling for the Excavation of Soils at the Former Diesel UST Dispenser Island, Below the Former Storage Tanks, and at the Recent Diesel Spill Areas

461 McGraw Avenue, Livermore, California 94550

I declare that to the best of my knowledge and belief that the statements and information provided above are correct and true. I understand that information, in addition to that provided above, may be needed in order to obtain approval from the Department of Environmental Health and that no work is to begin on this project until this closure plan has been approved. I understand that any changes in design, materials, or equipment will void this plan if prior approval is not obtained. I understand that all work performed during this project will be done in compliance with all applicable OSHA (Occupational Safety and Health Administration) requirements concerning personnel health and safety. I understand that site and worker safety are solely the responsibility of the property owner or his agent and that this responsibility is not shared nor assumed by the County of Alameda.

Once I have received my stamped, accepted closure plan, I will contact the project Hazardous Materials Specialist at least three working days in advance of site work to schedule the required inspections.

CONTRACTOR INFORMATION

Name: Mr. Apri S. Ghuman Title: Principal Engineer

Signature: _____ Date 03/28/07

This Proposed Workplan was prepared by:

Name: Mark Williams Title; Staff Field Manager (ART)

Signature: _____ Date:: 3/14/07

Name: Warren B. Chamberlain Title: Staff Project Manager

Signature: _____ Date: 3/14/07

[X] PROPERTY OWNER OR [ ] MOST RECENT TANK OWNER (Check one)

Name of Business: Estate of Crandal Mackey C/O Weldon & Hass

Name of Individual: Administrator Whitney Newland

Signature: _____ Date: 3/16/07

State Of California

CONTRACTORS STATE LICENSE BOARD

ACTIVE LICENSE

Consumer Affairs

License Number **720286** Entity CORP

Business Name MACOY ENVIRONMENTAL RESOURCES INCORPORATED DBA MACOY RESOURCES

Classification(s) A HAZ ASB

Expiration Date 03/31/2008

ACORD CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY): 03/13/2007

PRODUCER (213) 787-1100
Frenkel & Co., Inc.
725 South Figueroa St.,
Suite 2200
Los Angeles CA 90017-

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW.

INSURED
Macoy Resource Corp.

3200 E. Frontera St.
Anaheim CA 92806-

INSURERS AFFORDING COVERAGE	NAIC #
INSURER A: American International	
INSURER B: Lexington Insurance Co.	
INSURER C: Commerce & Industry	
INSURER D: XL Insurance	
INSURER E:	

COVERAGES

THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. AGGREGATE LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

INSR LTR	ADDL INSRD	TYPE OF INSURANCE	POLICY NUMBER	POLICY EFFECTIVE DATE (MM/DD/YY)	POLICY EXPIRATION DATE (MM/DD/YY)	LIMITS	
A		GENERAL LIABILITY X COMMERCIAL GENERAL LIABILITY CLAIMS MADE X OCCUR GEN'L AGGREGATE LIMIT APPLIES PER: POLICY PRO-JECT X LOC	BG1485256	09/06/2006 / / / /	09/06/2007 / / / /	EACH OCCURRENCE DAMAGE TO RENTED PREMISES (Ea occurrence) MED EXP (Any one person) PERSONAL & ADV INJURY GENERAL AGGREGATE PRODUCTS - COMP/OP AGG Deductible	$ 1,000,000 $ 300,000 $ 10,000 $ 1,000,000 $ 2,000,000 $ 1,000,000 5,000
C		AUTOMOBILE LIABILITY X ANY AUTO ALL OWNED AUTOS SCHEDULED AUTOS HIRED AUTOS NON-OWNED AUTOS	7567069	09/06/2006 / / / / / /	09/06/2007 / / / / / /	COMBINED SINGLE LIMIT (Ea accident) BODILY INJURY (Per person) BODILY INJURY (Per accident) PROPERTY DAMAGE (Per accident)	$ 1,000,000 $ $ $
		GARAGE LIABILITY ANY AUTO		/ /	/ /	AUTO ONLY - EA ACCIDENT OTHER THAN AUTO ONLY: EA ACC AGG	$ $ $
A		EXCESS/UMBRELLA LIABILITY X OCCUR CLAIMS MADE DEDUCTIBLE X RETENTION $ 10,000	ZGU1489288	09/06/2006 / /	09/06/2007 / /	EACH OCCURRENCE AGGREGATE	$ 5,000,000 $ 5,000,000 $ $ $
D		WORKERS COMPENSATION AND EMPLOYERS' LIABILITY ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? If yes, describe under SPECIAL PROVISIONS below	RWD500005401 $250,000 deductible	02/05/2007 / /	02/05/2008 / /	X WC STATU-TORY LIMITS OTH-ER E.L. EACH ACCIDENT E.L. DISEASE - EA EMPLOYEE E.L. DISEASE - POLICY LIMIT	$ 1,000,000 $ 1,000,000 $ 1,000,000
		OTHER		/ / / / / /	/ / / / / /		

DESCRIPTION OF OPERATIONS/LOCATIONS/VEHICLES/EXCLUSIONS ADDED BY ENDORSEMENT/SPECIAL PROVISIONS

Certificate Holder is Additional Insured for General Liability as respects All Operations performed for them by the Named Insured. *Except 10 days notice for non-payment of premium.

CERTIFICATE HOLDER

( )

SPECIMEN

CANCELLATION

SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, THE ISSUING INSURER WILL ENDEAVOR TO MAIL 30* DAYS WRITTEN NOTICE TO THE CERTIFICATE HOLDER NAMED TO THE LEFT, BUT FAILURE TO DO SO SHALL IMPOSE NO OBLIGATION OR LIABILITY OF ANY KIND UPON THE INSURER, ITS AGENTS OR REPRESENTATIVES.

AUTHORIZED REPRESENTATIVE

ACORD™ CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY) 3/28/2007

PRODUCER
ED JORDAN INS. BRKG.
4900 Hopyard Rd., #100
Pleasanton CA 94588
510-357-2532

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW.

INSURED
Applied Remedial Technologies, Inc.

1485 Bayshore Blvd., Suite 1
San Francisco, CA 94124
415-816-2134

INSURERS AFFORDING COVERAGE	NAIC#
INSURER A. Hudson Specialty Ins Co	
INSURER B:	
INSURER C:	
INSURER D:	
INSURER E:	

COVERAGES

THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. AGGREGATE LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

INSR LTR	ADD'L INSRD	TYPE OF INSURANCE	POLICY NUMBER	POLICY EFFECTIVE DATE (MM/DD/YY)	POLICY EXPIRATION DATE (MM/DD/YY)	LIMITS	
A		GENERAL LIABILITY X COMMERCIAL GENERAL LIABILITY [ ] CLAIMS MADE [X] OCCUR X Pollution GEN'L AGGREGATE LIMIT APPLIES PER: X POLICY [ ] PRO-JECT [ ] LOC	FEC6104648	11/18/06	11/18/07	EACH OCCURRENCE DAMAGE TO RENTED PREMISES (Ea occurence) MED EXP (Any one person) PERSONAL & ADV INJURY GENERAL AGGREGATE PRODUCTS - COMP/OP AGG	$ 2,000,000 $ 50,000 $ 5,000 $ 2,000,000 $ 2,000,000 $ 2,000,000
		AUTOMOBILE LIABILITY ANY AUTO ALL OWNED AUTOS SCHEDULED AUTOS HIRED AUTOS NON-OWNED AUTOS	NOT COVERED			COMBINED SINGLE LIMIT (Ea accident) BODILY INJURY (Per person) BODILY INJURY (Per accident) PROPERTY DAMAGE (Per accident)	$ $ $ $
		GARAGE LIABILITY ANY AUTO	NOT COVERED			AUTO ONLY - EA ACCIDENT OTHER THAN AUTO ONLY: EA ACC ACC	$ $ $
		EXCESS/UMBRELLA LIABILITY OCCUR [ ] CLAIMS MADE DEDUCTIBLE RETENTION $	NOT COVERED			EACH OCCURRENCE AGGREGATE	$ $
		WORKERS COMPENSATION AND EMPLOYERS' LIABILITY ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? If yes, describe under SPECIAL PROVISIONS below	NOT COVERED			[ ] WC STATU-TORY LIMITS [ ] OTH-ER E.L. EACH ACCIDENT E.L. DISEASE - EA EMPLOYEE E.L. DISEASE - POLICY LIMIT	$ $ $
A		OTHER Professional Liability	FEC6104648	11/18/06	11/18/07	$2,000,000	

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES / EXCLUSIONS ADDED BY ENDORSEMENT / SPECIAL PROVISIONS

This Certificate is for Evidence of Insurance only.

CERTIFICATE HOLDER

Applied Remedial Technologies, Inc.
1485 Baymore Blvd., Suite 1
San Francisco CA 94124

CANCELLATION

SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, THE ISSUING INSURER WILL ENDEAVOR TO MAIL 10 DAYS WRITTEN NOTICE TO THE CERTIFICATE HOLDER NAMED TO THE LEFT, BUT FAILURE TO DO SO SHALL IMPOSE NO OBLIGATION OR LIABILITY OF ANY KIND UPON THE INSURER, ITS AGENTS OR REPRESENTATIVES.

AUTHORIZED REPRESENTATIVE

#427078

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TABLE 1 - PRELIMINARY EVALUATION OF TANK T-1 LAB RESULTS
Cal Mac Transportation, 461 McGraw Avenue, Livermore, CA

COMPOUND	RESULTS	UNITS	SOIL		GROUNDWATER
			Residential Land Use Use (mg/kg)	Commercial/Industrial Land Use (mg/kg)	(μg/l)
			Environmental Screening Levels (ESLs) for GW as Potential Source of Drinking Water (Soils > 3m)		
Volatile Organic Compounds (Method 8260B)					
1,2-Dichlorobenzene	2,500	μg/kg	1.1	1.1	10
Napthalene	5,700	μg/kg	0.46	1.5	17
1,2,3-Trichloropropane	2,200	μg/kg	NA	NA	0.005 (Notification Level)
1,2,4-Trimethylbenzene	5,200	μg/kg	NA	NA	330 (Notification Level)
1,3,5-Trimethylbenzene	1,300	μg/kg	NA	NA	330 (Notification Level)
Semi-Volatile Organic Compounds (Method 8270C)					
Napthalene	3,000	μg/kg	0.46	1.5	17
Acenaphthene	7,800	μg/kg	16	16	20
Fluorene	11,000	μg/kg	8.9	8.9	3.9
Phenanthrene	44,000	μg/kg	11	11	4.6
Anthracene	8,200	μg/kg	2.8	2.8	0.73
Benzo[a]anthracene	7,000	μg/kg	12	12	0.027
Chrysene	10,000	μg/kg	19	19	0.29
Benzo[a]pyrene	3,000	μg/kg	1.5	1.5	0.014
Benzo[b]fluoranthene	2,500	μg/kg	15	15	0.029
Benzo[g,h,i]perylene	1,300	μg/kg	27	27	0.1
Fluoranthene	4,500	μg/kg	60	60	8
Pyrene	13,000	μg/kg	85	85	2
Non-Halogenated Organic Compounds-Diesel Range Organics (Method 8015B)					
Diesel Range (C10-C28)	31,000	mg/kg	100 (middle distillate)	100 (middle distillate)	100
Motor Oil Range (C24-C36)	26,000	mg/kg	1,000 (residual fuel)	1,000 (residual fuel)	100
Kerosene RO (C9-C19)	13,000	mg/kg	NA	NA	NA
Metals (Method 6010B)					
Arsenic	62	mg/kg	5.5	5.5	36
Barium	2.0	mg/kg	2,500	2,500	1,000
Beryllium	9.9	mg/kg	36	36	2.7
Chromium	2,000	mg/kg	58(Total)/1.8 (Cr6)	58(Total)/1.8 (Cr6)	50(Total)/11(Cr6)
Cobalt	21	mg/kg	10	10	3
Copper	220	mg/kg	2,500	5,000	3.1
Molybdenum	180	mg/kg	2,500	3,600	35
Nickel	190	mg/kg	1,000	1,000	8.2
Selenium	2.2	mg/kg	2,500	3,400	5

TABLE 1 - PRELIMINARY EVALUATION OF TANK T-1 LAB RESULTS
Cal Mac Transportation, 461 McGraw Avenue, Livermore, CA

COMPOUND	RESULTS	UNITS	SOIL		GROUNDWATER
			Residential Land Use Use (mg/kg)	Commercial/Industrial Land Use (mg/kg)	(μg/l)
			Environmental Screening Levels (ESLs) for Groundwater as Potential Source of Drinking Water		
Vanadium	12	mg/kg	2,500	5,000	15
Zinc	13	mg/kg	2,500	5,000	81
Mercury	0.52	mg/kg	98	98	0.012
HEM Analysis (Method 9071B)					
HEM	42,000	mg/kg	NA	NA	NA
pH-S Analysis (Method 9045C)					
Ph-S	SU	3.5	NA	NA	NA

NOTES:

1) Organochlorine Pesticides Results (Method 8081A) Results = ND (Non Detect)

2) Polychlorinated Biphenyls Results (Method 8082) = ND (Non Detect)

3) NA = Not Applicable

ANALYTICAL REPORT

Job Number: 720-8258-1

Job Description: Tank Waste Disposal

For:
Applied Remedial Technologies
1485 Bayshore Blvd
Suite 1
San Francisco, CA 94124

Attention: Mr. Apramjeet Ghuman

Dimple Sharma
Project Manager I
dsharma@stl-inc.com
03/28/2007

cc: Mr. Mark Williams

Project Manager: Dimple Sharma

Severn Trent Laboratories, Inc.
STL San Francisco 1220 Quarry Lane, Pleasanton, CA 94566
Tel (925) 484-1919 Fax (925) 484-1096 www.stl-inc.com

Client: Applied Remedial Technologies
Date: 03/28/2007

Semi Volatiles GC Analysis

Reporting Limit - Dilution, Non-Target

Sample 720-8258-4 was diluted due to the abundance of non-target analytes. Elevated reporting limits (RLs) are provided.

Affected Items
720-8258-A-4-C

Batch: 720-19532
Method: 720-8082

Semi Volatiles GC Analysis

Reporting Limit - Dilution, Non-Target

Sample 720-8258-4 was diluted due to the abundance of non-target analytes. Elevated reporting limits (RLs) are provided.

Affected Items
720-8258-A-4-B

Batch: 720-19537
Method: 720-8081A

Semi Volatiles MS Analysis

Surrogate - Diluted out

Due to the level of dilution required for sample, surrogate recoveries are not reported.

Affected Items
720-8258-A-4-E

Batch: 720-19568
Method: 720-8270C_SIM

720-8258-A-4-F MS

Batch: 720-19568
Method: 720-8270C_SIM

720-8258-A-4-G MSD

Batch: 720-19568
Method: 720-8270C_SIM

Volatiles MS

Surrogate - Matrix

Surrogate recovery for sample 8258-4 was outside control limits. This sample shows evidence of matrix interference; therefore, re-extraction and/or re-analysis was not performed.

