PACIFIC ECORISK | ENVIRONMENTAL CONSULTING & TESTING

Ms. Debra O'Leary
U.S. Army Corps of Engineers
San Francisco District
1455 Market Street
San Francisco, CA 94103-1398

July 31, 2012

Dear Ms. O'Leary:

On behalf of Mr. Jim Cannon of the Levin-Richmond Terminal Corporation (LRTC), I have enclosed two (2) copies of the report "Characterization of the Levin-Richmond Terminal Corporation Berth A: Dredge Materials Sampling and Analysis Results." In addition, one copy of this report has been sent to each of the other DMMO participating agency representatives.

If you have any questions, please give me a call at (707) 207-7761. I look forward to hearing from you.

Sincerely,

Jeffrey Cotsifas
President

cc (w/enc): Ms. Melissa Scianni, U.S. EPA
Ms. Brenda Goeden, BCDC
Ms. Elizabeth Christian, SFRWQCB
Mr. Donn Oetzel, SLC
Mr. Vicki Frey, CDFG
Mr. Arn Aarreberg, CDFG
Mr. Gary Stern, NMFS
Ms. Korie Schaeffer, NMFS
Mr. Jim Cannon, LRTC

2250 Cordelia Road, Fairfield, CA 94534 phone: 707.207.7760 fax: 707.207.7916 www.pacificecorisk.com

DATA REPORT

Characterization of the Levin-Richmond Terminal Corporation Berth A: Dredge Materials Sampling and Analysis Results

Episode 3

USACE: Permit 2008-00399S
RWQCB: File #: 741898 (EAC)
BCDC: M82-7 Amendment 7

Prepared for

Levin-Richmond Terminal Corporation
402 Wright Avenue
Richmond, CA 94804

Prepared by

Pacific EcoRisk
2250 Cordelia Road
Fairfield, CA 94534

July 2012

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List of Acronyms

ASTM	American Society for Testing and Materials
Bay	San Francisco Bay
BCDC	Bay Conservation and Development Commission
Calscience	Calscience Environmental Laboratories, Inc.
COC	Chain-of-custody
CV	Coefficient-of-variation
CY	Cubic yards
DMMO	Dredged Material Management Office
DU	Dredge unit
ESC	Elutriate Suitability Concentrations
GPS	Global positioning system
HDPE	High density polyethylene
ITM	Inland Testing Manual
LRTC	Levin-Richmond Terminal Corporation
MLLW	Mean lower low water
MRL	Method reporting limits
MWP	Montezuma Wetlands Project
NUAD	Not suitable for unconfined aquatic disposal
OTM	Ocean Testing Manual
PAH	Polycyclic aromatic hydrocarbons
PCB	Polychlorinated biphenyls
PER	Pacific EcoRisk
QA/QC	Quality assurance/quality control
RPD	Relative percent difference
RWQCB	Regional Water Quality Control Board
SAP	Sampling and Analysis Plan
SAR	Sampling and Analysis Report
SF-DODS	San Francisco Deep Ocean Disposal Site
SFRWQCB	San Francisco Regional Water Quality Control Board
SLC	State Lands Commission
SOP	Standard operating procedures
SUAD	Suitable for unconfined aquatic disposal
TEG	TEG Oceanographic Services
TOC	Total organic carbon
USACE	U.S. Army Corps of Engineers

USEPA	U.S. Environmental Protection Agency
USFDA	U.S Food & Drug Administration
WAAS	Wide angle augmentation system
WET	Waste extraction test

Distribution List

Ms. Debra O'Leary (2 bound copies)
U.S. Army Corps of Engineers
1455 Market Street
San Francisco, CA 94103
Phone: (415) 503-6807
Email: Debra.A.O'leary@spd02.usace.mil

Ms. Melissa Scianni
U.S. Environmental Protection Agency
75 Hawthorne Street
San Francisco, CA 94105-3919
Phone: (415) 972-3821
Email: Scianni.Melissa@epamail.epa.gov

Ms. Brenda Goeden
San Francisco Bay Conservation and Development Commission
50 California St., Suite 2600
San Francisco, CA 94111-6080
Phone: (415) 352-3623
Email: brendag@bcdc.ca.gov

Ms. Elizabeth Christian
San Francisco Regional Water Quality Control Board
1515 Clay St., Suite 1400
Oakland, CA 94612-1413
Phone: (510) 622-2335
Email: echristian@waterboards.ca.gov

Mr. Donn Oetzel
State Lands Commission
100 Howe Ave, #100 South
Sacramento, CA 95825-8202
Phone: (916) 574-1998
Email: OetzelD@slc.ca.gov

Ms. Vicki Frey
California Department of Fish and Game
Environmental Services Division
619 2nd Street
Eureka, CA 95501
Phone: (707) 445-7830
Email: vfrey@dfg.ca.gov

Mr. Arn Aarreberg
California Department of Fish and Game
Marine Region
5355 Skylane Blvd., Suite B
Santa Rosa, CA 95403
Phone: (707) 576-2882
Email: AAARREBERG@dfg.ca.gov

Mr. Gary Stern
National Marine Fisheries Service, Southwest Region
777 Sonoma Ave. #325
Santa Rosa, CA 95404
Phone: (707) 575-6060
Email: Gary.Stern@noaa.gov

Ms. Korie Schaeffer
National Marine Fisheries Service, Southwest Region
777 Sonoma Ave. #325
Santa Rosa, CA 95404
Phone: (707) 575-6087
Email: Korie.Schaeffer@noaa.gov

Mr. Jim Cannon
Levin-Richmond Terminal Corporation
402 Wright Avenue
Richmond, CA 94804
Phone: (510)-307-4020
jimc@levinterminal.com

1. INTRODUCTION

Levin-Richmond Terminal Corporation (LRTC), located in the Richmond Inner Harbor Channel in Richmond, CA (Figures 1-1 through 1-3), currently maintains 10-year permits from the U.S. Army Corps of Engineers (USACE), the Bay Conservation and Development Commission (BCDC) and has applied for an Episode specific water quality certification from the San Francisco Bay Regional Water Quality Control Board (SFRWQCB) for dredging of their Berth A. The LRTC Berth A is adjacent to the former United Heckathorn Superfund site. While the U.S. EPA (EPA) has performed a clean-up at the site, residual DDT and dieldrin are still present in the Lauritzen Channel (Figure 1-3).

LRTC has contracted Pacific EcoRisk (PER) to perform sampling and testing of its Berth A sediments in support of the third dredging episode under its current permits. This third episode will consist of "advanced" maintenance dredging activities. The advanced maintenance dredging is being performed to determine if dredging a trench along the face of the Berth A wharf to -45 ft MLLW can decrease the periodicity of maintenance dredging at Berth A. In addition, a secondary advanced maintenance program was also proposed that consisted of dredging of the entire berth area to the permitted over-depth tolerance of -41 ft MLLW. However, sampling and testing was not performed for the secondary advanced maintenance program at this time as the EPA requires more information on the potential effects of advanced maintenance dredging within the entire LRTC Berth A on contaminated sediment migration out of the Lauritzen Canal which is adjacent to the former United Heckathorn Superfund site.

The Berth A permitted maintenance dredge depth is 39 ft below Mean Lower Low Water (-39 ft MLLW) plus a two-foot over dredge tolerance, resulting in a project depth of -41 ft MLLW. Proposed advanced maintenance dredging activities would allow for dredging of a trench along the face of the Berth A wharf to -45 ft MLLW plus a one-foot over-dredge tolerance (-46 ft MLLW). The Episode 3 estimated total volume of dredged material to be removed from Berth A, including material accounted for by the one-foot over dredge tolerance, is estimated at 3,800 cubic yards (yds^3).

Table 1-1. Proposed Episode 3 Dredging for the Levin-Richmond Terminal Corporation.

Area	Dredge Unit	Maintenance Dredging Permitted Depth (ft MLLW)	Over-depth (ft)	Advanced Maintenance Dredging Depth	Estimated Volume (yds^3)	Over-depth (ft)	Estimated Volume (yds^3)	Total Estimated Volume (yds^3)
Berth A Trench	DU1	-39.0	2.0	-45.0	3,500	1.0	330	3,800

This Data Report has been prepared to provide the required characterization of these sediments. In order to meet permit requirements, the area to be dredged was sampled to a total depth of -46 ft MLLW or sampling refusal; a composite sample representative of this area was then analyzed and tested as per the ITM; each of the individual sediment cores was analyzed for organochlorine

pesticides and polychlorinated biphenyls (PCBs). A Z-layer, consisting of the 0.5 ft of sediment immediately below the permitted depth (plus over depth) or sampling refusal depth, was also collected and archived. The Z-layer composite sample was analyzed for organochlorine pesticides and PCBs

1.1 Objectives of the Sediment Investigation

The purpose of the proposed sampling and testing will be to evaluate the proposed dredged material to determine whether it will represent an adverse impact during removal operations and placement at the San Francisco Deep Ocean Disposal Site (SF-DODS). The procedures for sediment sample collection, sample processing and preparation, physical and chemical analyses, and data analyses were presented in a previously approved SAP. The specific objectives of the SAP scope-of-work were as follows:

- Collect core samples from within the designated sampling areas following field protocol detailed in this SAP; and
- Conduct chemical and biological analysis to determine whether Berth A sediment would be suitable for placement at SF-DODS. The results of chemical analysis indicate that sediments would not be suitable for unconfined aquatic disposal (SUAD) at SF-DODS. As a result, only analytical chemistry was performed to determine whether sediments will represent an adverse impact during removal operations and placement at the LRTC rehandling facility prior to placement at a landfill. Samples were archived to provide for any landfill placement site-specific requirements (i.e., waste extraction testing [WET]).

1.2 Organization of this Document

Sample collection and handling procedures are discussed in Sections 2 and 3. Results of chemical analyses are provided in Section 4. Section 5 discusses quality control and Section 6 presents the conclusions regarding sediment suitability.

