Transportation Terminals Company

4919 Tidewater Ave. Unit B Oakland, CA 94601

May 3, 2012

Kieth Nowell, Senior Hazardous Materials Specialist Alameda County Health Care Services Agency Environmental Health Services 1131 Harbor Bay Parkway, Second Floor Alameda, CA 94502

Subject: Letter of Transmittal for

Semi-Annual Monitoring Report

15651 Worthley Ave., San Lorenzo, CA

Case No. RO0002558

Dear Mr. Nowell,

On behalf of RWL Investments Inc., Environmental Restoration Services has prepared the attached Report dated April 30, 2012, for the above referenced site.

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

Sincerely,

RWL Investments, Inc.

Bob Lawlor President

RECEIVED

8:19 am, May 10, 2012

Alameda County Environmental Health

Environmental Restoration Services

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

Alameda County Health Care Services Agency Environmental Health Services 1131 Harbor Bay Parkway, Second Floor Alameda, CA 94502 April 30, 2012

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

Re: Groundwater Monitoring Well Sampling Event

Tank Excavation Groundwater Grab Sampling Event

On March 12, 2012, a single round of groundwater samples were obtained from monitoring wells MW1, MW2 and MW-3 by Well Test Inc. (Well Test) of San Jose, CA. Groundwater samples were collected by Well Test personnel as follows:

Each well was bailed until the volume of water withdrawn was equal to at least three casing volumes. To assure that a representative groundwater sample was collected periodic measurements of the temperature, pH and specific conductance were made. An individual log sheet was maintained throughout the sampling operations. The sample was collected only when the temperature, pH, and/or specific conductance reached relatively constant value and the well had recharged to a minimum of 80% of its pre-purge volume.

A bailer was used for evacuating the well casing (purging) of the monitor well. Water samples were collected using a disposable bailer. An effort was made to minimize exposure of the sample to air.

Subsequent to collection, the samples were immediately stored on crushed ice in an appropriate ice chest and maintained at a constant 4 degrees Celsius. Samples were transported under Chain-of-Custody procedures to Accutest Laboratories (Accutest) on the day after their collection.

Care was taken to collect all excess water resulting from the sampling and cleaning procedures. The excess water is contained in a pre-labeled 55-gallon drum on-site pending receipt of laboratory analyses.

The following analyses were performed by Accutest on the groundwater samples obtained from each monitor well:

TPH-diesel (Method 8015B), Fuel Oxygenates (Method 8260B)

In addition, the groundwater sample obtained from monitor well MW-1 was analyzed for dissolved zinc by EPA Method 6010.

PO Box 2006 * Menlo Park California 94026 * Phone 408/655-9434 * envirest@aol.com

The results of the groundwater samples recovered from monitoring wells MW-1, MW-2 and MW-3 indicated detection of Total Petroleum Hydrocarbon as diesel (TPH/d) at concentrations of 36.9, 78.4 and 33.9 micrograms per liter (ug/l), respectively. Monitoring well MW-3 also detected MTBE, at a concentration of 2.1 micrograms per liter.

	Historical Monitoring Well Analytical Results Results in micrograms per liter										
Date Sample# 9/16/08 MW1 1/19/09 MW1 10/12/11 MW1 3/12/12 MW1	TPH/d ND<100 ND<100 54.6 36.9		_	E-Benzene ND<.5 ND<.5 	e Xylenes ND<1.5 ND<1.5 	MTBE 2.09 0.96 ND<.5 ND<2	DTG 4.96 4.01 4.76 3.95	GE 7.11 8.06 7.31 8.12			
Date Sample# 9/16/08 MW2 1/19/09 MW2 10/12/11 MW2 3/12/12 MW2	TPH/d ND<100 ND<100 131 78.4	Benzene ND<.5 ND<.5 	Toluene ND<.5 ND<.5 ND<1	E-Benzene ND<.5 ND<.5 ND<1	e Xylenes ND<1.5 ND<1.5 	MTBE ND<.5 ND<.5 ND<.5 ND<2	DTG 5.18 1.90 1.79 2.21	GE 6.52 9.80 9.91 9.49			
Date Sample# 9/16/08 MW3 1/19/09 MW3 10/12/11 MW3 3/12/12 MW3	TPH/d ND<100 ND<100 ND<50 33.9	Benzene ND<.5 ND<.5 ND<1	Toluene ND<.5 ND<.5 ND<1	E-Benzene ND<.5 ND<.5 ND<1	e Xylenes ND<1.5 ND<1.5 ND<2	MTBE ND<.5 ND<.5 1.9 2.1	DTG 3.88 4.53 4.31 4.05	GE 8.17 7.52 7.74 8.00			

On March 12, 2012, Well Test personal the water levels in monitor wells MW-2, MW-3 and MW-1 were measured, by Well Test personal, within a one hour period. The water surface elevations in the wells were calculated using the survey data. However, the horizontal hydraulic gradient was not calculated because the unusually shallow groundwater elevation in monitoring well MW-2.

TANK EXCAVATION GROUNDWATER GRAB SAMPLING

Prior to initiating drilling, a subsurface drilling permit was obtained from the Alameda County Public Works Department (ACPWD). ACPWD was notified a minimum of 72 hours prior to drilling.

Prior to mobilization of the drilling equipment on-site, all associated equipment was thoroughly cleaned to removed all soil, oil, grease, mud, tar, etc. The cleaning process consisted of non-TSP cleaning and a clean water final rinse. On April 17, 2012, a single boring was advanced by Well Test using a 1.5 inch diameter stainless steel vibra-push Geo-Probe groundwater sample point to a depth of five feet.

The sample point was then allowed to recharge with groundwater. Well Test personal then inserted new Teflon single use tubing with check valve into the sample point for recovery of a groundwater grab sample. The groundwater then pumped to the surface by manually activating the check valve and placed into sample containers obtained directly from the analytical laboratory. An effort was made to minimize exposure of the sample to air. The groundwater sample, "PITGW4-17", was immediately stored on crushed ice and maintained at a constant 4 degrees Celsius. The sample was then transported to Accutest by Well Test personal, under proper chain-of-custody procedures.

Care was taken to collect all excess water resulting from the sampling and cleaning procedures. The excess water is contained in a pre-labeled 55-gallon drum on-site pending receipt of laboratory analyses. The boring was backfilled immediately after completion of sampling, according to ACPWD guidelines and under ACPWD inspection.

3.1.4 Laboratory Analyses

The following analyses were performed by Accutest on the groundwater sample "PITGW4-17" obtained from boring .

Naphthalene Dissolved LUFT 5 Metals (EPA Method 8270C) (EPA Method 6010)

The analytical results of the groundwater grab sample indicated no amount of analyzed constituents above the laboratory detection limit, with the exception of dissolved zinc at 39.2 ug/l.

CONCLUSIONS

It appears that the groundwater at the monitoring well sample points MW-1, MW-2 and MW-3 all contained TPH/d contaminates at concentrations above the lab detective limits, at concentrations of 36.9, 78.4 and 33.9 ug/l, respectively. Sample point MW-3 also reported a trace detection of MTBE at 2.1 ug/l. It also appears that the groundwater at grab sample point "TNK PIT", located within the backfill of the former tank excavation, contained dissolved zinc concentration of 39.2 ug/l. At this time, these concentrations all appear to be below the California Regional Water Quality Control Board, San Francisco Bay Region, Tier I, Table G Environmental Screening Level.

