Transportation Terminals Company
PO Box 882682
San Francisco, CA 94188-2682

Date: 8/15/2013
From: Bob Lawlor
To; Haz. Materials Specialist, Alameda Co. Environmental Health
Subject: 15651 Worthley Drive, San Lorenzo CA R02558

Perjury Statement

I declare, under penalty of perjury, that the information and/or recommendations contained in the attached document or report is true and correct to the best of my knowledge.

Bob Lawlor

General Partner

Environmental Restoration Services

Site Investigations * Fuel Tank Closures and Installations * Site Remediation * Regulatory Reporting

Alameda County Health Care Services
Department of Environmental Health
1131 Harbor Bay Parkway, Second Floor
Alameda, CA 94502

April 9, 2013

Attn: Mr. Keith Nowell, PG, Haz Mat. Specialist for : 15651 Worthley Dr., San Lorenzo

Re: Investigative Report

Environmental Restoration Services (ERS) is pleased to submit to following Investigative Report for your review.

1.0 INTRODUCTION

On April 30, 2003 , one 12000 gallon underground tank last containing diesel was removed at the subject site by ERS. Analytical results of a groundwater sample recovered from the excavation showed elevated levels of diesel constituents.

This Report first reviews the site background, describes the tank removal, sampling protocols and the analytical results and remedial actions, and then describes an additional investigative scope of work, as requested by the Alameda County Health Care Services Agency (ACHCSA)

1.1 Site Location

The site is located in a commercial/Industrial district of San Lorenzo, California on property at 15651 Worthley Dr. (Figure 1).

1.2 Background

On April 30, 2003 , one 12,000 gallon underground tank last containing diesel was removed.

1.3 Site History

1.3.1 Description of Site

The site is occupied by a trucking terminal. About 20% of the site is occupied by the present structures, with the remaining area covered by asphalt and concrete driving surfaces.

2.0 SITE DESCRIPTION

2.1 Site Description

The site is located approximately 200 feet southeast of the corner of Grant Ave.. and Worthley Dr.. An approximate 42,000 square foot office and trucking terminal is located down the center portion of the parcel with an approximate 2500 square foot truck repair building located in northern corner of the parcel. The majority of the remaining property is paved.

2.2 Vicinity Map

A vicinity map is given in Figure 1 which includes the location of any known hydraulic influences. San Lorenzo Creek lies approximately 1600 feet northwest of the site and San Francisco Bay lies approximately 2700 feet northwest of the site . A site map is given in Figure 1 which includes information on adjacent streets.

2.3 Depth to Groundwater

Depth to groundwater based groundwater elevation within on-site groundwater wells , is approximately three to four feet below ground surface (bgs.)

2.4 Soil Profile

Previous boring logs show predominantly high plasticity clays starting at the ground surface, becoming a silty clay at approximately three feet bgs., becoming a silty fine sand or clay silt to depths of ten feet bgs..

2.5 Waste Removal

One tank has been removed from the site.

2.6 Previous Investigative and Remedial Work

On April 30, 2003, after removal of the UST, ERS recovered one soil sample (“West SW @4’”) from the western excavation sidewall at approximately 4' bgs., and one groundwater sample from the excavation (“Pit GW”). The results of the analysis indicated levels of Total Petroleum Hydrocarbons as diesel (TPH/d) , BTEX and fuel oxygenates below the varying detection limits for both samples, with the exception of TPH/d concentrations in groundwater sample “Pit GW” at 2560 milligrams per liter (mg/l).

On May 1, 2003 the groundwater within the excavation was inoculated with Solmar L-100 hydrocarbon consuming microbes. The groundwater within the excavation was aerated using a submersible electric pump.

On June 5, 2003, the excavation was dewatered of approximately 5000 gallons and stored on-site within a 5000 gallon aboveground storage tank (AST) and as groundwater was recharging into the excavation, a grab water sample was recovered. The analytical results of the groundwater recharge sample indicated no BTEX above the detection limit and 520 micrograms per liter (ug/l) of diesel range (C10-28) TPH.

On June 5, 2003, one sample was obtained from the water contained in the tank and tested per Oro Loma Sanitary District (OLSD) waste discharge requirements. The analytical results were below discharge limits and a discharge permit was obtained from the OLSD.

On October 1, 2003 the 5000 gallons of groundwater within the AST and approximately 2000 gallons of groundwater within the excavation, was disposed of to the sanitary sewer. On October 1, 2003, as groundwater was recharging into the excavation prior to backfill, a grab water sample was recovered. The analytical results of the groundwater recharge sample indicated no C10-28 range TPH above the analytical detection limit. On October 1, 2003, prior to backfill, ERS also recovered one soil sample ("East-SW @4'") from the eastern excavation sidewall at approximately 4' bgs.. The analytical results of the soil sample indicated no C10-28 range TPH or BTEX above the analytical detection limit.

On October 17, 2006, six borings were advanced at the site using a small diameter push rig (Geo-Probe) to a depth of approximately 8 feet. The borings were located around the former tank location. Groundwater samples were recovered from each boring. Analytical results did not indicate C10-28 range TPH, BTEX or MTBE concentrations above the detection limits at any of the sampling points.

On September 5, 2008, three monitoring wells (MW-1 through MW-3) were installed using 8" diameter hollow stem auger. to a depth of approximately 10 feet. The borings were located around the former tank location, as shown in Figure 2. Soil samples were recovered from each well boring at depths of 4.5 and 10 feet bgs.. Analytical results did not indicate C6-10 range TPH, C10-28 range TPH, BTEX or MTBE concentrations above the detection limits at any of the sampling points.

On April 17, 2012, a single boring was advanced by Well Test Inc. of San Jose, CA, into the groundwater within the backfill of the former tank excavation, using a 1.5 inch diameter stainless steel vibra-push Geo-Probe groundwater sample point, to a depth of five feet. One groundwater sample "TNK PIT" was recovered at grab sample point. The sample contained and a dissolved zinc concentration of 39.2 ug/l and not indicate Naphthalene concentrations, nor dissolved cadmium, chromium, lead and nickel concentrations above the detection limits.