Figure 1-1. Location Map: Levin-Richmond Terminal Corporation

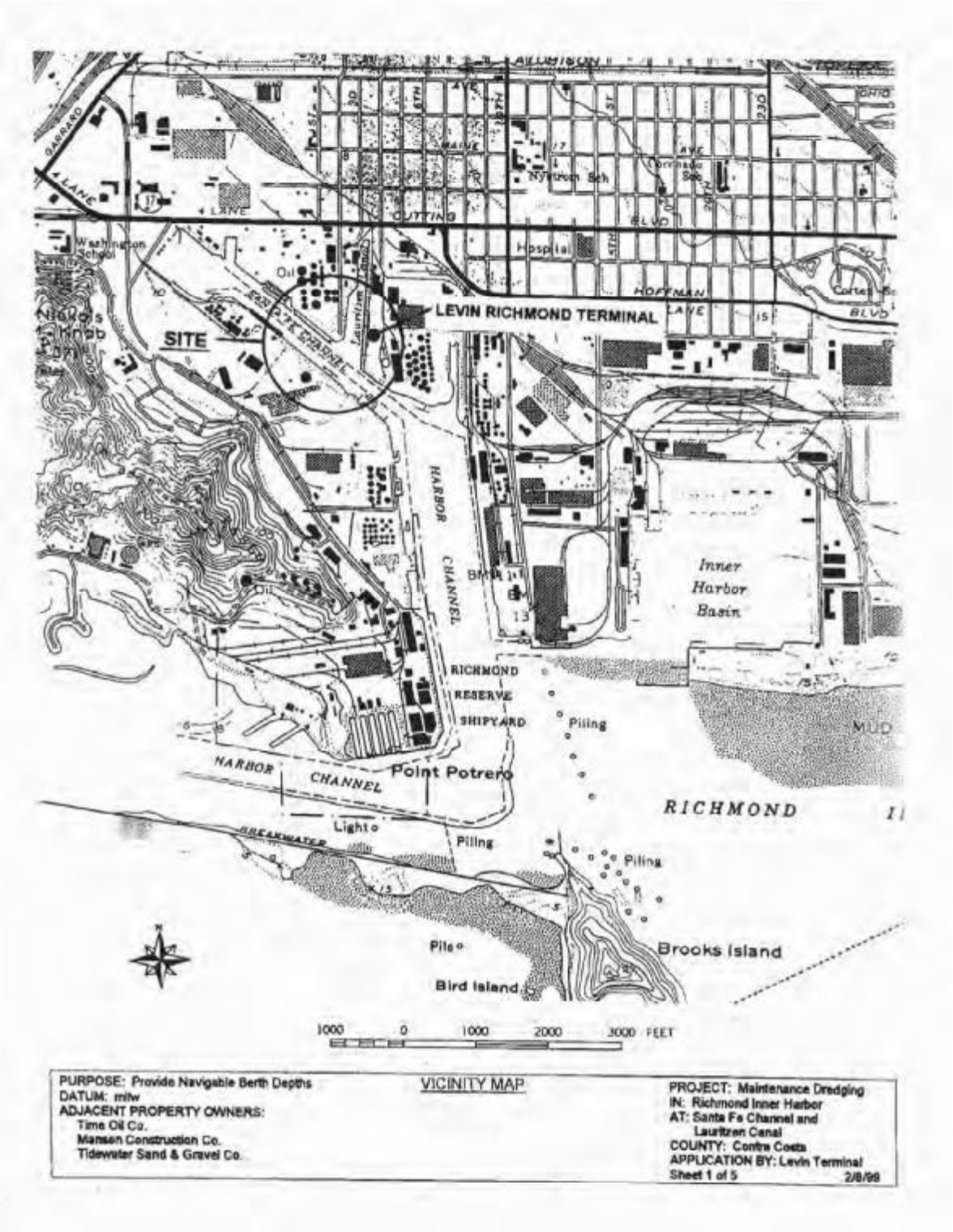

Figure 1-2. Vicinity Map 1: Levin-Richmond Terminal Corporation

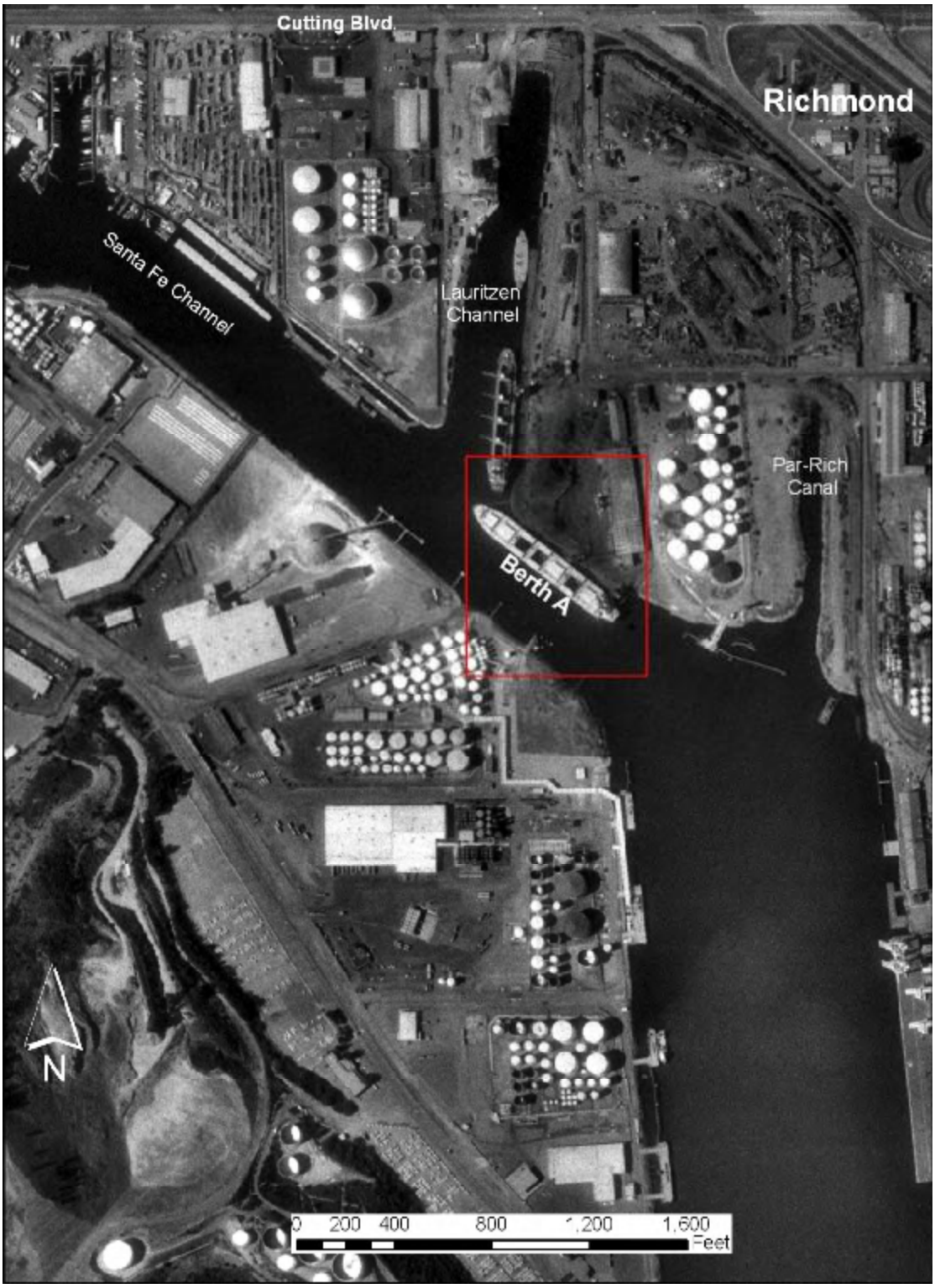

Figure 1-3. Vicinity Map 2: Levin-Richmond Terminal Corporation Berth A

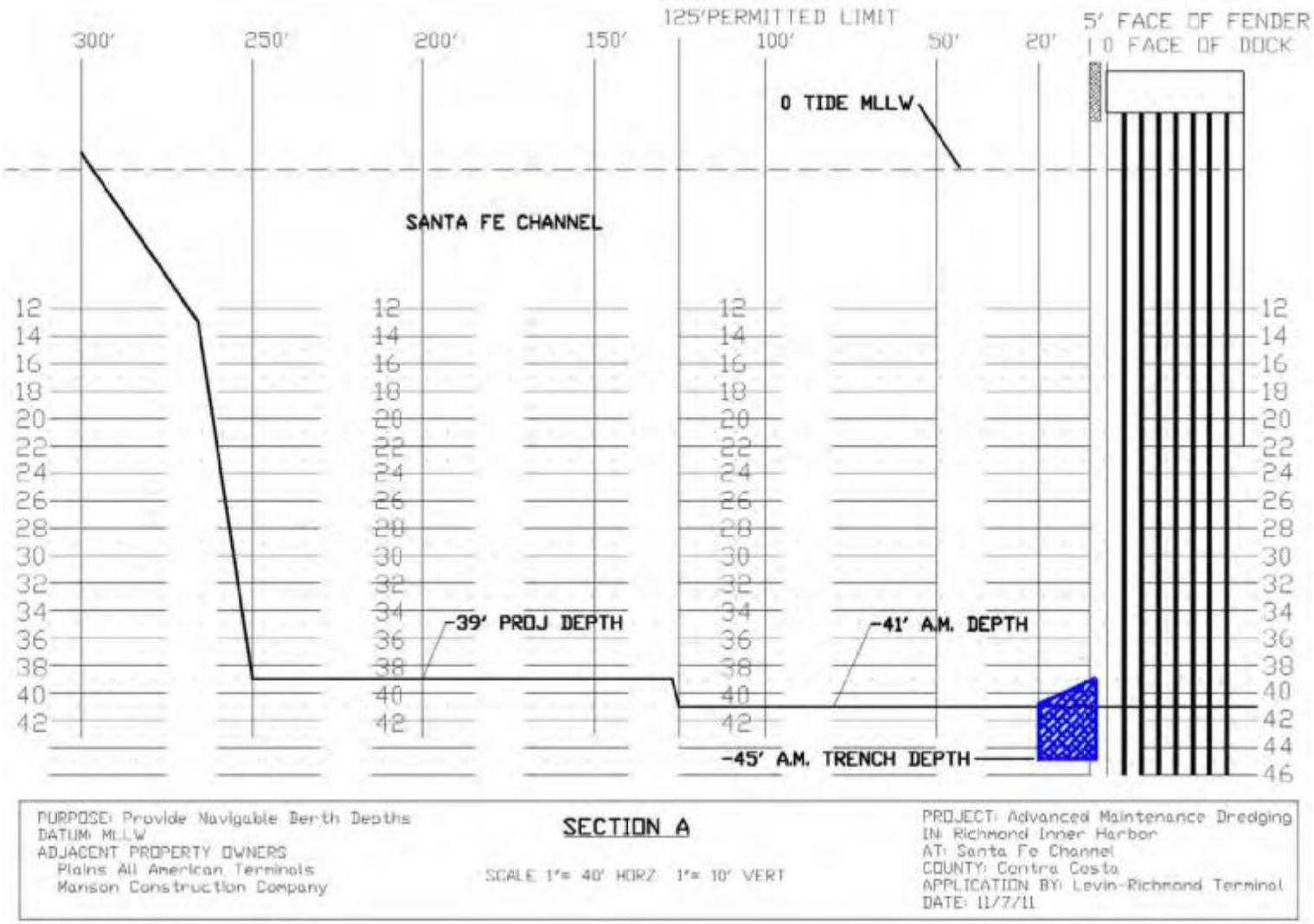

Figure 1-4. Project Map: Levin-Richmond Terminal Berth "A" Cross Section

2. FIELD SEDIMENT SAMPLE COLLECTION

All sediments were collected in accordance with guidelines and procedures outlined in the SAP (PER 2012). All sediment sampling field activities at the LRTC Berth A were performed on May 31, 2012 under the direction of Mr. Jeffrey Cotsifas of Pacific EcoRisk (PER). TEG Oceanographic Services (TEG) provided the sampling vessel, on-board positioning system, and sampling equipment. PER provided additional Field Scientists to assist in sediment core collection. Final sample site positions were determined with a global positioning system (GPS) that uses U.S. Government Wide Angle Augmentation System (WAAS) differential correction data to identify each sampling location. Table 2-1 lists station identifiers, GPS coordinates, mudline elevations, and core penetration depths for all stations.

It should be noted that sample core refusal was observed at each of the proposed sample locations above the 'project depth plus over-depth' of -46 ft MLLW (Table 2-1) due to the presence of hard sand and clay. However, vibracore penetration was achieved near the proposed project depth of -45 ft MLLW for most of the samples. As the project depth + over-depth could not be achieved for each of the samples, the typical Z-layer consisting of the 6-inches of sediment immediately below project depth + over-depth could not be collected. In order to provide characterization of the sediment quality for the sediments that would be in place after dredging of the sediments to the project depth plus over-depth, the bottom 6 inches of a separate core at each sampling location was collected and designated as the Z-layer.

Table 2-1. Locations of Sampling Stations, Core Penetration Depths.

SAMPLE ID	Latitude[A]	Longitude[A]	Mudline Elevation (ft MLLW)	Core Penetration Depth (ft)	Z-Layer (ft)	Cored Depth (ft MLLW)
LRTC-01	37°55.1719'	-122°22.0154'	-41.1	3.0	yes	-44.1
LRTC-02	37°55.1584'	-122°21.9950'	-41.4	4.0	yes	-45.4
LRTC-03	37°55.1395'	-122°21.9686'	-40.6	2.0	yes	-41.9
LRTC-04	37°55.1255'	-122°21.9433'	-40.7	4.2	yes	-44.9
LRTC-05	37°55.1100'	-122°21.9218'	-41.5	3.3	yes	-44.8

[A]State Plane Coordinate System, California Zone 3, NAD 83

All sediment samples were maintained on ice until transported to the PER testing lab for processing. Upon receipt at PER, all samples were logged in and placed in cold storage at ≤4°C in the dark until needed. Field log sheets are presented in Appendix A. With the exception of sampling refusal, there were no other unusual circumstances encountered during the fieldwork, and no major deviations from the SAP (PER 2012).

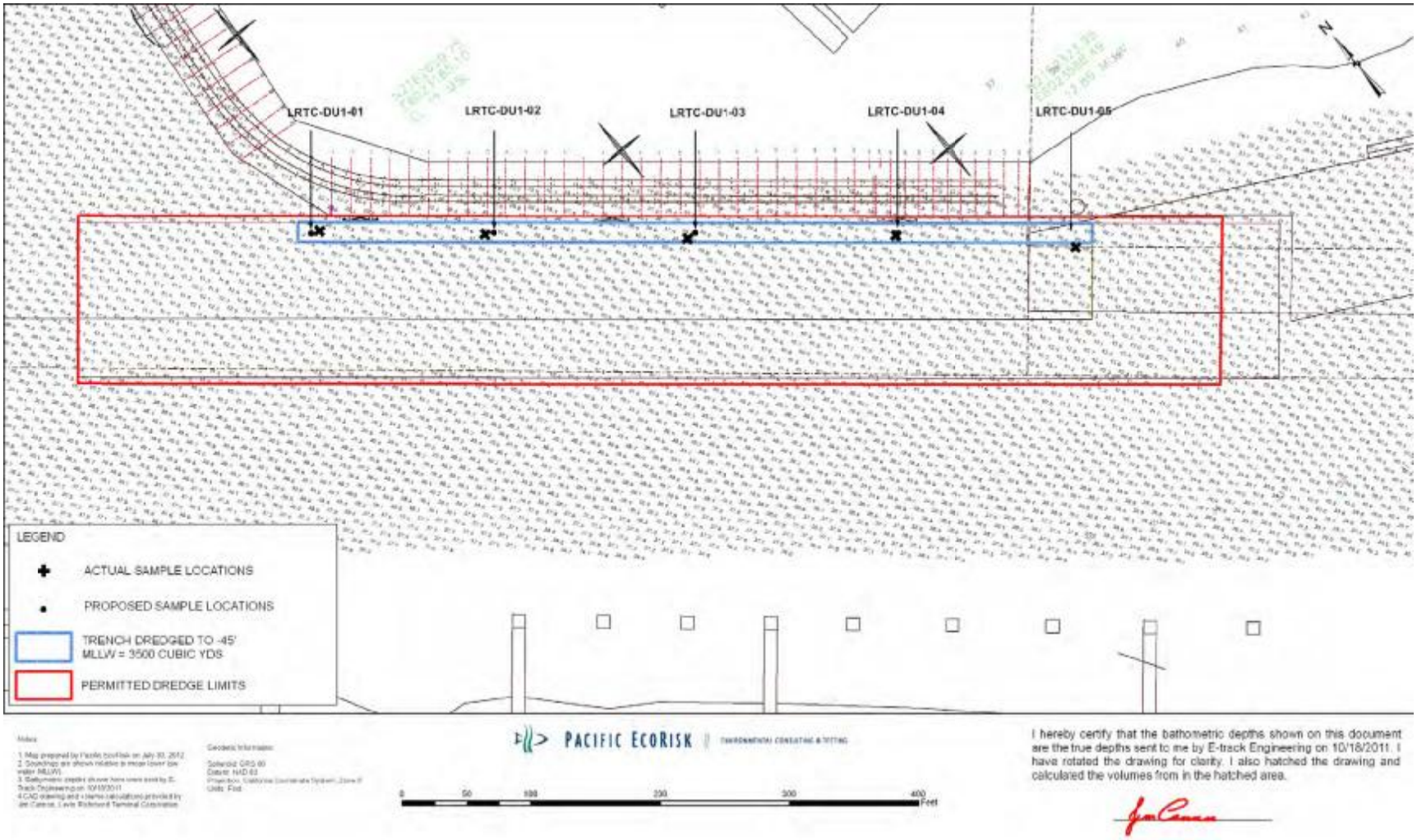

Figure 2-1. Project Map: Levin-Richmond Terminal Berth "A" Sample Locations

3. SAMPLE PROCESSING

3.1 Homogenization and Compositing of Sediments

Homogenization and compositing of individual sediment cores was performed at the PER laboratory facility in Fairfield, CA. The sediment maintenance depth sections from each individual core were individually homogenized in a stainless-steel bowl or high-density polyethylene (HDPE) container. A 500-mL sub-sample of the homogenized sediment from each individual sediment core was archived to allow for additional chemical analyses, if necessary; archived samples will be stored frozen at –20 ± 10˚C for up to one [1] year after sample collection.

