Transportation Terminals Company PO Box 882682

RECEIVED

8:19 am, Feb 21, 2012

Alameda County Environmental Health

San Francisco, CA 94188-2682

2/6/2012

Date: 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 November 6, 2011

Re:

Groundwater Monitoring Event 15651 Worthley Dr., San Lorenzo

On October 12, 2011, a single round of groundwater samples were obtained from monitoring wells MW1, MW2 and MW-3. Groundwater samples were collected 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Each well was bailed until the volume of water withdrawn was equal to at least three casing volumes.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)

PO Box 2006 * Menlo Park California 94026 * Phone 408/655-9434 * Fax 650/325-3238

The results of the groundwater samples indicated no detection of any of the chemical constituents tested, above the lab detection limits, with the exception of wells MW-1 and MW-2, both of which detected TPH/d, at a concentration of 54.6 and 131 micrograms per liter, respectively, and well MW-3 which detected MTBE, at a concentration of 1.9 micrograms per liter

Historical Monitoring Well Analytical Results Results in micrograms per liter

		1	Kesuits in i	microgram	ns per inter				
Date S	ample#	TPH/d	Benzene	Toluene	E-Benzene	Xylenes	MTBE	DTG	GE
	MW1	ND<100	ND<.5	ND<.5	ND<.5	ND<1.5	2.09	4.96	7.11
	MW1	ND<100	ND<.5	ND<.5	ND<.5	ND<1.5	0.96	4.01	8.06
10/12/11	MW1	54.6					ND<.5	4.76	7.31
Date S	ample#	TPH/d	Benzene	Toluene	E-Benzene		MTBE	DTG	GE
9/16/08	MW2	ND<100	ND<.5	ND<.5	ND<.5	ND<1.5	ND<.5	5.18	6.52
1/19/09	MW2	ND<100	ND<.5	ND<.5	ND<.5	ND<1.5	ND<.5	1.90	9.80
10/12/11	MW2	131					ND<.5	1.79	9.91
Date S	Sample#	TPH/d	Benzene	Toluene	E-Benzene	Xylenes	MTBE	DTG	GE
	MW3	ND<100	ND<.5	ND<.5	ND<.5	ND<1.5	ND<.5	3.88	8.17
	MW3	ND<100	ND<.5	ND<.5	ND<.5	ND<1.5	ND<.5	4.53	7.52
10/12/11	MW3	ND<50					1.9	4.31	7.74

DETERMINATION OF HORIZONTAL GROUNDWATER GRADIENT

On October 12, 2009, the water levels in monitor wells MW-2, MW-3 and MW-1 were measured 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.

CONCLUSIONS

It appears that the groundwater at the monitoring well sample points did not contain contaminates of concern above the lab detective limits, with the exception of groundwater samples "MW-1" and "MW-2" with concentrations of 54.6 and 131 micrograms per liter, respectively, and "MW-3" with a trace detection of MTBE.