Since September of 2008, the three monitoring wells have been sampled five times and have shown low concentrations of C10-28 range TPH in the groundwater.

3.0 INVESTIGATIVE SCOPE OF WORK

ERS believed that, due to the close proximity of existing monitoring well MW-2 to the pea-gravel backfilled former UST excavation, and higher than normal groundwater elevation within the excavation due to surface water infiltration, the groundwater elevation within MW-2 has been abnormally high when compared to MW-1 and MW-3. This has prevented the ability to establish a consistent groundwater flow direction and gradient in the vicinity of the former UST location. This investigative scope of work therefore was comprised of installing an additional groundwater monitoring well (MW-4) on-site and surveying the top of casing elevation of this new well in order to establish a consistent groundwater flow direction and gradient in the vicinity of the former UST location. The MW-4 well location is shown in Figure 2.

3.1 Monitoring Well Installation and Soil Sampling

Prior to initiating drilling, a subsurface drilling permit was obtained from the Alameda County Public Works Agency (ACPWA). ACHCSA was notified a minimum of 72 hours prior to drilling. Underground Service Alert was notified to locate any public/private utility lines at the proposed boring locations.

Prior to mobilization of the drill rig on-site, and prior to leaving the site, all associated equipment and well installation equipment was thoroughly cleaned to removed all soil, oil, grease, mud, tar, etc. The cleaning process consisted of high pressure steam cleaning of the drilling equipment and a high-pressure hot water final rinse. Before drilling the boring, all drilling equipment was steam-cleaned.

On March 11, 2013, a nominal 8-inch diameter boring was advanced using a hollow stem auger at each well location. Soils were visually logged from samples collected. Two soil samples, one from the capillary fringe (approximately 4 feet) and from the bottom (approximately 8 feet) were recovered from the well within a brass liner driven within a split spoon sampler. After recovery, the soil samples were sealed with Teflon sheet and plastic caps. The samples were immediately stored on crushed ice and maintained at a constant 4 degrees Celsius.

These samples were analyzed for C10- 28 range TPH and naphthalene.

Soil sample analytical results are as follows, results in micrograms per kilogram (ug/kg):

Sample	TPH(C10-28)	Naphthalene
MW-4@4’	316	ND<5
MW-4@8’	575	ND<5

The well casing and screens for the monitor wells were constructed with 2-inch diameter, Schedule 40, flush-joint threaded material. The PVC screens consisted of factory-milled 0.020 inch slots. The screen was installed at the interval from approximately 3 to 8 feet below ground surface (bgs.). A sand pack of clean washed Monterey 2/12 sand was placed adjacent to the entire screened interval. The sand pack was placed by carefully pouring sand down the annulus between the hollow stem and the well casing. The auger was raised periodically and an auger flight removed to allow the sand to fill the annulus between the casing and the borehole wall.

A six inch thick bentonite pellet seal was placed above the sand pack. The bentonite was hydrated with water at the quantity of 1 gallon per pound of bentonite. The bentonite was hydrated three times and allowed to swell for a minimum of 45 minutes. The annulus above the bentonite seal was grouted with a cement grout. The grout consisted of clean water mixed with Portland cement. The grout was placed after the auger flights are entirely withdrawn from the borehole. Well completion consisted of a locking PVC cap and subsurface traffic-rated utility box set above grade in concrete.

3.2 Monitor Well Development

After the concrete and cement grout had set for a minimum of 24 hours, the new well was developed by surging and bailing with clean equipment in order to prepare the well for collection of a representative groundwater sample. The well was purged until the water was relatively clear.. Water generated during development is stored on-site, in a labeled 55gallon drum.

3.3 Groundwater Gradient Determination

In order to obtain an accurate estimation for groundwater gradient, the top of the new well casing was surveyed to an accuracy of 0.01 feet by Registered Civil Engineer (14095) Samuel H. Halsted, PE . Elevations were determined relative to MSL. The bench mark selected were the top of well casings of wells MW-1, MW-2 and MW-3.

March 13, 2013, the water levels in wells MW-1, MW-3 and MW-4 were measured within a ten-minute period. The water surface elevations in the wells were calculated using the new survey data. The approximate horizontal hydraulic flow direction was west-southwest at an average 0.49% gradient. Groundwater gradient information is shown in Figure 2.