Proportionate volumes of the individual homogenized maintenance depth core sediments were composited and homogenized within a stainless steel container to comprise the composite sediment for the berth area; the composite sample was designated LRTC-Comp; a sub-sample of the homogenized composite sediment sample was frozen for archival storage.

For the Z-layer sediments, equal volumes of the homogenized LRTC-Z core sediments were composited and homogenized within a stainless steel container to comprise the "LRTC-Z-Comp" composite sediment. A sub-sample of the LRTC-Z-Comp sample was frozen for archival storage as described above.

All sediment was processed following procedures outlined in the SAP (PER 2012), with no deviations.

3.2 Sample Shipping

Prior to shipping to the analytical laboratory, sample containers were wrapped in bubble wrap and securely packed inside a cooler with ice packs or crushed ice. A temperature blank was included in each cooler. The original signed chain-of-custody (COC) forms were placed in a sealed plastic bag and taped to the inside lid of the cooler. Appropriate packaging tape was wrapped completely around the cooler. A *This Side Up* arrow label was attached on each side of the cooler, a *Glass-Handle with Care* label was attached to the top of the cooler, and the cooler was sealed with custody seals on both the front and the back lid seams.

Sediment samples were shipped by overnight delivery. The sub-contracting analytical laboratories are not to dispose of any samples for this project unless notified by PER in writing.

3.2.1 Chain-of-Custody (COC) Protocol

COC procedures were followed for all samples throughout the collection, handling, and analyses activities. The Sampling and Analysis Project Manager, or a designee, was responsible for all sample tracking and COC procedures. This person was responsible for final sample inventory,

maintenance of sample custody documentation, and completion of COC forms prior to transferring samples to the analytical laboratory. A COC form accompanied each cooler of samples to the respective analytical laboratories. Each custodian of the samples signed the COC form; copies of the COC forms are retained in the project file.

4. RESULTS OF CONVENTIONAL AND CHEMICAL ANALYSES

Sediment samples were analyzed by Calscience for the conventional and chemical parameters specified in the SAP (PER 2012). Conventional parameters included total organic carbon (TOC), total solids, and grain size. Chemical analyses included trace metals, polychlorinated biphenyls (PCBs), polycyclic aromatic hydrocarbons (PAHs), chlorinated pesticides, and butyltins. The results of these analyses are presented in Section 4.1; the full Data Report is provided in Appendix B.

Sediment physical and chemical characteristics provide information about chemicals of concern present in the sediment and their potential bioavailability, and about non-chemical factors that could affect toxicity. The results of the physical and chemical analyses of the LRTC Berth A sediments were compared to Bay Ambient sediment concentrations (SFRWQCB 1998) and the SF-DODs reference site database.

The results of the physical/chemical analyses are summarized in Tables 4-1 through 4-6.

4.1 LRTC-Comp Composite Analytical Chemistry Results

The "LRTC-Comp" site sediment was ~46.7% total solids, and was 85.4% fines (silts and clays) and 14.7% sand. TOC levels were moderate (0.64%).

All of the metal analytes for the LRTC-Comp sediments were generally similar to San Francisco Bay background levels (SFRWQCB 1998) and the SF-DODS reference database. Organotins were detected above the method detection limit (MDL) at 12.4 μg/kg. Dieldrin and total DDTs were reported at 4.2 μg/kg and 220 μg/kg, respectively, which were above San Francisco Bay background levels (SFRWQCB 1998) and the SF-DODS database. Total PAHs and total PCBs were reported at 4388 μg/kg and 103.2 μg/kg, respectively. While both total PAHs and total PCBs were above San Francisco Bay background levels (SFRWQCB 1998) and the SF-DODS database, PAHs were slightly below the San Francisco Bay Bioaccumulation Trigger Level (NOAA 2011). The results of the Z-Layer analysis indicated that the post-dredge mudline organochlorine pesticides and PCB concentrations would be expected to be similar or less than the proposed dredged materials.

4.1.1 Results of Analyses of Individual Cores for PCBs and Organochlorine Pesticides

The individual cores that comprised the LRTC-Comp sample were analyzed for PCBs and organochlorine pesticides to determine if there were hot-spot areas along the face of the wharf for these compounds. The results of these analyses indicated that PCB concentrations ranged from 23.6 μg/kg to 72.0 μg/kg, with sediment core LRTC-03 having the highest total PCB concentration. Dieldrin concentrations ranged from 1.7 μg/kg to 4.3 μg/kg, with sediment core LRTC-01 having the highest Dieldrin concentration. Total DDT concentrations ranged from 55.0

μg/kg to 550 μg/kg, with sediment cores LRTC-01 and LRTC-04 having the highest total DDT concentrations.

Table 4-1. LRTC Sediment Grain Size, Total Solids (%), and Total Organic Carbon (%).

Analytes	LRTC-Comp	SF-DODs Database
% Gravel	0.0	16-60
% Sand	14.7	
% Silt	54.2	25-62
% Clay	31.2	13-24
Total % Fines (silt & clay)	85.4	-
Total Solids (%)	46.7	-
Total Organic Carbon (%)	0.64	0.63-1.45

Table 4-2. LRTC Sediment Metals Concentrations (mg/kg, dry wt).

Metals	LRTC-Comp	Bay Ambient <100% Fines[b]	SF-DODS Database
Arsenic	10.3	15.3	2.2-5.33
Cadmium	0.348	0.33	0.3-0.6
Chromium	66.4	112	69.2-283
Copper	65.3	68.1	18.3-86.3
Lead	30.1	43.2	5.1-26
Mercury	0.239	0.43, 0.47[a]	0.1-0.2
Nickel	72.4	112	50.9-238
Selenium	<0.117	0.64	0.6-2.6
Silver	0.332	0.58	0.2-1.0
Zinc	158	158	60.8-288

a - San Francisco Bay 99th percentile mercury concentration (SFRWQCB 2012).
b - SFRWQCB 1998.
J - Analyte was detected at a concentration below the reporting limit and above the laboratory method detection limit; the reported value is therefore an estimate.
All results below laboratory method detection limit (MDL) are reported as < the MDL.

Table 4-3 LRTC Sediment Organotin Concentrations (μg/kg, dry wt).

Organotins	LRTC-Comp	Bay Ambient <100% Fines[a]	SF-DODS Database
Butyltin	<1.4	-	-
Dibutyltin	6.1 J	-	-
Tributyltin	6.3 J	-	-
Tetrabutyltin	<1.7	-	-
Total Detected Organotins	**12.4 J**	**-**	**≤1.3**

a - SFRWQCB 1998.
All results below laboratory method detection limit (MDL) are reported as < the MDL.

Table 4-4. LRTC Sediment PAH Concentrations (μg/kg, dry wt).

PAHs	LRTC-Comp	Bay Ambient <100% Fines[b]	SF-DODS Database
Acenaphthene	26	26.6	-
Acenaphthylene	51	31.7	-
Anthracene	110	88	-
Benzo(a)anthracene	280	244	-
Benzo(a)pyrene	320	412	-
Benzo(b)fluoranthene	410	371	-
Benzo(e)pyrene[a]	260	294	-
Benzo(g,h,i)perylene	170	310	-
Benzo(k)fluoranthene	340	258	-
Biphenyl[a]	8.0 J	12.9	-
Chrysene	460	289	-
Dibenzo(a,h)anthracene	50	32.7	-
2,6-Dimethylnaphthalene[a]	31	12.1	-
Fluoranthene	650	514	-
Fluorene	29	25.3	-
Indeno(1,2,3-cd)pyrene	150	382	-
2-Methylnaphthalene[a]	13 J	19.4	-
1-Methylnaphthalene[a]	7.5 J	12.1	-
1-Methylphenanthrene[a]	<3.5	31.7	-
Naphthalene	26	55.8	-
Perylene[a]	90	145	-
Phenanthrene	140	237	-
Pyrene	750	665	-
1,6,7-Trimethylnaphthalene[a]	5.0 J	9.8	-
Dibenzothiophene[a]	12 J	-	-
Total Detected PAHs	**4388**	**3390[b] , 4700[c]**	**≤192**

a - San Francisco Bay additional RMP PAHs (USACE/USEPA 2011).
b - San Francisco Bay ambient PAH Level (SFRWQCB 1998).
c - San Francisco Bay Bioaccumulation Trigger Level (USACE/USEPA 2012).
J - Analyte was detected at a concentration below the reporting limit and above the laboratory method detection limit; the reported value is therefore an estimate.
All results below laboratory method detection limit (MDL) are reported as < the MDL.

Table 4-5. LRTC Sediment Organochlorine Pesticide Concentrations (μg/kg, dry wt).

Organochlorine Pesticides	LRTC-Comp	LRTC-01	LRTC-02	LRTC-03	LRTC-04	LRTC-05	LRTC-Z-Comp	Bay Ambient <100% Fines[b]	SF-DODS Database
Aldrin	<0.67	<0.81	<0.74	<0.63	<0.75	<0.64	<0.48	1.1	-
alpha-BHC	<0.69	<0.84	<0.76	<0.65	<0.78	<0.66	<0.49	-	-
beta-BHC	<0.57	<0.68	<0.62	<0.53	<0.63	<0.5	<0.40	-	-
delta-BHC	<0.55	<0.66	<0.60	<0.52	<0.61	<0.52	<0.39	-	-
Total BHC	0.0	<0.89	<0.81	<0.70	<0.83	<0.71	<0.52	0.78, 0.99[a]	-
gamma-BHC (Lindane)	<0.74	0.0	0.0	0.0	0.0	0.0	0.0	-	-
Chlordane	<7.0	<8.4	<7.7	<6.6	<7.8	<6.7	<4.9	1.1, 37[a]	-
Dieldrin	4.2	4.3	2.1 J	3.1	2.5	1.7 J	4.5	0.44, 1.9[a]	-
Endosulfan I	<0.56	<0.68	<0.62	<0.53	<0.63	<0.53	<0.40	-	-
Endosulfan II	<0.60	<0.72	<0.66	<0.56	<0.67	<0.57	<0.42	-	-
Endosulfan Sulfate	<0.72	<0.87	<0.79	<0.68	<0.81	<0.69	<0.51	-	-
Endrin	<0.77	<0.92	<0.84	<0.72	<0.86	<0.73	<0.54	0.78	-
Endrin Aldehyde	<0.52	<0.63	<0.57	<0.49	<0.58	<0.50	<0.37	-	-
Heptachlor	<0.69	<0.83	<0.75	<0.65	<0.77	<0.65	<0.49	-	-
Heptachlor Epoxide	<0.76	<0.92	<0.83	<0.72	<0.85	<0.72	<0.54	-	-
Toxaphene	<14	<16	<15	<13	<15	<13	<9.6	-	-
2,4'-DDD	15	27	4.9	6.5	11	6.4	16	see total DDT	-
4,4'-DDD	110	140	27	34	82	31	86	see total DDT	-
2,4'-DDE	5.9	11	2.9	3.8	3.4	2.3	7.2	see total DDT	-
4,4'-DDE	17	20	7.9	8.1	9.4	5.9	15	see total DDT	-
2,4'-DDT	4.8	3.0	1.9 J	<0.61	4.4	2.4	0.93 J	see total DDT	-
4,4'-DDT	66	42	16	7.2	440	6.8	7.8	see total DDT	-
Total Detected DDT	**220**	**240**	**61**	**59**	**550**	**55**	**130**	**7.0[b], 50[a]**	**≤2.1**

All results below laboratory method detection limit (MDL) are reported as < the MDL.
a - San Francisco Bay Bioaccumulation Trigger Level (USACE/USEPA 2012).
b - SFRWQCB 1998.
J - Analyte was detected at a concentration below the MRL and above the MDL, and therefore is an estimate.

Table 4-6. LRTC Sediment PCB Congener Concentrations (μg/kg, dry wt).

PCBs	LRTC-Comp	LRTC-01	LRTC-02	LRTC-03	LRTC-04	LRTC-05	LRTC-Z-Comp	Bay Ambient <100% Fines[c] (SFRWQCB 1998)	SF-DODS Database
PCB 008	<0.43	<0.52	<0.47	<0.41	<0.48	<0.41	<0.31	-	-
PCB 018	3.5	<0.84	<0.77	1.9	<0.78	<0.67	0.57 J	-	-
PCB 028	2.2	<0.66	<0.60	0.69 J	0.83 J	0.78 J	0.74 J	-	-
PCB 031	5.4	0.90 J	0.49 J	1.1	0.75 J	0.76 J	0.63 J	-	-
PCB 033	1.1	<0.55	<0.50	<0.43	<0.51	0.47 J	0.64 J	-	-
PCB 044	3.9	0.89 J	0.97 J	3.1	1.7	1.0 J	1.3	-	-
PCB 049	6.3	1.0 J	1.3	6.9	1.9	1.6	1.8	-	-
PCB 052	8.4	1.6	2.5	9.1	3.4	2.3	2.9	-	-
PCB 056	<0.34	<0.41	<0.37	<0.32	<0.38	<0.32	<0.24	-	-
PCB 060	<0.68	<0.82	<0.74	<0.64	<0.76	<0.65	<0.48	-	-
PCB 066	4.1	0.81 J	0.81 J	2.3	1.3	1.2	1.5	-	-
PCB 070	4.7	1.2 J	1.9	3.0	1.8	1.4	2.4	-	-
PCB 074	1.8	<0.66	<0.60	0.64 J	1.1 J	0.55 J	0.68 J	-	-
PCB 087	<0.43	<0.52	<0.47	<0.40	<0.48	<0.41	<0.30	-	-
PCB 095	6.4	2.2	3.3	6.2	3.3	2.3	3.8	-	-
PCB 097	3.1	1.0 J	1.8	2.1	1.6	0.67 J	2.5	-	-
PCB 099	6.9	2.1	2.7	5.1	3.8	2.0	3.3	-	-
PCB 101	12	4.3	6.2	7.8	5.5	4.4	13	-	-
PCB 105	2.2	<0.62	1.7	1.0	0.93 J	0.72 J	1.7	-	-
PCB 110	7.8	1.8	4.0	5.8	3.0	2.0	4.7	-	-
PCB 118	8.4	1.8	4.3	5.3	2.9	2.0	4.7	-	-
PCB 128	1.7	<0.63	0.97 J	0.83 J	0.74 J	<0.50	1.1	-	-
PCB 132	<0.53	<0.64	<0.58	<0.50	<0.59	<0.50	<0.38	-	-
PCB 138/158	<0.54	<0.64	<0.59	<0.50	<0.60	<0.51	<0.38	-	-
PCB 141	1.2	0.56 J	0.88 J	0.66 J	0.51 J	0.51 J	0.75 J	-	-
PCB 149	4.6	1.2 J	2.3	3.0	2.2	1.6	2.9	-	-
PCB 151	<0.35	<0.43	<0.39	<0.33	<0.40	<0.34	<0.25	-	-
PCB 153	<0.47	1.0 J	2.2	3.1	<0.53	1.6	2.4	-	-

Table 4-6 (*Continued*). LRTC Sediment PCB Congener Concentrations (*µ*g/kg, dry wt).