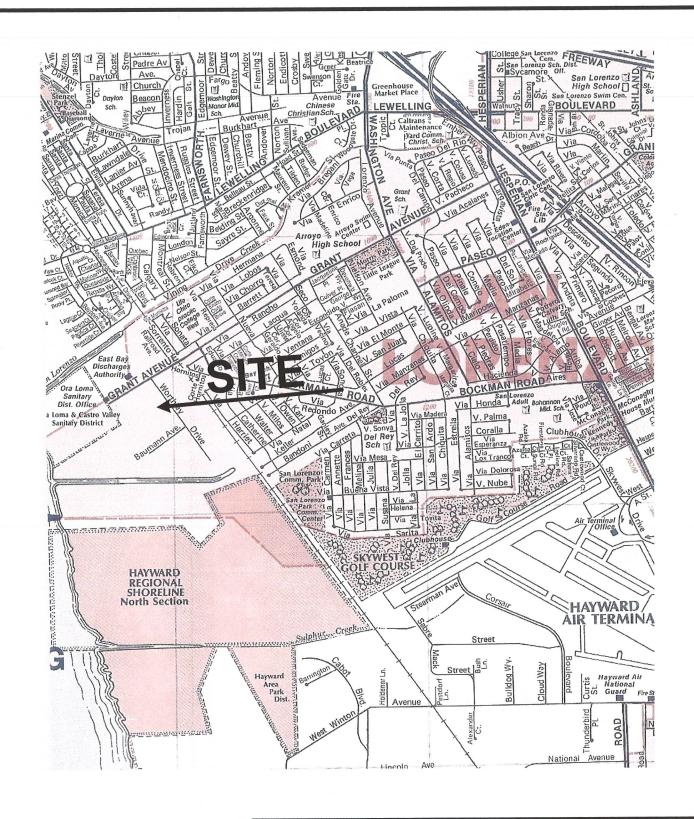
Bennett T. Halsted

Respectfully submitted this 30th day of April, 2012

Project Manager

Samuel H. Halsted Rus C.E. 14095

FIGURES

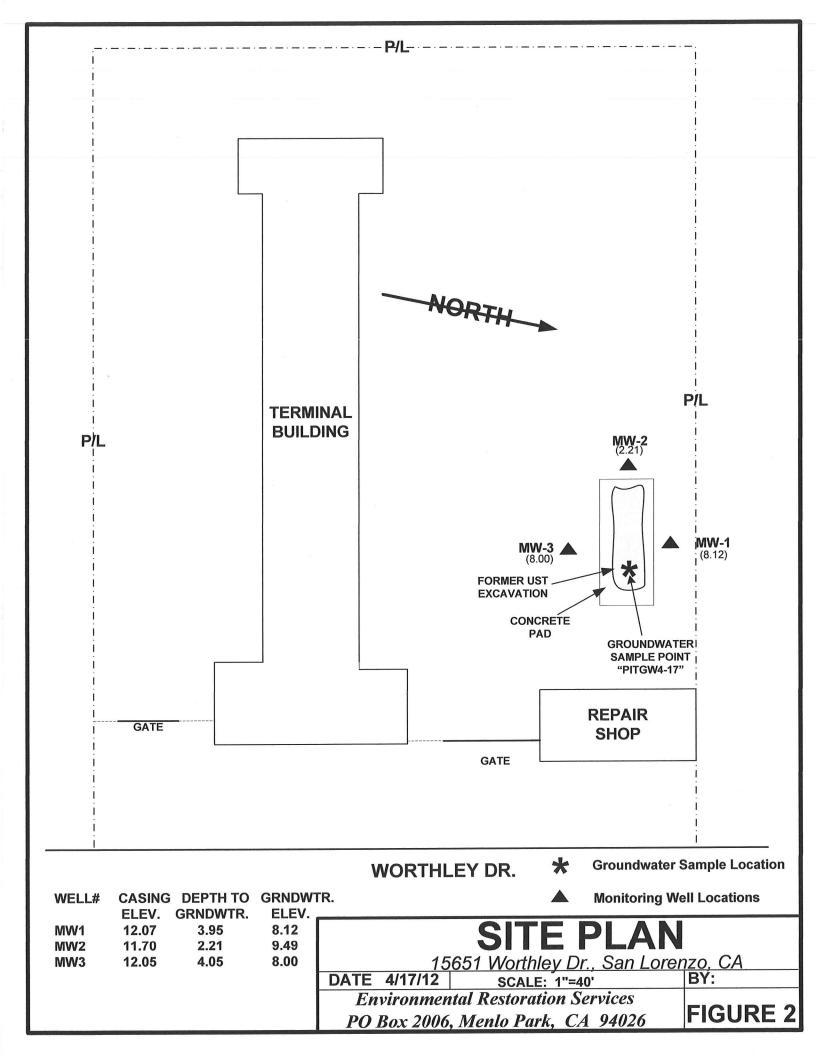


15651 Worthley Dr., San Lorenzo, CA
BY:

SCALE: 1"= 0.5 miles

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

FIGURE



DRILL PERMIT

Alameda County Public Works Agency - Water Resources Well Permit



Application Id:

399 Elmhurst Street Havward, CA 94544-1395 Telephone: (510)670-6633 Fax:(510)782-1939

Application Approved on: 04/11/2012 By jamesy

Permit Numbers: W2012-0246

Permits Valid from 04/16/2012 to 04/16/2012

City of Project Site:San Lorenzo 1333562932772

Site Location: 15651 Worthley Dr. San Lorenzo CA

04/16/2012 Completion Date: 04/16/2012

Project Start Date: Contact Steve Miller at (510) 670-5517 or stevem@acpwa.org Assigned Inspector:

Environmental Restoration Services - Ben Phone: 408-655-9434 Applicant:

Halsted

PO Box 2006, Menlo Park, CA 94026

Phone: --**Property Owner:** Tansportation Terminals nc.

4919 Tidewater Ave. Unit B, Oakland, CA 94601 ** same as Property Owner * Client:

Total Due: \$265.00

> \$265.00 Receipt Number: WR2012-0105 **Total Amount Paid: PAID IN FULL** Payer Name: Bennett T Halsted Paid By: VISA

Works Requesting Permits:

Borehole(s) for Geo Probes-Sampling 24 to 72 hours only - 1 Boreholes

Work Total: \$265.00 Driller: Environmental Restoration Services - Lic #: 589652 - Method: DP

Specifications

Permit Issued Dt Expire Dt Hole Diam Max Depth **Boreholes** Number 4.00 ft 1.50 in. W2012-04/11/2012 07/15/2012 1

0246

Specific Work Permit Conditions

- 1. Backfill bore hole by tremie with cement grout or cement grout/sand mixture. Upper two-three feet replaced in kind or with compacted cuttings. All cuttings remaining or unused shall be containerized and hauled off site. The containers shall be clearly labeled to the ownership of the container and labeled hazardous or non-hazardous.
- 2. Boreholes shall not be left open for a period of more than 24 hours. All boreholes left open more than 24 hours will need approval from Alameda County Public Works Agency, Water Resources Section. All boreholes shall be backfilled according to permit destruction requirements and all concrete material and asphalt material shall be to Caltrans Spec or County/City Codes. No borehole(s) shall be left in a manner to act as a conduit at any time.
- 3. Permittee shall assume entire responsibility for all activities and uses under this permit and shall indemnify, defend and save the Alameda County Public Works Agency, its officers, agents, and employees free and harmless from any and all expense, cost, liability in connection with or resulting from the exercise of this Permit including, but not limited to, properly damage, personal injury and wrongful death.
- 4. Applicant shall contact Steve Miller for an inspection time at (510) 670-5517 or email to stevem@acpwa.org at least five (5) working days prior to starting, once the permit has been approved. Confirm the scheduled date(s) at least 24 hours prior to drilling.
- 5. Permittee, permittee's contractors, consultants or agents shall be responsible to assure that all material or waters generated during drilling, boring destruction, and/or other activities associated with this Permit will be safely handled,

WELL PURGE LOGS

Well Purging/Sampling Logs **Project 2713 - Transportation Terminals**

15651 Worthley Drive, San Lorenzo, CA

WELL: MW-1

Well Purge Method:

PVC Bailer

Disposable Bailer

Sample Collection Method: Sample Depth (ft-btoc):

3.95

Sampled By:

Curtis Kilgore

Observations:

No Hydrocarbon Odor

Recovery %:

100.00%

Field Meter Types:

Solinst DTW; Hanna Water Test; Hanna HI 731313; SM 600

Decontamination Method:

3 Stage (Alconox, Tap Water & DI Rinse)

Container Type(s):

1 L; 2 VOAs; 1 (250 ml)

3.5 - 10

9.71

3.95

5.76

2.82

ft bgs

inches

ft btoc

ft btoc

ft

ft bgs

inches

ft btoc

ft btoc

ft

gal

ft bgs

inches

ft btoc

ft btoc

ft

gal

Preservatives:

Screen Interval: Casing Diameter:

Casing Depth: Depth to Water:

Height of Water:

Three Well Volumes:

none/HCL/Nitric

No

3.95

3.5 - 10

10.15

2.21

7.94

3.89

Filtered (Y/N):

17.7

Screen Interval:

Casing Depth:

Depth to Water:

Height of Water:

Three Well Volumes:

Container Type(s):

Casing Diameter:

Γ	Date/Time	Total Purge	Task	D.O.	O.R.P.	pН	EC	Temp	Turbidity	DTW	Pump
Ī	03/12/12	Vol. [Gal]	Status	mg/L	mV	Std. Units	uS/cm	°C	FTU	BTOC [ft]	Depth [ft]
Ī	9:08 AM	0	Pre-Purge							3.95	No Pump
Ī	9:46 AM	1	Purge			7.10	912	17.8			
Ī	9:50 AM	2	Purge			7.12	948	17.7			