Bennett T. Halsted

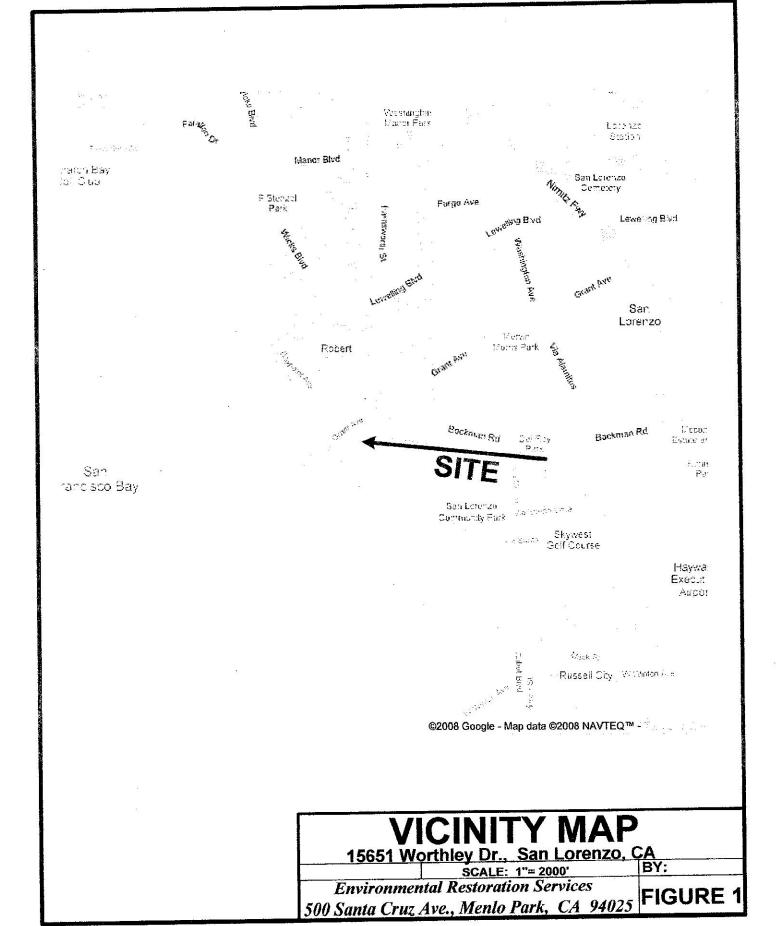
Project Manager

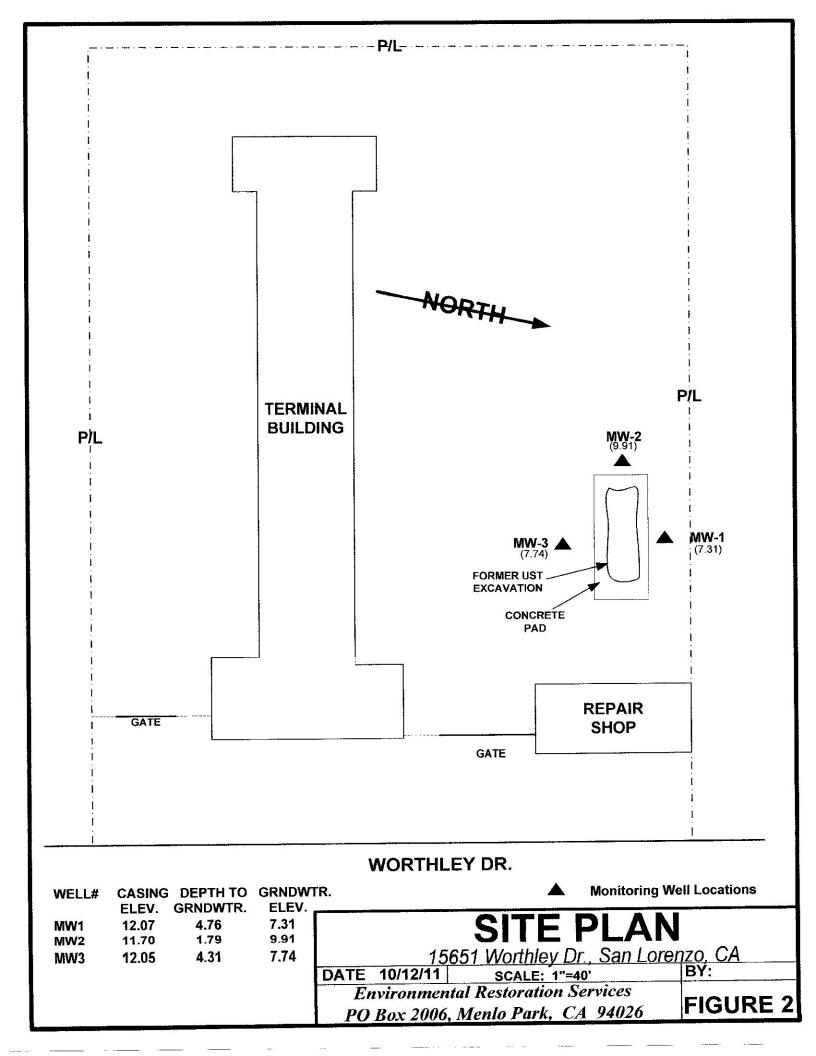
Samuel H. Halsted PE

C.E. 14095

Respectfully submitted this 6th day of November, 2011

FIGURES





WELL PURGE LOGS

Environmental Restoration Services WELL PURGE LOG

WELL	ID: MW-	1	Si	te Name: Trans	sportation Termin	als
Site A	ddress:	15651 Worthle	ey Dr., S	San Lorenzo		
Projec	t No.:	K 10 K 102 10	D	ate: 10/12/11		
Samp	lers Name	B. Halsted				
Measu	iring met	hod: Sounde	r			
Purge	Equipme	nt: Bailer			· · · · · · · · · · · · · · · · · · ·	· · · · · · · · · · · · · · · · · · ·
Water	in Well B	ox? No	Inside (diameter of wel	II: 2"	
Conve	ersion fac	tors (CF):	2-inch	well = 0.16 gai	llons/ft.,	
4-i	nch well :	= 0.65 gallon	s/ft.,	6-	inch well = 1.47	gallons/ft.,
Depth	to water	from top of o	asing:	4.76		
Total	Well Dept	h: 9.6				
Well v	TO DESCRIPTION OF THE PROPERTY	1 10 March 1997 1997 1997 1997 1997 1997 1997 199	1150	0.16 = Galle lepth to water}		
Water	Volume i	n Well: 4.84	ft / 0.77	gallons		
Well p	umped/b	ailed dry? _	_Yes _	xNo		
Lab A	nalysis:	8015B 8260	В			
Samp	le Contaiı	ners: (1) 1 lite	er ambe	er (2) 40ml VOA	s	
Samp	le Equipn	nent: Disp	osable l	Bailer		
			FIELD	MEASUREMEN	NTS	