PCBs	LRTC-Comp	LRTC-01	LRTC-02	LRTC-03	LRTC-04	LRTC-05	LRTC-Z-Comp	Bay Ambient <100% Fines[c]	SF-DODS Database
PCB 156	0.93 J	<0.58	<0.53	<0.45	<0.54	<0.46	0.55 J	-	-
PCB 170	<0.54	<0.64	<0.59	0.51 J	<0.60	<0.51	0.81	-	-
PCB 174	0.93 J	<0.49	<0.45	0.40 J	<0.46	0.57 J	0.61 J	-	-
PCB 177	0.60 J	<0.62	<0.56	<0.48	<0.57	<0.49	0.37 J	-	-
PCB 180	2.1	1.2 J	0.87 J	0.91 J	1.1 J	1.1	1.5	-	-
PCB 183	0.91 J	<0.56	0.56 J	<0.44	0.63 J	0.54 J	0.68 J	-	-
PCB 187	1.0 J	<0.56	<0.51	0.52 J	0.79 J	0.59 J	1.1	-	-
PCB 194	0.57 J	<0.61	<0.55	<0.48	<0.57	<0.48	0.37 J	-	-
PCB 195	<0.47	<0.57	<0.52	<0.45	<0.53	<0.45	<0.33	-	-
PCB 201	<0.47	<0.56	<0.51	<0.44	<0.52	<0.44	<0.33	-	-
PCB 203	0.45 J	<0.52	<0.47	<0.40	<0.48	<0.41	<0.30	-	-
Total Detected PCBs	**103.2**	**23.6**	**39.8**	**72.0**	**39.8**	**30.7**	**60**	**21.6, 26.4[a] 17.0[b]**	**Not detected**

a - San Francisco Bay 99th percentile PCB concentration (SFRWQCB 2012).
b - San Francisco Bay Bioaccumulation Trigger Level (USACE/USEPA 2012).
c - SFRWQCB 1998.
J - Analyte was detected at a concentration below the MRL and above the MDL, and therefore is an estimate.
All results below laboratory method detection limit (MDL) are reported as < the MDL.

5. QUALITY CONTROL REVIEW

Any analyses that did not comply with the analytical laboratory QA/QC limits are presented below (also, see final analytical reports in Appendix B for full case narrative).

5.1 Sediment Conventional and Chemical Analytical QA/QC Summary

The QA/QC review entailed reviewing the contract lab Data Report(s) for sample integrity, correct methodology, and compliance with all appropriate Lab QA/QC requirements. The overall data quality assessment found that all data were usable. Appendix B contains the conventional and chemical analyses reports, which include contract laboratory QA/QC narratives.

Metals – The matrix spike recoveries for lead and zinc fell outside the established control limits due to matrix interference. However, the results were flagged with the appropriate qualifiers and released with no further qualification since the laboratory control sediment/ laboratory control sediment duplicate (LCS/LCSD) recoveries were within the established control limits.

Organochlorine Pesticides – The matrix spike (MS), matrix spike duplicate (MSD), and/or relative percent difference (RPD) values for three organochlorine pesticides were outside the control limits due to matrix interference. The results were flagged with the appropriate qualifiers and were released with no further action since the associated LCS/LCSD recoveries and RPDs were within method control limits.

PCB Congeners – Many of the matrix spice and matrix spike recoveries fell outside the control limits due to matrix interference. However, since the LCS/LCSD recoveries were within the established control limits, the data were released with no further qualification.

Organotins – The Tributyltin MSD recovery and relative percent difference (RPD) were above the control limits. However, the LCS and LCSD recoveries and RPDs were in control, therefore the results were released with no further action.

PAHs –Several PAHs were measured in the method blank above the method detection limit, but below the reporting limit. Several PAH analytes were outside the established control limits due to the PAH concentrations found in the sample. The results were qualified and are released with no further action since the LCS and LCSD recoveries are in control.

6. SUMMARY

The Levin Richmond Terminal Sediments were analyzed to determine to determine suitability for placement at SF-DODS, or at the LRTC rehandling facility prior to disposal at a landfill.

The results of chemical analysis suggest that sediments would not be suitable for unconfined aquatic disposal (SUAD) at SF-DODS due to elevated total DDT; biological testing was not performed. As a result, LRTC is seeking a suitability determination to allow for dredging and placement of dredged material at a temporary on-site rehandling facility. Once the sediments are dried to an acceptable moisture level, they would be transported to a landfill. Samples have been archived to provide for any landfill placement site-specific requirements (i.e., waste extraction testing [WET]).

7. REFERENCES

PER (2012) Sediment Characterization Sampling and Analysis Plan (SAP) for the Dredging of Sediment from the Levin Richmond Terminal Berth. Prepared for Levin Richmond Terminal Corporation. Prepared by Pacific EcoRisk, Fairfield, CA.

SFRWQCB (1998) Ambient concentrations of toxic chemicals in San Francisco Bay Sediments: Draft Staff Report. San Francisco Regional Water Quality Lab Control Board, Oakland, CA.

USEPA/USACE (1998) Evaluation of Dredged Material Proposed for Discharge in Waters of the U.S. – Testing Manual – Inland Testing Manual. U.S. Environmental Protection Agency/U.S. Army Corps of Engineers. EPA-823-B-94-002. U.S. Environmental Protection Agency, Office of Water (4305).

Appendix A

Sampling Field Logs and Data Sheets

Pacific EcoRisk
Environmental Consulting and Testing

Pacific EcoRisk
2250 Cordelia Road
Fairfield, CA 94534
Phone: (707) 207-7760
Fax: (707) 207-7916

Sediment Core Collection Form

Station ID: LRTC-DU1-01 **Date:** 5/31/12

Project Name: Lewis-Richmond Terminal **Project No.:** 19733

Coordinates: #2 #2

Lat/Northing: 37°55.1719' Long/Easting: 122° 22.0154'

Vertical Datum: (MLLW) MLW Other:

Depth Measurement: (Sounder) Leadline

Project Depth: 45.0' **Overdredge:** 1.0' + 0.5' z

	Attempt 1	Attempt 2
Time:	0815	0835
(A) Measured Water Depth	43.5	~~43.6'~~ 45.0'
(B) Tide Height	3.6'	~~3.9'~~ 3.9'
(C) Mudline Elevation (A−B=C)	39.9'	~~39.7~~ 41.1
(D) Calculated Core Length (PD+OD-C=D)	6.1' + 0.5' z	~~6.3' + 0.5' z~~ 4.9' + 0.5' z
Estimated Penetration	2.5'	~~4.5'~~ 3.0'
Description of Core Drive	Hard refusal	Hard refusal
Refusal Encountered?	Yes	Yes
Total Core Length Recovered	~~1.5'~~ 1.25'	2.0'

Core Characteristics

Sediment Type	cobble, gravel, sand C M F, (silt clay), organic matter	cobble, gravel, sand C M F, (silt clay), organic matter
Sediment Color	gray, (black), brown, brown surface, olivine	(gray), black, brown, (brown surface), olivine
Sediment Odor	(None), slight, mod, strong H_2S, petroleum, septic	(None), slight, mod, strong H_2S, petroleum, septic
Any Layering Homogenous	Homog.	Homog

Comments: Dry blue/green clay in cutter head on first attempt. moved 6' away from wharf for second attempt. Attempt 2 was 16' from face of wharf. Took multiple cores on station #2 for volume. All attempts hit refusal - Blue green hard clay.

Recorded by: DC

Pacific EcoRisk
Environmental Consulting and Testing

Pacific EcoRisk
2250 Cordelia Road
Fairfield, CA 94534
Phone: (707) 207-7760
Fax: (707) 207-7916

Sediment Core Collection Form

Station ID: LRTC-DU1-02 **Date:** 5/31/12

Project Name: Levin-Richmond Terminal **Project No.:** 19733

Coordinates: #2: 37° 55.1584' #2: 122° 21.9950'
Lat/Northing: #1: 37° 55.1594' Long/Easting: #1: 122° 21.9939'

Vertical Datum: (MLLW) MLW Other:

Depth Measurement: Sounder (Leadline)

Project Depth: 45.0' **Overdredge:** 1.0'+0.5'Z

	Attempt 1	Attempt 2
Time:	09:50	10:15
(A) Measured Water Depth	44.0'	45.3
(B) Tide Height	4.1'	3.9'
(C) Mudline Elevation (A–B=C)	39.9'	41.4'
(D) Calculated Core Length (PD+OD-C=D)	6.1'+0.5Z	4.6'+0.5Z
Estimated Penetration	2.0'	4.0'
Description of Core Drive	Hard refusal	Hard refusal
Refusal Encountered?	Yes	Yes
Total Core Length Recovered	1.0'	3.0'

Core Characteristics

Sediment Type	cobble, gravel, sand C M F, (silt/clay), organic matter	cobble, gravel, sand C M F, (silt/clay), organic matter
Sediment Color	(gray), black, brown, (brown surface), olivine	(gray), (black), brown, (brown surface), olivine
Sediment Odor	(None), slight, mod, strong H_2S, petroleum, septic	(None), slight, mod, strong H_2S, petroleum, septic
Any Layering Homogenous	Layering	Layering

Comments: Dry blue-green Clay at bottom of Core. Very soft fluffy material present at above refusal layer. Moved boat 6' further from proposed location for 2nd attempt. Surface was brown, at 2.5' there was a 0.1' thick band of gray Clay. Remaining Core sediment was black. Multiple Cores collected at 2nd Station for Volume.

Recorded by: DG

Pacific EcoRisk
Environmental Consulting and Testing

Pacific EcoRisk
2250 Cordelia Road
Fairfield, CA 94534
Phone: (707) 207-7760
Fax: (707) 207-7916

Sediment Core Collection Form

Station ID: LRTC-DU1-03 **Date:** 5/31/12

Project Name: Levin Richmond Terminal **Project No.:** 19733

Coordinates:
Lat/Northing: #2: 37° 55.1418' #1: 37° 55.1395' Long/Easting: 122° 21.9699' #1: 122° 21.9686'

Vertical Datum: (MLLW) MLW Other:

Depth Measurement: Sounder (Leadline)

Project Depth: 45.0' **Overdredge:** 1.0' + 0.5'z

	Attempt 1	Attempt 2
Time:	11:40	1200
(A) Measured Water Depth	43.8'	43.7
(B) Tide Height	3.2'	2.9'
(C) Mudline Elevation (A–B=C)	40.6'	40.8'
(D) Calculated Core Length (PD+OD-C=D)	5.4' + 0.5'z	5.2' + 0.5'z
Estimated Penetration	2.0'	2.0'
Description of Core Drive	Hard Refusal	Hard refusal
Refusal Encountered?	Yes	Yes
Total Core Length Recovered	~~1.0~~ 1.3'	1.2'

Core Characteristics

Sediment Type	cobble, gravel, sand C M F, (silt clay), organic matter	cobble, gravel, sand C M F, (silt clay), organic matter
Sediment Color	(gray), black, brown, (brown surface), olivine	(gray), black, brown, (brown surface), olivine
Sediment Odor	(None), slight, mod, strong H_2S, petroleum, septic	(None), slight, mod, strong H_2S, petroleum, septic
Any Layering Homogenous	Layering	Layering

Comments: Hard refusal @ first site. moved 10' along wharf for a second with similar results material in core tip was blue-green dry clay. Moved a few feet further along wharf with identical results. Several cores collected for sufficient volume.

Recorded by: [illegible]

Pacific EcoRisk
Environmental Consulting and Testing

Pacific EcoRisk
2250 Cordelia Road
Fairfield, CA 94534
Phone: (707) 207-7760
Fax: (707) 207-7916

Sediment Core Collection Form

Station ID: LRTC-DU1-04 **Date:** 5/31/12

Project Name: Levin - Richmond Terminal **Project No.:** 19733

Coordinates:

Lat/Northing: 37° 55.1255' Long/Easting: 122° 21.9433'

Vertical Datum: (MLLW) MLW Other:

Depth Measurement: Sounder (Leadline)

Project Depth: 45.0' **Overdredge:** 1.0' + 2 Layer

	Attempt 1	Attempt 2
Time:	14:00	
(A) Measured Water Depth	42.3'	
(B) Tide Height	1.6'	
(C) Mudline Elevation (A–B=C)	40.7'	
(D) Calculated Core Length (PD+OD-C=D)	5.3' + 0.5' Z	
Estimated Penetration	~~3.2'~~ 4.2'	
Description of Core Drive	Hard refusal	
Refusal Encountered?	Yes	
Total Core Length Recovered	~~3.0'~~ 3.2'	

Core Characteristics

Sediment Type	cobble, gravel, sand C M F, (silt clay) organic matter	cobble, gravel, sand C M F, silt clay, organic matter
Sediment Color	(gray, black) brown, (brown surface), olivine	gray, black, brown, brown surface, olivine
Sediment Odor	(None), slight, mod, strong H_2S, petroleum, septic	None, slight, mod, strong H_2S, petroleum, septic
Any Layering Homogenous	Homogenous	

Comments: Hard refusal encountered. Shell hash was mixed ~~in~~ w/ fine throughout core. 3 Cores collected for volume while on station

Recorded by: DG

Pacific EcoRisk
Environmental Consulting and Testing

Pacific EcoRisk
2250 Cordelia Road
Fairfield, CA 94534
Phone: (707) 207-7760
Fax: (707) 207-7916

Sediment Core Collection Form

Station ID: LRTC-DU1-05 **Date:** 5/31/12

Project Name: Levin - Richmond Terminal **Project No.:** 19733

Coordinates:
Lat/Northing: 37° 55.1100' Long/Easting: 122° 21.9218'

Vertical Datum: (MLLW) MLW Other:

Depth Measurement: Sounder (Leadline)

Project Depth: 45.0' **Overdredge:** 1.0' + 0.5'

	Attempt 1	Attempt 2
Time:	15:15	
(A) Measured Water Depth	42.0'	
(B) Tide Height	1.5'	
(C) Mudline Elevation (A–B=C)	41.5'	
(D) Calculated Core Length (PD+OD-C=D)	4.5 + 0.5 Z	
Estimated Penetration	3.3'	
Description of Core Drive	Hard refusal	
Refusal Encountered?	Yes	
Total Core Length Recovered	2.1'	

Core Characteristics

Sediment Type	cobble, gravel, sand C M F, (silt clay), organic matter	cobble, gravel, sand C M F, silt clay, organic matter
Sediment Color	gray, (black), brown, (brown surface), olivine	gray, black, brown, brown surface, olivine
Sediment Odor	(None), slight, mod, strong H_2S, petroleum, septic	None, slight, mod, strong H_2S, petroleum, septic
Any Layering Homogenous	Layering	

Comments: Hard refusal - traces of blue-green sediment present at tip of core barrel. Multiple cores collected to attain sufficient volume for testing.