Affected Items
720-8258-A-4-L

Batch: 720-19512
Method: 720-8260B_LL

Volatiles MS

Reporting Limit - Dilution, Non-Target

Sample was diluted due to the abundance of non-target analytes. Elevated reporting limits (RLs) are provided.

Affected Items
720-8258-A-4-O

Batch: 720-19641
Method: 720-8260B

EXECUTIVE SUMMARY - Detections

Client: Applied Remedial Technologies Job Number: 720-8258-1

Lab Sample ID / Analyte	Client Sample ID / Result / Qualifier	Reporting Limit	Units	Method
720-8258-4	**TANK T-1**			
1,2-Dichlorobenzene	2500	1000	ug/Kg	8260B
Naphthalene	5700	2000	ug/Kg	8260B
1,2,3-Trichloropropane	2200	1000	ug/Kg	8260B
1,2,4-Trimethylbenzene	5200	1000	ug/Kg	8260B
1,3,5-Trimethylbenzene	1300	1000	ug/Kg	8260B
Naphthalene	3000	500	ug/Kg	8270C
Acenaphthene	7800	500	ug/Kg	8270C
Fluorene	11000	500	ug/Kg	8270C
Phenanthrene	44000	500	ug/Kg	8270C
Anthracene	8200	500	ug/Kg	8270C
Benzo[a]anthracene	7000	500	ug/Kg	8270C
Chrysene	10000	500	ug/Kg	8270C
Benzo[a]pyrene	3000	500	ug/Kg	8270C
Benzo[b]fluoranthene	2500	500	ug/Kg	8270C
Benzo[g,h,i]perylene	1300	500	ug/Kg	8270C
Fluoranthene	4500	500	ug/Kg	8270C
Pyrene	13000	500	ug/Kg	8270C
Diesel Range Organics [C10-C28]	31000	100	mg/Kg	8015B
Motor Oil Range Organics [C24-C36]	26000	5000	mg/Kg	8015B
Kerosene RO [C9-C19]	13000	100	mg/Kg	8015B
Arsenic	62	0.95	mg/Kg	6010B
Barium	2.0	0.95	mg/Kg	6010B
Beryllium	9.9	0.48	mg/Kg	6010B
Chromium	2000	0.95	mg/Kg	6010B
Cobalt	21	0.95	mg/Kg	6010B
Copper	220	0.95	mg/Kg	6010B
Molybdenum	180	0.95	mg/Kg	6010B
Nickel	190	0.95	mg/Kg	6010B
Selenium	2.2	1.9	mg/Kg	6010B
Vanadium	12	0.95	mg/Kg	6010B
Zinc	13	0.95	mg/Kg	6010B
Mercury	0.52	0.049	mg/Kg	7471A
HEM	42000	100	mg/Kg	9071B
Soluble				
pH-S	3.50	0.100	SU	9045C

Client: Applied Remedial Technologies | Job Number: 720-8258-2

Client Sample ID: TANK T-1

Lab Sample ID:	720-8258-4	Date Sampled:	03/16/2007 1205
Client Matrix:	Solid	Date Received:	03/16/2007 1218

6010B Inductively Coupled Plasma - Atomic Emission Spectrometry-TCLP

Method:	6010B	Analysis Batch: 720-19854		Instrument ID:	Varian ICP
Preparation:	3010A	Prep Batch: 720-19841		Lab File ID:	N/A
Dilution:	1.0	Leachate Batch: 720-19806		Initial Weight/Volume:	5.0 mL
Date Analyzed:	03/29/2007 1120			Final Weight/Volume:	50.0 mL
Date Prepared:	03/29/2007 0536				
Date Leached:	03/28/2007 1300				

Analyte	DryWt Corrected: N	Result (mg/L)	Qualifier	RL
Arsenic		ND		0.50
Chromium		ND		0.50

6010B Inductively Coupled Plasma - Atomic Emission Spectrometry-STLC Citrate

Method:	6010B	Analysis Batch: 720-19854		Instrument ID:	Varian ICP
Preparation:	3005A	Prep Batch: 720-19840		Lab File ID:	N/A
Dilution:	1.0	Leachate Batch: 720-19752		Initial Weight/Volume:	5.0 mL
Date Analyzed:	03/29/2007 1054			Final Weight/Volume:	50.0 mL
Date Prepared:	03/29/2007 0531				
Date Leached:	03/26/2007 2030				

Analyte	DryWt Corrected: N	Result (mg/L)	Qualifier	RL
Chromium		ND		0.50

METHOD SUMMARY

Client: Applied Remedial Technologies Job Number: 720-8258-1

Description	Lab Location	Method	Preparation Method
Matrix: Solid			
Volatile Organic Compounds by GC/MS	STL SF	SW846 8260B	
Purge-and-Trap for Aqueous Samples/High	STL SF		SW846 5030B
Volatile Organic Compounds by GC/MS (Low Level)	STL SF	SW846 8260B	
Purge-and-Trap for Aqueous Samples/High	STL SF		SW846 5030B
Semivolatile Organic Compounds by GC/MS (Selective Ion Monitoring)	STL SF	SW846 8270C	
Ultrasonic Extraction	STL SF		SW846 3550B
Nonhalogenated Organics using GC/FID -Modified (Diesel Range Organics)	STL SF	SW846 8015B	
Ultrasonic Extraction	STL SF		SW846 3550B
Organochlorine Pesticides by Gas Chromatography	STL SF	SW846 8081A	
Ultrasonic Extraction	STL SF		SW846 3550B
Polychlorinated Biphenyls (PCBs) by Gas Chromatography	STL SF	SW846 8082	
Ultrasonic Extraction	STL SF		SW846 3550B
Inductively Coupled Plasma - Atomic Emission Spectrometry	STL SF	SW846 6010B	
Acid Digestion of Sediments, Sludges, and Soils	STL SF		SW846 3050B
Mercury in Solid or Semisolid Waste (Manual Cold Vapor Technique)	STL SF	SW846 7471A	
Mercury in Solid or Semi-Solid Waste (Manual	STL SF		SW846 7471A
Soil and Waste pH	STL SF	SW846 9045C	
Deionized Water Leaching Procedure (Routine)	STL SF		ASTM NONE
n-Hexane Extractable Material (HEM) for Sludge, Sediment, and Solid Samples	STL SF	SW846 9071B	
n-Hexane Extractable Material (HEM) for Sludge,	STL SF		SW846 9071B

LAB REFERENCES:

STL SF = STL San Francisco

METHOD REFERENCES:

SW846 - "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

SAMPLE SUMMARY

Client: Applied Remedial Technologies Job Number: 720-8258-1

Lab Sample ID	Client Sample ID	Client Matrix	Date/Time Sampled	Date/Time Received
720-8258-4	TANK T-1	Solid	03/16/2007 1205	03/16/2007 1218

Client: Applied Remedial Technologies | Job Number: 720-8258-1

Client Sample ID: **TANK T-1**

Lab Sample ID: 720-8258-4 | Date Sampled: 03/16/2007 1205
Client Matrix: Solid | Date Received: 03/16/2007 1218

8260B Volatile Organic Compounds by GC/MS (Low Level)

Method: 8260B | Analysis Batch: 720-19512 | Instrument ID: Varian 3900G
Preparation: 5030B-Medium | Prep Batch: 720-19511 | Lab File ID: c:\saturnws\data\200703\03
Dilution: 200 | Initial Weight/Volume: 4.93 g
Date Analyzed: 03/21/2007 1635 | Final Weight/Volume: 10 mL
Date Prepared: 03/20/2007 0900

Analyte	DryWt Corrected: N	Result (ug/Kg)	Qualifier	RL
Methyl tert-butyl ether		ND		1000
Acetone		ND		10000
Benzene		ND		1000
Dichlorobromomethane		ND		1000
Bromobenzene		ND		1000
Chlorobromomethane		ND		4100
Bromoform		ND		1000
Bromomethane		ND		2000
Methyl Ethyl Ketone		ND		10000
n-Butylbenzene		ND		1000
sec-Butylbenzene		ND		1000
tert-Butylbenzene		ND		1000
Carbon disulfide		ND		1000
Carbon tetrachloride		ND		1000
Chlorobenzene		ND		1000
Chloroethane		ND		2000
Chloroform		ND		1000
Chloromethane		ND		2000
2-Chlorotoluene		ND		1000
4-Chlorotoluene		ND		1000
Chlorodibromomethane		ND		1000
1,2-Dichlorobenzene		2500		1000
1,3-Dichlorobenzene		ND		1000
1,4-Dichlorobenzene		ND		1000
1,3-Dichloropropane		ND		1000
1,1-Dichloropropene		ND		1000
1,2-Dibromo-3-Chloropropane		ND		10000
Ethylene Dibromide		ND		1000
Dibromomethane		ND		2000
Dichlorodifluoromethane		ND		2000
1,1-Dichloroethane		ND		1000
1,2-Dichloroethane		ND		1000
1,1-Dichloroethene		ND		1000
cis-1,2-Dichloroethene		ND		1000
trans-1,2-Dichloroethene		ND		1000
1,2-Dichloropropane		ND		1000
cis-1,3-Dichloropropene		ND		1000
trans-1,3-Dichloropropene		ND		1000
Ethylbenzene		ND		1000
Hexachlorobutadiene		ND		1000
2-Hexanone		ND		10000
Isopropylbenzene		ND		1000
4-Isopropyltoluene		ND		1000

Client: Applied Remedial Technologies | Job Number: 720-8258-1

Client Sample ID: **TANK T-1**

Lab Sample ID: 720-8258-4 | Date Sampled: 03/16/2007 1205
Client Matrix: Solid | Date Received: 03/16/2007 1218

8260B Volatile Organic Compounds by GC/MS (Low Level)

Method: 8260B | Analysis Batch: 720-19512 | Instrument ID: Varian 3900G
Preparation: 5030B-Medium | Prep Batch: 720-19511 | Lab File ID: c:\saturnws\data\200703\03
Dilution: 200 | Initial Weight/Volume: 4.93 g
Date Analyzed: 03/21/2007 1635 | Final Weight/Volume: 10 mL
Date Prepared: 03/20/2007 0900

Analyte	DryWt Corrected: N	Result (ug/Kg)	Qualifier	RL
Methylene Chloride		ND		2000
methyl isobutyl ketone		ND		10000
Naphthalene		5700		2000
N-Propylbenzene		ND		1000
Styrene		ND		1000
1,1,1,2-Tetrachloroethane		ND		1000
1,1,2,2-Tetrachloroethane		ND		1000
Tetrachloroethene		ND		1000
Toluene		ND		1000
1,2,3-Trichlorobenzene		ND		1000
1,2,4-Trichlorobenzene		ND		1000
1,1,1-Trichloroethane		ND		1000
1,1,2-Trichloroethane		ND		1000
Trichloroethene		ND		1000
Trichlorofluoromethane		ND		1000
1,2,3-Trichloropropane		2200		1000
1,1,2-Trichloro-1,2,2-trifluoroethane		ND		1000
1,2,4-Trimethylbenzene		5200		1000
1,3,5-Trimethylbenzene		1300		1000
Vinyl acetate		ND		10000
Vinyl chloride		ND		1000
Xylenes, Total		ND		2000
2,2-Dichloropropane		ND		1000

Surrogate	%Rec		Acceptance Limits
4-Bromofluorobenzene	59	X	60 - 140
1,2-Dichloroethane-d4 (Surr)	74		60 - 140
Toluene-d8 (Surr)	61	X	70 - 130

Client: Applied Remedial Technologies | Job Number: 720-8258-1

Client Sample ID: **TANK T-1**

Lab Sample ID: 720-8258-4 | Date Sampled: 03/16/2007 1205
Client Matrix: Solid | Date Received: 03/16/2007 1218

8260B Volatile Organic Compounds by GC/MS

Method: 8260B | Analysis Batch: 720-19641 | Instrument ID: Varian 3900A
Preparation: 5030B-Medium | Prep Batch: 720-19639 | Lab File ID: C:\SaturnWS\data\sa-so-82
Dilution: 200 | Initial Weight/Volume: 5.19 g
Date Analyzed: 03/21/2007 1214 | Final Weight/Volume: 10 mL
Date Prepared: 03/21/2007 1436

Analyte	DryWt Corrected: N	Result (mg/Kg)	Qualifier	RL
Benzene		ND		0.96
Ethylbenzene		ND		0.96
MTBE		ND		0.96
TAME		ND		0.96
Toluene		ND		0.96
Xylenes, Total		ND		1.9
TBA		ND		1.9
DIPE		ND		0.96
Gasoline Range Organics (GRO)-C5-C12		ND		48
Ethyl tert-butyl ether		ND		0.96

Surrogate	%Rec	Acceptance Limits
Toluene-d8 (Surr)	87	50 - 130
1,2-Dichloroethane-d4 (Surr)	82	60 - 140

Client: Applied Remedial Technologies | Job Number: 720-8258-1

Client Sample ID: **TANK T-1**

Lab Sample ID: 720-8258-4 | Date Sampled: 03/16/2007 1205
Client Matrix: Solid | Date Received: 03/16/2007 1218

8270C Semivolatile Organic Compounds by GC/MS (Selective Ion Monitoring)

Method:	8270C	Analysis Batch: 720-19568	Instrument ID:	Sat 2K2	
Preparation:	3550B	Prep Batch: 720-19483	Lab File ID:	c:\saturnws\epdata\data\200	
Dilution:	10		Initial Weight/Volume:	30.05	g
Date Analyzed:	03/21/2007 1614		Final Weight/Volume:	10	mL
Date Prepared:	03/20/2007 1106		Injection Volume:		

Analyte	DryWt Corrected: N	Result (ug/Kg)	Qualifier	RL
Naphthalene		3000		500
Acenaphthene		7800		500
Acenaphthylene		ND		500
Fluorene		11000		500
Phenanthrene		44000		500
Anthracene		8200		500
Benzo[a]anthracene		7000		500
Chrysene		10000		500
Benzo[a]pyrene		3000		500
Benzo[b]fluoranthene		2500		500
Benzo[k]fluoranthene		ND		500
Benzo[g,h,i]perylene		1300		500
Indeno[1,2,3-cd]pyrene		ND		500
Fluoranthene		4500		500
Pyrene		13000		500
Dibenz(a,h)anthracene		ND		500

Surrogate	%Rec	Qualifier	Acceptance Limits
2-Fluorobiphenyl	112		30 - 115
Terphenyl-d14	145	X	18 - 137

Client: Applied Remedial Technologies | Job Number: 720-8258-1

Client Sample ID: **TANK T-1**

Lab Sample ID: 720-8258-4
Client Matrix: Solid

Date Sampled: 03/16/2007 1205
Date Received: 03/16/2007 1218

8015B Nonhalogenated Organics using GC/FID -Modified (Diesel Range Organics)

Method: 8015B
Preparation: 3550B
Dilution: 100
Date Analyzed: 03/21/2007 1334
Date Prepared: 03/19/2007 0756