Time	Gallons	Temp. (EF)	pН	Conductivity	Other:	Comments
4:37	1	62	7.11	9.67		
4:47	2	64	7.09	9.79		
4:58	3	64	7.06	9.70		
					I.	
COM	MENTS:					

Environmental Restoration Services WELL PURGE LOG

WELL	ID: MW-2	2	Sit	te Name: Trans	sportation Ter	minals
Site A	ddress: 1	5651 Worthle	y Dr., S	an Lorenzo		
Projec	t No.:		D	ate: 10/12/11		. <u> </u>
Sampl	ers Name	: B Halsted				,
Measu	ring meth	nod: Sounde	r			
Purge	Equipme	nt: Bailer				
Water	in Well B	ox? No	Inside d	diameter of wel	i: 2"	
Conve	rsion fac	tors (CF):	2-inch	well = 0.16 gal	lons/ft.,	
4-i	nch well =	= 0.65 gallon	s/ft.,	6-	inch well = 1	.47 gallons/ft.,
Depth	to water	from top of c	asing:	1.79		
Total \	Well Dept	h: 10.4				
Well v	olume = ({1	Feet - total well dep	Feet) X oth} - {d	0.16 = Galle lepth to water}	ons {CF}	
Water	Volume i	n Well: 8.61	ft / 1.37	gallons		
Well p	umped/b	ailed dry? _	_Yes _	x No		
Lab A	nalysis:	8015B 8260)B			
Samp	le Contaiı	ners: (1) 1 lit	er ambe	er (2) 40ml VOA	S	
Samp	le Equipn	nent: Disp	osable I	Bailer		
		170.000 TTO.0000	FIELD	MEASUREMEN	NTS	
Time	Gallons	Temp. (EF)	рН	Conductivity	Other:	Comments
3:47	1.5	63	7.08	4.37		
4:59	3.0	64	7.03	4.65		
4:14	5.0	61	7.07	4.17		·
	1				l .	•
COMI	MENTS:					