Recorded by: DG

Appendix B

Results of Sediment Analysis: Data Reports Submitted by Calscience

Calscience Environmental Laboratories, Inc.

CALSCIENCE

WORK ORDER NUMBER: 12-06-1182

The difference is service

AIR | SOIL | WATER | MARINE CHEMISTRY

Analytical Report For

Client: Pacific Ecorisk

Client Project Name: Levin Richmond Terminal 19733

Attention: Jeff Cotsifas
2250 Cordelia Road
Fairfield, CA 94534-1912

Approved for release on 07/5/2012 by:
Danielle Gonsman
Project Manager

ResultLink ▸

Email your PM ▸

Calscience Environmental Laboratories, Inc. (Calscience) certifies that the test results provided in this report meet all NELAC requirements for parameters for which accreditation is required or available. Any exceptions to NELAC requirements are noted in the case narrative. The original report of subcontracted analyses, if any, is attached to this report. The results in this report are limited to the sample(s) tested and any reproduction thereof must be made in its entirety. The client or recipient of this report is specifically prohibited from making material changes to said report and, to the extent that such changes are made, Calscience is not responsible, legally or otherwise. The client or recipient agrees to indemnify Calscience for any defense to any litigation which may arise.

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Calscience Environmental Laboratories, Inc.

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Work Order Number: 12-06-1182

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Calscience Environmental Laboratories, Inc.

CASE NARRATIVE

Calscience Work Order No.: 12-06-1182
Project ID: Levin Richmond Terminal / 19733

Provided below is a narrative of our analytical effort, including any unique features or anomalies encountered as part of the analysis of the sediment samples.

Sample Condition on Receipt

Seven sediment samples (housed in 16-oz glass containers and a Ziploc bag) were received for this project on June 16, 2012. The samples were transferred to the laboratory in an ice-chest with wet ice, following strict chain-of-custody (COC) procedures. The temperature of the samples upon receipt at the laboratory was -4.0°C. The samples were given laboratory identification numbers, logged into the Laboratory Information Management System (LIMS) and then stored under refrigeration pending sediment chemistry testing.

Tests Performed

One sample was analyzed for the following, per the COC:

Trace Metals by EPA 6020/7471A
Chlorinated Pesticides by EPA 8081A
PAHs by EPA 8270C SIM
PCB Congeners by EPA 8082A (M) GC/ECD
TOC by EPA 9060A
Organotins by Krone et al.
Total Solids by SM 2540B
Grain Size by ASTM D4464M

Six samples were analyzed for the following, per the COC:

Chlorinated Pesticides by EPA 8081A
PCB Congeners by EPA 8082A (M) GC/ECD
Total Solids by SM 2540B

Data Summary

The sample results and reporting limits were dry weight corrected.

All samples were homogenized prior to preparation and analysis.

<u>Holding times</u>

All holding times were met with the following exceptions.

The samples were received past the EPA recommended holding time for Total Solids, OC Pesticides, PAHs, PCB Congeners and Organotins (in solid samples). However, we have been advised by the client that these samples were frozen after collection (prior to receipt at the laboratory) and remained in that condition until received by Calscience. Calscience follows standard industry practice and the Puget Sound Protocol, which states the holding times for sediment samples may be extended up to one year if kept frozen after collection. Therefore, the results have not been flagged as exceeding the EPA recommended holding times.

Calibration

Frequency and control criteria for initial and continuing calibration verifications were met.

Reporting Limits

All Method Detection Limits were met. The results were evaluated to the MDL, and where applicable, "J" flags were reported.

Blanks

Concentrations of target analytes in the method blank were found to be below reporting limits for all testing with the following exceptions.

Trace level detections of four PAHs were found (below the RL, but above the MDL) in the EPA 8270C SIM Method Blank. The results have been flagged with the appropriate qualifiers.

Laboratory Control Samples

A Laboratory Control Sample (LCS) analysis was performed at the required frequencies, and unless otherwise noted, all parameters were within the established control limits.

Matrix Spikes

Matrix spike analyses were performed for each applicable analysis (with the exception of EPA 9060 TOC) on project sample LRTC-DU1-Comp. All parameters were within the established control limits with the following exceptions.

The matrix spike recoveries for Lead and Zinc (by EPA 6020) fell outside the established control limits due to matrix interference. However, the results have been flagged with the appropriate qualifiers and are released with no further qualification since the PDS/LCS/LCSD recoveries were within the established control limits.

The Tributyltin MSD recovery and RPD were above the control limits. However, the LCS and LCSD recoveries and RPDs were in control, therefore the results are released with no further action.

The MS, MSD and/or RPD values for three EPA 8081A OC Pesticides were outside the control limits due to matrix interference. The results have been flagged with the appropriate qualifiers and are released with no further action since the associated LCS/LCSD recoveries and RPDs were within the control limits.

Several EPA 8270C SIM PAH analytes were outside the established control limits due to the PAH concentrations found in the sample. The results have been qualified and are released with no further action since the LCS and LCSD recoveries are in control.

For PCB Congeners by EPA 8082, many of the matrix spike and matrix spike recoveries fell outside the control limits due to matrix interference. However, since the LCS/LCSD recoveries were within the established control limits, the data are released with no further qualification.

Surrogates

Surrogate recoveries for all applicable tests and samples were within the established control limits.

Laboratory Duplicate

A laboratory duplicate was created for this project using Sample LRTC-DU1-Comp. The Laboratory Duplicate was analyzed for the requested analyses and the precision between the two samples was acceptable.

Acronyms

LCS/LCSD- Laboratory Control Sample/Laboratory Control Sample Duplicate
PDS/PDSD- Post Digestion Spike/Post Digestion Spike Duplicate
MS/MSD- Matrix Spike/Matrix Spike Duplicate
RPD- Relative Percent Difference

Calscience Environmental Laboratories, Inc.

Analytical Report

Pacific Ecorisk		Date Received:	06/16/12
2250 Cordelia Road		Work Order No:	12-06-1182
Fairfield, CA 94534-1912		Preparation:	N/A
		Method:	EPA 9060A

Project: Levin Richmond Terminal 19733

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
LRTC-DU1-Comp	**12-06-1182-1-A**	**05/31/12 08:15**	**Sediment**	**TOC 5**	**06/21/12**	**06/21/12 14:12**	**C0621TOCL1**

Comment(s): -Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.
-Results are reported on a dry weight basis.

Parameter	Result	RL	MDL	DF	Qual	Units
Carbon, Total Organic	0.64	0.11	0.026	1		%

LRTC-DU1-Comp (LAB DUP)	**12-06-1182-8-A**	**05/31/12 08:15**	**Sediment**	**TOC 5**	**06/21/12**	**06/21/12 14:12**	**C0621TOCL1**

Comment(s): -Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.
-Results are reported on a dry weight basis.

Parameter	Result	RL	MDL	DF	Qual	Units
Carbon, Total Organic	0.53	0.11	0.026	1		%

Method Blank	**099-06-013-739**	**N/A**	**Solid**	**TOC 5**	**06/21/12**	**06/21/12 14:12**	**C0621TOCL1**

Comment(s): -Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qual	Units
Carbon, Total Organic	ND	0.050	0.012	1		%

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers

Calscience Environmental Laboratories, Inc.

Analytical Report

Pacific Ecorisk		Date Received:	06/16/12
2250 Cordelia Road		Work Order No:	12-06-1182
Fairfield, CA 94534-1912		Preparation:	N/A
		Method:	SM 2540 B

Project: Levin Richmond Terminal 19733

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
LRTC-DU1-Comp	**12-06-1182-1-A**	**05/31/12 08:15**	**Sediment**	**N/A**	**06/21/12**	**06/21/12 16:00**	**C0621TSB4**

Comment(s): -Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qual	Units
Solids, Total	46.7	0.100	0.100	1		%

LRTC-DU1-01	**12-06-1182-2-A**	**05/31/12 08:15**	**Sediment**	**N/A**	**06/21/12**	**06/21/12 16:00**	**C0621TSB4**

Comment(s): -Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qual	Units
Solids, Total	38.8	0.100	0.100	1		%

LRTC-DU1-02	**12-06-1182-3-A**	**05/31/12 09:50**	**Sediment**	**N/A**	**06/21/12**	**06/21/12 16:00**	**C0621TSB4**

Comment(s): -Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qual	Units
Solids, Total	42.6	0.100	0.100	1		%

LRTC-DU1-03	**12-06-1182-4-A**	**05/31/12 11:40**	**Sediment**	**N/A**	**06/21/12**	**06/21/12 16:00**	**C0621TSB4**

Comment(s): -Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qual	Units
Solids, Total	49.6	0.100	0.100	1		%

LRTC-DU1-04	**12-06-1182-5-A**	**05/31/12 14:00**	**Sediment**	**N/A**	**06/21/12**	**06/21/12 16:00**	**C0621TSB4**

Comment(s): -Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qual	Units
Solids, Total	41.8	0.100	0.100	1		%

LRTC-DU1-05	**12-06-1182-6-A**	**05/31/12 15:15**	**Sediment**	**N/A**	**06/21/12**	**06/21/12 16:00**	**C0621TSB4**

Comment(s): -Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qual	Units
Solids, Total	49.1	0.100	0.100	1		%

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers

Calscience Environmental Laboratories, Inc.

Analytical Report

Pacific Ecorisk		Date Received:	06/16/12
2250 Cordelia Road		Work Order No:	12-06-1182
Fairfield, CA 94534-1912		Preparation:	N/A
		Method:	SM 2540 B

Project: Levin Richmond Terminal 19733

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
LRTC-DU1-Z-Comp	**12-06-1182-7-A**	**05/31/12 08:15**	**Sediment**	**N/A**	**06/21/12**	**06/21/12 16:00**	**C0621TSB4**

Comment(s): -Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qual	Units
Solids, Total	66.1	0.100	0.100	1		%

LRTC-DU1-Comp (LAB DUP)	**12-06-1182-8-A**	**05/31/12 08:15**	**Sediment**	**N/A**	**06/21/12**	**06/21/12 16:00**	**C0621TSB4**

Comment(s): -Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qual	Units
Solids, Total	47.4	0.100	0.100	1		%

Method Blank	**099-05-019-1,969**	**N/A**	**Solid**	**N/A**	**06/21/12**	**06/21/12 16:00**	**C0621TSB4**

Comment(s): -Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qual	Units
Solids, Total	ND	0.100	0.100	1		%

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers

Calscience Environmental Laboratories, Inc.

Analytical Report

Pacific Ecorisk		Date Received:	06/16/12
2250 Cordelia Road		Work Order No:	12-06-1182
Fairfield, CA 94534-1912		Preparation:	EPA 3545
		Method:	EPA 8081A
		Units:	ug/kg
Project: Levin Richmond Terminal 19733			Page 1 of 5

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
LRTC-DU1-Comp	**12-06-1182-1-D**	**05/31/12 08:15**	**Sediment**	**GC 51**	**06/20/12**	**06/22/12 16:54**	**120620L01**

Comment(s): -Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.
-Results are reported on a dry weight basis.

Parameter	Result	RL	MDL	DF	Qual	Parameter	Result	RL	MDL	DF	Qual
Aldrin	ND	2.1	0.67	1		4,4'-DDE	17	2.1	0.64	1	
Alpha-BHC	ND	2.1	0.69	1		4,4'-DDT	66	21	7.2	10	
Beta-BHC	ND	2.1	0.57	1		Endosulfan I	ND	2.1	0.56	1	
Delta-BHC	ND	2.1	0.55	1		Endosulfan II	ND	2.1	0.60	1	
Gamma-BHC	ND	2.1	0.74	1		Endosulfan Sulfate	ND	2.1	0.72	1	
Chlordane	ND	21	7.0	1		Endrin	ND	2.1	0.77	1	
Dieldrin	4.2	2.1	0.71	1		Endrin Aldehyde	ND	2.1	0.52	1	
2,4'-DDD	15	2.1	0.73	1		Heptachlor	ND	2.1	0.69	1	
2,4'-DDE	5.9	2.1	0.65	1		Heptachlor Epoxide	ND	2.1	0.76	1	
2,4'-DDT	4.8	2.1	0.64	1		Toxaphene	ND	43	14	1	
4,4'-DDD	110	21	6.8	10		Total DDTs	220	2.1	0.70	1	

Surrogates:	REC (%)	Control Limits	Qual	Surrogates:	REC (%)	Control Limits	Qual
2,4,5,6-Tetrachloro-m-Xylene	84	50-130		Decachlorobiphenyl	98	50-130	

LRTC-DU1-01	**12-06-1182-2-B**	**05/31/12 08:15**	**Sediment**	**GC 51**	**06/20/12**	**06/22/12 17:09**	**120620L01**

Comment(s): -Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.
-Results are reported on a dry weight basis.