Analysis Batch: 720-19600
Prep Batch: 720-19420

Instrument ID: HP DRO5
Lab File ID: N/A
Initial Weight/Volume: 30.15 g
Final Weight/Volume: 5 mL
Injection Volume:
Column ID: PRIMARY

Analyte	DryWt Corrected: N	Result (mg/Kg)	Qualifier	RL
Diesel Range Organics [C10-C28]		31000		100
Motor Oil Range Organics [C24-C36]		26000		5000
Kerosene RO [C9-C19]		13000		100

Surrogate	%Rec		Acceptance Limits
o-Terphenyl	0	D	50 - 130

Client: Applied Remedial Technologies | Job Number: 720-8258-1

Client Sample ID: **TANK T-1**

Lab Sample ID: 720-8258-4 | Date Sampled: 03/16/2007 1205
Client Matrix: Solid | Date Received: 03/16/2007 1218

8081A Organochlorine Pesticides by Gas Chromatography

Method: 8081A | Analysis Batch: 720-19537 | Instrument ID: Varian Pest 2
Preparation: 3550B | Prep Batch: 720-19421 | Lab File ID: N/A
Dilution: 10 | Initial Weight/Volume: 30.49 g
Date Analyzed: 03/21/2007 0435 | Final Weight/Volume: 10 mL
Date Prepared: 03/19/2007 0803 | Injection Volume:
Column ID: PRIMARY

Analyte	DryWt Corrected: N	Result (ug/Kg)	Qualifier	RL
Aldrin		ND		20
Dieldrin		ND		20
Endrin aldehyde		ND		20
Endrin		ND		20
Endrin ketone		ND		20
Heptachlor		ND		20
Heptachlor epoxide		ND		20
4,4'-DDT		ND		20
4,4'-DDE		ND		20
4,4'-DDD		ND		20
Endosulfan I		ND		20
Endosulfan II		ND		20
alpha-BHC		ND		20
beta-BHC		ND		20
gamma-BHC (Lindane)		ND		20
delta-BHC		ND		20
Endosulfan sulfate		ND		20
Methoxychlor		ND		20
Toxaphene		ND		390
Chlordane (technical)		ND		390
alpha-Chlordane		ND		20
gamma-Chlordane		ND		20

Surrogate	%Rec		Acceptance Limits
Tetrachloro-m-xylene	0	D	50 - 125
DCB Decachlorobiphenyl	0	D	46 - 142

Client: Applied Remedial Technologies | Job Number: 720-8258-1

Client Sample ID: **TANK T-1**

Lab Sample ID: 720-8258-4
Client Matrix: Solid

Date Sampled: 03/16/2007 1205
Date Received: 03/16/2007 1218

8082 Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Method: 8082
Preparation: 3550B
Dilution: 10
Date Analyzed: 03/20/2007 1106
Date Prepared: 03/19/2007 1817

Analysis Batch: 720-19532
Prep Batch: 720-19463

Instrument ID: Agilent PCB 2
Lab File ID: N/A
Initial Weight/Volume: 30.18 g
Final Weight/Volume: 10 mL
Injection Volume:
Column ID: PRIMARY

Analyte	DryWt Corrected: N	Result (ug/Kg)	Qualifier	RL
PCB-1016		ND		500
PCB-1221		ND		500
PCB-1232		ND		500
PCB-1242		ND		500
PCB-1248		ND		500
PCB-1254		ND		500
PCB-1260		ND		500

Surrogate	%Rec		Acceptance Limits
Tetrachloro-m-xylene	0	D	57 - 113
DCB Decachlorobiphenyl	0	D	47 - 99

Client: Applied Remedial Technologies | Job Number: 720-8258-1

Client Sample ID: TANK T-1

Lab Sample ID: 720-8258-4 | Date Sampled: 03/16/2007 1205
Client Matrix: Solid | Date Received: 03/16/2007 1218

6010B Inductively Coupled Plasma - Atomic Emission Spectrometry

Method: 6010B | Analysis Batch: 720-19550 | Instrument ID: Varian ICP
Preparation: 3050B | Prep Batch: 720-19491 | Lab File ID: N/A
Dilution: 1.0 | Initial Weight/Volume: 1.05 g
Date Analyzed: 03/21/2007 1021 | Final Weight/Volume: 50 mL
Date Prepared: 03/20/2007 1149

Analyte	DryWt Corrected: N	Result (mg/Kg)	Qualifier	RL
Antimony		ND		1.9
Arsenic		62		0.95
Barium		2.0		0.95
Beryllium		9.9		0.48
Cadmium		ND		0.48
Chromium		2000		0.95
Cobalt		21		0.95
Copper		220		0.95
Lead		ND		0.95
Molybdenum		180		0.95
Nickel		190		0.95
Selenium		2.2		1.9
Silver		ND		0.95
Thallium		ND		0.95
Vanadium		12		0.95
Zinc		13		0.95

7471A Mercury in Solid or Semisolid Waste (Manual Cold Vapor Technique)

Method: 7471A | Analysis Batch: 720-19525 | Instrument ID: FIMS 100
Preparation: 7471A | Prep Batch: 720-19521 | Lab File ID: N/A
Dilution: 1.0 | Initial Weight/Volume: 1.03 g
Date Analyzed: 03/20/2007 1947 | Final Weight/Volume: 50 mL
Date Prepared: 03/20/2007 1758

Analyte	DryWt Corrected: N	Result (mg/Kg)	Qualifier	RL
Mercury		0.52		0.049

General Chemistry

Client Sample ID: TANK T-1

Lab Sample ID: 720-8258-4
Client Matrix: Solid

Date Sampled: 03/16/2007 1205
Date Received: 03/16/2007 1218

Analyte	Result	Qual	Units	RL	Dil	Method
HEM	42000		mg/Kg	100	1.0	9071B
	Anly Batch: 720-19490	Date Analyzed	03/20/2007 1146		DryWt Corrected: N	
	Prep Batch: 720-19485	Date Prepared:	03/20/2007 1127			

Analyte	Result	Qual	Units	RL	Dil	Method
pH-S	3.50		SU	0.100	1.0	9045C
	Anly Batch: 720-19649	Date Analyzed	03/22/2007 1600		DryWt Corrected: N	

DATA REPORTING QUALIFIERS

Client: Applied Remedial Technologies Job Number: 720-8258-1

Lab Section	Qualifier	Description
GC/MS VOA		
	X	Surrogate exceeds the control limits
GC/MS Semi VOA		
	F	MS or MSD exceeds the control limits
	4	MS, MSD: The analyte present in the original sample is 4 times greater than the matrix spike concentration; therefore, control limits are not applicable.
	F	RPD of the MS and MSD exceeds the control limits
	X	Surrogate exceeds the control limits
GC Semi VOA		
	D	Surrogate or matrix spike recoveries were not obtained because the extract was diluted for analysis; also compounds analyzed at a dilution may be flagged with a D.
General Chemistry		
	4	MS, MSD: The analyte present in the original sample is 4 times greater than the matrix spike concentration; therefore, control limits are not applicable.

Client: Applied Remedial Technologies Job Number: 720-8258-1

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
GC/MS VOA					
Prep Batch: 720-19511					
LCS 720-19511/1-AA	Lab Control Spike	T	Solid	5030B	
LCSD 720-19511/2-AA	Lab Control Spike Duplicate	T	Solid	5030B	
MB 720-19511/3-AA	Method Blank	T	Solid	5030B	
720-8258-4	TANK T-1	T	Solid	5030B	
Analysis Batch:720-19512					
LCS 720-19511/1-AA	Lab Control Spike	T	Solid	8260B	720-19511
LCSD 720-19511/2-AA	Lab Control Spike Duplicate	T	Solid	8260B	720-19511
MB 720-19511/3-AA	Method Blank	T	Solid	8260B	720-19511
720-8258-4	TANK T-1	T	Solid	8260B	720-19511
Prep Batch: 720-19639					
LCS 720-19639/2-AA	Lab Control Spike	T	Solid	5030B	
LCSD 720-19639/3-AA	Lab Control Spike Duplicate	T	Solid	5030B	
MB 720-19639/1-AA	Method Blank	T	Solid	5030B	
720-8258-4	TANK T-1	T	Solid	5030B	
Analysis Batch:720-19641					
LCS 720-19639/2-AA	Lab Control Spike	T	Solid	8260B	720-19639
LCSD 720-19639/3-AA	Lab Control Spike Duplicate	T	Solid	8260B	720-19639
MB 720-19639/1-AA	Method Blank	T	Solid	8260B	720-19639
720-8258-4	TANK T-1	T	Solid	8260B	720-19639

Report Basis
T = Total

Client: Applied Remedial Technologies Job Number: 720-8258-1

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
GC/MS Semi VOA					
Prep Batch: 720-19483					
LCS 720-19483/2-AA	Lab Control Spike	T	Solid	3550B	
LCSD 720-19483/3-AA	Lab Control Spike Duplicate	T	Solid	3550B	
MB 720-19483/1-AA	Method Blank	T	Solid	3550B	
720-8258-4	TANK T-1	T	Solid	3550B	
720-8258-4MS	Matrix Spike	T	Solid	3550B	
720-8258-4MSD	Matrix Spike Duplicate	T	Solid	3550B	
Analysis Batch:720-19568					
LCS 720-19483/2-AA	Lab Control Spike	T	Solid	8270C	720-19483
LCSD 720-19483/3-AA	Lab Control Spike Duplicate	T	Solid	8270C	720-19483
MB 720-19483/1-AA	Method Blank	T	Solid	8270C	720-19483
720-8258-4	TANK T-1	T	Solid	8270C	720-19483
720-8258-4MS	Matrix Spike	T	Solid	8270C	720-19483
720-8258-4MSD	Matrix Spike Duplicate	T	Solid	8270C	720-19483

Report Basis
T = Total

Client: Applied Remedial Technologies Job Number: 720-8258-1

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
GC Semi VOA					
Prep Batch: 720-19420					
LCS 720-19420/2-AA	Lab Control Spike	T	Solid	3550B	
LCSD 720-19420/3-AA	Lab Control Spike Duplicate	T	Solid	3550B	
MB 720-19420/1-AA	Method Blank	T	Solid	3550B	
720-8258-4	TANK T-1	T	Solid	3550B	
Prep Batch: 720-19421					
LCS 720-19421/2-AA	Lab Control Spike	T	Solid	3550B	
LCSD 720-19421/3-AA	Lab Control Spike Duplicate	T	Solid	3550B	
MB 720-19421/1-AA	Method Blank	T	Solid	3550B	
720-8258-4	TANK T-1	T	Solid	3550B	
Prep Batch: 720-19463					
LCS 720-19463/2-AA	Lab Control Spike	T	Solid	3550B	
LCSD 720-19463/3-AA	Lab Control Spike Duplicate	T	Solid	3550B	
MB 720-19463/1-AA	Method Blank	T	Solid	3550B	
720-8258-4	TANK T-1	T	Solid	3550B	
Analysis Batch:720-19532					
LCS 720-19463/2-AA	Lab Control Spike	T	Solid	8082	720-19463
LCSD 720-19463/3-AA	Lab Control Spike Duplicate	T	Solid	8082	720-19463
MB 720-19463/1-AA	Method Blank	T	Solid	8082	720-19463
720-8258-4	TANK T-1	T	Solid	8082	720-19463
Analysis Batch:720-19537					
LCS 720-19421/2-AA	Lab Control Spike	T	Solid	8081A	720-19421
LCSD 720-19421/3-AA	Lab Control Spike Duplicate	T	Solid	8081A	720-19421
MB 720-19421/1-AA	Method Blank	T	Solid	8081A	720-19421
720-8258-4	TANK T-1	T	Solid	8081A	720-19421
Analysis Batch:720-19600					
LCS 720-19420/2-AA	Lab Control Spike	T	Solid	8015B	720-19420
LCSD 720-19420/3-AA	Lab Control Spike Duplicate	T	Solid	8015B	720-19420
MB 720-19420/1-AA	Method Blank	T	Solid	8015B	720-19420
720-8258-4	TANK T-1	T	Solid	8015B	720-19420

Report Basis
T = Total

Client: Applied Remedial Technologies Job Number: 720-8258-1

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
Metals					
Prep Batch: 720-19491					
LCS 720-19491/2-AA	Lab Control Spike	T	Solid	3050B	
LCSD 720-19491/3-AA	Lab Control Spike Duplicate	T	Solid	3050B	
MB 720-19491/1-AA	Method Blank	T	Solid	3050B	
720-8258-4	TANK T-1	T	Solid	3050B	
Prep Batch: 720-19521					
LCS 720-19521/2-AA	Lab Control Spike	T	Solid	7471A	
LCSD 720-19521/3-AA	Lab Control Spike Duplicate	T	Solid	7471A	
MB 720-19521/1-AA	Method Blank	T	Solid	7471A	
720-8258-4	TANK T-1	T	Solid	7471A	
Analysis Batch:720-19525					
LCS 720-19521/2-AA	Lab Control Spike	T	Solid	7471A	720-19521
LCSD 720-19521/3-AA	Lab Control Spike Duplicate	T	Solid	7471A	720-19521
MB 720-19521/1-AA	Method Blank	T	Solid	7471A	720-19521
720-8258-4	TANK T-1	T	Solid	7471A	720-19521
Analysis Batch:720-19550					
LCS 720-19491/2-AA	Lab Control Spike	T	Solid	6010B	720-19491
LCSD 720-19491/3-AA	Lab Control Spike Duplicate	T	Solid	6010B	720-19491
MB 720-19491/1-AA	Method Blank	T	Solid	6010B	720-19491
720-8258-4	TANK T-1	T	Solid	6010B	720-19491

Report Basis
T = Total

Client: Applied Remedial Technologies Job Number: 720-8258-1

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
General Chemistry					
Prep Batch: 720-19485					
LCS 720-19485/2-AA	Lab Control Spike	T	Solid	9071B	
LCSD 720-19485/3-AA	Lab Control Spike Duplicate	T	Solid	9071B	
MB 720-19485/1-AA	Method Blank	T	Solid	9071B	
720-8258-4	TANK T-1	T	Solid	9071B	
720-8258-4MS	Matrix Spike	T	Solid	9071B	
720-8258-4MSD	Matrix Spike Duplicate	T	Solid	9071B	
Analysis Batch:720-19490					
LCS 720-19485/2-AA	Lab Control Spike	T	Solid	9071B	720-19485
LCSD 720-19485/3-AA	Lab Control Spike Duplicate	T	Solid	9071B	720-19485
MB 720-19485/1-AA	Method Blank	T	Solid	9071B	720-19485
720-8258-4	TANK T-1	T	Solid	9071B	720-19485
720-8258-4MS	Matrix Spike	T	Solid	9071B	720-19485
720-8258-4MSD	Matrix Spike Duplicate	T	Solid	9071B	720-19485
Prep Batch: 720-19596					
LCS 720-19596/1-AA	Lab Control Spike	S	Solid	NONE	
720-8258-4	TANK T-1	S	Solid	NONE	
Analysis Batch:720-19649					
LCS 720-19596/1-AA	Lab Control Spike	S	Solid	9045C	
720-8258-4	TANK T-1	S	Solid	9045C	