7.12

943

WELL: MW-2

9:52 AM

11:45 AM

Well Purge Method:

PVC Bailer

Purge

Collect Sampales

Sample Collection Method:

Disposable Bailer

Sample Depth (ft-btoc):

2.29

3

3

Sampled By:

Curtis Kilgore

Observations:

No Hydrocarbon Odor

Recovery %:

99.58%

Field Meter Types:

Solinst DTW; Hanna Water Test; Hanna HI 731313; SM 600

Preservatives:

1 Amber L; 2 VOAs

Decontamination Method:

3 Stage (Alconox, Tap Water & DI Rinse)

Filtered (Y/N):

HCL No

Date/Time	Total Purge	Task	D.O.	O.R.P.	рН	EC	Temp	Turbidity	DTW	Pump
03/12/12	Vol. [Gal]	Status	mg/L	mV	Std. Units	uS/cm	°C	FTU	BTOC [ft]	Depth [ft]
9:20 AM	0	Pre-Purge							2.21	No Pump
10:05 AM	1	Purge			8.00	580	17.4			
10:08 AM	2.5	Purge			7.82	497	17.4			
10:11 AM	4.5	Purge			7.90	512	17.4			
11:15 AM	4.5	Collect Sampales				.,			2.29	

WELL: MW-3

Well Purge Method:

PVC Bailer

Sample Collection Method: Sample Depth (ft-btoc):

Disposable Bailer 4.07

Sampled By:

Curtis Kilgore

Observations:

No Hydrocarbon Odor

Recovery %:

99.88%

Field Meter Types: Decontamination Method: Solinst DTW; Hanna Water Test; Hanna HI 731313; SM 600

Container Type(s):

Three Well Volumes:

1 Amber L; 2 VOAs

3.5 - 10

9.73

4.05

5.68

2.78

3 Stage (Alconox, Tap Water & DI Rinse)

Preservatives:

Screen Interval:

Casing Depth:

Depth to Water:

Height of Water:

Casing Diameter:

HCL

		0 (•		Filtered (Y	/N):	No
Date/Time	Total Purge	Task	D.O.	O.R.P.	рН	EC	Temp	Turbidity	
								100000000000000000000000000000000000000	T

Date/Time	Total Purge	Task	D.O.	O.R.P.	pН	EC	Temp	Turbidity	DTW	Pump
03/12/12	Vol. [Gal]	Status	mg/L	mV	Std. Units	uS/cm	°C	FTU	BTOC [ft]	Depth [ft]
9:10 AM	0	Pre-Purge				*			4.05	No Pump
10:24 AM	1	Purge			7.51	610	17.6			
10:30 AM	2	Purge			7.60	587	17.5			
10:32 AM	3	Purge			7.47	592	17.6			
12:15 PM	3	Collect Sampales							4.07	

CHAIN-OF-CUSTODY ANALYTICAL RESULTS



03/24/12



Technical Report for

Environmental Restoration Services

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

Accutest Job Number: C20813

Sampling Date: 03/12/12

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: 29



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.

Kesavalu M. Bagawandoss, Ph.D., J.D., Lab Director

- James 1

Client Service contact: Diane Theesen 408-588-0200

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

This report shall not be reproduced, except in its entirety, without the written approval of Accutest Laboratories.

 $Test\ results\ relate\ only\ to\ samples\ analyzed.$

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4.

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Sample Summary

Environmental Restoration Services

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

Job No: C20813

Sample Number	Collected Date	Time By	Received	Matri Code		Client Sample ID
C20813-1	03/12/12	11:15 CK	03/12/12	AQ	Ground Water	MW-2
C20813-2	03/12/12	11:45 CK	03/12/12	AQ	Ground Water	MW-1
C20813-2F	03/12/12	11:45 CK	03/12/12	AQ	Groundwater Filtered	MW-1
C20813-3	03/12/12	12:15 CK	03/12/12	AQ	Ground Water	MW-3





Sample Results	
Report of Analysis	



Page 1 of 1

Client Sample ID: MW-2

 Lab Sample ID:
 C20813-1
 Date Sampled:
 03/12/12

 Matrix:
 AQ - Ground Water
 Date Received:
 03/12/12

 Method:
 SW846 8260B
 Percent Solids:
 n/a

Project: Trans. Terminals - 15651 Worthley Drive, San Lorenzo, CA

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 a	W29524.D	1	03/22/12	TN	n/a	n/a	VW1002
Run #2							

Purge Volume
Run #1 10.0 ml
Run #2

BTEX, Oxygenates

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	1.0	0.20	ug/l	
108-88-3	Toluene	ND	1.0	0.20	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.20	ug/l	
1330-20-7	Xylene (total)	ND	2.0	0.46	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	0.20	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.20	ug/l	
108-20-3	Di-Isopropyl ether	ND	2.0	0.22	ug/l	
637-92-3	Ethyl Tert Butyl Ether	ND	2.0	0.22	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.20	ug/l	
994-05-8	Tert-Amyl Methyl Ether	ND	2.0	0.40	ug/l	
75-65-0	Tert-Butyl Alcohol	ND	10	2.4	ug/l	
	TPH-GRO (C6-C10)	ND	50	25	ug/l	
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limi	ts	
1868-53-7	Dibromofluoromethane	93%		60-13	30%	
2037-26-5	Toluene-D8	91%		60-13	30%	
460-00-4	4-Bromofluorobenzene	94%		60-13	30%	

⁽a) Sample vial contained more than 0.5cm of sediment.

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



Page 1 of 1

Client Sample ID: MW-2

 Lab Sample ID:
 C20813-1
 Date Sampled:
 03/12/12

 Matrix:
 AQ - Ground Water
 Date Received:
 03/12/12

 Method:
 SW846 8015B M SW846 3510C
 Percent Solids:
 n/a

Project: Trans. Terminals - 15651 Worthley Drive, San Lorenzo, CA

File ID DF **Analytical Batch** Analyzed By **Prep Date Prep Batch** Run #1 GG32701.D 1 03/16/12 JH 03/14/12 OP5580 **GGG873** Run #2

Initial Volume Final Volume

Run #1 1060 ml 1.0 ml

Run #2

TPH Extractable w/ Silica Gel Cleanup

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH (C10-C28)	0.0784	0.094	0.024	mg/l	J
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Lim	its	
630-01-3	Hexacosane	39% a		45-1	40%	

(a) Surrogate outside control limits due to matrix interference. Emulsion formed during extraction process.

ND = Not detected MDL - Method Detection Limit J = Inc.

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



Client Sample ID: MW-1

 Lab Sample ID:
 C20813-2
 Date Sampled:
 03/12/12

 Matrix:
 AQ - Ground Water
 Date Received:
 03/12/12

 Method:
 SW846 8260B
 Percent Solids:
 n/a

Project: Trans. Terminals - 15651 Worthley Drive, San Lorenzo, CA

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 a	W29525.D	1	03/22/12	TN	n/a	n/a	VW1002
Run #2							

Purge Volume
Run #1 10.0 ml
Run #2

BTEX, Oxygenates

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	1.0	0.20	ug/l	
108-88-3	Toluene	ND	1.0	0.20	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.20	ug/l	
1330-20-7	Xylene (total)	ND	2.0	0.46	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	0.20	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.20	ug/l	
108-20-3	Di-Isopropyl ether	ND	2.0	0.22	ug/l	
637-92-3	Ethyl Tert Butyl Ether	ND	2.0	0.22	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.20	ug/l	
994-05-8	Tert-Amyl Methyl Ether	ND	2.0	0.40	ug/l	
75-65-0	Tert-Butyl Alcohol	ND	10	2.4	ug/l	
	TPH-GRO (C6-C10)	ND	50	25	ug/l	
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Lim	its	
1868-53-7	Dibromofluoromethane	95%		60-1	30%	
2037-26-5	Toluene-D8	92%		60-1	30%	
460-00-4	4-Bromofluorobenzene	94%		60-1	30%	

⁽a) Sample vial contained more than 0.5cm of sediment.