Environmental Restoration Services WELL PURGE LOG

WELL	ID: MW-3	3	Sit	te Name: Tr	ansportation Terr	ninals
Site A	ddress: 1	5651 Worthle	y Dr., S	an Lorenzo		
Projec	t No.:	1971 TANKS	D	ate: 10/12/1	1	
Sampl	ers Name	: B. Halsted				
Measu	ring meth	nod: Sounder				
Purge	Equipme	nt: Bailer				
Water	in Well B	ox? No I	nside d	liameter of v	vell: 2"	
Conve	rsion fac	tors (CF):	2-inch	well = 0.16	gallons/ft.,	
4-i	nch well :	= 0.65 gallons	s/ft.,		6-inch well = 1.	47 gallons/ft.,
Depth	to water	from top of c	asing:	4.31		
	Well Dept					
Well v	olume = ({1	Feet - total well dep	Feet) X th} - {d	0.16 = G epth to wate	allons er} {CF}	
Water	Volume i	n Well: 5.4 ft	/ 0.85	gallons		
Well p	umped/b	ailed dry? _	Yes _	x No		
Lab A	nalysis:	8015B 8260	В	***		
Samp	le Contaiı	ners: (1) 1 lite	er ambe	er (2) 40ml V	D A s	
Samp	le Equipn	nent: Dispo	osable l	Bailer		
			FIELD	MEASUREN	IENTS	
Time	Gallons	Temp. (EF)	рН	Conductivi	Other:	Comments
3:16	1	66	6.81	3.43		
5:29	2	65	6.67	3.21		
5:44	3	66	6.57	3.16		
	 					
COM	MENTS:					

CHAIN-OF-CUSTODY ANALYTICAL RESULTS



10/24/11



Technical Report for

Environmental Restoration Services

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

Accutest Job Number: C18436

Sampling Date: 10/12/11

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: 25



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)

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

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4.5

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C



Sample Summary

Environmental Restoration Services

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

Job No: C18436

Sample Number	Collected Date Time By	Matrix Received Code	
C18436-1	10/12/11 16:18 BH	10/13/11 AQ (Ground Water MW-1
C18436-2	10/12/11 17:00 BH	10/13/11 AQ (Ground Water MW-2
C18436-3	10/12/11 17:45 BH	10/13/11 AQ (Ground Water MW-3





Sample Results	
Report of Analysis	



Page 1 of 1

Client Sample ID: MW-1

 Lab Sample ID:
 C18436-1
 Date Sampled:
 10/12/11

 Matrix:
 AQ - Ground Water
 Date Received:
 10/13/11

 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	R5298.D	1	10/18/11	BD	n/a	n/a	VR185
Run #2							

Purge Volume Run #1 10.0 ml

Run #2

Oxygenates

CAS No.	Compound	Result	RL	MDL	Units	Q
108-20-3 637-92-3 1634-04-4 994-05-8 75-65-0	Di-Isopropyl ether Ethyl Tert Butyl Ether Methyl Tert Butyl Ether Tert-Amyl Methyl Ether Tert-Butyl Alcohol	ND ND ND ND	5.0 5.0 1.0 5.0 10	0.50 0.50 0.50 0.50 5.0	ug/l ug/l ug/l ug/l ug/l	
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Lim	its	
1868-53-7 2037-26-5 460-00-4	Dibromofluoromethane Toluene-D8 4-Bromofluorobenzene	98% 112% 99%		60-1 60-1 60-1	30%	

ND = Not detected MDL - Method Detection Limit J = Indicates the substitution of the substitution of

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



2

Report of Analysis

Page 1 of 1

Client Sample ID: MW-1

 Lab Sample ID:
 C18436-1
 Date Sampled:
 10/12/11

 Matrix:
 AQ - Ground Water
 Date Received:
 10/13/11

 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 HH17924.D 1 10/15/11 JH 10/14/11 OP4727 GHH584

Run #2

Initial Volume Final Volume

Run #1 1060 ml 1.0 ml

Run #2

TPH Extractable

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH (C10-C28)	0.0546	0.094	0.047	mg/l	J
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Lim	iits	
630-01-3	Hexacosane	61%		45-1	40%	

ND = Not detected MDL - Method Detection Limit J = Indicates and 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:
 C18436-2
 Date Sampled:
 10/12/11