4.0 DISCUSSION

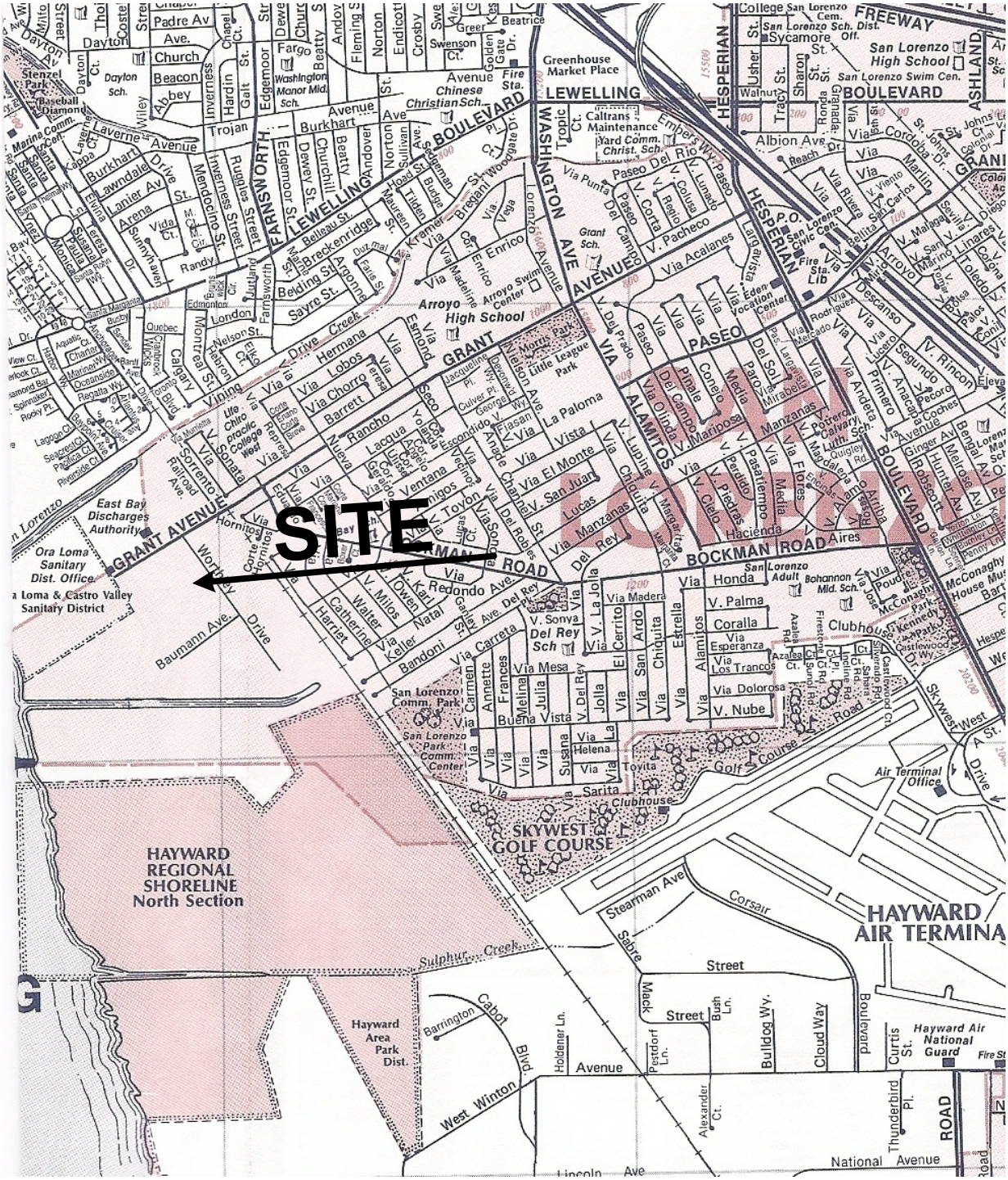
It appears that the soil samples collected from the new monitoring well MW-4 do not contain concentrations of Naphthalene above the analytical detection limits, nor do they contain concentrations above the California Regional Water Quality Control Board, San Francisco Bay Region, Environmental Screening Levels, Table A-1, Final ESL Shallow Soil, for middle distillates TPH. It further appears that a groundwater flow direction and gradient, consistent with historic groundwater gradient data from a neighboring site, has been established in the vicinity of the former UST location.

Respectfully submitted this 9th day of April, 2013.

Bennett T. Halsted
Project Manager

Samuel H. Halsted, PE
C.E. (14095)