Report Basis
S = Soluble
T = Total

Client: Applied Remedial Technologies

Job Number: 720-8258-1

Method Blank - Batch: 720-19511

Method: 8260B
Preparation: 5030B

Lab Sample ID: MB 720-19511/3-AA
Client Matrix: Solid
Dilution: 200
Date Analyzed: 03/20/2007 1303
Date Prepared: 03/20/2007 0900

Analysis Batch: 720-19512
Prep Batch: 720-19511
Units: ug/Kg

Instrument ID: Varian 3900G
Lab File ID: c:\saturnws\data\200703\03
Initial Weight/Volume: 5 g
Final Weight/Volume: 10 mL

Analyte	Result	Qual	RL
Methyl tert-butyl ether	ND		1000
Acetone	ND		10000
Benzene	ND		1000
Dichlorobromomethane	ND		1000
Bromobenzene	ND		1000
Chlorobromomethane	ND		4000
Bromoform	ND		1000
Bromomethane	ND		2000
Methyl Ethyl Ketone	ND		10000
n-Butylbenzene	ND		1000
sec-Butylbenzene	ND		1000
tert-Butylbenzene	ND		1000
Carbon disulfide	ND		1000
Carbon tetrachloride	ND		1000
Chlorobenzene	ND		1000
Chloroethane	ND		2000
Chloroform	ND		1000
Chloromethane	ND		2000
2-Chlorotoluene	ND		1000
4-Chlorotoluene	ND		1000
Chlorodibromomethane	ND		1000
1,2-Dichlorobenzene	ND		1000
1,3-Dichlorobenzene	ND		1000
1,4-Dichlorobenzene	ND		1000
1,3-Dichloropropane	ND		1000
1,1-Dichloropropene	ND		1000
1,2-Dibromo-3-Chloropropane	ND		10000
Ethylene Dibromide	ND		1000
Dibromomethane	ND		2000
Dichlorodifluoromethane	ND		2000
1,1-Dichloroethane	ND		1000
1,2-Dichloroethane	ND		1000
1,1-Dichloroethene	ND		1000
cis-1,2-Dichloroethene	ND		1000
trans-1,2-Dichloroethene	ND		1000
1,2-Dichloropropane	ND		1000
cis-1,3-Dichloropropene	ND		1000
trans-1,3-Dichloropropene	ND		1000
Ethylbenzene	ND		1000
Hexachlorobutadiene	ND		1000
2-Hexanone	ND		10000

Calculations are performed before rounding to avoid round-off errors in calculated results.

Client: Applied Remedial Technologies

Job Number: 720-8258-1

Method Blank - Batch: 720-19511

Method: 8260B
Preparation: 5030B

Lab Sample ID: MB 720-19511/3-AA
Client Matrix: Solid
Dilution: 200
Date Analyzed: 03/20/2007 1303
Date Prepared: 03/20/2007 0900

Analysis Batch: 720-19512
Prep Batch: 720-19511
Units: ug/Kg

Instrument ID: Varian 3900G
Lab File ID: c:\saturnws\data\200703\03
Initial Weight/Volume: 5 g
Final Weight/Volume: 10 mL

Analyte	Result	Qual	RL
Isopropylbenzene	ND		1000
4-Isopropyltoluene	ND		1000
Methylene Chloride	ND		2000
methyl isobutyl ketone	ND		10000
Naphthalene	ND		2000
N-Propylbenzene	ND		1000
Styrene	ND		1000
1,1,1,2-Tetrachloroethane	ND		1000
1,1,2,2-Tetrachloroethane	ND		1000
Tetrachloroethene	ND		1000
Toluene	ND		1000
1,2,3-Trichlorobenzene	ND		1000
1,2,4-Trichlorobenzene	ND		1000
1,1,1-Trichloroethane	ND		1000
1,1,2-Trichloroethane	ND		1000
Trichloroethene	ND		1000
Trichlorofluoromethane	ND		1000
1,2,3-Trichloropropane	ND		1000
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		1000
1,2,4-Trimethylbenzene	ND		1000
1,3,5-Trimethylbenzene	ND		1000
Vinyl acetate	ND		10000
Vinyl chloride	ND		1000
Xylenes, Total	ND		2000
2,2-Dichloropropane	ND		1000

Surrogate	% Rec	Acceptance Limits
4-Bromofluorobenzene	101	60 - 140
1,2-Dichloroethane-d4 (Surr)	99	60 - 140
Toluene-d8 (Surr)	103	70 - 130

Calculations are performed before rounding to avoid round-off errors in calculated results.

Client: Applied Remedial Technologies Job Number: 720-8258-1

Lab Control Spike/
Lab Control Spike Duplicate Recovery Report - Batch: 720-19511

Method: 8260B
Preparation: 5030B

LCS Lab Sample ID: LCS 720-19511/1-AA
Client Matrix: Solid
Dilution: 200
Date Analyzed: 03/20/2007 1155
Date Prepared: 03/20/2007 0900

Analysis Batch: 720-19512
Prep Batch: 720-19511
Units: ug/Kg

Instrument ID: Varian 3900G
Lab File ID: c:\saturnws\data\200703\0
Initial Weight/Volume: 5 g
Final Weight/Volume: 10 mL

LCSD Lab Sample ID: LCSD 720-19511/2-AA
Client Matrix: Solid
Dilution: 200
Date Analyzed: 03/20/2007 1229
Date Prepared: 03/20/2007 0900

Analysis Batch: 720-19512
Prep Batch: 720-19511
Units: ug/Kg

Instrument ID: Varian 3900G
Lab File ID: c:\saturnws\data\200703\032
Initial Weight/Volume: 5 g
Final Weight/Volume: 10 mL

Analyte	% Rec. LCS	% Rec. LCSD	Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
Benzene	95	98	69 - 129	4	20		
Chlorobenzene	101	105	61 - 121	4	20		
1,1-Dichloroethene	106	114	65 - 125	7	20		
Toluene	93	100	70 - 130	7	20		
Trichloroethene	88	95	74 - 134	8	20		

Surrogate	LCS % Rec	LCSD % Rec	Acceptance Limits
4-Bromofluorobenzene	105	101	60 - 140
1,2-Dichloroethane-d4 (Surr)	105	104	60 - 140
Toluene-d8 (Surr)	101	101	70 - 130

Calculations are performed before rounding to avoid round-off errors in calculated results.

Client: Applied Remedial Technologies

Job Number: 720-8258-1

Method Blank - Batch: 720-19639

Method: 8260B
Preparation: 5030B

Lab Sample ID: MB 720-19639/1-AA
Client Matrix: Solid
Dilution: 200
Date Analyzed: 03/21/2007 1152
Date Prepared: 03/21/2007 1436

Analysis Batch: 720-19641
Prep Batch: 720-19639
Units: mg/Kg

Instrument ID: Varian 3900A
Lab File ID: C:\SaturnWS\data\mb-so-7
Initial Weight/Volume: 5.07 g
Final Weight/Volume: 10 mL

Analyte	Result	Qual	RL
Benzene	ND		0.99
Ethylbenzene	ND		0.99
MTBE	ND		0.99
TAME	ND		0.99
Toluene	ND		0.99
Xylenes, Total	ND		2.0
TBA	ND		2.0
DIPE	ND		0.99
Gasoline Range Organics (GRO)-C5-C12	ND		49
Ethyl tert-butyl ether	ND		0.99

Surrogate	% Rec	Acceptance Limits
Toluene-d8 (Surr)	109	50 - 130
1,2-Dichloroethane-d4 (Surr)	104	60 - 140

Calculations are performed before rounding to avoid round-off errors in calculated results.

Client: Applied Remedial Technologies Job Number: 720-8258-1

Lab Control Spike/
Lab Control Spike Duplicate Recovery Report - Batch: 720-19639

Method: 8260B
Preparation: 5030B

LCS Lab Sample ID: LCS 720-19639/2-AA
Client Matrix: Solid
Dilution: 200
Date Analyzed: 03/21/2007 1108
Date Prepared: 03/21/2007 1436

Analysis Batch: 720-19641
Prep Batch: 720-19639
Units: mg/Kg

Instrument ID: Varian 3900A
Lab File ID: C:\SaturnWS\data\ls-so-7-(
Initial Weight/Volume: 5.01 g
Final Weight/Volume: 10 mL

LCSD Lab Sample ID: LCSD 720-19639/3-AA
Client Matrix: Solid
Dilution: 200
Date Analyzed: 03/21/2007 1130
Date Prepared: 03/21/2007 1436

Analysis Batch: 720-19641
Prep Batch: 720-19639
Units: mg/Kg

Instrument ID: Varian 3900A
Lab File ID: C:\SaturnWS\data\ld-so-7-03
Initial Weight/Volume: 5.01 g
Final Weight/Volume: 10 mL

Analyte	% Rec. LCS	LCSD	Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
Benzene	77	78	69 - 129	2	20		
MTBE	83	84	65 - 165	1	20		
Toluene	89	91	70 - 130	1	20		

Surrogate	LCS % Rec	LCSD % Rec	Acceptance Limits
Toluene-d8 (Surr)	103	95	50 - 130
1,2-Dichloroethane-d4 (Surr)	94	88	60 - 140

Calculations are performed before rounding to avoid round-off errors in calculated results.

Client: Applied Remedial Technologies

Job Number: 720-8258-1

Method Blank - Batch: 720-19483

Method: 8270C
Preparation: 3550B

Lab Sample ID: MB 720-19483/1-AA
Client Matrix: Solid
Dilution: 1.0
Date Analyzed: 03/21/2007 1419
Date Prepared: 03/20/2007 1106

Analysis Batch: 720-19568
Prep Batch: 720-19483
Units: ug/Kg

Instrument ID: Sat 2K2
Lab File ID: c:\saturnws\epdata\data\20
Initial Weight/Volume: 30.16 g
Final Weight/Volume: 1 mL
Injection Volume:

Analyte	Result	Qual	RL
Naphthalene	ND		5.0
Acenaphthene	ND		5.0
Acenaphthylene	ND		5.0
Fluorene	ND		5.0
Phenanthrene	ND		5.0
Anthracene	ND		5.0
Benzo[a]anthracene	ND		5.0
Chrysene	ND		5.0
Benzo[a]pyrene	ND		5.0
Benzo[b]fluoranthene	ND		5.0
Benzo[k]fluoranthene	ND		5.0
Benzo[g,h,i]perylene	ND		5.0
Indeno[1,2,3-cd]pyrene	ND		5.0
Fluoranthene	ND		5.0
Pyrene	ND		5.0
Dibenz(a,h)anthracene	ND		5.0

Surrogate	% Rec	Acceptance Limits
2-Fluorobiphenyl	78	30 - 115
Terphenyl-d14	88	18 - 137

Calculations are performed before rounding to avoid round-off errors in calculated results.

Client: Applied Remedial Technologies Job Number: 720-8258-1

Lab Control Spike/
Lab Control Spike Duplicate Recovery Report - Batch: 720-19483

Method: 8270C
Preparation: 3550B

LCS Lab Sample ID: LCS 720-19483/2-AA
Client Matrix: Solid
Dilution: 1.0
Date Analyzed: 03/21/2007 1321
Date Prepared: 03/20/2007 1106

Analysis Batch: 720-19568
Prep Batch: 720-19483
Units: ug/Kg

Instrument ID: Sat 2K2
Lab File ID: c:\saturnws\epdata\data\20
Initial Weight/Volume: 30.06 g
Final Weight/Volume: 1 mL
Injection Volume:

LCSD Lab Sample ID: LCSD 720-19483/3-AA
Client Matrix: Solid
Dilution: 1.0
Date Analyzed: 03/21/2007 1350
Date Prepared: 03/20/2007 1106

Analysis Batch: 720-19568
Prep Batch: 720-19483
Units: ug/Kg

Instrument ID: Sat 2K2
Lab File ID: c:\saturnws\epdata\data\200
Initial Weight/Volume: 30.13 g
Final Weight/Volume: 1 mL
Injection Volume:

Analyte	% Rec. LCS	% Rec. LCSD	Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
Naphthalene	77	77	21 - 133	1	35		
Acenaphthene	67	74	47 - 145	9	35		
Acenaphthylene	69	70	33 - 145	2	35		
Fluorene	74	77	59 - 121	4	35		
Phenanthrene	83	81	10 - 130	3	35		
Anthracene	80	78	27 - 133	4	35		
Benzo[a]anthracene	80	77	33 - 143	4	35		
Chrysene	81	81	17 - 168	0	35		
Benzo[a]pyrene	84	79	17 - 163	5	35		
Benzo[b]fluoranthene	88	82	24 - 159	7	35		
Benzo[k]fluoranthene	89	87	11 - 162	2	35		
Benzo[g,h,i]perylene	87	83	9 - 219	5	35		
Indeno[1,2,3-cd]pyrene	89	83	9 - 171	7	35		
Fluoranthene	89	87	26 - 137	2	35		
Pyrene	79	80	52 - 115	1	35		
Dibenz(a,h)anthracene	90	90	9 - 171	0	35		

Surrogate	LCS % Rec	LCSD % Rec	Acceptance Limits
2-Fluorobiphenyl	72	75	30 - 115
Terphenyl-d14	84	87	18 - 137

Calculations are performed before rounding to avoid round-off errors in calculated results.

Client: Applied Remedial Technologies

Job Number: 720-8258-1

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 720-19483

Method: 8270C
Preparation: 3550B

MS Lab Sample ID:	720-8258-4	Analysis Batch:	720-19568	Instrument ID:	Sat 2K2
Client Matrix:	Solid	Prep Batch:	720-19483	Lab File ID:	c:\saturnws\epdata\data\2
Dilution:	5.0			Initial Weight/Volume:	30.20 g
Date Analyzed:	03/21/2007 1517			Final Weight/Volume:	10 mL
Date Prepared:	03/20/2007 1106			Injection Volume:	

MSD Lab Sample ID:	720-8258-4	Analysis Batch:	720-19568	Instrument ID:	Sat 2K2
Client Matrix:	Solid	Prep Batch:	720-19483	Lab File ID:	c:\saturnws\epdata\data\20
Dilution:	5.0			Initial Weight/Volume:	30.18 g
Date Analyzed:	03/21/2007 1545			Final Weight/Volume:	10 mL
Date Prepared:	03/20/2007 1106			Injection Volume:	

	% Rec.						
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Naphthalene	171	5	21 - 133	17	35	4	4
Acenaphthene	-427	-242	47 - 145	9	35	4	4
Acenaphthylene	0	0	33 - 145	NC	35	F	F
Fluorene	-534	-393	59 - 121	5	35	4	4
Phenanthrene	-343	-2580	10 - 130	19	35	4	4
Anthracene	290	-179	27 - 133	18	35	4	4
Benzo[a]anthracene	36	-272	33 - 143	15	35	4	4
Chrysene	-57	-556	17 - 168	18	35	4	4
Benzo[a]pyrene	-32	-69	17 - 163	4	35	4	4
Benzo[b]fluoranthene	-222	-263	24 - 159	8	35	4	4
Benzo[k]fluoranthene	475	681	11 - 162	36	35	F	F
Benzo[g,h,i]perylene	26	-41	9 - 219	17	35		F
Indeno[1,2,3-cd]pyrene	234	265	9 - 171	12	35	F	F
Fluoranthene	-253	-394	26 - 137	14	35	4	4
Pyrene	-183	-611	52 - 115	12	35	4	4
Dibenz(a,h)anthracene	238	238	52 - 115	0	35	F	F

Surrogate	MS % Rec	MSD % Rec		Acceptance Limits
2-Fluorobiphenyl	105	132	X	30 - 115
Terphenyl-d14	80	297	X	18 - 137

Calculations are performed before rounding to avoid round-off errors in calculated results.