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



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Report of Analysis

Page 1 of 1

Client Sample ID: MW-1

 Lab Sample ID:
 C20813-2
 Date Sampled:
 03/12/12

 Matrix:
 AQ - Ground Water
 Date Received:
 03/12/12

 Method:
 SW846 8015B M SW846 3510C
 Percent Solids:
 n/a

Project: Trans. Terminals - 15651 Worthley Drive, San Lorenzo, CA

 File ID
 DF
 Analyzed
 By
 Prep Date
 Prep Batch
 Analytical Batch

 Run #1
 GG32671.D
 1
 03/15/12
 JH
 03/14/12
 OP5580
 GGG872

Run #2

Initial Volume Final Volume

Run #1 1000 ml 1.0 ml

Run #2

TPH Extractable w/ Silica Gel Cleanup

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH (C10-C28)	0.0369	0.10	0.025	mg/l	J
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Run# 2 Limits		
630-01-3	Hexacosane	58%		45-1	40%	

ND = Not detected MDL - Method Detection Limit J = Indi

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



Page 1 of 1

Client Sample ID: MW-1

Lab Sample ID:C20813-2FDate Sampled:03/12/12Matrix:AQ - Groundwater FilteredDate Received:03/12/12

Percent Solids: n/a

Project: Trans. Terminals - 15651 Worthley Drive, San Lorenzo, CA

Dissolved Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Zinc	< 20	20	ug/l	1	03/15/12	03/19/12 RS	SW846 6010B ¹	SW3010A ²

(1) Instrument QC Batch: MA2392(2) Prep QC Batch: MP4666

Page 1 of 1

Client Sample ID: MW-3

Lab Sample ID: C20813-3 **Date Sampled:** 03/12/12 Matrix: AQ - Ground Water **Date Received:** 03/12/12 Method: Percent Solids: n/a SW846 8260B

Project: Trans. Terminals - 15651 Worthley Drive, San Lorenzo, CA

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 a	W29526.D	1	03/22/12	TN	n/a	n/a	VW1002
Run #2							

	Purge Volume	
Run #1	10.0 ml	
Run #2		

BTEX, Oxygenates

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	1.0	0.20	ug/l	
108-88-3	Toluene	ND	1.0	0.20	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.20	ug/l	
1330-20-7	Xylene (total)	ND	2.0	0.46	ug/l	
106-93-4	1,2-Dibromoethane	ND	1.0	0.20	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.20	ug/l	
108-20-3	Di-Isopropyl ether	ND	2.0	0.22	ug/l	
637-92-3	Ethyl Tert Butyl Ether	ND	2.0	0.22	ug/l	
1634-04-4	Methyl Tert Butyl Ether	2.1	1.0	0.20	ug/l	
994-05-8	Tert-Amyl Methyl Ether	ND	2.0	0.40	ug/l	
75-65-0	Tert-Butyl Alcohol	ND	10	2.4	ug/l	
	TPH-GRO (C6-C10)	ND	50	25	ug/l	
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Lim	its	
1868-53-7	Dibromofluoromethane	99%		60-1	30%	
2037-26-5	Toluene-D8	93%		60-1	30%	
460-00-4	4-Bromofluorobenzene	96%		60-1	30%	

⁽a) Sample vial contained more than 0.5cm of sediment. Sample was not preserved to the pH < 2.

ND = Not detected MDL - Method Detection Limit J = Indicates an estimated value

RL = Reporting Limit

E = Indicates value exceeds calibration range

B = Indicates analyte found in associated method blank N = Indicates presumptive evidence of a compound



Page 1 of 1

Client Sample ID: MW-3

 Lab Sample ID:
 C20813-3
 Date Sampled:
 03/12/12

 Matrix:
 AQ - Ground Water
 Date Received:
 03/12/12

 Method:
 SW846 8015B M SW846 3510C
 Percent Solids:
 n/a

Project: Trans. Terminals - 15651 Worthley Drive, San Lorenzo, CA

 File ID
 DF
 Analyzed
 By
 Prep Date
 Prep Batch
 Analytical Batch

 Run #1
 GG32672.D
 1
 03/15/12
 JH
 03/14/12
 OP5580
 GGG872

Run #2

Initial Volume Final Volume

Run #1 1000 ml 1.0 ml

Run #2

TPH Extractable w/ Silica Gel Cleanup

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH (C10-C28)	0.0339	0.10	0.025	mg/l	J
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Run# 2 Limits		
630-01-3	Hexacosane	68%		45-1	40%	

ND = Not detected MDL - Method Detection Limit J = Indicators

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





Misc.	Forms		

Custody Documents and Other Forms

Includes the following where applicable:

• Chain of Custody



	(CHAIN OF	CUS	TODY						
	a Commission providences	2105 Lundy Ave, Sa	an Jose, CA 9	5131	FED-EX Track	ing ≢		Bottle Order Contr	ol#	
ACCUTE		(408) 588-0200	FAX: (408) 58		Accutest Quot	0 #		Accutest NC J	ob#: C	0813
LABORA	TORIES			Amp1807				1		
Client / Reporting Information	T	Project Information	n	1	· -	- 1	Reque	ested Analysis		Matrix Codes WW- Wastewater
Environmental Kesterat.	Project Na	me Trans 1	rerm		3					GW- Ground Water
Address P.O. BOX 2006	Street 156	51 Worth	ley [)r.	2 2					SW- Surface Water SO- Soil
minto Park En, 940	26 San	Lorenzo	(a		2 2	1 1				OI-Oil WP-Wipe
Project Contacts. Ja 54a	Project #				15:cl.	14				LIQ - Non-aqueous Liquid
Phone # 408-655-9434	EMAIL:	envirested	alicom	1	Els Fre	Sec	8.0			AIR
Samplers's Name		chase Order #	The same of	DoW:	0	400/				DW- Drinking Water (Perchlorate Only)
Accutest Sample ID Sample ID / Field Point / Point of Collection	Collection Date Time	Sampled by Matrix bottle	1 8	preserved Bottles	7 pH/19	0,4				LAB USE ONLY
1 mw-7	3-12-115	(W 3			XX					1-64 Answerley
2 mw-1	1145	CKIS	, x		XX	(X		+1-5	aconford	
3 MW-3	1215	CK V 2	X		XX	'/				<u> </u>
Turnaround Time (Business days)		Data Deliverab	via Information					mments / Remarks		
	oved By:/ Date:	Commercial "A" - Re				1 \	(1)		١	1 11
10 Day (Workload dependent)		Commercial "B" - Re			-	Lab	FILKI	ININO	sample	1 mmodesty
5 Day (Workload dependent) 3 Day (125% markup)		FULT1 - Level 4 data		cmomatograms		for	ZING C	inalysis	· .	
2 Day (150% markup)		EDF for Geotracker	EDD F	ormat		•		. ,	•	
1 Day (200% markup) Same Day (300% markup)		Provide EDF Global ID Provide EDF Logcode							***	
Emergency T/A data available VIA Lablink										
Sample Custody Relinquished by Sampler:	nust be documented	d below each time samp Received By:		ssession, including o	ourier deliv	ery, Date Time:		Received By:		
1 Curtiste Mall	3-12-12	1 MKE MEORE	fix14	2 Relinquished By:		Date Time:		2 Received By:		
Relinquished by:	Dare lune:	3		4				40		
Refinquished by:	Date Time:	Received By:		Custody Seal #	1	ottle / Pres Y N	Headspace	\sim	On log V N	Cooler Temp.
5		5			Labels match	Cock V)/N	Separate Receiv	ring Check List used	U'"164	-0,4:100c

C20813: Chain of Custody Page 1 of 2



Accutest Laboratories Northern California Sample Recei	ving Check Lis	t Job#: C	208 2	Initial:TM
Review Chain of Custody Chain of Custody is to be complete.		_		
Are these regulatory (NPDES) samples? CWA	(Yes / No	Client Sample ID	pH Check	Other Comments/Issues
	Yes (No)		· · · · · · · · · · · · · · · · · · ·	
□ Was Client Informed that hold time is 15 min? Yes / No Continue	Yes / No			
Was ortho-Phosphate filtered with in 15 min? Yes / No Continue	Yes / No			
√ Are sample within hold time?	Yes / No —			
Are sample in danger of exceeding hold-time	Yes (No)			
Existing Client? Yes// No Existing Project?	(Yes) / No			
If No: Is Report to info complete and legible, including;	_			
□ deliverable □ Name □ Address □ phone □ e-mail				
Is Bill to info complete and legible, including;				
p PO# o Credit card on Contact paddress on phone of e-mail				
Is Contact and/or Project Manager identified, including;				
□ phone □ e-mail				
p Project name / number				
	Yes /(No)			
	(Yes) No			
	(Yes) No	-		
	(Yes)/ No			
	(Yes) No			
TAT requested available? (Yes / No Approved by PM	Tes/ No			
28 TAT requested available? (Teg/No Approved by 177)	—— <u> </u>			
Review Coolers:				
were all Coolers temperatures measured at ≤6°C?	Ven /80			
·	Yes /No)			
• If cooler is outside the ≤6°C; note down the affected bottles in that cooler on the left Are samples on Ice?	(Yes)/ No			
Note that ANC does NOT accept evidentiary samples. (We do not lock refrigerators)				
note that rate does not decopy of months of the de not look for agenticity	L			
Shipment Received Method walk In				
Custody Seals: Present: Yes / No) If Yes; Unbroken:	Yes / No			
Country Seals. Freschit. 1657 MO 11 165, OHOLOKEIL	Tes/ No			
Review of Sample Bottles: If you answer no. explain to the side				