Parameter	Result	RL	MDL	DF	Qual	Parameter	Result	RL	MDL	DF	Qual
Aldrin	ND	2.6	0.81	1		4,4'-DDE	20	5.2	1.5	2	
Alpha-BHC	ND	2.6	0.84	1		4,4'-DDT	42	26	8.6	10	
Beta-BHC	ND	2.6	0.68	1		Endosulfan I	ND	2.6	0.68	1	
Delta-BHC	ND	2.6	0.66	1		Endosulfan II	ND	2.6	0.72	1	
Gamma-BHC	ND	2.6	0.89	1		Endosulfan Sulfate	ND	2.6	0.87	1	
Chlordane	ND	26	8.4	1		Endrin	ND	2.6	0.92	1	
Dieldrin	4.3	2.6	0.85	1		Endrin Aldehyde	ND	2.6	0.63	1	
2,4'-DDD	27	5.2	1.7	2		Heptachlor	ND	2.6	0.83	1	
2,4'-DDE	11	2.6	0.79	1		Heptachlor Epoxide	ND	2.6	0.92	1	
2,4'-DDT	3.0	2.6	0.77	1		Toxaphene	ND	52	16	1	
4,4'-DDD	140	26	8.1	10		Total DDTs	240	2.6	0.85	1	

Surrogates:	REC (%)	Control Limits	Qual	Surrogates:	REC (%)	Control Limits	Qual
2,4,5,6-Tetrachloro-m-Xylene	88	50-130		Decachlorobiphenyl	106	50-130	

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers

Calscience Environmental Laboratories, Inc.

Analytical Report

Pacific Ecorisk		Date Received:	06/16/12
2250 Cordelia Road		Work Order No:	12-06-1182
Fairfield, CA 94534-1912		Preparation:	EPA 3545
		Method:	EPA 8081A
		Units:	ug/kg
Project: Levin Richmond Terminal 19733			Page 2 of 5

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
LRTC-DU1-02	**12-06-1182-3-B**	**05/31/12 09:50**	**Sediment**	**GC 51**	**06/20/12**	**06/22/12 18:22**	**120620L01**

Comment(s): -Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.
-Results are reported on a dry weight basis.

Parameter	Result	RL	MDL	DF	Qual	Parameter	Result	RL	MDL	DF	Qual
Aldrin	ND	2.3	0.74	1		4,4'-DDE	7.9	2.3	0.70	1	
Alpha-BHC	ND	2.3	0.76	1		4,4'-DDT	16	2.3	0.79	1	
Beta-BHC	ND	2.3	0.62	1		Endosulfan I	ND	2.3	0.62	1	
Delta-BHC	ND	2.3	0.60	1		Endosulfan II	ND	2.3	0.66	1	
Gamma-BHC	ND	2.3	0.81	1		Endosulfan Sulfate	ND	2.3	0.79	1	
Chlordane	ND	23	7.7	1		Endrin	ND	2.3	0.84	1	
Dieldrin	2.1	2.3	0.77	1	J	Endrin Aldehyde	ND	2.3	0.57	1	
2,4'-DDD	4.9	2.3	0.79	1		Heptachlor	ND	2.3	0.75	1	
2,4'-DDE	2.9	2.3	0.72	1		Heptachlor Epoxide	ND	2.3	0.83	1	
2,4'-DDT	1.9	2.3	0.71	1	J	Toxaphene	ND	47	15	1	
4,4'-DDD	27	4.7	1.5	2		Total DDTs	61	2.3	0.77	1	

Surrogates:	REC (%)	Control Limits	Qual	Surrogates:	REC (%)	Control Limits	Qual
2,4,5,6-Tetrachloro-m-Xylene	100	50-130		Decachlorobiphenyl	111	50-130	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
LRTC-DU1-03	**12-06-1182-4-B**	**05/31/12 11:40**	**Sediment**	**GC 51**	**06/20/12**	**06/22/12 18:36**	**120620L01**

Comment(s): -Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.
-Results are reported on a dry weight basis.

Parameter	Result	RL	MDL	DF	Qual	Parameter	Result	RL	MDL	DF	Qual
Aldrin	ND	2.0	0.63	1		4,4'-DDE	8.1	2.0	0.60	1	
Alpha-BHC	ND	2.0	0.65	1		4,4'-DDT	7.2	2.0	0.67	1	
Beta-BHC	ND	2.0	0.53	1		Endosulfan I	ND	2.0	0.53	1	
Delta-BHC	ND	2.0	0.52	1		Endosulfan II	ND	2.0	0.56	1	
Gamma-BHC	ND	2.0	0.70	1		Endosulfan Sulfate	ND	2.0	0.68	1	
Chlordane	ND	20	6.6	1		Endrin	ND	2.0	0.72	1	
Dieldrin	3.1	2.0	0.66	1		Endrin Aldehyde	ND	2.0	0.49	1	
2,4'-DDD	6.5	2.0	0.68	1		Heptachlor	ND	2.0	0.65	1	
2,4'-DDE	3.8	2.0	0.62	1		Heptachlor Epoxide	ND	2.0	0.72	1	
2,4'-DDT	ND	2.0	0.61	1		Toxaphene	ND	40	13	1	
4,4'-DDD	34	10	3.2	5		Total DDTs	59	2.0	0.66	1	

Surrogates:	REC (%)	Control Limits	Qual	Surrogates:	REC (%)	Control Limits	Qual
2,4,5,6-Tetrachloro-m-Xylene	96	50-130		Decachlorobiphenyl	107	50-130	

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers

Calscience Environmental Laboratories, Inc.

Analytical Report

Pacific Ecorisk		Date Received:	06/16/12
2250 Cordelia Road		Work Order No:	12-06-1182
Fairfield, CA 94534-1912		Preparation:	EPA 3545
		Method:	EPA 8081A
		Units:	ug/kg
Project: Levin Richmond Terminal 19733			Page 3 of 5

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
LRTC-DU1-04	**12-06-1182-5-B**	**05/31/12 14:00**	**Sediment**	**GC 51**	**06/20/12**	**06/22/12 18:51**	**120620L01**

Comment(s): -Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.
-Results are reported on a dry weight basis.

Parameter	Result	RL	MDL	DF	Qual	Parameter	Result	RL	MDL	DF	Qual
Aldrin	ND	2.4	0.75	1		4,4'-DDE	9.4	2.4	0.72	1	
Alpha-BHC	ND	2.4	0.78	1		4,4'-DDT	440	120	40	50	
Beta-BHC	ND	2.4	0.63	1		Endosulfan I	ND	2.4	0.63	1	
Delta-BHC	ND	2.4	0.61	1		Endosulfan II	ND	2.4	0.67	1	
Gamma-BHC	ND	2.4	0.83	1		Endosulfan Sulfate	ND	2.4	0.81	1	
Chlordane	ND	24	7.8	1		Endrin	ND	2.4	0.86	1	
Dieldrin	2.5	2.4	0.79	1		Endrin Aldehyde	ND	2.4	0.58	1	
2,4'-DDD	11	2.4	0.81	1		Heptachlor	ND	2.4	0.77	1	
2,4'-DDE	3.4	2.4	0.73	1		Heptachlor Epoxide	ND	2.4	0.85	1	
2,4'-DDT	4.4	2.4	0.72	1		Toxaphene	ND	48	15	1	
4,4'-DDD	82	24	7.6	10		Total DDTs	550	2.4	0.78	1	

Surrogates:	REC (%)	Control Limits	Qual	Surrogates:	REC (%)	Control Limits	Qual
2,4,5,6-Tetrachloro-m-Xylene	100	50-130		Decachlorobiphenyl	103	50-130	

LRTC-DU1-05	**12-06-1182-6-B**	**05/31/12 15:15**	**Sediment**	**GC 51**	**06/20/12**	**06/22/12 19:05**	**120620L01**

Comment(s): -Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.
-Results are reported on a dry weight basis.

Parameter	Result	RL	MDL	DF	Qual	Parameter	Result	RL	MDL	DF	Qual
Aldrin	ND	2.0	0.64	1		4,4'-DDE	5.9	2.0	0.61	1	
Alpha-BHC	ND	2.0	0.66	1		4,4'-DDT	6.8	2.0	0.68	1	
Beta-BHC	ND	2.0	0.54	1		Endosulfan I	ND	2.0	0.53	1	
Delta-BHC	ND	2.0	0.52	1		Endosulfan II	ND	2.0	0.57	1	
Gamma-BHC	ND	2.0	0.71	1		Endosulfan Sulfate	ND	2.0	0.69	1	
Chlordane	ND	20	6.7	1		Endrin	ND	2.0	0.73	1	
Dieldrin	1.7	2.0	0.67	1	J	Endrin Aldehyde	ND	2.0	0.50	1	
2,4'-DDD	6.4	2.0	0.69	1		Heptachlor	ND	2.0	0.65	1	
2,4'-DDE	2.3	2.0	0.62	1		Heptachlor Epoxide	ND	2.0	0.72	1	
2,4'-DDT	2.4	2.0	0.61	1		Toxaphene	ND	41	13	1	
4,4'-DDD	31	10	3.2	5		Total DDTs	55	2.0	0.67	1	

Surrogates:	REC (%)	Control Limits	Qual	Surrogates:	REC (%)	Control Limits	Qual
2,4,5,6-Tetrachloro-m-Xylene	93	50-130		Decachlorobiphenyl	90	50-130	

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers

Calscience Environmental Laboratories, Inc.

Analytical Report

Pacific Ecorisk		Date Received:	06/16/12
2250 Cordelia Road		Work Order No:	12-06-1182
Fairfield, CA 94534-1912		Preparation:	EPA 3545
		Method:	EPA 8081A
		Units:	ug/kg
Project: Levin Richmond Terminal 19733			Page 4 of 5

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
LRTC-DU1-Z-Comp	**12-06-1182-7-B**	**05/31/12 08:15**	**Sediment**	**GC 51**	**06/20/12**	**06/22/12 19:20**	**120620L01**

Comment(s): -Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.
-Results are reported on a dry weight basis.

Parameter	Result	RL	MDL	DF	Qual	Parameter	Result	RL	MDL	DF	Qual
Aldrin	ND	1.5	0.48	1		4,4'-DDE	15	3.0	0.90	2	
Alpha-BHC	ND	1.5	0.49	1		4,4'-DDT	7.8	1.5	0.51	1	
Beta-BHC	ND	1.5	0.40	1		Endosulfan I	ND	1.5	0.40	1	
Delta-BHC	ND	1.5	0.39	1		Endosulfan II	ND	1.5	0.42	1	
Gamma-BHC	ND	1.5	0.52	1		Endosulfan Sulfate	ND	1.5	0.51	1	
Chlordane	ND	15	4.9	1		Endrin	ND	1.5	0.54	1	
Dieldrin	4.5	1.5	0.50	1		Endrin Aldehyde	ND	1.5	0.37	1	
2,4'-DDD	16	3.0	1.0	2		Heptachlor	ND	1.5	0.49	1	
2,4'-DDE	7.2	1.5	0.46	1		Heptachlor Epoxide	ND	1.5	0.54	1	
2,4'-DDT	0.93	1.5	0.45	1	J	Toxaphene	ND	30	9.6	1	
4,4'-DDD	86	15	4.8	10		Total DDTs	130	1.5	0.50	1	

Surrogates:	REC (%)	Control Limits	Qual	Surrogates:	REC (%)	Control Limits	Qual
2,4,5,6-Tetrachloro-m-Xylene	108	50-130		Decachlorobiphenyl	113	50-130	

LRTC-DU1-Comp (LAB DUP)	**12-06-1182-8-D**	**05/31/12 08:15**	**Sediment**	**GC 51**	**06/20/12**	**06/25/12 15:33**	**120620L01**

Comment(s): -Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.
-Results are reported on a dry weight basis.

Parameter	Result	RL	MDL	DF	Qual	Parameter	Result	RL	MDL	DF	Qual
Aldrin	ND	2.1	0.66	1		4,4'-DDE	26	4.2	1.3	2	
Alpha-BHC	ND	2.1	0.68	1		4,4'-DDT	56	21	7.1	10	
Beta-BHC	ND	2.1	0.56	1		Endosulfan I	ND	2.1	0.55	1	
Delta-BHC	ND	2.1	0.54	1		Endosulfan II	ND	2.1	0.59	1	
Gamma-BHC	ND	2.1	0.73	1		Endosulfan Sulfate	ND	2.1	0.71	1	
Chlordane	ND	21	6.9	1		Endrin	ND	2.1	0.76	1	
Dieldrin	7.7	2.1	0.70	1		Endrin Aldehyde	ND	2.1	0.52	1	
2,4'-DDD	23	4.2	1.4	2		Heptachlor	ND	2.1	0.68	1	
2,4'-DDE	10	2.1	0.64	1		Heptachlor Epoxide	ND	2.1	0.75	1	
2,4'-DDT	4.1	2.1	0.63	1		Toxaphene	ND	42	13	1	
4,4'-DDD	110	21	6.7	10		Total DDTs	230	2.1	0.69	1	

Surrogates:	REC (%)	Control Limits	Qual	Surrogates:	REC (%)	Control Limits	Qual
2,4,5,6-Tetrachloro-m-Xylene	113	50-130		Decachlorobiphenyl	126	50-130	

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers

Calscience Environmental Laboratories, Inc.

Analytical Report

Pacific Ecorisk		Date Received:	06/16/12
2250 Cordelia Road		Work Order No:	12-06-1182
Fairfield, CA 94534-1912		Preparation:	EPA 3545
		Method:	EPA 8081A
		Units:	ug/kg
Project: Levin Richmond Terminal 19733			Page 5 of 5

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	**099-12-858-146**	**N/A**	**Solid**	**GC 51**	**06/20/12**	**06/22/12 16:39**	**120620L01**

Comment(s): -Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qual	Parameter	Result	RL	MDL	DF	Qual
Aldrin	ND	1.0	0.31	1		4,4'-DDE	ND	1.0	0.30	1	
Alpha-BHC	ND	1.0	0.32	1		4,4'-DDT	ND	1.0	0.33	1	
Beta-BHC	ND	1.0	0.26	1		Endosulfan I	ND	1.0	0.26	1	
Delta-BHC	ND	1.0	0.26	1		Endosulfan II	ND	1.0	0.28	1	
Gamma-BHC	ND	1.0	0.35	1		Endosulfan Sulfate	ND	1.0	0.34	1	
Chlordane	ND	10	3.3	1		Endrin	ND	1.0	0.36	1	
Dieldrin	ND	1.0	0.33	1		Endrin Aldehyde	ND	1.0	0.24	1	
2,4'-DDD	ND	1.0	0.34	1		Heptachlor	ND	1.0	0.32	1	
2,4'-DDE	ND	1.0	0.31	1		Heptachlor Epoxide	ND	1.0	0.36	1	
2,4'-DDT	ND	1.0	0.30	1		Toxaphene	ND	20	6.3	1	
4,4'-DDD	ND	1.0	0.32	1		Total DDTs	ND	1.0	0.33	1	

Surrogates:	REC (%)	Control Limits	Qual	Surrogates:	REC (%)	Control Limits	Qual
2,4,5,6-Tetrachloro-m-Xylene	95	50-130		Decachlorobiphenyl	86	50-130	

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers

Calscience Environmental Laboratories, Inc.