Client: Applied Remedial Technologies

Job Number: 720-8258-1

Method Blank - Batch: 720-19420

Method: 8015B
Preparation: 3550B

Lab Sample ID: MB 720-19420/1-AA
Client Matrix: Solid
Dilution: 1.0
Date Analyzed: 03/19/2007 1736
Date Prepared: 03/19/2007 0756

Analysis Batch: 720-19600
Prep Batch: 720-19420
Units: mg/Kg

Instrument ID: HP DRO5
Lab File ID: N/A
Initial Weight/Volume: 30.34 g
Final Weight/Volume: 5 mL
Injection Volume:
Column ID: PRIMARY

Analyte	Result	Qual	RL
Diesel Range Organics [C10-C28]	ND		0.99
Motor Oil Range Organics [C24-C36]	ND		49
Kerosene RO [C9-C19]	ND		0.99

Surrogate	% Rec	Acceptance Limits
o-Terphenyl	84	50 - 130

Lab Control Spike/
Lab Control Spike Duplicate Recovery Report - Batch: 720-19420

Method: 8015B
Preparation: 3550B

LCS Lab Sample ID: LCS 720-19420/2-AA
Client Matrix: Solid
Dilution: 1.0
Date Analyzed: 03/19/2007 1642
Date Prepared: 03/19/2007 0756

Analysis Batch: 720-19600
Prep Batch: 720-19420
Units: mg/Kg

Instrument ID: HP DRO5
Lab File ID: N/A
Initial Weight/Volume: 30.13 g
Final Weight/Volume: 5 mL
Injection Volume:
Column ID: PRIMARY

LCSD Lab Sample ID: LCSD 720-19420/3-AA
Client Matrix: Solid
Dilution: 1.0
Date Analyzed: 03/19/2007 1709
Date Prepared: 03/19/2007 0756

Analysis Batch: 720-19600
Prep Batch: 720-19420
Units: mg/Kg

Instrument ID: HP DRO5
Lab File ID: N/A
Initial Weight/Volume: 30.30 g
Final Weight/Volume: 5 mL
Injection Volume:
Column ID: PRIMARY

Analyte	% Rec. LCS	% Rec. LCSD	Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
Diesel Range Organics [C10-C28]	72	70	50 - 130	2	30		

Surrogate	LCS % Rec	LCSD % Rec	Acceptance Limits
o-Terphenyl	83	83	50 - 130

Calculations are performed before rounding to avoid round-off errors in calculated results.

Client: Applied Remedial Technologies

Job Number: 720-8258-1

Method Blank - Batch: 720-19421

Method: 8081A
Preparation: 3550B

Lab Sample ID: MB 720-19421/1-AA
Client Matrix: Solid
Dilution: 1.0
Date Analyzed: 03/20/2007 2000
Date Prepared: 03/19/2007 0803

Analysis Batch: 720-19537
Prep Batch: 720-19421
Units: ug/Kg

Instrument ID: Varian Pest 2
Lab File ID: N/A
Initial Weight/Volume: 30.09 g
Final Weight/Volume: 10 mL
Injection Volume:
Column ID: PRIMARY

Analyte	Result	Qual	RL
Aldrin	ND		2.0
Dieldrin	ND		2.0
Endrin aldehyde	ND		2.0
Endrin	ND		2.0
Endrin ketone	ND		2.0
Heptachlor	ND		2.0
Heptachlor epoxide	ND		2.0
4,4'-DDT	ND		2.0
4,4'-DDE	ND		2.0
4,4'-DDD	ND		2.0
Endosulfan I	ND		2.0
Endosulfan II	ND		2.0
alpha-BHC	ND		2.0
beta-BHC	ND		2.0
gamma-BHC (Lindane)	ND		2.0
delta-BHC	ND		2.0
Endosulfan sulfate	ND		2.0
Methoxychlor	ND		2.0
Toxaphene	ND		40
Chlordane (technical)	ND		40
alpha-Chlordane	ND		2.0
gamma-Chlordane	ND		2.0

Surrogate	% Rec	Acceptance Limits
Tetrachloro-m-xylene	106	50 - 125
DCB Decachlorobiphenyl	103	46 - 142

Calculations are performed before rounding to avoid round-off errors in calculated results.

Client: Applied Remedial Technologies Job Number: 720-8258-1

Lab Control Spike/
Lab Control Spike Duplicate Recovery Report - Batch: 720-19421

Method: 8081A
Preparation: 3550B

LCS Lab Sample ID: LCS 720-19421/2-AA
Client Matrix: Solid
Dilution: 1.0
Date Analyzed: 03/20/2007 1916
Date Prepared: 03/19/2007 0803

Analysis Batch: 720-19537
Prep Batch: 720-19421
Units: ug/Kg

Instrument ID: Varian Pest 2
Lab File ID: N/A
Initial Weight/Volume: 30.39 g
Final Weight/Volume: 10 mL
Injection Volume:
Column ID: PRIMARY

LCSD Lab Sample ID: LCSD 720-19421/3-AA
Client Matrix: Solid
Dilution: 1.0
Date Analyzed: 03/20/2007 1938
Date Prepared: 03/19/2007 0803

Analysis Batch: 720-19537
Prep Batch: 720-19421
Units: ug/Kg

Instrument ID: Varian Pest 2
Lab File ID: N/A
Initial Weight/Volume: 30.17 g
Final Weight/Volume: 10 mL
Injection Volume:
Column ID: PRIMARY

Analyte	% Rec. LCS	% Rec. LCSD	Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
Aldrin	107	108	37 - 136	1	35		
Dieldrin	106	104	58 - 135	1	35		
Endrin	105	103	58 - 134	1	35		
Heptachlor	108	109	40 - 136	1	35		
4,4'-DDT	104	103	55 - 132	1	35		
gamma-BHC (Lindane)	107	109	37 - 137	3	35		

Surrogate	LCS % Rec	LCSD % Rec	Acceptance Limits
Tetrachloro-m-xylene	108	112	50 - 125
DCB Decachlorobiphenyl	100	100	46 - 142

Calculations are performed before rounding to avoid round-off errors in calculated results.

Client: Applied Remedial Technologies

Job Number: 720-8258-1

Method Blank - Batch: 720-19463

Method: 8082
Preparation: 3550B

Lab Sample ID: MB 720-19463/1-AA
Client Matrix: Solid
Dilution: 1.0
Date Analyzed: 03/20/2007 1502
Date Prepared: 03/19/2007 1817

Analysis Batch: 720-19532
Prep Batch: 720-19463
Units: ug/Kg

Instrument ID: Agilent PCB 2
Lab File ID: N/A
Initial Weight/Volume: 30.14 g
Final Weight/Volume: 10 mL
Injection Volume:
Column ID: PRIMARY

Analyte	Result	Qual	RL
PCB-1016	ND		50
PCB-1221	ND		50
PCB-1232	ND		50
PCB-1242	ND		50
PCB-1248	ND		50
PCB-1254	ND		50
PCB-1260	ND		50

Surrogate	% Rec	Acceptance Limits
Tetrachloro-m-xylene	87	57 - 113
DCB Decachlorobiphenyl	73	47 - 99

Calculations are performed before rounding to avoid round-off errors in calculated results.

Client: Applied Remedial Technologies

Job Number: 720-8258-1

Lab Control Spike/
Lab Control Spike Duplicate Recovery Report - Batch: 720-19463

Method: 8082
Preparation: 3550B

LCS Lab Sample ID:	LCS 720-19463/2-AA	Analysis Batch: 720-19532	Instrument ID: Agilent PCB 2
Client Matrix:	Solid	Prep Batch: 720-19463	Lab File ID: N/A
Dilution:	1.0	Units: ug/Kg	Initial Weight/Volume: 30.17 g
Date Analyzed:	03/20/2007 1422		Final Weight/Volume: 10 mL
Date Prepared:	03/19/2007 1817		Injection Volume:
			Column ID: PRIMARY

LCSD Lab Sample ID:	LCSD 720-19463/3-AA	Analysis Batch: 720-19532	Instrument ID: Agilent PCB 2
Client Matrix:	Solid	Prep Batch: 720-19463	Lab File ID: N/A
Dilution:	1.0	Units: ug/Kg	Initial Weight/Volume: 30.24 g
Date Analyzed:	03/20/2007 1442		Final Weight/Volume: 10 mL
Date Prepared:	03/19/2007 1817		Injection Volume:
			Column ID: PRIMARY

	% Rec.						
Analyte	LCS	LCSD	Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
PCB-1016	108	106	65 - 135	1	35		
PCB-1260	100	99	65 - 135	1	35		

Surrogate	LCS % Rec	LCSD % Rec	Acceptance Limits
Tetrachloro-m-xylene	91	90	57 - 113
DCB Decachlorobiphenyl	74	72	47 - 99

Calculations are performed before rounding to avoid round-off errors in calculated results.

Client: Applied Remedial Technologies

Job Number: 720-8258-1

Method Blank - Batch: 720-19491

Method: 6010B
Preparation: 3050B

Lab Sample ID: MB 720-19491/1-AA
Client Matrix: Solid
Dilution: 1.0
Date Analyzed: 03/21/2007 0910
Date Prepared: 03/20/2007 1149

Analysis Batch: 720-19550
Prep Batch: 720-19491
Units: mg/Kg

Instrument ID: Varian ICP
Lab File ID: N/A
Initial Weight/Volume: 1 g
Final Weight/Volume: 50 mL

Analyte	Result	Qual	RL
Antimony	ND		2.0
Arsenic	ND		1.0
Barium	ND		1.0
Beryllium	ND		0.50
Cadmium	ND		0.50
Chromium	ND		1.0
Cobalt	ND		1.0
Copper	ND		1.0
Lead	ND		1.0
Molybdenum	ND		1.0
Nickel	ND		1.0
Selenium	ND		2.0
Silver	ND		1.0
Thallium	ND		1.0
Vanadium	ND		1.0
Zinc	ND		1.0

Calculations are performed before rounding to avoid round-off errors in calculated results.

Client: Applied Remedial Technologies

Job Number: 720-8258-1

Lab Control Spike/
Lab Control Spike Duplicate Recovery Report - Batch: 720-19491

Method: 6010B
Preparation: 3050B

LCS Lab Sample ID: LCS 720-19491/2-AA
Client Matrix: Solid
Dilution: 1.0
Date Analyzed: 03/21/2007 0920
Date Prepared: 03/20/2007 1149

Analysis Batch: 720-19550
Prep Batch: 720-19491
Units: mg/Kg

Instrument ID: Varian ICP
Lab File ID: N/A
Initial Weight/Volume: 1 g
Final Weight/Volume: 50 mL

LCSD Lab Sample ID: LCSD 720-19491/3-AA
Client Matrix: Solid
Dilution: 1.0
Date Analyzed: 03/21/2007 0923
Date Prepared: 03/20/2007 1149

Analysis Batch: 720-19550
Prep Batch: 720-19491
Units: mg/Kg

Instrument ID: Varian ICP
Lab File ID: N/A
Initial Weight/Volume: 1 g
Final Weight/Volume: 50 mL

	% Rec.						
Analyte	LCS	LCSD	Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
Antimony	89	91	80 - 120	2	20		
Arsenic	92	93	80 - 120	1	20		
Barium	95	96	80 - 120	1	20		
Beryllium	90	91	80 - 120	1	20		
Cadmium	91	92	80 - 120	1	20		
Chromium	92	93	80 - 120	1	20		
Cobalt	92	93	80 - 120	1	20		
Copper	94	95	80 - 120	1	20		
Lead	92	93	80 - 120	1	20		
Molybdenum	94	96	80 - 120	1	20		
Nickel	92	93	80 - 120	1	20		
Selenium	90	91	80 - 120	1	20		
Silver	92	93	80 - 120	1	20		
Thallium	93	94	80 - 120	1	20		
Vanadium	94	95	80 - 120	1	20		
Zinc	91	92	80 - 120	1	20		

Calculations are performed before rounding to avoid round-off errors in calculated results.

Client: Applied Remedial Technologies

Job Number: 720-8258-1

Method Blank - Batch: 720-19521

Method: 7471A
Preparation: 7471A

Lab Sample ID: MB 720-19521/1-AA
Client Matrix: Solid
Dilution: 1.0
Date Analyzed: 03/20/2007 1924
Date Prepared: 03/20/2007 1758

Analysis Batch: 720-19525
Prep Batch: 720-19521
Units: mg/Kg

Instrument ID: FIMS 100
Lab File ID: N/A
Initial Weight/Volume: 1 g
Final Weight/Volume: 50 mL

Analyte	Result	Qual	RL
Mercury	ND		0.050

Lab Control Spike/
Lab Control Spike Duplicate Recovery Report - Batch: 720-19521

Method: 7471A
Preparation: 7471A

LCS Lab Sample ID: LCS 720-19521/2-AA
Client Matrix: Solid
Dilution: 1.0
Date Analyzed: 03/20/2007 1925
Date Prepared: 03/20/2007 1758

Analysis Batch: 720-19525
Prep Batch: 720-19521
Units: mg/Kg

Instrument ID: FIMS 100
Lab File ID: N/A
Initial Weight/Volume: 1 g
Final Weight/Volume: 50 mL

LCSD Lab Sample ID: LCSD 720-19521/3-AA
Client Matrix: Solid
Dilution: 1.0
Date Analyzed: 03/20/2007 1926
Date Prepared: 03/20/2007 1758

Analysis Batch: 720-19525
Prep Batch: 720-19521
Units: mg/Kg

Instrument ID: FIMS 100
Lab File ID: N/A
Initial Weight/Volume: 1 g
Final Weight/Volume: 50 mL

Analyte	% Rec. LCS	% Rec. LCSD	Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
Mercury	101	102	85 - 115	1	20		

Calculations are performed before rounding to avoid round-off errors in calculated results.