 Matrix:
 AQ - Ground Water
 Date Received:
 10/13/11

 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	R5299.D	1	10/18/11	BD	n/a	n/a	VR185
Run #2							

Purge Volume Run #1 10.0 ml

Run #2

Oxygenates

CAS No.	Compound	Result	RL	MDL	Units	Q
108-20-3 637-92-3	Di-Isopropyl ether Ethyl Tert Butyl Ether	ND ND	5.0 5.0	0.50 0.50	ug/l ug/l	
1634-04-4 994-05-8 75-65-0	Methyl Tert Butyl Ether Tert-Amyl Methyl Ether Tert-Butyl Alcohol	ND ND ND	1.0 5.0 10	0.50 0.50 5.0	ug/l ug/l ug/l	
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Lim	its	
1868-53-7 2037-26-5 460-00-4	Dibromofluoromethane Toluene-D8 4-Bromofluorobenzene	99% 108% 98%			30% 30% 30%	

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

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: C18436-2 **Date Sampled:** 10/12/11 Matrix: AQ - Ground Water **Date Received:** 10/13/11 Method: SW846 8015B M SW846 3510C Percent Solids: n/a

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

File ID DF **Prep Date Analytical Batch** Analyzed By **Prep Batch** Run #1 GG29039.D 1 10/17/11 JH 10/14/11 OP4731 **GGG775**

Run #2

Final Volume Initial Volume

Run #1 1040 ml 1.0 ml

Run #2

TPH Extractable

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH (C10-C28)	0.131	0.096	0.048	mg/l	
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Lim	its	
630-01-3	Hexacosane	88%		45-1	40%	

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



Client Sample ID: MW-3

 Lab Sample ID:
 C18436-3
 Date Sampled:
 10/12/11

 Matrix:
 AQ - Ground Water
 Date Received:
 10/13/11

 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	R5300.D	1	10/18/11	BD	n/a	n/a	VR185
Run #2							

Purge Volume Run #1 10.0 ml

Run #2

Oxygenates

CAS No.	Compound	Result	RL	MDL	Units	Q
108-20-3 637-92-3	Di-Isopropyl ether Ethyl Tert Butyl Ether	ND ND	5.0 5.0	0.50 0.50	ug/l ug/l	
1634-04-4 994-05-8	Methyl Tert Butyl Ether Tert-Amyl Methyl Ether	1.9 ND	1.0 5.0	0.50 0.50	ug/l ug/l	
75-65-0	Tert-Butyl Alcohol	ND	10	5.0	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	112%		60-1	30%	
460-00-4	4-Bromofluorobenzene	100%		60-1	30%	

ND = Not detected MDL - Method Detection Limit J

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-3

Lab Sample ID: C18436-3 **Date Sampled:** 10/12/11 **Matrix:** AQ - Ground Water **Date Received:** 10/13/11 Method: SW846 8015B M SW846 3510C Percent Solids: n/a

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

File ID DF **Prep Date Analytical Batch** Analyzed By **Prep Batch** Run #1 GG29040.D 1 10/17/11 JH 10/14/11 OP4731 **GGG775**

Run #2

Final Volume Initial Volume

Run #1 1040 ml 1.0 ml

Run #2

TPH Extractable

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH (C10-C28)	ND	0.096	0.048	mg/l	
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Lim	iits	
630-01-3	Hexacosane	83%		45-1	40%	

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





Misc. Forms
Custody Documents and Other Forms

Includes the following where applicable:

• Chain of Custody



	CHAIN OF CUS	TODY				
	2105 Lundy Ave, San Jose, CA	i i	FED-EX Tracking #		Bottle Order Control #	
ACCUTEST	(408) 588-0200 FAX: (408) 58	38-0201	Accutest Quete f		Accutest NC Job #1 C	,436
LABORATORIES Client / Reporting Information	EKS CI Project Information	1mP1307 .		Poque	sted Analysis	Matrix Codes
Company Name Environmental region Services Project Address C Street	vame: Transportation	Terminals	3			WW- Wastewater GW- Ground Water SW- Surface Water
Y, 0, Box 2006 15 City State CLS McNo or (C) Project/Contact: Project	1051 Worthley horenzes (a	<i>V</i> 1.	125			SO- Soil Ol-Oil WP-Wipe
BenHalsted			- \ \ \			LIQ - Non-aqueous Liquid
Samplers's Name (Client F	ırchase Order #	»M	deose 1			AIR DW- Drinking Water (Perchtorate Only)
Accutest Sample ID Sample ID / Field Point / Point of Collection Date Time	Sampled by Matrix bottles \overline{Q}	preserved Bottles	10 T			LAB USE ONLY
1 mw- 1 101211412	1011 1 1 1 1 1		\times			1-lithhabermp
3 MW-3 V, 54	1 1 2		XX			
MIM-5 1 1 2 1	V V V C	1 1 1 1	<u> </u>			$+$ \forall
Turnaround Time (Business days) Standard TAT 15 Business Days Approved By/ Date: 10 Day (Workload dependent) 5 Day (Workload dependent)	Data Deliverable Information Commercial "A" - Results only Commercial "B" - Results with QC s Commercial "B+" - Results, QC, and FULT1 - Level 4 data package			Com	ments / Remarks	
3 Day (125% markup) 2 Day (150% markup)	EDF for Geotracker EDD	Format				
1 Day (200% markup) Same Day (300% markup)	Provide EDF Global ID		-			
Emergency T/A data available VIA Lablink						
Sample Custody must be documen Date Time: (5:5) Relinquished by: Date Time: (7:4)	ed below each time samples change po	ssession, including co pélinquished By: 2 Relinquished By:	Date	Time:	Received By: 2 Received By:	
3 Retinquished by: Date Time:	Received By:	1	Appropriate Bottle / Pro		4 /N On Ice (C) N ng Check List use(V) / N 2/1	Cooler Temp.

C18436: Chain of Custody Page 1 of 2



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v	Æ	

Of the County India to the comme	Isas suud laudhla			
Review Chain of Custody Chain of Custody is to be completely		Political		
Are these regulatory (NPBES) samples? -CWA	Yes / No Yes / (No)	Client Sample ID	pH Check	Other Comments/Issues
p/is pH requested?				
	Yes / No			
C Vida diala i naspriala mara i mana	Yes / No			
Are sample within hold time?	(es)/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;				
□ PO# □ Credit card □ Contact □address □ phone □ e-mail				
Is Contact and/or Project Manager identified, including;				
phone pe-mail				
p Project name / number				
Special requirements?	Yes / No			
⊘Sample IDs / date & time of collection provided?	(Yes)/No			
✓Is Matrix listed and correct?	(Yes)/ No			
⟨⟨Analyses listed, we do, or client has authorized a subcontract?	(Yes) No		***************************************	
✓ Chain is signed and dated by both client and sample custodian?	(Yes)/No			
a 141 requested availables (1651 No. 745)				
Review Coolers:				
Were all Coolers temperatures measured at ≤6°C?	Yes (No)			
•	163 (110)			
 If cooler is outside the ≤6°C; note down the affected bottles in that cooler on the left	Yes / No			
Note that ANC does NOT accept evidentiary samples. (We do not lock refrigerators)				
Note that ANO does NOT accept evidentially sumples. (We do not look terrigoration)				
Shipment Received Method Walk In				
	Yes / No			
Custody Seals: Present: Yes / (No If Yes; Unbroken:	res/ No			
Review of Sample Bottles: If you answer no, explain to the side				
Chain matches bottle labels? (Sample bottle intact?	Yes / No			
s there enough sample volume in proper bottle for requested analyses?	(Yes) / No			
p Proper Preservatives? (res) No				
Check pH on preserved samples except 1664, 625, 8270 and VOAs; make notes on left.				
Headspace-VOAs? Greater than 6mm in diameter	Yes /No			
List sample ID and affected container	_			

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

C18436: 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: SW846 8260B

Method Blank Summary

Job Number: C18436

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
VR185-MB	R5294.D	1	10/18/11	BD	n/a	n/a	VR185

The QC reported here applies to the following samples:

C18436-1, C18436-2, C18436-3

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

CAS No. **Surrogate Recoveries** Limits Dibromofluoromethane 96% 60-130% 1868-53-7 2037-26-5 Toluene-D8 113% 60-130% 460-00-4 4-Bromofluorobenzene 100% 60-130%



Method: SW846 8260B

Blank Spike/Blank Spike Duplicate Summary

Job Number: C18436

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
VR185-BS	R5290.D	1	10/18/11	BD	n/a	n/a	VR185
VR185-BSD	R5291.D	1	10/18/11	BD	n/a	n/a	VR185

The QC reported here applies to the following samples:

C18436-1, C18436-2, C18436-3

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	BSD ug/l	BSD %	RPD	Limits Rec/RPD
108-20-3	Di-Isopropyl ether	20	19.1	96	18.2	91	5	60-130/30
637-92-3	Ethyl Tert Butyl Ether	20	18.2	91	17.4	87	4	60-130/30
1634-04-4	Methyl Tert Butyl Ether	20	17.5	88	16.7	84	5	60-130/30
994-05-8	Tert-Amyl Methyl Ether	20	17.7	89	16.8	84	5	60-130/30
75-65-0	Tert-Butyl Alcohol	100	94.6	95	91.2	91	4	60-130/30

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
1868-53-7	Dibromofluoromethane	99%	97%	60-130%
2037-26-5	Toluene-D8	109%	111%	60-130%
460-00-4	4-Bromofluorobenzene	101%	101%	60-130%



Laboratory Control Sample Summary Job Number: C18436

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
VR185-LCS	R5293.D	1	10/18/11	BD	n/a	n/a	VR185

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

C18436-1, C18436-2, C18436-3

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

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	97%	60-130%
2037-26-5	Toluene-D8	112%	60-130%
460-00-4	4-Bromofluorobenzene	100%	60-130%

Method: SW846 8260B

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: C18436

Account: ERSCAMP Environmental Restoration Services

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

Sample	File ID	DF	Analyzed	Ву	Prep Date	Prep Batch	Analytical Batch
C18444-1MS	R5312.D	1	10/18/11	BD	n/a	n/a	VR185
C18444-1MSD	R5313.D	1	10/18/11	BD	n/a	n/a	VR185
C18444-1	R5295.D	1	10/18/11	BD	n/a	n/a	VR185

The QC reported here applies to the following samples:

C18436-1, C18436-2, C18436-3

CAS No.	Compound	C18444-1 ug/l Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
108-20-3	Di-Isopropyl ether	ND	20	18.6	93	18.6	93	0	60-130/25
637-92-3 1634-04-4	Ethyl Tert Butyl Ether Methyl Tert Butyl Ether	ND 1.2	20 20	17.8 17.7	89 83	17.9 17.8	90 83	1	60-130/25 60-130/25
994-05-8 75-65-0	Tert-Amyl Methyl Ether Tert-Butyl Alcohol	ND ND	20 100	17.3 91.9	87 92	17.4 90.7	87 91	1	60-130/25 60-130/25
73-03-0	Tert-Butyl Meonor	ND	100	71.7)2	70.7	71	1	00-130/23
CAS No.	Surrogate Recoveries	MS	MSD	C1	8444-1	Limits			
1868-53-7 2037-26-5 460-00-4	Dibromofluoromethane Toluene-D8 4-Bromofluorobenzene	96% 109% 100%	96% 109% 100%	999 111 101	1%	60-1309 60-1309 60-1309	%		





GC Semi-volatiles

QC Data Summaries

Includes the following where applicable:

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



Method: SW846 8015B M

Method Blank Summary

Job Number: C18436

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
OP4727-MB	HH17881.D	1	10/14/11	JH	10/14/11	OP4727	GHH584

The QC reported here applies to the following samples:

C18436-1

CAS No. Compound Result RL MDL Units Q

TPH (C10-C28) ND 0.10 0.050 mg/l

CAS No. Surrogate Recoveries Limits

630-01-3 Hexacosane 87% 45-140%

Method: SW846 8015B M

Method Blank Summary

Job Number: C18436

Account: ERSCAMP Environmental Restoration Services

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

Sample OP4731-MB	File ID GG29022.D	DF 1	Analyzed 10/17/11	Ву ЈН	Prep Date 10/14/11	Prep Batch OP4731	Analytical Batch GGG775