	(es) No			
Is there enough sample volume in proper bottle for requested analyses?	Vesy No			
p Froper Preservatives? (es) No	-			
Check pH on preserved samples except 1664, 625, 8270 and VOAs; make notes on left.	_			
✓Headspace-VOAs? Greater than 6mm in diameter List sample ID and affected container	Yes /(No)			
rist sample in and affected container				

Non-Compliance issues and discrepancies on the COC are forwarded to Project Management

C20813: Chain of Custody Page 2 of 2





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: C20813

Account: ERSCAMP Environmental Restoration Services

Project: Trans. Terminals - 15651 Worthley Drive, San Lorenzo, CA

Sample VW1002-MB	File ID W29513.D	DF 1	Analyzed 03/22/12	By TN	Prep Date n/a	Prep Batch n/a	Analytical Batch VW1002	
---------------------	----------------------------	----------------	--------------------------	-----------------	----------------------	-----------------------	----------------------------	--

The QC reported here applies to the following samples:

CAS No.	Compound	Result	RL	MDL	Units Q
71-43-2	Benzene	ND	1.0	0.20	ug/l
106-93-4	1,2-Dibromoethane	ND	1.0	0.20	ug/l
107-06-2	1,2-Dichloroethane	ND	1.0	0.20	ug/l
108-20-3	Di-Isopropyl ether	ND	2.0	0.22	ug/l
100-41-4	Ethylbenzene	ND	1.0	0.20	ug/l
637-92-3	Ethyl Tert Butyl Ether	ND	2.0	0.22	ug/l
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.20	ug/l
994-05-8	Tert-Amyl Methyl Ether	ND	2.0	0.40	ug/l
75-65-0	Tert-Butyl Alcohol	ND	10	2.4	ug/l
108-88-3	Toluene	ND	1.0	0.20	ug/l
1330-20-7	Xylene (total)	ND	2.0	0.46	ug/l
	TPH-GRO (C6-C10)	ND	50	25	ug/l

CAS No.	Surrogate Recoveries	Limits	
1868-53-7	Dibromofluoromethane	95%	60-130%
2037-26-5	Toluene-D8	90%	60-130%
460-00-4	4-Bromofluorobenzene	88%	60-130%



Blank Spike/Blank Spike Duplicate Summary

Job Number: C20813

Account: **ERSCAMP** Environmental Restoration Services

Project: Trans. Terminals - 15651 Worthley Drive, San Lorenzo, CA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VW1002-BS	W29510.D	1	03/22/12	TN	n/a	n/a	VW1002
VW1002-BSD	W29511.D	1	03/22/12	TN	n/a	n/a	VW1002

The QC reported here applies to the following samples:

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	BSD ug/l	BSD %	RPD	Limits Rec/RPD
71-43-2	Benzene	20	18.1	91	18.3	92	1	60-130/30
106-93-4	1,2-Dibromoethane	20	18.6	93	18.3	92	2	60-130/30
107-06-2	1,2-Dichloroethane	20	19.8	99	18.8	94	5	60-130/30
108-20-3	Di-Isopropyl ether	20	17.8	89	17.0	85	5	60-130/30
100-41-4	Ethylbenzene	20	17.6	88	18.0	90	2	60-130/30
637-92-3	Ethyl Tert Butyl Ether	20	19.4	97	18.4	92	5	60-130/30
1634-04-4	Methyl Tert Butyl Ether	20	18.7	94	17.9	90	4	60-130/30
994-05-8	Tert-Amyl Methyl Ether	20	19.2	96	18.0	90	6	60-130/30
75-65-0	Tert-Butyl Alcohol	100	81.9	82	76.3	76	7	60-130/30
108-88-3	Toluene	20	17.0	85	17.0	85	0	60-130/30
1330-20-7	Xylene (total)	60	54.2	90	54.9	92	1	60-130/30

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
1868-53-7	Dibromofluoromethane	102%	97%	60-130%
2037-26-5	Toluene-D8	95%	90%	60-130%
460-00-4	4-Bromofluorobenzene	97%	95%	60-130%



Laboratory Control Sample Summary Job Number: C20813

Account: **ERSCAMP** Environmental Restoration Services

Project: Trans. Terminals - 15651 Worthley Drive, San Lorenzo, CA

Sample VW1002-LCS	File ID W29512.D	DF 1	Analyzed 03/22/12	By TN	Prep Date n/a	Prep Batch n/a	Analytical Batch VW1002

The QC reported here applies to the following samples:

CAS No.	Compound	Spike ug/l	LCS ug/l	LCS %	Limits
	TPH-GRO (C6-C10)	125	117	94	60-130
	TPH-GRO (C6-C10)	125	117	94	60-13

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	93%	60-130%
2037-26-5	Toluene-D8	96%	60-130%
460-00-4	4-Bromofluorobenzene	92%	60-130%

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: C20813

Account: **ERSCAMP** Environmental Restoration Services

Project: Trans. Terminals - 15651 Worthley Drive, San Lorenzo, CA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
C20839-3MS	W29522.D	1	03/22/12	TN	n/a	n/a	VW1002
C20839-3MSD	W29523.D	1	03/22/12	TN	n/a	n/a	VW1002
C20839-3	W29514.D	1	03/22/12	TN	n/a	n/a	VW1002

The QC reported here applies to the following samples:

CAS No.	Compound	C20839 ug/l	-3 Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
71-43-2	Benzene	ND		20	18.4	92	17.8	89	3	60-130/25
106-93-4	1,2-Dibromoethane	ND		20	20.0	100	18.8	94	6	60-130/25
107-06-2	1,2-Dichloroethane	ND		20	18.5	93	17.9	90	3	60-130/25
108-20-3	Di-Isopropyl ether	ND		20	17.4	87	16.7	84	4	60-130/25
100-41-4	Ethylbenzene	ND		20	18.3	92	17.6	88	4	60-130/25
637-92-3	Ethyl Tert Butyl Ether	ND		20	19.1	96	18.2	91	5	60-130/25
1634-04-4	Methyl Tert Butyl Ether	0.28	J	20	19.2	95	18.2	90	5	60-130/25
994-05-8	Tert-Amyl Methyl Ether	ND		20	18.9	95	18.0	90	5	60-130/25
75-65-0	Tert-Butyl Alcohol	ND		100	89.8	90	84.8	85	6	60-130/25
108-88-3	Toluene	ND		20	17.8	89	17.0	85	5	60-130/25
1330-20-7	Xylene (total)	ND		60	55.9	93	54.0	90	3	60-130/25

CAS No.	Surrogate Recoveries	MS	MSD	C20839-3	Limits
1868-53-7 2037-26-5	Dibromofluoromethane Toluene-D8	97% 94%	95% 91%	95% 93%	60-130% 60-130%
460-00-4	4-Bromofluorobenzene	99%	96%	94%	60-130%





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QC Data Summaries

Includes the following where applicable:

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



Job Number: C20813

Method Blank Summary

Account: **ERSCAMP** Environmental Restoration Services

Project: Trans. Terminals - 15651 Worthley Drive, San Lorenzo, CA

Sample OP5580-MB	File ID GG32621.D	DF 1	Analyzed 03/14/12	By JH	Prep Date 03/14/12	Prep Batch OP5580	Analytical Batch GGG871

The QC reported here applies to the following samples:

Method: SW846 8015B M

C20813-1, C20813-2, C20813-3

CAS No. Compound Result RLMDL Units Q

TPH (C10-C28) ND 0.10 0.025 mg/l

CAS No. **Surrogate Recoveries** Limits

630-01-3 81% 45-140% Hexacosane

5.2.1

Page 1 of 1

Method: SW846 8015B M

Blank Spike/Blank Spike Duplicate Summary

Job Number: C20813

Account: ERSCAMP Environmental Restoration Services

Project: Trans. Terminals - 15651 Worthley Drive, San Lorenzo, CA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP5580-BS	GG32622.D	1	03/14/12	JH	03/14/12	OP5580	GGG871
OP5580-BSD	GG32623.D	1	03/14/12	JH	03/14/12	OP5580	GGG871