Client: Applied Remedial Technologies

Job Number: 720-8258-1

Lab Control Spike - Batch: 720-19649

Method: 9045C
Preparation: N/A

Lab Sample ID: LCS 720-19596/1-AA
Client Matrix: Solid
Dilution: 1.0
Date Analyzed: 03/22/2007 1305
Date Prepared: N/A
Date Leached: 03/22/2007 1300

Analysis Batch: 720-19649
Prep Batch: N/A
Units: SU

Leachate Batch: 720-19596

Instrument ID: Corning pH
Lab File ID: N/A
Initial Weight/Volume: 50 mL
Final Weight/Volume:

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
pH-S	7.00	7.010	100	99 - 101	

Calculations are performed before rounding to avoid round-off errors in calculated results.

Client: Applied Remedial Technologies

Job Number: 720-8258-1

Method Blank - Batch: 720-19485

Method: 9071B
Preparation: 9071B

Lab Sample ID: MB 720-19485/1-AA
Client Matrix: Solid
Dilution: 1.0
Date Analyzed: 03/20/2007 1146
Date Prepared: 03/20/2007 1127

Analysis Batch: 720-19490
Prep Batch: 720-19485
Units: mg/Kg

Instrument ID: No Equipment Assigned
Lab File ID: N/A
Initial Weight/Volume: 10.00 g
Final Weight/Volume: 10.000 mL

Analyte	Result	Qual	RL
HEM	ND		100

Lab Control Spike/
Lab Control Spike Duplicate Recovery Report - Batch: 720-19485

Method: 9071B
Preparation: 9071B

LCS Lab Sample ID: LCS 720-19485/2-AA
Client Matrix: Solid
Dilution: 1.0
Date Analyzed: 03/20/2007 1146
Date Prepared: 03/20/2007 1127

Analysis Batch: 720-19490
Prep Batch: 720-19485
Units: mg/Kg

Instrument ID: No Equipment Assigned
Lab File ID: N/A
Initial Weight/Volume: 10.08 g
Final Weight/Volume: 10.08 mL

LCSD Lab Sample ID: LCSD 720-19485/3-AA
Client Matrix: Solid
Dilution: 1.0
Date Analyzed: 03/20/2007 1146
Date Prepared: 03/20/2007 1127

Analysis Batch: 720-19490
Prep Batch: 720-19485
Units: mg/Kg

Instrument ID: No Equipment Assigned
Lab File ID: N/A
Initial Weight/Volume: 10.03 g
Final Weight/Volume: 10.03 mL

	% Rec.						
Analyte	LCS	LCSD	Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
HEM	93	91	79 - 120	1	18		

Calculations are performed before rounding to avoid round-off errors in calculated results.

Client: Applied Remedial Technologies

Job Number: 720-8258-1

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 720-19485

Method: 9071B
Preparation: 9071B

MS Lab Sample ID:	720-8258-4	Analysis Batch:	720-19490	Instrument ID:	No Equipment Assigned
Client Matrix:	Solid	Prep Batch:	720-19485	Lab File ID:	N/A
Dilution:	1.0			Initial Weight/Volume:	10.01 g
Date Analyzed:	03/20/2007 1146			Final Weight/Volume:	10.01 mL
Date Prepared:	03/20/2007 1127				

MSD Lab Sample ID:	720-8258-4	Analysis Batch:	720-19490	Instrument ID:	No Equipment Assigned
Client Matrix:	Solid	Prep Batch:	720-19485	Lab File ID:	N/A
Dilution:	1.0			Initial Weight/Volume:	10.00 g
Date Analyzed:	03/20/2007 1146			Final Weight/Volume:	10.00 mL
Date Prepared:	03/20/2007 1127				

	% Rec.						
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
HEM	226	384	79 - 120	3	20	4	4

Calculations are performed before rounding to avoid round-off errors in calculated results.

SEVERN TRENT STL

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720-8258

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Date 3/16/07 Page 1 of 1

Report To

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Phone: 415-467-5640

Analysis Request

Sample ID	Date	Time	Matrix	Preserv.	TPH EPA - ☐ 8015/8021 ☐ 8260B ☒ Gas w/ ☒ BTEX ☒ MTBE	Purgeable Aromatics BTEX EPA - ☐ 8021 ☐ 8260B	TEPH EPA 8015M* ☐ Silica Gel ☒ Diesel ☒ Motor Oil ☐ Other	Fuel Tests EPA 8260B ☒ Gas ☐ BTEX ☐ Five Oxyenates ☐ DCA, EDB ☐ Ethanol	Purgeable Halocarbons (HVOCs) EPA 8021 or 8260B	Volatile Organics GC/MS (VOCs) ☐ EPA 8260B ☐ 624	Semivolatiles GC/MS ☐ EPA 8270 ☐ 625	Oil and Grease ☐ Petroleum (EPA 1664) ☒ Total	Pesticides ☒ EPA 8081 ☐ 608 PCBs ☒ EPA 8082 ☐ 608	PNAs by ☒ 8270 ☐ 8310	CAM17 Metals (EPA 6010/7470/7471)	Metals ☐ Lead ☐ LUFT ☐ RCRA ☐ Other	Low Level Metals by EPA 200.8/6020 (ICP-MS)	☐ WET (STLC) ☐ TCLP	☐ Hexavalent Chromium ☐ pH (24h hold time for H_2O)	☐ Spec Cond ☐ Alkalinity ☐ TSS ☐ TDS ☐	Anions ☐ Cl ☐ SO_4 ☐ NO_3 ☐ F ☐ Br ☐ NO_2 ☐ PO_4				Number of Containers
Tank T-1	3/16/07	12:05	Soil		X		X		X	X	X	X	X	X	X				X							1

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Project Info.

Project Name: 461 McGraw Ave
Project#:
PO#:
Credit Card#:

Sample Receipt

of Containers: 1
Head Space:
Temp: 21.3 <4hrs
Conforms to record:

TAT: 5 Day | 72h | 48h | 24h | Other:

Report: ☐ Routine ☐ Level 3 ☐ Level 4 ☐ EDD ☐ State Tank Fund EDF ☐ Global ID _____

Special Instructions / Comments:
Composite the jars. Sample variability

1) Relinquished by:
Signature 12:18pm Time
Mark Williams 3/16/07
Printed Name Date
for Applied Remedial Tech
Company
925 859-2544 Contact

2) Relinquished by:
Signature Time
Printed Name Date
Company

3) Relinquished by:
Signature Time
Printed Name Date
Company

1) Received by:
Joan MacQuarrie 1218
Signature Time
Printed Name 3-16-07 Date
Joan Mullen
Company

2) Received by:
Signature Time
Printed Name Date
Company

3) Received by:
Signature Time
Printed Name Date
Company

Rev 06/04

LOGIN SAMPLE RECEIPT CHECK LIST

Client: Applied Remedial Technologies Job Number: 720-8258-1

Login Number: 8258

Question	T/F/NA	Comment
Radioactivity either was not measured or, if measured, is at or below background	NA	
The cooler's custody seal, if present, is intact.	NA	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
There are no discrepancies between the sample IDs on the containers and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
VOA sample vials do not have headspace or bubble is <6mm (1/4") in diameter.	True	
If necessary, staff have been informed of any short hold time or quick TAT needs	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	

ANALYTICAL REPORT

Job Number: 720-8258-2

Job Description: Tank Waste Disposal

For:
Applied Remedial Technologies
1485 Bayshore Blvd
Suite 1
San Francisco, CA 94124

Attention: Mr. Apramjeet Ghuman

Dimple Sharma
Project Manager I
dsharma@stl-inc.com
03/29/2007

cc: Mr. Mark Williams

Project Manager: Dimple Sharma

Severn Trent Laboratories, Inc.
STL San Francisco 1220 Quarry Lane, Pleasanton, CA 94566
Tel (925) 484-1919 Fax (925) 484-1096 www.stl-inc.com

EXECUTIVE SUMMARY - Detections

Client: Applied Remedial Technologies Job Number: 720-8258-2

Lab Sample ID Analyte	Client Sample ID	Result / Qualifier	Reporting Limit	Units	Method

No Detections

METHOD SUMMARY

Client: Applied Remedial Technologies Job Number: 720-8258-2

Description	Lab Location	Method	Preparation Method
Matrix: Solid			
Inductively Coupled Plasma - Atomic Emission Spectrometry	STL SF	SW846 6010B	
Toxicity Characteristic Leaching Procedure	STL SF		SW846 1311
Acid Digestion of Waters for Total Recoverable or	STL SF		SW846 3005A
Acid Digestion of Aqueous Samples and Extracts	STL SF		SW846 3010A
California WET Citrate Leach	STL SF		CA-WET CA WET Citrate

LAB REFERENCES:

STL SF = STL San Francisco

METHOD REFERENCES:

SW846 - "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

SAMPLE SUMMARY

Client: Applied Remedial Technologies Job Number: 720-8258-2

Lab Sample ID	Client Sample ID	Client Matrix	Date/Time Sampled	Date/Time Received
720-8258-4	TANK T-1	Solid	03/16/2007 1205	03/16/2007 1218

Client: Applied Remedial Technologies | Job Number: 720-8258-2

Client Sample ID: TANK T-1

Lab Sample ID:	720-8258-4	Date Sampled:	03/16/2007 1205
Client Matrix:	Solid	Date Received:	03/16/2007 1218

6010B Inductively Coupled Plasma - Atomic Emission Spectrometry-TCLP

Method:	6010B	Analysis Batch: 720-19854		Instrument ID:	Varian ICP
Preparation:	3010A	Prep Batch: 720-19841		Lab File ID:	N/A
Dilution:	1.0	Leachate Batch: 720-19806		Initial Weight/Volume:	5.0 mL
Date Analyzed:	03/29/2007 1120			Final Weight/Volume:	50.0 mL
Date Prepared:	03/29/2007 0536				
Date Leached:	03/28/2007 1300				

Analyte	DryWt Corrected: N	Result (mg/L)	Qualifier	RL
Arsenic		ND		0.50
Chromium		ND		0.50

6010B Inductively Coupled Plasma - Atomic Emission Spectrometry-STLC Citrate

Method:	6010B	Analysis Batch: 720-19854		Instrument ID:	Varian ICP
Preparation:	3005A	Prep Batch: 720-19840		Lab File ID:	N/A
Dilution:	1.0	Leachate Batch: 720-19752		Initial Weight/Volume:	5.0 mL
Date Analyzed:	03/29/2007 1054			Final Weight/Volume:	50.0 mL
Date Prepared:	03/29/2007 0531				
Date Leached:	03/26/2007 2030				

Analyte	DryWt Corrected: N	Result (mg/L)	Qualifier	RL
Chromium		ND		0.50

DATA REPORTING QUALIFIERS

Lab Section	Qualifier	Description

Client: Applied Remedial Technologies Job Number: 720-8258-2

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
Metals					
Prep Batch: 720-19752					
MB 720-19752/1-AB	Method Blank	C	Solid	CA WET Citrate	
720-8258-4	TANK T-1	C	Solid	CA WET Citrate	
Prep Batch: 720-19806					
720-8258-4	TANK T-1	P	Solid	1311	
Prep Batch: 720-19840					
LCS 720-19840/2-AA	Lab Control Spike	R	Solid	3005A	
LCSD 720-19840/3-AA	Lab Control Spike Duplicate	R	Solid	3005A	
MB 720-19752/1-AB	Method Blank	C	Solid	3005A	720-19752
720-8258-4MS	Matrix Spike	C	Solid	3005A	
720-8258-4MSD	Matrix Spike Duplicate	C	Solid	3005A	
720-8258-4	TANK T-1	C	Solid	3005A	720-19752
Prep Batch: 720-19841					
LCS 720-19841/2-AA	Lab Control Spike	T	Solid	3010A	
LCSD 720-19841/3-AA	Lab Control Spike Duplicate	T	Solid	3010A	
MB 720-19841/1-AA	Method Blank	T	Solid	3010A	
720-8258-4MS	Matrix Spike	P	Solid	3010A	
720-8258-4MSD	Matrix Spike Duplicate	P	Solid	3010A	
720-8258-4	TANK T-1	P	Solid	3010A	720-19806
Analysis Batch:720-19854					
LCS 720-19840/2-AA	Lab Control Spike	R	Solid	6010B	720-19840
LCSD 720-19840/3-AA	Lab Control Spike Duplicate	R	Solid	6010B	720-19840
MB 720-19752/1-AB	Method Blank	C	Solid	6010B	720-19840
LCS 720-19841/2-AA	Lab Control Spike	T	Solid	6010B	720-19841
LCSD 720-19841/3-AA	Lab Control Spike Duplicate	T	Solid	6010B	720-19841
MB 720-19841/1-AA	Method Blank	T	Solid	6010B	720-19841
720-8258-4	TANK T-1	C	Solid	6010B	720-19840
720-8258-4MS	Matrix Spike	C	Solid	6010B	720-19840
720-8258-4MSD	Matrix Spike Duplicate	C	Solid	6010B	720-19840
720-8258-4	TANK T-1	P	Solid	6010B	720-19841
720-8258-4MS	Matrix Spike	P	Solid	6010B	720-19841
720-8258-4MSD	Matrix Spike Duplicate	P	Solid	6010B	720-19841

Report Basis
C = STLC Citrate
P = TCLP
R = Total Recoverable
T = Total

Client: Applied Remedial Technologies

Job Number: 720-8258-2

Method Blank - Batch: 720-19840

Method: 6010B
Preparation: 3005A
STLC Citrate

Lab Sample ID: MB 720-19752/1-AB
Client Matrix: Solid
Dilution: 1.0
Date Analyzed: 03/29/2007 1037
Date Prepared: 03/29/2007 0531
Date Leached: 03/26/2007 2030

Analysis Batch: 720-19854
Prep Batch: 720-19840
Units: mg/L

Leachate Batch: 720-19752

Instrument ID: Varian ICP
Lab File ID: N/A
Initial Weight/Volume: 5.0 mL
Final Weight/Volume: 50.0 mL

Analyte	Result	Qual	RL
Chromium	ND		0.50

Lab Control Spike/
Lab Control Spike Duplicate Recovery Report - Batch: 720-19840

Method: 6010B
Preparation: 3005A
Total Recoverable

LCS Lab Sample ID: LCS 720-19840/2-AA
Client Matrix: Solid
Dilution: 1.0
Date Analyzed: 03/29/2007 1047
Date Prepared: 03/29/2007 0531

Analysis Batch: 720-19854
Prep Batch: 720-19840
Units: mg/L

Instrument ID: Varian ICP
Lab File ID: N/A
Initial Weight/Volume: 5.0 mL
Final Weight/Volume: 50.0 mL

LCSD Lab Sample ID: LCSD 720-19840/3-AA
Client Matrix: Solid
Dilution: 1.0
Date Analyzed: 03/29/2007 1050
Date Prepared: 03/29/2007 0531

Analysis Batch: 720-19854
Prep Batch: 720-19840
Units: mg/L

Instrument ID: Varian ICP
Lab File ID: N/A
Initial Weight/Volume: 5.0 mL
Final Weight/Volume: 50.0 mL

Analyte	% Rec. LCS	% Rec. LCSD	Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
Chromium	100	99	80 - 120	1	20		

Calculations are performed before rounding to avoid round-off errors in calculated results.