Analytical Report

Pacific Ecorisk		Date Received:	06/16/12
2250 Cordelia Road		Work Order No:	12-06-1182
Fairfield, CA 94534-1912		Preparation:	EPA 3545
		Method:	EPA 8082A (M)/ECD
		Units:	ug/kg
Project: Levin Richmond Terminal 19733			Page 1 of 9

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
LRTC-DU1-Comp	**12-06-1182-1-D**	**05/31/12 08:15**	**Sediment**	**GC 41**	**06/20/12**	**06/27/12 21:08**	**120620L02**

Comment(s): -Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.
-Results are reported on a dry weight basis.

Parameter	Result	RL	MDL	DF	Qual	Parameter	Result	RL	MDL	DF	Qual
PCB008	ND	1.1	0.43	1		PCB118	8.4	1.1	0.53	1	
PCB018	3.5	1.1	0.70	1		PCB128	1.7	1.1	0.52	1	
PCB028	2.2	1.1	0.55	1		PCB132	ND	1.1	0.53	1	
PCB031	5.4	1.1	0.38	1		PCB138/158	ND	2.1	0.54	1	
PCB033	1.1	1.1	0.46	1		PCB141	1.2	1.1	0.46	1	
PCB044	3.9	1.1	0.60	1		PCB149	4.6	1.1	0.44	1	
PCB049	6.3	1.1	0.45	1		PCB151	ND	1.1	0.35	1	
PCB052	8.4	1.1	0.50	1		PCB153	ND	1.1	0.47	1	
PCB056	ND	1.1	0.34	1		PCB156	0.93	1.1	0.48	1	J
PCB060	ND	1.1	0.68	1		PCB170	ND	1.1	0.54	1	
PCB066	4.1	1.1	0.47	1		PCB174	0.93	1.1	0.41	1	J
PCB070	4.7	1.1	0.54	1		PCB177	0.60	1.1	0.51	1	J
PCB074	1.8	1.1	0.55	1		PCB180	2.1	1.1	0.66	1	
PCB087	ND	1.1	0.43	1		PCB183	0.91	1.1	0.47	1	J
PCB095	6.4	1.1	0.37	1		PCB187	1.0	1.1	0.47	1	J
PCB097	3.1	1.1	0.44	1		PCB194	0.57	1.1	0.51	1	J
PCB099	6.9	1.1	0.46	1		PCB195	ND	1.1	0.47	1	
PCB101	12	5.4	2.7	5		PCB201	ND	1.1	0.47	1	
PCB105	2.2	1.1	0.52	1		PCB203	0.45	1.1	0.43	1	J
PCB110	7.8	1.1	0.69	1							

Surrogates:	REC (%)	Control Limits	Qual	Surrogates:	REC (%)	Control Limits	Qual
2,4,5,6-Tetrachloro-m-Xylene	100	25-200					

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers

Calscience Environmental Laboratories, Inc.

Analytical Report

Pacific Ecorisk		Date Received:	06/16/12
2250 Cordelia Road		Work Order No:	12-06-1182
Fairfield, CA 94534-1912		Preparation:	EPA 3545
		Method:	EPA 8082A (M)/ECD
		Units:	ug/kg
Project: Levin Richmond Terminal 19733			Page 2 of 9

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
LRTC-DU1-01	**12-06-1182-2-B**	**05/31/12 08:15**	**Sediment**	**GC 41**	**06/20/12**	**06/22/12 23:19**	**120620L02**

Comment(s): -Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.
-Results are reported on a dry weight basis.

Parameter	Result	RL	MDL	DF	Qual	Parameter	Result	RL	MDL	DF	Qual
PCB008	ND	1.3	0.52	1		PCB118	1.8	1.3	0.63	1	
PCB018	ND	1.3	0.84	1		PCB128	ND	1.3	0.63	1	
PCB028	ND	1.3	0.66	1		PCB132	ND	1.3	0.64	1	
PCB031	0.90	1.3	0.46	1	J	PCB138/158	ND	2.6	0.64	1	
PCB033	ND	1.3	0.55	1		PCB141	0.56	1.3	0.55	1	J
PCB044	0.89	1.3	0.72	1	J	PCB149	1.2	1.3	0.53	1	J
PCB049	1.0	1.3	0.54	1	J	PCB151	ND	1.3	0.43	1	
PCB052	1.6	1.3	0.60	1		PCB153	1.0	1.3	0.57	1	J
PCB056	ND	1.3	0.41	1		PCB156	ND	1.3	0.58	1	
PCB060	ND	1.3	0.82	1		PCB170	ND	1.3	0.64	1	
PCB066	0.81	1.3	0.57	1	J	PCB174	ND	1.3	0.49	1	
PCB070	1.2	1.3	0.64	1	J	PCB177	ND	1.3	0.62	1	
PCB074	ND	1.3	0.66	1		PCB180	1.2	1.3	0.79	1	J
PCB087	ND	1.3	0.52	1		PCB183	ND	1.3	0.56	1	
PCB095	2.2	1.3	0.44	1		PCB187	ND	1.3	0.56	1	
PCB097	1.0	1.3	0.52	1	J	PCB194	ND	1.3	0.61	1	
PCB099	2.1	1.3	0.56	1		PCB195	ND	1.3	0.57	1	
PCB101	4.3	1.3	0.65	1		PCB201	ND	1.3	0.56	1	
PCB105	ND	1.3	0.62	1		PCB203	ND	1.3	0.52	1	
PCB110	1.8	1.3	0.83	1							

Surrogates:	REC (%)	Control Limits	Qual	Surrogates:	REC (%)	Control Limits	Qual
2,4,5,6-Tetrachloro-m-Xylene	48	25-200					

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers

Calscience Environmental Laboratories, Inc.

Analytical Report

Pacific Ecorisk		Date Received:	06/16/12
2250 Cordelia Road		Work Order No:	12-06-1182
Fairfield, CA 94534-1912		Preparation:	EPA 3545
		Method:	EPA 8082A (M)/ECD
		Units:	ug/kg
Project: Levin Richmond Terminal 19733			Page 3 of 9

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
LRTC-DU1-02	**12-06-1182-3-B**	**05/31/12 09:50**	**Sediment**	**GC 41**	**06/20/12**	**06/22/12 23:52**	**120620L02**

Comment(s): -Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.
-Results are reported on a dry weight basis.

Parameter	Result	RL	MDL	DF	Qual	Parameter	Result	RL	MDL	DF	Qual
PCB008	ND	1.2	0.47	1		PCB118	4.3	1.2	0.58	1	
PCB018	ND	1.2	0.77	1		PCB128	0.97	1.2	0.57	1	J
PCB028	ND	1.2	0.60	1		PCB132	ND	1.2	0.58	1	
PCB031	0.49	1.2	0.42	1	J	PCB138/158	ND	2.3	0.59	1	
PCB033	ND	1.2	0.50	1		PCB141	0.88	1.2	0.50	1	J
PCB044	0.97	1.2	0.65	1	J	PCB149	2.3	1.2	0.49	1	
PCB049	1.3	1.2	0.49	1		PCB151	ND	1.2	0.39	1	
PCB052	2.5	1.2	0.55	1		PCB153	2.2	1.2	0.52	1	
PCB056	ND	1.2	0.37	1		PCB156	ND	1.2	0.53	1	
PCB060	ND	1.2	0.74	1		PCB170	ND	1.2	0.59	1	
PCB066	0.81	1.2	0.52	1	J	PCB174	ND	1.2	0.45	1	
PCB070	1.9	1.2	0.59	1		PCB177	ND	1.2	0.56	1	
PCB074	ND	1.2	0.60	1		PCB180	0.87	1.2	0.72	1	J
PCB087	ND	1.2	0.47	1		PCB183	0.56	1.2	0.51	1	J
PCB095	3.3	1.2	0.40	1		PCB187	ND	1.2	0.51	1	
PCB097	1.8	1.2	0.48	1		PCB194	ND	1.2	0.55	1	
PCB099	2.7	1.2	0.51	1		PCB195	ND	1.2	0.52	1	
PCB101	6.2	1.2	0.59	1		PCB201	ND	1.2	0.51	1	
PCB105	1.7	1.2	0.57	1		PCB203	ND	1.2	0.47	1	
PCB110	4.0	1.2	0.76	1							

Surrogates:	REC (%)	Control Limits	Qual	Surrogates:	REC (%)	Control Limits	Qual
2,4,5,6-Tetrachloro-m-Xylene	72	25-200					

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers

Calscience Environmental Laboratories, Inc.

Analytical Report

Pacific Ecorisk		Date Received:	06/16/12
2250 Cordelia Road		Work Order No:	12-06-1182
Fairfield, CA 94534-1912		Preparation:	EPA 3545
		Method:	EPA 8082A (M)/ECD
		Units:	ug/kg
Project: Levin Richmond Terminal 19733			Page 4 of 9

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
LRTC-DU1-03	**12-06-1182-4-B**	**05/31/12 11:40**	**Sediment**	**GC 41**	**06/20/12**	**06/23/12 00:25**	**120620L02**

Comment(s): -Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.
-Results are reported on a dry weight basis.

Parameter	Result	RL	MDL	DF	Qual	Parameter	Result	RL	MDL	DF	Qual
PCB008	ND	1.0	0.41	1		PCB118	5.3	1.0	0.50	1	
PCB018	1.9	1.0	0.66	1		PCB128	0.83	1.0	0.49	1	J
PCB028	0.69	1.0	0.52	1	J	PCB132	ND	1.0	0.50	1	
PCB031	1.1	1.0	0.36	1		PCB138/158	ND	2.0	0.50	1	
PCB033	ND	1.0	0.43	1		PCB141	0.66	1.0	0.43	1	J
PCB044	3.1	1.0	0.56	1		PCB149	3.0	1.0	0.42	1	
PCB049	6.9	1.0	0.42	1		PCB151	ND	1.0	0.33	1	
PCB052	9.1	2.0	0.94	2		PCB153	3.1	1.0	0.44	1	
PCB056	ND	1.0	0.32	1		PCB156	ND	1.0	0.45	1	
PCB060	ND	1.0	0.64	1		PCB170	0.51	1.0	0.50	1	J
PCB066	2.3	1.0	0.45	1		PCB174	0.40	1.0	0.39	1	J
PCB070	3.0	1.0	0.50	1		PCB177	ND	1.0	0.48	1	
PCB074	0.64	1.0	0.52	1	J	PCB180	0.91	1.0	0.62	1	J
PCB087	ND	1.0	0.40	1		PCB183	ND	1.0	0.44	1	
PCB095	6.2	1.0	0.35	1		PCB187	0.52	1.0	0.44	1	J
PCB097	2.1	1.0	0.41	1		PCB194	ND	1.0	0.48	1	
PCB099	5.1	1.0	0.44	1		PCB195	ND	1.0	0.45	1	
PCB101	7.8	2.0	1.0	2		PCB201	ND	1.0	0.44	1	
PCB105	1.0	1.0	0.49	1		PCB203	ND	1.0	0.40	1	
PCB110	5.8	1.0	0.65	1							

Surrogates:	REC (%)	Control Limits	Qual	Surrogates:	REC (%)	Control Limits	Qual
2,4,5,6-Tetrachloro-m-Xylene	62	25-200					

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers

Calscience Environmental Laboratories, Inc.

Analytical Report

Pacific Ecorisk		Date Received:	06/16/12
2250 Cordelia Road		Work Order No:	12-06-1182
Fairfield, CA 94534-1912		Preparation:	EPA 3545
		Method:	EPA 8082A (M)/ECD
		Units:	ug/kg
Project: Levin Richmond Terminal 19733			Page 5 of 9

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
LRTC-DU1-04	**12-06-1182-5-B**	**05/31/12 14:00**	**Sediment**	**GC 41**	**06/20/12**	**06/23/12 00:59**	**120620L02**

Comment(s): -Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.
-Results are reported on a dry weight basis.

Parameter	Result	RL	MDL	DF	Qual	Parameter	Result	RL	MDL	DF	Qual
PCB008	ND	1.2	0.48	1		PCB118	2.9	1.2	0.59	1	
PCB018	ND	1.2	0.78	1		PCB128	0.74	1.2	0.58	1	J
PCB028	0.83	1.2	0.62	1	J	PCB132	ND	1.2	0.59	1	
PCB031	0.75	1.2	0.43	1	J	PCB138/158	ND	2.4	0.60	1	
PCB033	ND	1.2	0.51	1		PCB141	0.51	1.2	0.51	1	J
PCB044	1.7	1.2	0.67	1		PCB149	2.2	1.2	0.49	1	
PCB049	1.9	1.2	0.50	1		PCB151	ND	1.2	0.40	1	
PCB052	3.4	1.2	0.56	1		PCB153	ND	1.2	0.53	1	
PCB056	ND	1.2	0.38	1		PCB156	ND	1.2	0.54	1	
PCB060	ND	1.2	0.76	1		PCB170	ND	1.2	0.60	1	
PCB066	1.3	1.2	0.53	1		PCB174	ND	1.2	0.46	1	
PCB070	1.8	1.2	0.60	1		PCB177	ND	1.2	0.57	1	
PCB074	1.1	1.2	0.61	1	J	PCB180	1.1	1.2	0.73	1	J
PCB087	ND	1.2	0.48	1		PCB183	0.63	1.2	0.52	1	J
PCB095	3.3	1.2	0.41	1		PCB187	0.79	1.2	0.52	1	J
PCB097	1.6	1.2	0.49	1		PCB194	ND	1.2	0.57	1	
PCB099	3.8	1.2	0.52	1		PCB195	ND	1.2	0.53	1	
PCB101	5.5	1.2	0.61	1		PCB201	ND	1.2	0.52	1	
PCB105	0.93	1.2	0.58	1	J	PCB203	ND	1.2	0.48	1	
PCB110	3.0	1.2	0.77	1							

Surrogates:	REC (%)	Control Limits	Qual	Surrogates:	REC (%)	Control Limits	Qual
2,4,5,6-Tetrachloro-m-Xylene	94	25-200					

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers

Calscience Environmental Laboratories, Inc.