The QC reported here applies to the following samples:

CAS No.	Compound	Spike mg/l	BSP mg/l	BSP %	BSD mg/l	BSD %	RPD	Limits Rec/RPD
	TPH (C10-C28)	1	0.677	68	0.760	76	12	45-140/30
CAS No.	Surrogate Recoveries	BSP	BSD		Limits			
630-01-3	Hexacosane	74%	74%		45-140%	΄.		
050-01-5	Tichacosanc	7 7 70	7 + 70	,	TJ-170/	,		



5.3.1

Page 1 of 1

Method: SW846 8015B M

-2

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: C20813

Account: ERSCAMP Environmental Restoration Services

Project: Trans. Terminals - 15651 Worthley Drive, San Lorenzo, CA

Sample	File ID	DF	Analyzed	$\mathbf{B}\mathbf{y}$	Prep Date	Prep Batch	Analytical Batch
OP5580-MS	HH020981	.D1	03/15/12	JН	03/15/12	OP5580	GHH694
OP5580-MSD	HH020982	LD1	03/15/12	JН	03/15/12	OP5580	GHH694
C20865-2	GG32657.	D 1	03/15/12	JН	03/15/12	OP5580	GGG872

The QC reported here applies to the following samples:

CAS No.	Compound	C20865-2 mg/l Q	Spike mg/l	MS mg/l	MS %	MSD mg/l	MSD %	RPD	Limits Rec/RPD
	TPH (C10-C28)	0.684	1.89	2.34	88	2.75	109	16	45-140/25
CAS No.	Surrogate Recoveries	MS	MSD	C20865-2		Limits			
630-01-3	Hexacosane	73%	85%	58%	ó	45-1409	6		





Metals Analysis

QC Data Summaries

Includes the following where applicable:

- · Method Blank Summaries
- Matrix Spike and Duplicate Summaries
- Blank Spike and Lab Control Sample Summaries
- Serial Dilution Summaries

BLANK RESULTS SUMMARY Part 2 - Method Blanks

Login Number: C20813

Account: ERSCAMP - Environmental Restoration Services Project: Trans. Terminals - 15651 Worthley Drive, San Lorenzo, CA

QC Batch ID: MP4666 Methods: SW846 6010B Matrix Type: AQUEOUS Units: ug/l

Prep Date:

03/15/12

Metal	RL	IDL	MDL	MB raw	final
Aluminum	200	13	8.5		
Antimony	6.0	.7	.51		
Arsenic	10	.7	.65		
Barium	200	. 4	.35		
Beryllium	5.0	. 2	. 4		
Boron	100	.9	.64		
Cadmium	2.0	. 2	.15		
Calcium	5000	7.1	12		
Chromium	10	.3	.41		
Cobalt	5.0	. 2	.3		
Copper	10	1.2	3		
Iron	200	6.4	12		
Lead	10	.7	.85		
Magnesium	5000	27	36		
Manganese	15	.1	1.3		
Molybdenum	20	. 2	.22		
Nickel	5.0	. 2	.12		
Potassium	10000	18	44		
Selenium	10	1.8	2.2		
Silicon	100	1.2	6.9		
Silver	5.0	.3	.47		
Sodium	10000	15	13		
Strontium	10	. 2	.24		
Thallium	10	.5	.54		
Tin	50	. 2	.7		
Titanium	10	. 4	.34		
Vanadium	10	.3	.3		
Zinc	20	.3	4.2	0.80	<20

Associated samples MP4666: C20813-2F

Results < IDL are shown as zero for calculation purposes (*) Outside of QC limits $\dot{}$



MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: C20813 Account: ERSCAMP - Environmental Restoration Services Project: Trans. Terminals - 15651 Worthley Drive, San Lorenzo, CA

QC Batch ID: MP4666 Methods: SW846 6010B Matrix Type: AQUEOUS Units: ug/l

03/15/12 Prep Date:

Metal	C20877-1 Original	MS	Spikelot MPIR4A	% Rec	QC Limits	
Aluminum						
Antimony	anr					
Arsenic	anr					
Barium						
Beryllium	anr					
Boron						
Cadmium	anr					
Calcium						
Chromium	anr					
Cobalt						
Copper	anr					
Iron	anr					
Lead	anr					
Magnesium						
Manganese	anr					
Molybdenum						
Nickel	anr					
Potassium						
Selenium	anr					
Silicon						
Silver	anr					
Sodium						
Strontium						
Thallium	anr					
Tin						
Titanium						
Vanadium						
Zinc	109	633	500	104.8	75-125	

Associated samples MP4666: C20813-2F

Results < IDL are shown as zero for calculation purposes (*) Outside of QC limits (N) Matrix Spike Rec. outside of QC limits

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: C20813 Account: ERSCAMP - Environmental Restoration Services Project: Trans. Terminals - 15651 Worthley Drive, San Lorenzo, CA

QC Batch ID: MP4666 Methods: SW846 6010B Matrix Type: AQUEOUS Units: ug/l

Prep Date:

03/15/12

Metal	C20877-1 Original	MSD	Spikelot MPIR4A	% Rec	MSD RPD	QC Limit
Aluminum						
Antimony	anr					
Arsenic	anr					
Barium						
Beryllium	anr					
Boron						
Cadmium	anr					
Calcium						
Chromium	anr					
Cobalt						
Copper	anr					
Iron	anr					
Lead	anr					
Magnesium						
Manganese	anr					
Molybdenum						
Nickel	anr					
Potassium						
Selenium	anr					
Silicon						
Silver	anr					
Sodium						
Strontium						
Thallium	anr					
Tin						
Titanium						
Vanadium						
Zinc	109	639	500	106.0	0.9	20

Associated samples MP4666: C20813-2F

Results < IDL are shown as zero for calculation purposes (*) Outside of QC limits (N) Matrix Spike Rec. outside of QC limits

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: C20813 Account: ERSCAMP - Environmental Restoration Services

Project: Trans. Terminals - 15651 Worthley Drive, San Lorenzo, CA

QC Batch ID: MP4666 Methods: SW846 6010B Matrix Type: AQUEOUS Units: ug/l

03/15/12 Prep Date:

Metal	BSP Result	Spikelot MPIR4A	% Rec	QC Limits
Aluminum				
Antimony	anr			
Arsenic	anr			
Barium				
Beryllium	anr			
Boron				
Cadmium	anr			
Calcium				
Chromium	anr			
Cobalt				
Copper	anr			
Iron	anr			
Lead	anr			
Magnesium				
Manganese	anr			
Molybdenum				
Nickel	anr			
Potassium				
Selenium	anr			
Silicon				
Silver	anr			
Sodium				
Strontium				
Thallium	anr			
Tin				
Titanium				
Vanadium				
Zinc	531	500	106.2	80-120

Associated samples MP4666: C20813-2F

Results < IDL are shown as zero for calculation purposes (*) Outside of QC limits $\dot{\ }$ (anr) Analyte not requested

SERIAL DILUTION RESULTS SUMMARY

Login Number: C20813 Account: ERSCAMP - Environmental Restoration Services

Project: Trans. Terminals - 15651 Worthley Drive, San Lorenzo, CA

QC Batch ID: MP4666 Methods: SW846 6010B Matrix Type: AQUEOUS Units: ug/l

03/15/12 Prep Date:

Metal	C20877-1 Original SDL 1:	5 %DIF	QC Limits
Aluminum			
Antimony	anr		
Arsenic	anr		
Barium			
Beryllium	anr		
Boron			
Cadmium	anr		
Calcium			
Chromium	anr		
Cobalt			
Copper	anr		
Iron	anr		
Lead	anr		
Magnesium			
Manganese	anr		
Molybdenum			
Nickel	anr		
Potassium			
Selenium	anr		
Silicon			
Silver	anr		
Sodium			
Strontium			
Thallium	anr		
Tin			
Titanium			
Vanadium			
Zinc	109 108	1.5	0-10

Associated samples MP4666: C20813-2F

Results < IDL are shown as zero for calculation purposes (*) Outside of QC limits $\dot{\ }$





04/25/12



Technical Report for

Environmental Restoration Services

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

Accutest Job Number: C21384

Sampling Date: 04/17/12

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: 18



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.