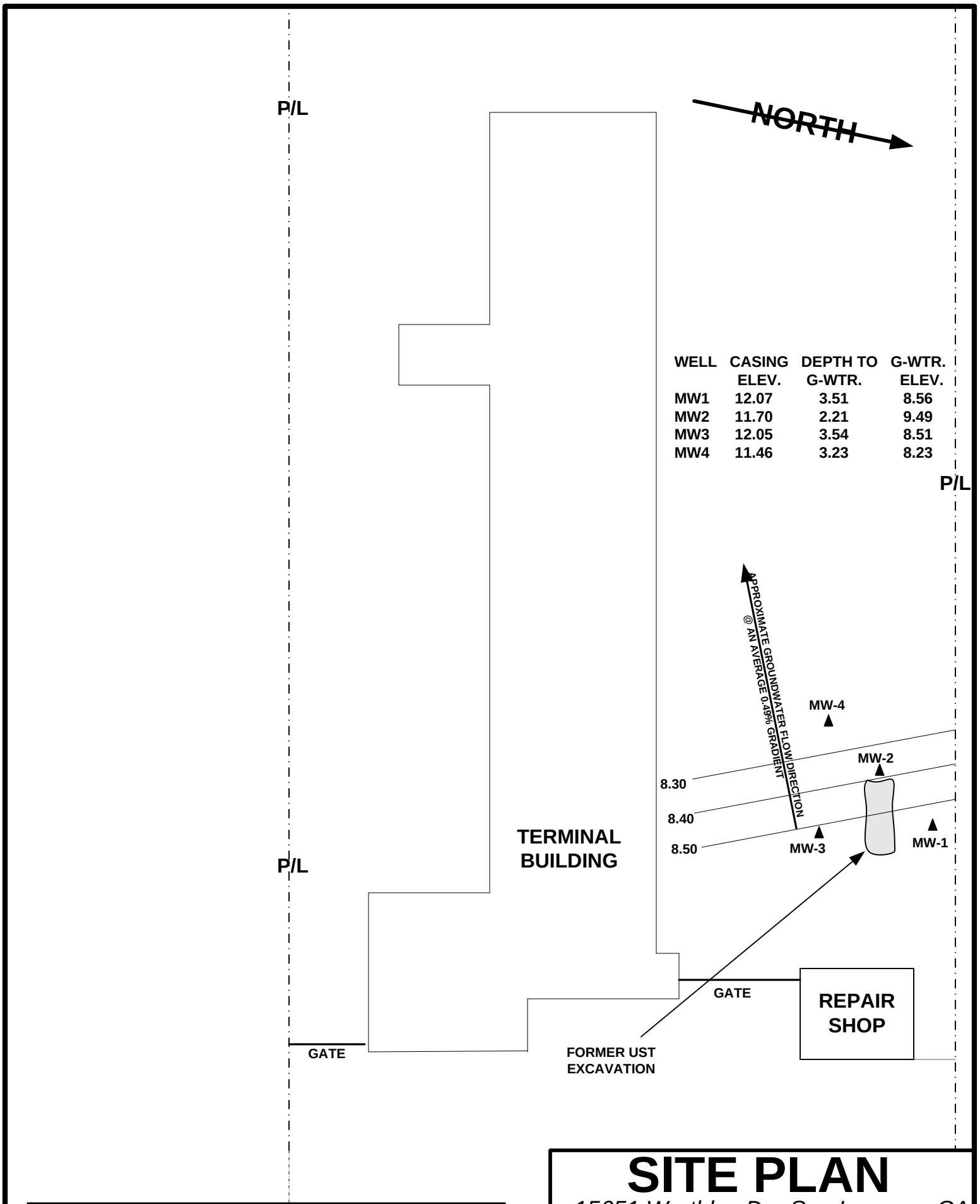
FIGURES



VICINITY MAP

15651 Worthley Dr., San Lorenzo, CA

	SCALE: 1"= 0.5 miles	**BY:**
Environmental Restoration Services ***PO Box 2006, Menlo Park, CA 94026***		**FIGURE 1**



SITE PLAN

15651 Worthley Dr., San Lorenzo, CA

DATE 3/13/13 | SCALE: 1"=60' | **FIGURE 2**

Environmental Restoration Services
PO Box 2006, Menlo Park, CA 94026

MW4 WELL
COMPLETION LOG

Environmental Restoration Services — *Boring Log*

Location: 15651 Worthley Dr. , San Lorenzo **Date:** 3/11/13 **Boring No.:** MW-4

Drill Method: 8" Hollow Stem **Logged By:** BTH **Page** 1 **of** 1

Sample No.	Blow Count	Sample Type
MW4@4'		Soil
MW4@8'		Soil

Location | Depth | USGS

Lithology Description

Asphalt/Baserock

5' **CL** silty CLAY, brown (7.5Y 5/4), med. plasticity, moist. no odor.

BOH

ML Low plasticity clayey SILT. 30% clay 15% fine sand. soft, v. moist. brownish yellow(10YR6/6). No odor.

10'

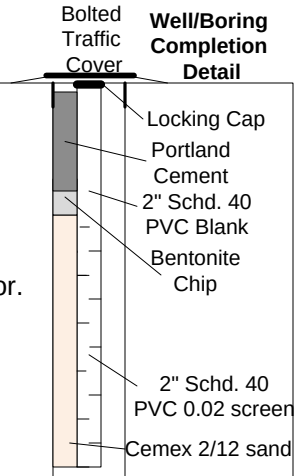
15'

20'

25'

30'

Well/Boring Completion Detail



WELL DTW LOGS

Environmental Restoration Services
WELL PURGE LOG

WELL ID: MW-3	**Site Name:** Transportation Terminals
Site Address: 15651 Worthley Dr., San Lorenzo	
Project No.:	**Date:** 3/13/13
Samplers Name: B. Halsted	
Measuring method: Sounder	
Purge Equipment:	
Water in Well Box? No	**Inside diameter of well:** 2”
Conversion factors (CF): 2-inch well = 0.16 gallons/ft., 4-inch well = 0.65 gallons/ft., 6-inch well = 1.47 gallons/ft.,	
Depth to water from top of casing: 3.54	
Total Well Depth: +/- 10.4	
Well volume = (Feet - Feet) X 0.16 **= Gallons** **{total well depth} - {depth to water} {CF}**	
Water Volume in Well:	
Well pumped/bailed dry? __Yes __ No	
Lab Analysis:	
Sample Containers:	
Sample Equipment:	

FIELD MEASUREMENTS

Time	Gallons	Temp. (F)	pH	Conductivity	Other:	Comments

COMMENTS:

Environmental Restoration Services
WELL PURGE LOG

WELL ID: MW-1	**Site Name:** Transportation Terminals
Site Address: 15651 Worthley Dr., San Lorenzo	
Project No.:	**Date:** 3/13/13
Samplers Name: B. Halsted	
Measuring method: Sounder	
Purge Equipment:	
Water in Well Box? No	**Inside diameter of well:** 2”
Conversion factors (CF): 2-inch well = 0.16 gallons/ft., 4-inch well = 0.65 gallons/ft., 6-inch well = 1.47 gallons/ft.,	
Depth to water from top of casing: 3.51	
Total Well Depth: +/- 9.6	
Well volume = (Feet - Feet) X 0.16 **= Gallons** {total well depth} - {depth to water} {CF}	
Water Volume in Well:	
Well pumped/bailed dry? ___Yes ___ No	
Lab Analysis:	
Sample Containers:	
Sample Equipment:	

FIELD MEASUREMENTS

Time	Gallons	Temp. (EF)	pH	Conductivity	Other:	Comments

COMMENTS:

Environmental Restoration Services
WELL PURGE LOG

WELL ID: MW-2	**Site Name:** Transportation Terminals
Site Address: 15651 Worthley Dr., San Lorenzo	
Project No.:	**Date:** 3/13/13
Samplers Name: B. Halsted	
Measuring method: Sounder	
Purge Equipment: Bailer	
Water in Well Box? No	**Inside diameter of well:** 2”
Conversion factors (CF): 2-inch well = 0.16 gallons/ft., 4-inch well = 0.65 gallons/ft., 6-inch well = 1.47 gallons/ft.,	
Depth to water from top of casing: 2.21	
Total Well Depth: +/- 9.7	
Well volume = (Feet - Feet) X 0.16 **= Gallons** **{total well depth} - {depth to water} {CF}**	
Water Volume in Well:	
Well pumped/bailed dry? ___Yes ___ No	
Lab Analysis:	
Sample Containers:	
Sample Equipment:	