The QC reported here applies to the following samples:

C18436-2, C18436-3

 CAS No.
 Compound
 Result
 RL
 MDL
 Units
 Q

 TPH (C10-C28)
 ND
 0.10
 0.050
 mg/l

CAS No. Surrogate Recoveries Limits

630-01-3 Hexacosane 93% 45-140%

5.2.1

Page 1 of 1

Method: SW846 8015B M

Blank Spike/Blank Spike Duplicate Summary

Job Number: C18436

Account: ERSCAMP Environmental Restoration Services

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

	alytical Batch H584 H584
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The QC reported here applies to the following samples:

C18436-1

CAS No.	Compound	Spike mg/l	BSP mg/l	BSP %	BSD mg/l	BSD %	RPD	Limits Rec/RPD
	TPH (C10-C28)	1	0.949	95	0.929	93	2	45-140/30
CAS No.	Surrogate Recoveries	BSP	BSI)	Limits			
630-01-3	Hexacosane	87%	90%)	45-140%)		



Method: SW846 8015B M

Blank Spike/Blank Spike Duplicate Summary

Job Number: C18436

Account: ERSCAMP Environmental Restoration Services

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

Sample OP4731-BS OP4731-BSD	File ID GG29023.D GG29024.D	Analyzed 10/17/11 10/17/11	By JH JH	Prep Date 10/14/11 10/14/11	Prep Batch OP4731 OP4731	Analytical Batch GGG775 GGG775

The QC reported here applies to the following samples:

C18436-2, C18436-3

CAS No.	Compound	Spike mg/l	BSP mg/l	BSP %	BSD mg/l	BSD %	RPD	Limits Rec/RPD
	TPH (C10-C28)	1	0.940	94	0.921	92	2	45-140/30
CAS No.	Surrogate Recoveries	BSP	BSI)	Limits			
630-01-3	Hexacosane	102%	93%	ó	45-140%	ò		



Method: SW846 8015B M

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: C18436

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
OP4727-MS	HH17948.D	1	10/17/11	JH	10/14/11	OP4727	GHH585
OP4727-MSD	HH17949.D	1	10/17/11	JH	10/14/11	OP4727	GHH585
C18424-9	HH17922.D	1	10/15/11	JH	10/14/11	OP4727	GHH584

The QC reported here applies to the following samples:

C18436-1

CAS No.	Compound	C18424- mg/l	9 Q	Spike mg/l	MS mg/l	MS %	MSD mg/l	MSD %	RPD	Limits Rec/RPD
	ТРН (С10-С28)	0.0798	J	1.89	1.81	92	1.79	91	1	45-140/25
CAS No.	Surrogate Recoveries	MS		MSD (C18424-9				
630-01-3	Hexacosane	87%		89%	67%	,)	45-140%	,)		



Method: SW846 8015B M

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: C18436

Account: ERSCAMP Environmental Restoration Services

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

Sample	File ID	DF	Analyzed	Ву	Prep Date	Prep Batch	Analytical Batch
OP4731-MS	HH17957.D	1	10/17/11	JH	10/14/11	OP4731	GHH585
OP4731-MSD	HH17958.D	1	10/17/11	JH	10/14/11	OP4731	GHH585
C18443-1	GG29041.D	1	10/17/11	JH	10/14/11	OP4731	GGG775

The QC reported here applies to the following samples:

C18436-2, C18436-3

CAS No.	Compound	C18443-1 mg/l Q	Spike mg/l	MS mg/l	MS %	MSD mg/l	MSD %	RPD	Limits Rec/RPD
	TPH (C10-C28)	1.55	2	3.05	75	3.17	81	4	45-140/25
CAS No.	Surrogate Recoveries	MS	MSD	C18443-1		Limits			
630-01-3	Hexacosane	75%	83%	97%	6	45-1409	6		