Kesavalu M. Bagawandoss, Ph.D., J.D., Lab Director

- gamentes

Client Service contact: Diane Theesen 408-588-0200

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

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Sample Summary

Environmental Restoration Services

Job No: C21384

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

Sample Collected			Matr	ix	Client		
Number	Date	Time By	Received	Code	Type	Sample ID	
C21384-1	04/17/12	10:05 CK	04/17/12	AQ	Ground Water	PITGW4-17	
C21384-1F	04/17/12	10:05 CK	04/17/12	AQ	Groundwater Filtered	PITGW4-17	





Sample Results		
Report of Analysis		
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Report of Analysis

Page 1 of 1

Client Sample ID: PITGW4-17

 Lab Sample ID:
 C21384-1
 Date Sampled:
 04/17/12

 Matrix:
 AQ - Ground Water
 Date Received:
 04/17/12

 Method:
 SW846 8270C
 SW846 3510C
 Percent Solids:
 n/a

Project: Trans. Terminals - 15651 Worthley Drive, San Lorenzo, CA

File ID DF Analyzed By Prep Date Prep Batch Analytical Batch
Run #1 Y14927.D 1 04/18/12 MT 04/18/12 OP5813 EY677

Run #2

Initial Volume Final Volume

Terphenyl-d14

Run #1 1060 ml 1.0 ml

Run #2

1718-51-0

CAS No. Compound Result RLMDL Units Q 91-20-3 Naphthalene ND 4.7 1.2 ug/1 CAS No. **Surrogate Recoveries** Run#1 Run# 2 Limits 4165-60-0 Nitrobenzene-d5 25-100% 79% 321-60-8 2-Fluorobiphenyl 25-106% 80%

86%

ND = Not detected MDL - Method Detection Limit J = Indicate

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

35-130%

B = Indicates analyte found in associated method blank N = Indicates presumptive evidence of a compound



Report of Analysis

Page 1 of 1

Client Sample ID: PITGW4-17

Lab Sample ID:C21384-1FDate Sampled:04/17/12Matrix:AQ - Groundwater FilteredDate Received:04/17/12Percent Solids:n/a

Project: Trans. Terminals - 15651 Worthley Drive, San Lorenzo, CA

Dissolved Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Cadmium	< 2.0	2.0	ug/l	1	04/20/12	04/22/12 RS	SW846 6010B ¹	SW3010A ²
Chromium	< 10	10	ug/l	1	04/20/12	04/22/12 RS	SW846 6010B ¹	SW3010A ²
Lead	< 10	10	ug/l	1	04/20/12	04/22/12 RS	SW846 6010B ¹	SW3010A ²
Nickel	< 5.0	5.0	ug/l	1	04/20/12	04/22/12 RS	SW846 6010B ¹	SW3010A ²
Zinc	39.2	20	ug/l	1	04/20/12	04/22/12 RS	SW846 6010B ¹	SW3010A ²

(1) Instrument QC Batch: MA2465

(2) Prep QC Batch: MP4841



Misc. Forms	
Custody Documents and Other Forms	

Includes the following where applicable:

· Chain of Custody



		CHAIN	OF CU	STODY		EKS CAMPI	307			···
			ve, San Jose, C					Bottle Order Co		
ACCUTE		(408) 588-020	FAX: (408)	588-0201	Accutest Qu	uote #		Accutest NO	Job #: C	C21384
LABORA	TORIES		177.053							1
Client / Reporting Information		Project Infor		-	₽.		Regu	ested Analysi	s I	Matrix Codes WW- Wastewater
Environ munter losercitions on	Project N	ame: Travk,	Term.		me la					GW- Ground Water SW- Surface Water
City Cox ZOOC	Street 5 (•	hloy Dr	- 1	12	68 70				SO- Soil
Menlo Kark, Cu 94	076 San Project #	Lorenzo	la	i i i i i i i i i i i i i i i i i i i	LAB-PILTER)	<u>a</u>				OI-Oil WP-Wipe
1 13, 199 13 16 16				1	EIL					LfQ - Non-aqueous Liquid
Phone #408-655-9454		envirest a	Laolico	1	La	<u>& </u>				AIR
Sampleys's Name Kilgore	Client Pu Collecti	rchase Order #	Number	of preserved Bottles	buloss	NAphtralene				DW- Drinking Water (Perchlorate Only)
Accutest Sample ID Sample, ID / Field Point / Point of Collection	Date Time			12SO4 12SO4 Vohe Vohe	15	5				LAB USE ONLY
	44742 1005	ek u	7	2	XX	\sim				
					17.17					
Turnaround Time (Business days)		Data De	iverable information				Co	mments / Remai	ks	
Appro	oved By:/ Date:	Commercial "A	" - Results only " - Results with QC	summaries	1	mared water	ely G	ilter 3	Preseru	e sample
5 Day 3 Day (125% markup)		Commerical "B	+" - Results, QC, a data package	nd chromatograms	1	told one	L, I, L			bottle
2 Day (150% markup)		EDF for Geolra	L	Format					_	•
1 Day (200% markup) Same Day (300% markup)		Provide EDF Log			_			HDPE N		
Emergency T/A data available VIA Lablink		^	,	7			1-lifer	Amber	MP	
Sample Custody m	ust be documente	d below each lime s	amples change	ossession, including (Relinquished By:	courier dell	Ivery.		Received By:		
	41-17-12	1 erm		1/				2		
Relinquished by:	Date Time:	Received By:	• () [Relinquished By:		Date Time:	,	Received By:		
3 Relinquished by:	Date Time:	3 Received By:		4 Custody Seal #	Appropriate	Bottle / Bres (Y) N	Headspace	Y/N NA	On Ice Y (N)	Cooler Temp.
5		5			1			ing Check List us		20.8-0.4=20.4 ∞

C21384: Chain of Custody

Page 1 of 2



Accutest Laboratories Northern California Sample Receive	ving Check L	ist Job# : C	21384	Initial: EX
Review Chain of Custody Chain of Custody is to be comple	ete and legible.			
	(Yes / No [Client Sample ID	pH Check	Other Comments#esues*
	Yes/(No)			Discolved metals:
D Was Client informed that hold time is 15 min? Yes / No Continue	Yes / No			1
Was ortho-Phosphate filtered with in 15 min? Yes / No Continue	Yes / No			Lab-Filtered & preserved In
	Yes/No			Cab. For UP 5 WETAL
	Yes /(No			· · · · · · · · · · · · · · · · · · ·
	Yes)/ No	-		<u> </u>
If No: Is Report to info complete and legible, including;				* WF1 5 metals and
□ deliverable □ Name □ Address □ phone □ e-mail				Nuphthalene added as per
Is Bill to info complete and legible, including;				84. (Ex) 4-17-12
□ PO# □ Credit card □ Contact □address □ phone □ e-mail				
Is Contact and/or Project Manager identified, including;				
g phone g e-mail				
p Project name / number				
	Yes /(No)			
	(Yes) No			
	(es) No			
	(Yes) No			
	(Yes)/ No	-		
□ TAT requested available? □ TAT requested available? □ TAT requested available? □ TAT requested available?				
Roview Coolors: Samples Dropped of Straight from tield.				
	Yes /(No)			
If cooler is outside the ≤6°C; note down the affected bottles in that cooler on the left	-		4400	
∀Are samples on Ice?	Yes/No)	****		
Note that ANC does NOT accept evidentiary samples. (We do not lock refrigerators)				
• • • •				
Shipment Received Method Walk In	1			
	Yes / No			
,	1			
Review of Sample Bottles: If you answer no, explain to the side	Į			
	(Yes/ No			
	(Yes/ No			
□ Proper Preservatives? Yes / No				
Check pH on preserved samples except 1664, 625, 8270 and VOAs; make notes on left.	-			

Non-Compliance issues and discrepancies on the COC are forwarded to Project Management

Yes / No

Greater than 6mm in diameter List sample ID and affected container

□ Headspace-VOAs?