FIELD MEASUREMENTS

Time	Gallons	Temp. (EF)	pH	Conductivity	Other:	Comments

COMMENTS:

Environmental Restoration Services
WELL PURGE LOG

WELL ID: MW-4	**Site Name:** Transportation Terminals
Site Address: 15651 Worthley Dr., San Lorenzo	
Project No.:	**Date:** 3/13/13
Samplers Name: B. Halsted	
Measuring method: Sounder	
Purge Equipment:	
Water in Well Box? No	**Inside diameter of well:** 2”
Conversion factors (CF): 2-inch well = 0.16 gallons/ft., 4-inch well = 0.65 gallons/ft., 6-inch well = 1.47 gallons/ft.,	
Depth to water from top of casing: 3.23	
Total Well Depth: +/- 8.1	
Well volume = (Feet - Feet) X 0.16 **= Gallons** {total well depth} - {depth to water} {CF}	
Water Volume in Well:	
Well pumped/bailed dry? ___Yes ___ No	
Lab Analysis:	
Sample Containers:	
Sample Equipment:	

FIELD MEASUREMENTS

Time	Gallons	Temp. (EF)	pH	Conductivity	Other:	Comments

COMMENTS:

CHAIN-OF-CUSTODY
ANALYTICAL RESULTS

Northern California ACCUTEST LABORATORIES

03/20/13

Technical Report for

Environmental Restoration Services

T06019710220-Trans Terminals-15651 Worthley Drive, San Lorenzo CA

Accutest Job Number: C26667

Sampling Date: 03/11/13

Report to:

Environmental Restoration Services
500 Santa Cruz Avenue
Menlo Park, CA 94025
envirest@aol.com

ATTN: Ben Halsted

Total number of pages in report: **23**

Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Conference and/or state specific certification programs as applicable.

James J. Rhudy
Lab Director

Client Service contact: Diane Theesen 408-588-0200

Certifications: CA (08258CA) AZ (AZ0762) DoD/ISO/IEC 17025:2005 (L2242)

Sections: 1 2 3 4 5 6

Table of Contents

Sample Summary

Environmental Restoration Services

Job No: C26667

T06019710220-Trans Terminals-15651 Worthley Drive, San Lorenzo CA

Sample Number	Collected Date	Time	By	Received	Matrix Code	Type	Client Sample ID
C26667-1	03/11/13	14:45	BH	03/14/13	SO	Soil	MW4@4'
C26667-2	03/11/13	15:03	BH	03/14/13	SO	Soil	MW4@8'

Soil samples reported on a dry weight basis unless otherwise indicated on result page.

Summary of Hits

Job Number: C26667
Account: Environmental Restoration Services
Project: T06019710220-Trans Terminals-15651 Worthley Drive, San Lorenzo CA
Collected: 03/11/13

Lab Sample ID Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
C26667-1	**MW4@4'**					
TPH (C10-C28)		3.16 J	9.7	2.4	mg/kg	SW846 8015B M
C26667-2	**MW4@8'**					
TPH (C10-C28)		5.75 J	9.9	2.5	mg/kg	SW846 8015B M

Northern California ACCUTEST LABORATORIES

Sample Results

Report of Analysis

Report of Analysis

Client Sample ID:	MW4@4'		
Lab Sample ID:	C26667-1	**Date Sampled:**	03/11/13
Matrix:	SO - Soil	**Date Received:**	03/14/13
Method:	SW846 8260B	**Percent Solids:**	n/a [a]
Project:	T06019710220-Trans Terminals-15651 Worthley Drive, San Lorenzo CA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	L23514.D	1	03/18/13	XB	n/a	n/a	VL745
Run #2							

	Initial Weight
Run #1	5.02 g
Run #2	

Oxygenates

CAS No.	Compound	Result	RL	MDL	Units	Q
108-20-3	Di-Isopropyl ether	ND	5.0	0.50	ug/kg	
637-92-3	Ethyl tert-Butyl Ether	ND	5.0	0.50	ug/kg	
1634-04-4	Methyl Tert Butyl Ether	ND	5.0	1.0	ug/kg	
91-20-3	Naphthalene	ND	5.0	1.0	ug/kg	
994-05-8	Tert-Amyl Methyl Ether	ND	5.0	0.50	ug/kg	
75-65-0	Tert Butyl Alcohol	ND	40	10	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	109%		70-130%
2037-26-5	Toluene-D8	107%		70-130%
460-00-4	4-Bromofluorobenzene	91%		70-130%

(a) All results reported on a wet weight basis.

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW4@4'		
Lab Sample ID:	C26667-1	**Date Sampled:**	03/11/13
Matrix:	SO - Soil	**Date Received:**	03/14/13
Method:	SW846 8015B M SW846 3545A	**Percent Solids:**	n/a [a]
Project:	T06019710220-Trans Terminals-15651 Worthley Drive, San Lorenzo CA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	HH301682.D	1	03/20/13	JH	03/15/13	OP7652	GHH939
Run #2							

	Initial Weight	Final Volume
Run #1	10.3 g	1.0 ml
Run #2		

TPH Extractable w/ Silica Gel Cleanup

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH (C10-C28)	3.16	9.7	2.4	mg/kg	J

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
630-01-3	Hexacosane	78%		37-122%

(a) All results reported on a wet weight basis.