Client: Applied Remedial Technologies

Job Number: 720-8258-2

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 720-19840

Method: 6010B
Preparation: 3005A
STLC Citrate

MS Lab Sample ID:	720-8258-4	Analysis Batch:	720-19854	Instrument ID:	Varian ICP
Client Matrix:	Solid	Prep Batch:	720-19840	Lab File ID:	N/A
Dilution:	1.0			Initial Weight/Volume:	5.0 mL
Date Analyzed:	03/29/2007 1057			Final Weight/Volume:	50.0 mL
Date Prepared:	03/29/2007 0531				

MSD Lab Sample ID:	720-8258-4	Analysis Batch:	720-19854	Instrument ID:	Varian ICP
Client Matrix:	Solid	Prep Batch:	720-19840	Lab File ID:	N/A
Dilution:	1.0			Initial Weight/Volume:	5.0 mL
Date Analyzed:	03/29/2007 1101			Final Weight/Volume:	50.0 mL
Date Prepared:	03/29/2007 0531				

	% Rec.						
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Chromium	101	101	80 - 120	0	20		

Calculations are performed before rounding to avoid round-off errors in calculated results.

Client: Applied Remedial Technologies Job Number: 720-8258-2

Method Blank - Batch: 720-19841

Method: 6010B
Preparation: 3010A

Lab Sample ID: MB 720-19841/1-AA
Client Matrix: Solid
Dilution: 1.0
Date Analyzed: 03/29/2007 1106
Date Prepared: 03/29/2007 0536

Analysis Batch: 720-19854
Prep Batch: 720-19841
Units: mg/L

Instrument ID: Varian ICP
Lab File ID: N/A
Initial Weight/Volume: 5.0 mL
Final Weight/Volume: 50.0 mL

Analyte	Result	Qual	RL
Arsenic	ND		0.50
Chromium	ND		0.50

Lab Control Spike/
Lab Control Spike Duplicate Recovery Report - Batch: 720-19841

Method: 6010B
Preparation: 3010A

LCS Lab Sample ID: LCS 720-19841/2-AA
Client Matrix: Solid
Dilution: 1.0
Date Analyzed: 03/29/2007 1109
Date Prepared: 03/29/2007 0536

Analysis Batch: 720-19854
Prep Batch: 720-19841
Units: mg/L

Instrument ID: Varian ICP
Lab File ID: N/A
Initial Weight/Volume: 5.0 mL
Final Weight/Volume: 50.0 mL

LCSD Lab Sample ID: LCSD 720-19841/3-AA
Client Matrix: Solid
Dilution: 1.0
Date Analyzed: 03/29/2007 1112
Date Prepared: 03/29/2007 0536

Analysis Batch: 720-19854
Prep Batch: 720-19841
Units: mg/L

Instrument ID: Varian ICP
Lab File ID: N/A
Initial Weight/Volume: 5.0 mL
Final Weight/Volume: 50.0 mL

Analyte	% Rec. LCS	% Rec. LCSD	Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
Arsenic	100	102	80 - 120	2	20		
Chromium	99	101	80 - 120	2	20		

Calculations are performed before rounding to avoid round-off errors in calculated results.

Client: Applied Remedial Technologies

Job Number: 720-8258-2

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 720-19841

Method: 6010B
Preparation: 3010A
TCLP

MS Lab Sample ID:	720-8258-4	Analysis Batch:	720-19854	Instrument ID:	Varian ICP
Client Matrix:	Solid	Prep Batch:	720-19841	Lab File ID:	N/A
Dilution:	1.0			Initial Weight/Volume:	5.0 mL
Date Analyzed:	03/29/2007 1129			Final Weight/Volume:	50.0 mL
Date Prepared:	03/29/2007 0536				

MSD Lab Sample ID:	720-8258-4	Analysis Batch:	720-19854	Instrument ID:	Varian ICP
Client Matrix:	Solid	Prep Batch:	720-19841	Lab File ID:	N/A
Dilution:	1.0			Initial Weight/Volume:	5.0 mL
Date Analyzed:	03/29/2007 1133			Final Weight/Volume:	50.0 mL
Date Prepared:	03/29/2007 0536				

	% Rec.						
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Arsenic	100	102	75 - 125	2	20		
Chromium	100	102	75 - 125	2	20		

Calculations are performed before rounding to avoid round-off errors in calculated results.

SEVERN TRENT STL

STL San Francisco Chain of Custody

720-8258

1220 Quarry Lane • Pleasanton, CA 94566-4756
Phone: (925) 484-1919 • Fax: (925) 484-1096
Email: sflogin@stl-inc.com

Reference #: 104566

Date 3/16/07 Page 1 of 1

Report To

Attn: Aprimjeet Ghuman
Company: Applied Remedial Technology
Address: 1405 Bayshore Blvd Suite 1
Phone: San Francisco, CA 94124
Bill To: Applied Remedial
Sampled By: Mark Williams
Attn: Appri Ghuman
Phone: 415-467-5640

Analysis Request

Sample ID	Date	Time	Matrix	Preserv.	TPH EPA - ☐ 8015/8021 ☐ 8260B ☒ Gas w/ ☒ BTEX ☒ MTBE	Purgeable Aromatics BTEX EPA - ☐ 8021 ☐ 8260B	TEPH EPA 8015M* ☐ Silica Gel ☒ Diesel ☒ Motor Oil ☐ Other	Fuel Tests EPA 8260B ☒ Gas ☐ BTEX ☐ Five Oxyenates ☐ DCA, EDB ☐ Ethanol	Purgeable Halocarbons (HVOCs) EPA 8021 or 8260B	Volatile Organics GC/MS (VOCs) ☐ EPA 8260B ☐ 624	Semivolatiles GC/MS ☐ EPA 8270 ☐ 625	Oil and Grease ☐ Petroleum (EPA 1664) ☒ Total	Pesticides ☒ EPA 8081 ☐ 608 PCBs ☒ EPA 8082 ☐ 608	PNAs by ☒ 8270 ☐ 8310	CAM17 Metals (EPA 6010/7470/7471)	Metals ☐ Lead ☐ LUFT ☐ RCRA ☐ Other	Low Level Metals by EPA 200.8/6020 (ICP-MS)	☐ WET (STLC) ☐ TCLP	☐ Hexavalent Chromium ☒ pH (24h hold time for H_2O)	☐ Spec Cond ☐ Alkalinity ☐ TSS ☐ TDS ☐	Anions ☐ Cl ☐ SO_4 ☐ NO_3 ☐ F ☐ Br ☐ NO_2 ☐ PO_4				Number of Containers
Tank T-1	3/16/07	12:05	Soil		X		X			X		X	X	X	X				X							1

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Project Info.

Project Name: 461 McGraw Ave
Project#:
PO#:
Credit Card#:

Sample Receipt

of Containers: 1
Head Space:
Temp: 21.3 <4hrs
Conforms to record:

TAT: 5 Day | 72h | 48h | 24h | Other:

Report: ☐ Routine ☐ Level 3 ☐ Level 4 ☐ EDD ☐ State Tank Fund EDF ☐ Global ID _____

Special Instructions / Comments:
Composite the jars. Sample variability

1) Relinquished by:	2) Relinquished by:	3) Relinquished by:
Signature: [signature] Time: 12:18 pm	Signature: Time:	Signature: Time:
Printed Name: Mark Williams Date: 3/16/07	Printed Name: Date:	Printed Name: Date:
Company: for Applied Remedial Tech 925 859-2544 Contact	Company:	Company:

1) Received by:	2) Received by:	3) Received by:
Signature: Joan MacQuiddy 1218 Time:	Signature: Time:	Signature: Time:
Printed Name: Joan Mullen Date: 3-16-07	Printed Name: Date:	Printed Name: Date:
Company:	Company:	Company:

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LOGIN SAMPLE RECEIPT CHECK LIST

Client: Applied Remedial Technologies

Job Number: 720-8258-2

Login Number: 8258

Question	T/F/NA	Comment
Radioactivity either was not measured or, if measured, is at or below background	NA	
The cooler's custody seal, if present, is intact.	NA	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
There are no discrepancies between the sample IDs on the containers and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
VOA sample vials do not have headspace or bubble is <6mm (1/4") in diameter.	True	
If necessary, staff have been informed of any short hold time or quick TAT needs	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	

ATTACHMENT B

Site-Specific Health and Safety Plan

SITE HEALTH & SAFETY PLAN

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SITE HEALTH & SAFETY PLAN
ENVIRONMENTAL INVESTIGATION SERVICES, INC.

PROJECT NAME: Call Mac Transportation Company
LOCATION: 461 McGraw Avenue, Livermore, CA.
DATE: 5/18/07
TASK: Site Investigation and Remedial Action

PROJECT MANAGER: Peter Littman
PROJECT SAFETY OFFICER: Jennifer Morris
SITE SAFETY OFFICER (SSO): Jennifer Morris

NEAREST HOSPITAL:	Valley Care Medical Center Phone: 911 Address: 5555 Las Positas Blvd, Pleasanton, CA
NEAREST FIRE DEPARTMENT: 3560 Nevada Street, Pleasanton, 94566 -	Livermore-Pleasanton Fire Department Phone: 911 or 925 454-2361
HAZARDOUS MATERIALS SPILL/ CLEAN-UP CONTRACTOR:	MACOY Resource Corp. Phone: (805) 227-1090 Cell (805) 391-3013 Address: 3030 Ramada Drive Paso Robles, California
U. S. ALERT SERVICE NUMBER:	1-800-642-2444
NEAREST PG&E OFFICE:	Livermore, CA 24-hr Emergency Phone: 1- 800 743-5000 Address: Livermore, California

NEAREST TELEPHONE LOCATION: Macoy Resources Cell and EIS Cell Phone

LOCATION OF SITE "CLEAN AREA": as per SSO: See Map.

LOCATION OF PERSONNEL DECON: STATION: as per SSO: See Map.

The following pages contain guidelines for on-site procedures to minimize risks to personnel at the job site, as well as information regarding basic first aid in the event of injury, among other points.

A pre-project Safety Meeting to familiarize all field personnel the potential hazards associated with the job shall be held at the start of each day's activities. Pre-project Safety Meeting held by:

X _____ Date: _____

X _____ Date: _____

X _____ Date: _____

X _____ Date: _____

We, the undersigned, have read the Site Safety Plan and understand the potential hazards on-site. We will follow the guidelines set forth in order to decrease the likelihood of personal or public injury.

X _____ Title: _____ Date: _____

X _____ Title: _____ Date: _____

X _____ Title: _____ Date: _____

X _____ Title: _____ Date: _____

X _____ Title: _____ Date: _____

X _____ Title: _____ Date: _____

X _____ Title: _____ Date: _____

X _____ Title: _____ Date: _____

SITE HEALTH & SAFETY PLAN
ENVIRONMENTAL INVESTIGATION SERVICES, INC.

I. HEALTH AND SAFETY PROGRAM OVERVIEW

A. In order to promote health and safety awareness, the position of Site Safety Officer (SSO) is rotated among employees for each project site.

B. It is the responsibility of the designated SSO to implement the Site Safety Plan (SSP) and to hold a pre-project safety meeting.

II. FACILITY BACKGROUND

A. Site History

The site is located northeast of the intersection of McGraw Avenue and Preston Road in Livermore, Alameda County, California. The nearest surface water is Arroyo Seco, located approximately ½ mile south of the site and flow to the northwest. The site location is shown on Figure 1. The attached Figure depicts the site layout and features of concern. The site is currently vacant, but was formerly used by Call Mac Transportation as a truck storage and salvage yard. A site plan is shown in Figure 2.

According to Applied Remedial Technologies' (ART's) *Proposed Work Plan to Conduct Soil Removal and Confirmation Sampling of the Impacted Soils at the Former Diesel UST Dispenser Island, Below the Former Above Ground Storage Tanks, and at the Recent Diesel Spill Areas, 461 McGraw Avenue, Livermore, California, 94550,* issued to Alameda County Environmental Health Services (ACEH) April 2, 2007, an underground storage tank (UST) was removed from the site in 1995. A visual inspection of the UST after it had been removed revealed that it was generally in good condition, with no visible holes. No hydrocarbon odor or staining was reported in the former UST pit, and the three soil samples collected from the tank pit contained no detectable petroleum hydrocarbons. Both the field observations and the soil sample analytical results (soil samples S-1 through S-3) reported that no petroleum hydrocarbons were detected. In addition, one water sample was collected from the excavation from approximately 13 to 14 feet below ground surface (bgs). There were no detectable concentrations of any of the constituents analyzed.

One soil sample was collected below the dispenser island (S-4), and was found to contain 17,000 milligrams per kilograms (mg/kg) total petroleum hydrocarbons as diesel (TPH-d). This sample was collected from an area of obvious over-spillage. No benzene, toluene, ethylbenzene or xylenes (collectively BTEX) was detected.

According to information gathered during the development of this workplan, there are three ASTs (T-1 through T-3) located at the site. AST (T-1) appears to have been moved from another location (T-4) on the site. ART submitted *Work Plan to Remove the Three Remaining Storage Tanks, 461 McGraw Avenue, Livermore, California 94550* to the Livermore-Pleasanton Fire Department (LPFD) on April 2, 2007 outlining procedures for decommissioning and disposing of the ASTs and their contents, and for sampling the soil beneath the ASTs. According to the workplan ART submitted to ACEH, the Department of Toxic Substances Control (DTSC) has conducted soil sampling activities below two of the

existing ASTs. The soil analytical data show that the ASTs have impacted the soil below them, and excavation will be necessary in the area.

There are also a total of 34 small areas where petroleum hydrocarbon staining has been noted. There are also 7 larger areas of petroleum hydrocarbon staining that were the results of unauthorized releases during Golden State Metal's crushing of vehicles at the site.

B. Chemical Constituents of Concern. The following chemicals are likely to be present on site: benzene, toluene, ethylbenzene, and xylenes (BTEX)

C. Scope of Work

The Site Remediation and Investigation Activities will consist of the following tasks:

- Remove the concrete pad, dispenser island, and piping associated with the former UST. Overexcavate the impacted soil and collect confirmation soil samples from the sidewalls and bottom of the excavation. Dispose of excavated soil according to state and local regulations. Backfill the excavation to a minimum 90% relative compaction with clean imported fill material.
- Remove and dispose of three ASTs and their contents per ART's April 2, 2007 *Work Plan to Remove the Three Remaining Storage Tanks, 461 McGraw Avenue, Livermore, California 94550*. Overexcavate the soil below and nearby the ASTs and former AST location to remove impacted soil. Collect a minimum of two confirmation soil samples from the excavations below each of AST locations T-1, T-3, and T-4, and a minimum of one soil sample from the excavation below the AST location T-2 for laboratory analysis. Dispose of excavated soil according to state and local regulations. Backfill the excavation to a minimum 90% relative compaction with clean imported fill material.
- Excavate 34 small areas where soil has been stained by petroleum hydrocarbons. Determine extents of the excavations using field observations and data from a handheld photoionization detector (PID).
- Excavate 7 larger areas where soil has been impacted by unauthorized releases of petroleum hydrocarbons during Golden State Metal's dismantling and removal of vehicles at the site. Note field observations and PID data. Collect at least one confirmation soil sample from each of these seven areas.
- Collect a total of eight soil samples from the soil loading dock: 4 surface soil samples and four shallow (2-3 feet bgs) soil samples.
- Collect 2 surface or near-surface soil samples adjacent to the storage container on the building pad to determine whether the soil has been impacted by former drum storage.
- Collect 2 surface or near-surface soil samples of the building pad to verify that the soil used in its construction is clean.
- Collect eight surface or near-surface soil samples in the vicinity of the former battery storage area near former trailer two to determine whether the soil has been impacted by lead.
- Purge and sample water well 3S/2E-3H4, in the northeastern portion of the property.
- Repair well 3S/2E-3H4 to Zone 7 Water District standards.