C21384: Chain of Custody Page 2 of 2





GC/MS Semi-volatiles

QC Data Summaries

Includes the following where applicable:

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



Method: SW846 8270C

Method Blank Summary

Job Number: C21384

Account: ERSCAMP Environmental Restoration Services

Project: Trans. Terminals - 15651 Worthley Drive, San Lorenzo, CA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP5813-MB	Y14929.D	1	04/18/12	MT	04/18/12	OP5813	EY677

The QC reported here applies to the following samples:

C21384-1

CAS No.	Compound	Result	RL	MDL	Units Q
91-20-3	Naphthalene	ND	5.0	1.2	ug/l
CAC N-	Summagata Dagovanica		Limits		
CAS No.	Surrogate Recoveries		Limits		
4165-60-0	Nitrobenzene-d5	80%	25-100		
	o .	80% 80%		%	



Blank Spike/Blank Spike Duplicate Summary

Job Number: C21384

Account: **ERSCAMP** Environmental Restoration Services

Project: Trans. Terminals - 15651 Worthley Drive, San Lorenzo, CA

	ole File ID DF	Sample
Y14922.D 1 04/18/12 MT 04/18/12 OP5813 EY677	13-BS Y14922.D 1	OP5813-BS
Y14923.D 1 04/18/12 MT 04/18/12 OP5813 EY677	13-BSD Y14923.D 1	OP5813-BSD
114923.D 1 04/10/12 W11 04/10/12 0F3013	13-B3D 114923.D 1	OF 3613-B3D

The QC reported here applies to the following samples: **Method:** SW846 8270C

C21384-1

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	BSD ug/l	BSD %	RPD	Limits Rec/RPD
91-20-3	Naphthalene	25	24.4	98	24.5	98	0	20-104/30
CAS No.	Surrogate Recoveries	BSP	BSI	D	Limits			
4165-60-0 321-60-8 1718-51-0	Nitrobenzene-d5 2-Fluorobiphenyl Terphenyl-d14	83% 81% 85%	849 829 929	6	25-100% 25-106% 35-130%	,		





Metals Analysis

QC Data Summaries

Includes the following where applicable:

- · Method Blank Summaries
- Matrix Spike and Duplicate Summaries
- Blank Spike and Lab Control Sample Summaries
- Serial Dilution Summaries



BLANK RESULTS SUMMARY Part 2 - Method Blanks

Login Number: C21384

Account: ERSCAMP - Environmental Restoration Services Project: Trans. Terminals - 15651 Worthley Drive, San Lorenzo, CA

QC Batch ID: MP4841 Methods: SW846 6010B Matrix Type: AQUEOUS Units: ug/l

Prep Date:

04/20/12

Matal	DI	TDI	MDT	MB	final
Metal	RL	IDL	MDL	raw	final
Aluminum	200	13	8.5		
Antimony	6.0	. 7	.51		
Arsenic	10	.7	.65		
Barium	200	. 4	.35		
Beryllium	5.0	. 2	. 4		
Boron	100	.9	.64		
Cadmium	2.0	. 2	.15	0.40	<2.0
Calcium	5000	7.1	12		
Chromium	10	.3	.41	-0.40	<10
Cobalt	5.0	. 2	.3		
Copper	10	1.2	3		
Iron	200	6.4	12		
Lead	10	.7	.85	0.10	<10
Magnesium	5000	27	36		
Manganese	15	.1	1.3		
Molybdenum	20	. 2	.22		
Nickel	5.0	. 2	.12	-0.70	<5.0
Potassium	10000	18	44		
Selenium	10	1.8	2.2		
Silicon	100	1.2	6.9		
Silver	5.0	. 3	.47		
Sodium	10000	15	13		
Strontium	10	. 2	.24		
Thallium	10	.5	.54		
Tin	50	. 2	.7		
Titanium	10	. 4	.34		
Vanadium	10	. 3	.3		
Zinc	20	.3	4.2	1.1	<20

Associated samples MP4841: C21384-1F

Results < IDL are shown as zero for calculation purposes (*) Outside of QC limits $\dot{\ }$



MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: C21384 Account: ERSCAMP - Environmental Restoration Services

Project: Trans. Terminals - 15651 Worthley Drive, San Lorenzo, CA

QC Batch ID: MP4841 Methods: SW846 6010B Matrix Type: AQUEOUS Units: ug/l

04/20/12 Prep Date:

Metal	C21358- Origina		Spikelot MPIR4	% Rec	QC Limits
Aluminum	anr				
Antimony	anr				
Arsenic	anr				
Barium	anr				
Beryllium	anr				
Boron	anr				
Cadmium	0.80	524	500	104.7	75–125
Calcium	anr				
Chromium	0.90	503	500	100.4	75-125
Cobalt	anr				
Copper	anr				
Iron	anr				
Lead	2.3	489	500	97.8	75-125
Magnesium	anr				
Manganese	anr				
Molybdenum	anr				
Nickel	94.1	598	500	102.9	75-125
Potassium	anr				
Selenium	anr				
Silicon	anr				
Silver	anr				
Sodium	anr				
Strontium					
Thallium	anr				
Tin					
Titanium					
Vanadium	anr				
Zinc	18.1	532	500	103.3	75-125

Associated samples MP4841: C21384-1F

Results < IDL are shown as zero for calculation purposes (*) Outside of QC limits (N) Matrix Spike Rec. outside of QC limits



MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: C21384 Account: ERSCAMP - Environmental Restoration Services

Project: Trans. Terminals - 15651 Worthley Drive, San Lorenzo, CA

QC Batch ID: MP4841 Methods: SW846 6010B Matrix Type: AQUEOUS Units: ug/l

Prep Date:

04/20/12

Metal	C21358- Origina		Spikel MPIR4	ot % Rec	MSD RPD	QC Limit
Aluminum	anr					
Antimony	anr					
Arsenic	anr					
Barium	anr					
Beryllium	anr					
Boron	anr					
Cadmium	0.80	525	500	104.9	0.2	20
Calcium	anr					
Chromium	0.90	502	500	100.2	0.2	20
Cobalt	anr					
Copper	anr					
Iron	anr					
Lead	2.3	488	500	97.6	0.2	20
Magnesium	anr					
Manganese	anr					
Molybdenum	anr					
Nickel	94.1	596	500	102.5	0.3	20
Potassium	anr					
Selenium	anr					
Silicon	anr					
Silver	anr					
Sodium	anr					
Strontium						
Thallium	anr					
Гin						
Titanium						
Vanadium	anr					
Zinc	18.1	529	500	102.7	0.6	20

Associated samples MP4841: C21384-1F

Results < IDL are shown as zero for calculation purposes (*) Outside of QC limits (N) Matrix Spike Rec. outside of QC limits



SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: C21384 Account: ERSCAMP - Environmental Restoration Services

Project: Trans. Terminals - 15651 Worthley Drive, San Lorenzo, CA

QC Batch ID: MP4841 Methods: SW846 6010B Units: ug/l Matrix Type: AQUEOUS

04/20/12 04/20/12 Prep Date: BSP Spikelot BSD Spikelot BSD QC OC MPIR4 Limits MPIR4 Limit Metal Result % Rec Result % Rec RPD Aluminum anr Antimony anr Arsenic anr Barium anr Beryllium anr Boron anr Cadmium 99.2 97.8 496 500 80-120 489 500 1.4 Calcium anr Chromium 498 500 99.6 80-120 492 500 98.4 1.2 Cobalt anr Copper anr Iron anr Lead 485 500 97.0 80-120 477 500 95.4 1.7 Magnesium anr Manganese anr Molybdenum anr Nickel 481 500 96.2 80-120 473 500 94.6 1.7 Potassium anr Selenium anr Silicon anr Silver anr Sodium anr Strontium Thallium anr Tin Titanium Vanadium anr

516 Associated samples MP4841: C21384-1F

Results < IDL are shown as zero for calculation purposes

103.2 80-120

500

(*) Outside of QC limits (anr) Analyte not requested

Zinc

508

500

101.6

1.6

SERIAL DILUTION RESULTS SUMMARY

Login Number: C21384 Account: ERSCAMP - Environmental Restoration Services

Project: Trans. Terminals - 15651 Worthley Drive, San Lorenzo, CA

QC Batch ID: MP4841 Methods: SW846 6010B Matrix Type: AQUEOUS Units: ug/l

04/20/12 Prep Date:

Metal	C21358-: Origina	2F l SDL 1:5	%DIF	QC Limits
Aluminum	anr			
Antimony	anr			
Arsenic	anr			
Barium	anr			
Beryllium	anr			
Boron	anr			
Cadmium	0.700	0.00	100.0(a)	0-10
Calcium	anr			
Chromium	1.40	0.00	100.0(a)	0-10
Cobalt	anr			
Copper	anr			
Iron	anr			
Lead	0.00	0.00	NC	0-10
Magnesium	anr			
Manganese	anr			
Molybdenum	anr			
Nickel	105	76.1	8.6	0-10
Potassium	anr			
Selenium	anr			
Silicon	anr			
Silver	anr			
Sodium	anr			
Strontium				
Thallium	anr			
Tin				
Titanium				
Vanadium	anr			
Zinc	19.0	16.6	7.8	0-10

Associated samples MP4841: C21384-1F

Results < IDL are shown as zero for calculation purposes (*) Outside of QC limits

(anr) Analyte not requested

(a) Percent difference acceptable due to low initial sample concentration (< 50 times IDL).