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW4@8'		
Lab Sample ID:	C26667-2	**Date Sampled:**	03/11/13
Matrix:	SO - Soil	**Date Received:**	03/14/13
Method:	SW846 8260B	**Percent Solids:**	n/a [a]
Project:	T06019710220-Trans Terminals-15651 Worthley Drive, San Lorenzo CA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	M38606.D	1	03/15/13	XB	n/a	n/a	VM1169
Run #2							

	Initial Weight
Run #1	5.05 g
Run #2	

Oxygenates

CAS No.	Compound	Result	RL	MDL	Units	Q
108-20-3	Di-Isopropyl ether	ND	5.0	0.50	ug/kg	
637-92-3	Ethyl tert-Butyl Ether [b]	ND	5.0	0.50	ug/kg	
1634-04-4	Methyl Tert Butyl Ether	ND	5.0	0.99	ug/kg	
91-20-3	Naphthalene	ND	5.0	0.99	ug/kg	
994-05-8	Tert-Amyl Methyl Ether	ND	5.0	0.50	ug/kg	
75-65-0	Tert Butyl Alcohol	ND	40	9.9	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	109%		70-130%
2037-26-5	Toluene-D8	117%		70-130%
460-00-4	4-Bromofluorobenzene	102%		70-130%

(a) All results reported on a wet weight basis.
(b) CCV outside of control limits (biased high); not detected in sample.

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW4@8'		
Lab Sample ID:	C26667-2	**Date Sampled:**	03/11/13
Matrix:	SO - Soil	**Date Received:**	03/14/13
Method:	SW846 8015B M SW846 3545A	**Percent Solids:**	n/a [a]
Project:	T06019710220-Trans Terminals-15651 Worthley Drive, San Lorenzo CA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	HH301683.D	1	03/20/13	JH	03/15/13	OP7652	GHH939
Run #2							

	Initial Weight	Final Volume
Run #1	10.1 g	1.0 ml
Run #2		

TPH Extractable w/ Silica Gel Cleanup

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH (C10-C28)	5.75	9.9	2.5	mg/kg	J

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
630-01-3	Hexacosane	76%		37-122%

(a) All results reported on a wet weight basis.

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Northern California ACCUTEST LABORATORIES

Misc. Forms

Custody Documents and Other Forms

Includes the following where applicable:

- Chain of Custody

CHAIN OF CUSTODY

ACCUTEST LABORATORIES
2105 Lundy Ave, San Jose, CA 95131
(408) 588-0200 FAX: (408) 588-0201

ERSCAMP1307

FED-EX Tracking # | Bottle Order Control #
Accutest Quote # | Accutest NC Job #: C C26667

Client / Reporting Information

Company Name: Environmental Restoration Service
Address: P.O. Box 2006
City: Menlo Park State: Ca Zip: 94026
Project Contact: B. Halsted
Phone #: 408-655-9434
Samplers's Name: B. Halsted

Project Information

Project Name: Transportation Terminals
Street: 15651 Worthley Dr
City: San Lorenzo State: Ca
Project #:
EMAIL: enviresta@aol.com
Client Purchase Order #:

Requested Analysis

TPH'd w/ silica gel cleanup
Naphthalene 8260
Fuel Oxygenates 8260

Matrix Codes

WW- Wastewater
GW- Ground Water
SW- Surface Water
SO- Soil
OI-Oil
WP-Wipe
LIQ - Non-aqueous Liquid
AIR
DW- Drinking Water (Perchlorate Only)

Accutest Sample ID	Sample ID / Field Point / Point of Collection	Collection Date	Collection Time	Sampled by	Matrix	# of bottles	Number of preserved Bottles	TPH'd w/ silica gel cleanup	Naphthalene 8260	Fuel Oxygenates 8260	LAB USE ONLY
1	mw4e.4'	3/11/13	245	BH	S	1		X	X		
2	mw4e8'	4	303	"	"	1		X	X		

Turnaround Time (Business days) | Approved By:/ Date:

- [ ] 10 Day
- [X] 5 Day
- [ ] 3 Day (125% markup)
- [ ] 2 Day (150% markup)
- [ ] 1 Day (200% markup)
- [ ] Same Day (300% markup)

Emergency T/A data available VIA Lablink

Data Deliverable Information

- [ ] Commercial "A" - Results only
- [X] Commercial "B" - Results with QC summaries
- [ ] Commercial "B+" - Results, QC, and chromatograms
- [ ] FULT1 - Level 4 data package
- [ ] EDF for Geotracker [ ] EDD Format
- Provide EDF Global ID:
- Provide EDF Logcode:

Comments / Remarks

Sample Custody must be documented below each time samples change possession, including courier delivery.

	Relinquished by Sampler:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:
1		3/14/13 1130	Lea Baum	2		2
3			3	4		4
5			5	Custody Seal #		

Appropriate Bottle / Pres (Y) N | Headspace Y / N N/A | On Ice (Y) N | Cooler Temp: 5.8°C
Labels match COC (Y) N | Separate Receiving Check List used: (Y) N

C26667: Chain of Custody
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Accutest Laboratories Sample Receipt Summary

Accutest Job Number: C26667 **Client:** ENVIRONMENTAL RESTORATION SERVI **Project:** TRANSPORTATION TERMINALS

Date / Time Received: 3/14/2013 **Delivery Method:** Client **Airbill #'s:**

Cooler Temps (Initial/Adjusted): #1: (5.8/5.8); 0

Cooler Security	Y	or	N		Y	or	N
1. Custody Seals Present:	☐		☑	3. COC Present:	☑		☐
2. Custody Seals Intact:	☐		☐	4. Smpl Dates/Time OK	☑		☐

Cooler Temperature	Y	or	N
1. Temp criteria achieved:	☑		☐
2. Cooler temp verification:	IR Gun		
3. Cooler media:	Ice (Bag)		
4. No. Coolers:	1		

Quality Control Preservation	Y	or	N	N/A
1. Trip Blank present / cooler:	☐		☐	☑
2. Trip Blank listed on COC:	☐		☐	☑
3. Samples preserved properly:	☐		☐	
4. VOCs headspace free:	☐		☐	☑

Sample Integrity - Documentation	Y	or	N
1. Sample labels present on bottles:	☑		☐
2. Container labeling complete:	☑		☐
3. Sample container label / COC agree:	☑		☐