- Advance three soil borings to depths of approximately 5 feet below first encountered groundwater: one near the former UST and associated piping and dispenser island, one near the tank car (T-3), and one near the two ASTs (T-1 and T-2). Continuously log soils using the Unified Soil Classification System (USCS) as a guide, and screen the soils with a PID. Collect discrete soil samples for laboratory analysis from approximately 5 feet bgs, one sample from between ten and twenty feet bgs (with the exact depth to be determined in the field based on soil conditions, lithologic changes, and other factors), and the capillary fringe. If evidence of petroleum hydrocarbon contamination is observed in the field, collect additional soil samples may be collected for laboratory analysis to characterize the petroleum hydrocarbon concentrations. Collect grab groundwater samples from the soil borings for laboratory analysis. Backfill soil boring to grade with neat cement grout.
- Advance three soil borings to depths of approximately 5 feet below first encountered groundwater, along the western property boundary adjacent to McGraw Avenue, including one in the southwestern corner of the property near the intersection of McGraw Avenue and Preston Avenue. Continuously log soils using the Unified Soil Classification System (USCS) as a guide, and screen the soils with a PID. Collect no soil samples for laboratory analysis unless evidence of petroleum hydrocarbon contamination is observed in the field. Collect grab groundwater samples from the soil borings for laboratory analysis. Backfill soil boring to grade with neat cement grout.

III. SITE CHARACTERIZATION / JOB HAZARD ANALYSIS

A. Physical Hazards

1. Operation of Heavy Equipment
   a. Backhooe or Excavator
   b. Geoprobe Truck

2. Electrical Shock
   a. Overhead Wires 10 feet clearance
   b. Faulty electric wiring on equipment
   c. Faulty electric service to equipment

3. High Traffic Areas
   a. Traffic barricades for work areas and traffic control if necessary

4. Drilling
   a. Encountering underground utilities

5. Hearing Loss
   a. Engine-driven equipment
   b. Impact tools

6. Hazardous Chemical Exposure:
   a. Soils and/or soil gas vapors may contain an assortment of residual BTEX. Chemicals are moderately toxic and highly flammable, causing explosive concentrations in air over a range of 0.8% to 6% by volume.

7. Chemical List: Residual gasoline is present onsite. Consult NIOSH Pocket Guide to Chemical Hazards for other information.

a. Benzene
   (1) Routes of entry
      (a) Inhalation
      (b) Ingestion
      (c) Dermal contact
      (d) Absorption
   (2) Acute Symptoms
      (a) Fatigue
      (b) Eye, nose and skin irritation
      (c) Giddiness
      (d) Headache
      (e) Nausea
      (f) Staggered walk
      (g) Anorexia
      (h) Dermatitis
      (i) Bone marrow depression
      (j) Abdominal pain

b. Toluene
   (1) Routes of entry
      (a) Inhalation
      (b) Ingestion
      (c) Dermal contact
      (d) Absorption
   (2) Acute symptoms
      (a) Fatigue
      (b) Weakness
      (c) Confusion
      (d) Euphoria
      (e) Dizziness
      (f) Headache
      (g) Dilated pupils
      (h) Muscle fatigue
      (i) Lacrimation
      (j) Insomnia
      (k) Paresthesia
      (l) Dermatitis
      (m) Photophobia

c. Ethylbenzene
   (1) Routes of entry
      (a) Inhalation
      (b) Ingestion
      (c) Dermal contact
   (2) Acute symptoms

(a) Eye and skin irritations
(b) Headache
(c) Dermatitis
(d) Narcosis
(e) Coma

d. Xylenes (ortho/meta/para isomers)

(1) Routes of entry

(a) Inhalation
(b) Ingestion
(c) Dermal contact
(d) Absorption

(2) Acute Symptoms

(a) Eyes, nose, throat and skin irritation
(b) Drowsiness
(c) Dizziness
(d) Excitement
(e) Incoherence
(f) Staggered walk
(g) Nausea
(h) Vomiting
(i) Abdominal pain
(j) Dermatitis

IV. TRAINING

A. Potential Hazards - All personnel working at the site are made aware of all potential on-site hazards prior to the beginning of field work.

B. Safe Work Practices - All personnel at the site are advised of safe work practices and hazard avoidance.

C. SSP - All personnel, including subcontractors of EIS and all visitors to the site work areas, are to read the SSP and sign an acknowledgment indicating that they have reviewed and understand its contents.

D. OSHA - All EIS Macoy resource Corporation and the Geoprobe Drilling Company field personnel have completed a minimum of 40-hour OSHA training and are updated annually with an 8-hour refresher course.

V. PERSONAL PROTECTIVE EQUIPMENT

A. Level "D" protection for field crew installing soil borings and soil sampling:

1. Chemically resistant steel-toed boots
2. Hard hat
3. Safety glasses - Eye protection must be worn whenever the potential for flying debris and or chemical splash is present.
4. Hearing protection
5. Leather gloves
6. Denim or equivalent long pants
7. Button up shirt

VI. HEALTH SURVEILLANCE

A. Health surveillance will be on an individual and on a "buddy system" basis.

B. All personnel are advised to pay particular attention for the symptoms of chemical exposure outlined in Appendix A.

VII. EXPOSURE MONITORING PLAN

At the direction of the site safety officer exposure monitoring shall consist of:

A. Direct observation for excessive fumes, dust or vapor clouds, or excessively noxious odors; or

B. Direct reading instruments:
(Equipment use depends on site-specific conditions).
photo-ionization detector (PID), or a field gas chromatograph

VIII. SITE CONTROL

A. Work Zones - Areas will be designated after utility location survey and site reconnaissance with Macoy Resources Corp personnel and placed on site map and will be indicated in pre-field meeting.

1. Exclusion Zone

a. Where work is performed, with all proper safety equipment, and employing safe work practices.

b. Public is excluded.

c. Area is barricaded with barricades, cones and/or caution tape.

d. Cones placed to guide public away from work area.

2. Contamination Reduction Zone

a. Located outside the exclusion zone.

b. Place where personnel and/or equipment are decontaminated in the event of contact with hazardous chemicals, from either the soil, water and/or air (vapors).

3. Support Zone

a. Clean zone or Support zone is located outside Contamination Reduction Zone.

b. Contains all job related support equipment and/or services.

B. Location of Nearest Communication Equipment

1. Cell phones on all responsible workers.

2. All persons in the various zones will have remote communication equipment if necessary.

C. Location of Nearest Medical Assistance

1. On-site map shows nearest hospital. See Page 1 for address and telephone number.

D. On-site Communication

1. All personnel on-site will be made aware of common hand signals.

E. Engineering Controls
1. Site Map
a. Indicates work locations.

IX. DECONTAMINATION

A. Material Handling
1. All sampling equipment will be clean prior to use
2. Contaminated equipment will be taken off-site only after decontamination.
3. Disposal of wash and rinse water will be in compliance with all applicable regulations.

B. Personal Hygiene
1. No smoking, eating, or drinking will take place in the exclusion zone or in the contamination reduction zone.
2. A designated break area may be established off-site. However, if smoking or open flames are permitted, any such facility must be established a minimum of at least 100 feet upwind of any of any vapor source and shall be tested for flammable gases and vapor at the start of work and prior to scheduled break periods each day.
3. Personnel must wash all exposed skin areas with soap and water in the decontamination area before departing the site or going on break.

X. STANDARD OPERATING PROCEDURES

A. Pre-project safety meeting prior to working.
B. Sampling equipment calibrated before use.
C. Respirator fit test (if required).
D. Site work performed.
E. Decontamination protocol followed.

XI. CONTINGENCY PLAN / EMERGENCY PROCEDURES

A. Personal Exposure (First Aid)
1. In the event that exposure symptoms are manifested, the victim will be taken up-wind and off-site. Seek qualified medical attention immediately.
2. Consult NIOSH Pocket Guide to Chemical Hazards prior to rendering first aid. Wash skin with soap and water immediately.
3. Inhalation - Move to fresh air and administer immediate artificial respiration if required.
4. Ingestion - Do not induce vomiting. If conscious, give water or milk to drink. Seek qualified medical attention immediately.
5. Eyes - Flush with water for at least 20 minutes while holding eyes open. Seek qualified medical attention immediately.

B. Personal Injury- (Supervisors and field employees are trained in First Aid and CPR).
1. Provide basic first aid procedures as required; note time and circumstances of injuries. Follow these emergency action procedures:
a. Survey the scene.

(1) Is it safe to assist victim(s).

b. Conduct a Primary Survey

(1) Check for unresponsiveness and Airway, Breathing, and Circulation.

c. Phone 911 for ambulance if necessary.

d. Conduct a Secondary Survey.

(1) Interview victim

(2) Check vital signs

(2) Head to toe exam

e. Transport to nearest medical facility as appropriate. Notify SSO. See directions and map in Appendix B for the nearest hospital emergency room.

C. Fire and Explosion Potential

1. Evacuate the area immediately and conduct a head count of all personnel. Notify fire department. Do not attempt to fight the fire. A fire extinguisher will be present on-site for immediate response by on OSHA certified person.

XII. LIST OF APPROPRIATE REFERENCE LITERATURE

A. Title 29 CFR 1910 - OSHA General Industry Standard
B. Title 29 CFR 1926 - OSHA Construction Standard
C. Title 49 CFR 171-173 - DOT Regulations

APPENDIX A.

A. Potential Hazards

1. Exposure to Hazardous Chemicals

a. Hazardous / Toxic Materials

(1) Possible that the presence of BTEX in the shallow soil and groundwater exists.

b. Hazard Assessment

(1) Moderately toxic chemicals through inhalation, ingestion, absorption and skin contact, but possess good warning properties.

(2) Highly flammable and explosive when vapor concentrations range from 0.8 to 6% by volume.

2. Chemical Listing

a. Benzene

(1) Permissible exposure limit (PEL) = 10 ppm with a ceiling of 50 ppm for 10 minutes. (NIOSH)

(2) Action Level = 0.05 ppm

(3) Immediately Dangerous to Life or Health (IDLH) at 3,000 parts per million

(a) Carcinogenic

(4) Physical Properties

(a) Vapor pressure = 75 mm mercury

(b) Lower explosion limit (LEL) = 1.3%

(c) Upper explosion limit (UEL) = 7.9%
(d) Class 1B flammable liquid

(5) Target Organs
(a) Central Nervous System (CNA)
(b) Skin
(c) Blood
(d) Eyes
(e) Respiratory system
(f) Bone marrow

b. **Toluene**

(1) Permissible exposure limit (PEL) = 200 ppm with a maximum exposure of 500 ppm for 10 minute peak.

(2) Action Level = 50 ppm

(3) Immediately Dangerous to Life or Health (IDLH) at 2,000 parts per million

(4) Physical Properties
(a) Vapor pressure = 22 mm mercury
(b) Lower explosion limit (LEL) = 1.2%
(c) Upper explosion limit (UEL) = 7.1%
(d) Class 1B flammable liquid

(5) Target Organs
(a) Central Nervous System (CNA)
(b) Skin
(c) Liver
(d) Kidneys

c. **Ethylbenzene**

(1) Permissible exposure limit (PEL) = 100 ppm

(2) Action Level = 50 ppm

(3) Immediately Dangerous to Life or Health (IDLH) at 2,000 parts per million

(4) Physical Properties
(a) Vapor pressure = 10 mm mercury
(b) Lower explosion limit (LEL) = 1.0%
(c) Upper explosion limit (UEL) =6.7%
(d) Class 1B flammable liquid

(5) Target Organs
(a) Central Nervous System (CNA)
(b) Skin
(c) Upper respiratory system
(d) Eyes

d. **Xylenes (ortho/meta/para isomers)**

(1) Permissible exposure limit (PEL) = 100 ppm with maximum exposure of 200 ppm for 10 minutes.

(2) Action Level = 50 ppm

(3) Immediately Dangerous to Life or Health (IDLH) at 1,000 parts per million

(4) Physical Properties
(a) Vapor pressure = 7/9/9 mm mercury
(b) Lower explosion limit (LEL) = 1/1.0/1.1%

(c) Upper explosion limit (UEL) = 7/7/7%
(d) Class 1B flammable liquid - o xylene
(e) Class 1C flammable liquid - m,p xylenes

(5) Target Organs
(a) Central nervous system
(b) Eyes
(c) Liver
(d) Kidneys
(e) Skin
(f) Blood
(g) Gastro-intestinal tract

First Aid: 1. Get medical assistance for all cases of overexposure. Eyes: flush thoroughly with water. Skin: wash with soap and water. Inhalation: remove to fresh air. Ingestion: if conscious, induce vomiting.

Directions to PLEASANTON, CA

YAHOO! LOCAL Maps

Summary and Notes

START A **461 Mcgraw Ave, LIVERMORE, CA**

FINISH B **Valleycare Health System (925) 847-3000**
5555 W Las Positas Blvd, PLEASANTON, CA

Total Distance: 9.1 miles, Total Time: 12 mins (approx.)

Add your notes here...

	Distance
A 461 MCGRAW AVE, LIVERMORE, CA	
1. Start at **461 MCGRAW AVE, LIVERMORE** going toward **SOUTHFRONT RD**	go **< 0.1** mi
2. Turn L on **SOUTHFRONT RD**	go **0.4** mi
3. Turn R on **1ST ST**	go **0.3** mi
4. Continue on **SPRINGTOWN BLVD**	go **< 0.1** mi
5. Turn L to take ramp onto **I-580 W**	go **7.0** mi
6. Take exit **#47/TASSAJARA RD** toward **SANTA RITA RD**	go **0.3** mi
7. Turn L on **SANTA RITA RD**	go **0.9** mi
8. Turn R on **W LAS POSITAS BLVD**	go **0.1** mi
9. Arrive at **5555 W LAS POSITAS BLVD, PLEASANTON,** on the R	
B 5555 W LAS POSITAS BLVD, PLEASANTON, CA	

Distance: 9.1miles, Time: 12 mins