Sample Integrity - Condition	Y	or	N
1. Sample recvd within HT:	☑		☐
2. All containers accounted for:	☑		☐
3. Condition of sample:	Intact		

Sample Integrity - Instructions	Y	or	N	N/A
1. Analysis requested is clear:	☑		☐	
2. Bottles received for unspecified tests	☐		☑	
3. Sufficient volume recvd for analysis:	☑		☐	
4. Compositing instructions clear:	☐		☐	☑
5. Filtering instructions clear:	☐		☐	☑

Comments

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C26667: Chain of Custody
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Northern California ACCUTEST LABORATORIES

GC/MS Volatiles

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries

Method Blank Summary

Job Number: C26667
Account: ERSCAMP Environmental Restoration Services
Project: T06019710220-Trans Terminals-15651 Worthley Drive, San Lorenzo CA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VM1169-MB	M38596.D	1	03/15/13	XB	n/a	n/a	VM1169

The QC reported here applies to the following samples: **Method:** SW846 8260B

C26667-2

CAS No.	Compound	Result	RL	MDL	Units	Q
108-20-3	Di-Isopropyl ether	ND	5.0	0.50	ug/kg	
637-92-3	Ethyl tert-Butyl Ether	ND	5.0	0.50	ug/kg	
1634-04-4	Methyl Tert Butyl Ether	ND	5.0	1.0	ug/kg	
91-20-3	Naphthalene	ND	5.0	1.0	ug/kg	
994-05-8	Tert-Amyl Methyl Ether	ND	5.0	0.50	ug/kg	
75-65-0	Tert Butyl Alcohol	ND	40	10	ug/kg	

CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dibromofluoromethane	106%	70-130%
2037-26-5	Toluene-D8	112%	70-130%
460-00-4	4-Bromofluorobenzene	104%	70-130%

Method Blank Summary

Job Number: C26667
Account: ERSCAMP Environmental Restoration Services
Project: T06019710220-Trans Terminals-15651 Worthley Drive, San Lorenzo CA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VL745-MB	L23513.D	1	03/18/13	XB	n/a	n/a	VL745

The QC reported here applies to the following samples: **Method:** SW846 8260B

C26667-1

CAS No.	Compound	Result	RL	MDL	Units	Q
108-20-3	Di-Isopropyl ether	ND	5.0	0.50	ug/kg	
637-92-3	Ethyl tert-Butyl Ether	ND	5.0	0.50	ug/kg	
1634-04-4	Methyl Tert Butyl Ether	ND	5.0	1.0	ug/kg	
91-20-3	Naphthalene	ND	5.0	1.0	ug/kg	
994-05-8	Tert-Amyl Methyl Ether	ND	5.0	0.50	ug/kg	
75-65-0	Tert Butyl Alcohol	ND	40	10	ug/kg	

CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dibromofluoromethane	104%	70-130%
2037-26-5	Toluene-D8	103%	70-130%
460-00-4	4-Bromofluorobenzene	99%	70-130%

Blank Spike/Blank Spike Duplicate Summary

Job Number: C26667
Account: ERSCAMP Environmental Restoration Services
Project: T06019710220-Trans Terminals-15651 Worthley Drive, San Lorenzo CA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VM1169-BS	M38594.D	1	03/15/13	XB	n/a	n/a	VM1169
VM1169-BSD	M38595.D	1	03/15/13	XB	n/a	n/a	VM1169

The QC reported here applies to the following samples: **Method:** SW846 8260B

C26667-2

CAS No.	Compound	Spike ug/kg	BSP ug/kg	BSP %	BSD ug/kg	BSD %	RPD	Limits Rec/RPD
108-20-3	Di-Isopropyl ether	40	40.1	100	40.4	101	1	78-126/19
637-92-3	Ethyl tert-Butyl Ether	40	49.1	123	48.6	122	1	75-132/21
1634-04-4	Methyl Tert Butyl Ether	40	45.8	115	44.8	112	2	79-127/19
91-20-3	Naphthalene	40	39.5	99	40.0	100	1	78-125/23
994-05-8	Tert-Amyl Methyl Ether	40	45.6	114	45.4	114	0	80-127/20
75-65-0	Tert Butyl Alcohol	200	216	108	199	100	8	65-144/23

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
1868-53-7	Dibromofluoromethane	111%	107%	70-130%
2037-26-5	Toluene-D8	106%	107%	70-130%
460-00-4	4-Bromofluorobenzene	109%	110%	70-130%

* = Outside of Control Limits.

Blank Spike/Blank Spike Duplicate Summary

Job Number: C26667
Account: ERSCAMP Environmental Restoration Services
Project: T06019710220-Trans Terminals-15651 Worthley Drive, San Lorenzo CA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VL745-BS	L23510.D	1	03/18/13	XB	n/a	n/a	VL745
VL745-BSD	L23511.D	1	03/18/13	XB	n/a	n/a	VL745

The QC reported here applies to the following samples: **Method:** SW846 8260B

C26667-1

CAS No.	Compound	Spike ug/kg	BSP ug/kg	BSP %	BSD ug/kg	BSD %	RPD	Limits Rec/RPD
108-20-3	Di-Isopropyl ether	40	36.7	92	37.6	94	2	78-126/19
637-92-3	Ethyl tert-Butyl Ether	40	40.1	100	40.8	102	2	75-132/21
1634-04-4	Methyl Tert Butyl Ether	40	37.4	94	37.4	94	0	79-127/19
91-20-3	Naphthalene	40	38.0	95	38.0	95	0	78-125/23
994-05-8	Tert-Amyl Methyl Ether	40	38.5	96	39.1	98	2	80-127/20
75-65-0	Tert Butyl Alcohol	200	178	89	164	82	8	65-144/23

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
1868-53-7	Dibromofluoromethane	106%	106%	70-130%
2037-26-5	Toluene-D8	104%	103%	70-130%
460-00-4	4-Bromofluorobenzene	103%	103%	70-130%

* = Outside of Control Limits.

Laboratory Control Sample Summary

Job Number: C26667
Account: ERSCAMP Environmental Restoration Services
Project: T06019710220-Trans Terminals-15651 Worthley Drive, San Lorenzo CA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VL745-LCS	L23512.D	1	03/18/13	XB	n/a	n/a	VL745

The QC reported here applies to the following samples: **Method:** SW846 8260B

C26667-1

CAS No.	Compound	Spike ug/kg	LCS ug/kg	LCS %	Limits

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	104%	70-130%
2037-26-5	Toluene-D8	104%	70-130%
460-00-4	4-Bromofluorobenzene	98%	70-130%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: C26667
Account: ERSCAMP Environmental Restoration Services
Project: T06019710220-Trans Terminals-15651 Worthley Drive, San Lorenzo CA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
C26653-1MS	M38614.D	1	03/15/13	XB	n/a	n/a	VM1169
C26653-1MSD	M38615.D	1	03/15/13	XB	n/a	n/a	VM1169
C26653-1	M38597.D	1	03/15/13	XB	n/a	n/a	VM1169

The QC reported here applies to the following samples: **Method:** SW846 8260B

C26667-2

CAS No.	Compound	C26653-1 ug/kg	Q	Spike ug/kg	MS ug/kg	MS %	MSD ug/kg	MSD %	RPD	Limits Rec/RPD
108-20-3	Di-Isopropyl ether	ND		39.5	48.4	122	49.1	126	1	78-126/19
637-92-3	Ethyl tert-Butyl Ether	ND		39.5	52.4	133* [a]	52.7	135* [a]	1	75-132/21
1634-04-4	Methyl Tert Butyl Ether	ND		39.5	48.6	123	49.0	125	1	79-127/19
91-20-3	Naphthalene	ND		39.5	42.9	109	41.4	106	4	78-125/23
994-05-8	Tert-Amyl Methyl Ether	ND		39.5	50.9	129* [a]	51.5	132* [a]	1	80-127/20
75-65-0	Tert Butyl Alcohol	ND		198	276	140	255	131	8	65-144/23

CAS No.	Surrogate Recoveries	MS	MSD	C26653-1	Limits
1868-53-7	Dibromofluoromethane	111%	114%	106%	70-130%
2037-26-5	Toluene-D8	110%	108%	110%	70-130%
460-00-4	4-Bromofluorobenzene	106%	102%	106%	70-130%

(a) Outside control limits due to matrix interference.

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: C26667
Account: ERSCAMP Environmental Restoration Services
Project: T06019710220-Trans Terminals-15651 Worthley Drive, San Lorenzo CA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
C26651-22MS	L23530.D	1	03/19/13	XB	n/a	n/a	VL745
C26651-22MSD	L23531.D	1	03/19/13	XB	n/a	n/a	VL745
C26651-22	L23515.D	1	03/18/13	XB	n/a	n/a	VL745

The QC reported here applies to the following samples: **Method:** SW846 8260B

C26667-1

CAS No.	Compound	C26651-22 ug/kg	Q	Spike ug/kg	MS ug/kg	MS %	MSD ug/kg	MSD %	RPD	Limits Rec/RPD
108-20-3	Di-Isopropyl ether	ND		39.2	35.7	91	35.6	91	0	78-126/19
637-92-3	Ethyl tert-Butyl Ether	ND		39.2	36.4	93	36.3	93	0	75-132/21
1634-04-4	Methyl Tert Butyl Ether	ND		39.2	36.1	92	36.4	94	1	79-127/19
91-20-3	Naphthalene	ND		39.2	36.4	93	37.4	96	3	78-125/23
994-05-8	Tert-Amyl Methyl Ether	ND		39.2	36.6	93	36.6	94	0	80-127/20
75-65-0	Tert Butyl Alcohol	ND		196	186	95	190	98	2	65-144/23

CAS No.	Surrogate Recoveries	MS	MSD	C26651-22	Limits
1868-53-7	Dibromofluoromethane	110%	109%	109%	70-130%
2037-26-5	Toluene-D8	103%	102%	102%	70-130%
460-00-4	4-Bromofluorobenzene	106%	106%	101%	70-130%

* = Outside of Control Limits.

Northern California ACCUTEST LABORATORIES

GC Semi-volatiles

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries

Method Blank Summary

Job Number: C26667
Account: ERSCAMP Environmental Restoration Services
Project: T06019710220-Trans Terminals-15651 Worthley Drive, San Lorenzo CA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP7652-MB	HH301680.D	1	03/20/13	JH	03/15/13	OP7652	GHH939

The QC reported here applies to the following samples: **Method:** SW846 8015B M

C26667-1, C26667-2

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH (C10-C28)	ND	10	2.5	mg/kg	

CAS No.	Surrogate Recoveries		Limits
630-01-3	Hexacosane	94%	37-122%

Blank Spike/Blank Spike Duplicate Summary

Job Number: C26667
Account: ERSCAMP Environmental Restoration Services
Project: T06019710220-Trans Terminals-15651 Worthley Drive, San Lorenzo CA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP7652-BS	HH301678.D	1	03/20/13	JH	03/15/13	OP7652	GHH939
OP7652-BSD	HH301679.D	1	03/20/13	JH	03/15/13	OP7652	GHH939

The QC reported here applies to the following samples: **Method:** SW846 8015B M

C26667-1, C26667-2

CAS No.	Compound	Spike mg/kg	BSP mg/kg	BSP %	BSD mg/kg	BSD %	RPD	Limits Rec/RPD
	TPH (C10-C28)	100	80.4	80	81.7	82	2	39-102/29

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
630-01-3	Hexacosane	94%	97%	37-122%

* = Outside of Control Limits.