Analytical Report

Pacific Ecorisk		Date Received:	06/16/12
2250 Cordelia Road		Work Order No:	12-06-1182
Fairfield, CA 94534-1912		Preparation:	EPA 3545
		Method:	EPA 8082A (M)/ECD
		Units:	ug/kg
Project: Levin Richmond Terminal 19733			Page 6 of 9

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
LRTC-DU1-05	**12-06-1182-6-B**	**05/31/12 15:15**	**Sediment**	**GC 41**	**06/20/12**	**06/23/12 01:32**	**120620L02**

Comment(s): -Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.
-Results are reported on a dry weight basis.

Parameter	Result	RL	MDL	DF	Qual	Parameter	Result	RL	MDL	DF	Qual
PCB008	ND	1.0	0.41	1		PCB118	2.0	1.0	0.50	1	
PCB018	ND	1.0	0.67	1		PCB128	ND	1.0	0.50	1	
PCB028	0.78	1.0	0.52	1	J	PCB132	ND	1.0	0.50	1	
PCB031	0.76	1.0	0.36	1	J	PCB138/158	ND	2.0	0.51	1	
PCB033	0.47	1.0	0.44	1	J	PCB141	0.51	1.0	0.43	1	J
PCB044	1.0	1.0	0.57	1	J	PCB149	1.6	1.0	0.42	1	
PCB049	1.6	1.0	0.43	1		PCB151	ND	1.0	0.34	1	
PCB052	2.3	1.0	0.48	1		PCB153	1.6	1.0	0.45	1	
PCB056	ND	1.0	0.32	1		PCB156	ND	1.0	0.46	1	
PCB060	ND	1.0	0.65	1		PCB170	ND	1.0	0.51	1	
PCB066	1.2	1.0	0.45	1		PCB174	0.57	1.0	0.39	1	J
PCB070	1.4	1.0	0.51	1		PCB177	ND	1.0	0.49	1	
PCB074	0.55	1.0	0.52	1	J	PCB180	1.1	1.0	0.63	1	
PCB087	ND	1.0	0.41	1		PCB183	0.54	1.0	0.45	1	J
PCB095	2.3	1.0	0.35	1		PCB187	0.59	1.0	0.44	1	J
PCB097	0.67	1.0	0.41	1	J	PCB194	ND	1.0	0.48	1	
PCB099	2.0	1.0	0.44	1		PCB195	ND	1.0	0.45	1	
PCB101	4.4	1.0	0.52	1		PCB201	ND	1.0	0.44	1	
PCB105	0.72	1.0	0.49	1	J	PCB203	ND	1.0	0.41	1	
PCB110	2.0	1.0	0.66	1							

Surrogates:	REC (%)	Control Limits	Qual	Surrogates:	REC (%)	Control Limits	Qual
2,4,5,6-Tetrachloro-m-Xylene	102	25-200					

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers

Calscience Environmental Laboratories, Inc.

Analytical Report

Pacific Ecorisk		Date Received:	06/16/12
2250 Cordelia Road		Work Order No:	12-06-1182
Fairfield, CA 94534-1912		Preparation:	EPA 3545
		Method:	EPA 8082A (M)/ECD
		Units:	ug/kg
Project: Levin Richmond Terminal 19733			Page 7 of 9

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
LRTC-DU1-Z-Comp	**12-06-1182-7-B**	**05/31/12 08:15**	**Sediment**	**GC 41**	**06/20/12**	**06/23/12 02:06**	**120620L02**

Comment(s): -Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.
-Results are reported on a dry weight basis.

Parameter	Result	RL	MDL	DF	Qual	Parameter	Result	RL	MDL	DF	Qual
PCB008	ND	0.76	0.31	1		PCB118	4.7	0.76	0.37	1	
PCB018	0.57	0.76	0.49	1	J	PCB128	1.1	0.76	0.37	1	
PCB028	0.74	0.76	0.39	1	J	PCB132	ND	0.76	0.38	1	
PCB031	0.63	0.76	0.27	1	J	PCB138/158	ND	1.5	0.38	1	
PCB033	0.64	0.76	0.33	1	J	PCB141	0.75	0.76	0.32	1	J
PCB044	1.3	0.76	0.42	1		PCB149	2.9	0.76	0.31	1	
PCB049	1.8	0.76	0.32	1		PCB151	ND	0.76	0.25	1	
PCB052	2.9	0.76	0.35	1		PCB153	2.4	0.76	0.33	1	
PCB056	ND	0.76	0.24	1		PCB156	0.55	0.76	0.34	1	J
PCB060	ND	0.76	0.48	1		PCB170	0.81	0.76	0.38	1	
PCB066	1.5	0.76	0.33	1		PCB174	0.61	0.76	0.29	1	J
PCB070	2.4	0.76	0.38	1		PCB177	0.37	0.76	0.36	1	J
PCB074	0.68	0.76	0.39	1	J	PCB180	1.5	0.76	0.46	1	
PCB087	ND	0.76	0.30	1		PCB183	0.68	0.76	0.33	1	J
PCB095	3.8	0.76	0.26	1		PCB187	1.1	0.76	0.33	1	
PCB097	2.5	0.76	0.31	1		PCB194	0.37	0.76	0.36	1	J
PCB099	3.3	0.76	0.33	1		PCB195	ND	0.76	0.33	1	
PCB101	13	7.6	3.8	10		PCB201	ND	0.76	0.33	1	
PCB105	1.7	0.76	0.36	1		PCB203	ND	0.76	0.30	1	
PCB110	4.7	0.76	0.49	1							

Surrogates:	REC (%)	Control Limits	Qual	Surrogates:	REC (%)	Control Limits	Qual
2,4,5,6-Tetrachloro-m-Xylene	118	25-200					

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers

Calscience Environmental Laboratories, Inc.

Analytical Report

Pacific Ecorisk		Date Received:	06/16/12
2250 Cordelia Road		Work Order No:	12-06-1182
Fairfield, CA 94534-1912		Preparation:	EPA 3545
		Method:	EPA 8082A (M)/ECD
		Units:	ug/kg
Project: Levin Richmond Terminal 19733			Page 8 of 9

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
LRTC-DU1-Comp (LAB DUP)	**12-06-1182-8-B**	**05/31/12 08:15**	**Sediment**	**GC 41**	**06/20/12**	**06/23/12 02:39**	**120620L02**

Comment(s): -Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.
-Results are reported on a dry weight basis.

Parameter	Result	RL	MDL	DF	Qual	Parameter	Result	RL	MDL	DF	Qual
PCB008	ND	1.1	0.43	1		PCB118	7.9	1.1	0.52	1	
PCB018	3.0	1.1	0.69	1		PCB128	1.5	1.1	0.51	1	
PCB028	2.0	1.1	0.54	1		PCB132	ND	1.1	0.52	1	
PCB031	2.5	1.1	0.37	1		PCB138/158	ND	2.1	0.53	1	
PCB033	ND	1.1	0.45	1		PCB141	1.0	1.1	0.45	1	J
PCB044	3.4	1.1	0.59	1		PCB149	4.5	1.1	0.44	1	
PCB049	5.7	1.1	0.44	1		PCB151	ND	1.1	0.35	1	
PCB052	7.6	1.1	0.49	1		PCB153	4.0	1.1	0.46	1	
PCB056	ND	1.1	0.33	1		PCB156	0.82	1.1	0.47	1	J
PCB060	ND	1.1	0.67	1		PCB170	0.98	1.1	0.53	1	J
PCB066	3.7	1.1	0.47	1		PCB174	0.83	1.1	0.40	1	J
PCB070	4.2	1.1	0.53	1		PCB177	0.52	1.1	0.51	1	J
PCB074	1.6	1.1	0.54	1		PCB180	1.9	1.1	0.65	1	
PCB087	ND	1.1	0.42	1		PCB183	0.77	1.1	0.46	1	J
PCB095	5.8	1.1	0.36	1		PCB187	1.1	1.1	0.46	1	
PCB097	3.0	1.1	0.43	1		PCB194	0.54	1.1	0.50	1	J
PCB099	6.3	1.1	0.46	1		PCB195	ND	1.1	0.47	1	
PCB101	13	5.3	2.7	5		PCB201	ND	1.1	0.46	1	
PCB105	2.0	1.1	0.51	1		PCB203	ND	1.1	0.42	1	
PCB110	7.2	1.1	0.68	1							

Surrogates:	REC (%)	Control Limits	Qual	Surrogates:	REC (%)	Control Limits	Qual
2,4,5,6-Tetrachloro-m-Xylene	93	25-200					

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers

Calscience Environmental Laboratories, Inc.

Analytical Report

Pacific Ecorisk		Date Received:	06/16/12
2250 Cordelia Road		Work Order No:	12-06-1182
Fairfield, CA 94534-1912		Preparation:	EPA 3545
		Method:	EPA 8082A (M)/ECD
		Units:	ug/kg
Project: Levin Richmond Terminal 19733			Page 9 of 9

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	**099-15-202-19**	**N/A**	**Solid**	**GC 41**	**06/20/12**	**06/22/12 16:07**	**120620L02**

Comment(s): -Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qual	Parameter	Result	RL	MDL	DF	Qual
PCB008	ND	0.50	0.20	1		PCB118	ND	0.50	0.25	1	
PCB018	ND	0.50	0.33	1		PCB128	ND	0.50	0.24	1	
PCB028	ND	0.50	0.26	1		PCB132	ND	0.50	0.25	1	
PCB031	ND	0.50	0.18	1		PCB138/158	ND	1.0	0.25	1	
PCB033	ND	0.50	0.22	1		PCB141	ND	0.50	0.21	1	
PCB044	ND	0.50	0.28	1		PCB149	ND	0.50	0.21	1	
PCB049	ND	0.50	0.21	1		PCB151	ND	0.50	0.17	1	
PCB052	ND	0.50	0.23	1		PCB153	ND	0.50	0.22	1	
PCB056	ND	0.50	0.16	1		PCB156	ND	0.50	0.22	1	
PCB060	ND	0.50	0.32	1		PCB170	ND	0.50	0.25	1	
PCB066	ND	0.50	0.22	1		PCB174	ND	0.50	0.19	1	
PCB070	ND	0.50	0.25	1		PCB177	ND	0.50	0.24	1	
PCB074	ND	0.50	0.26	1		PCB180	ND	0.50	0.31	1	
PCB087	ND	0.50	0.20	1		PCB183	ND	0.50	0.22	1	
PCB095	ND	0.50	0.17	1		PCB187	ND	0.50	0.22	1	
PCB097	ND	0.50	0.20	1		PCB194	ND	0.50	0.24	1	
PCB099	ND	0.50	0.22	1		PCB195	ND	0.50	0.22	1	
PCB101	ND	0.50	0.25	1		PCB201	ND	0.50	0.22	1	
PCB105	ND	0.50	0.24	1		PCB203	ND	0.50	0.20	1	
PCB110	ND	0.50	0.32	1							

Surrogates:	REC (%)	Control Limits	Qual	Surrogates:	REC (%)	Control Limits	Qual
2,4,5,6-Tetrachloro-m-Xylene	66	25-200					

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers

Calscience Environmental Laboratories, Inc.

Analytical Report

Pacific Ecorisk		Date Received:	06/16/12
2250 Cordelia Road		Work Order No:	12-06-1182
Fairfield, CA 94534-1912		Preparation:	EPA 3545
		Method:	EPA 8270C SIM PAHs
		Units:	ug/kg
Project: Levin Richmond Terminal 19733			Page 1 of 2

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
LRTC-DU1-Comp	**12-06-1182-1-D**	**05/31/12 08:15**	**Sediment**	**GC/MS AAA**	**06/20/12**	**06/26/12 07:00**	**120620L03**

Comment(s): -Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.
-Results are reported on a dry weight basis.

Parameter	Result	RL	MDL	DF	Qual	Parameter	Result	RL	MDL	DF	Qual
Acenaphthene	26	21	3.9	1		Fluoranthene	650	21	2.1	1	B
Acenaphthylene	51	21	3.2	1		Fluorene	29	21	3.1	1	
Anthracene	110	21	1.7	1		Indeno (1,2,3-c,d) Pyrene	150	21	2.3	1	B
Benzo (a) Anthracene	280	21	3.3	1		2-Methylnaphthalene	13	21	3.9	1	J
Benzo (a) Pyrene	320	21	2.2	1		1-Methylnaphthalene	7.5	21	4.3	1	J
Benzo (b) Fluoranthene	410	21	2.2	1		1-Methylphenanthrene	ND	21	3.5	1	
Benzo (e) Pyrene	260	21	3.2	1		Naphthalene	26	21	6.4	1	
Benzo (g,h,i) Perylene	170	21	2.0	1	B	Perylene	90	21	3.7	1	
Benzo (k) Fluoranthene	340	21	3.0	1		Phenanthrene	140	21	2.2	1	
Biphenyl	8.0	21	3.0	1	J	Pyrene	750	21	2.1	1	B
Chrysene	460	21	2.5	1		1,6,7-Trimethylnaphthalene	5.0	21	3.0	1	J
Dibenz (a,h) Anthracene	50	21	2.2	1		Dibenzothiophene	12	21	2.9	1	J
2,6-Dimethylnaphthalene	31	21	3.6	1							

Surrogates:	REC (%)	Control Limits	Qual	Surrogates:	REC (%)	Control Limits	Qual
2-Fluorobiphenyl	38	14-146		Nitrobenzene-d5	48	18-162	
p-Terphenyl-d14	48	34-148					

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers

Calscience Environmental Laboratories, Inc.

Analytical Report

Pacific Ecorisk		Date Received:	06/16/12
2250 Cordelia Road		Work Order No:	12-06-1182
Fairfield, CA 94534-1912		Preparation:	EPA 3545
		Method:	EPA 8270C SIM PAHs
		Units:	ug/kg
Project: Levin Richmond Terminal 19733			Page 2 of 2

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
LRTC-DU1-Comp (LAB DUP)	**12-06-1182-8-D**	**05/31/12 08:15**	**Sediment**	**GC/MS AAA**	**06/20/12**	**06/26/12 07:27**	**120620L03**

Comment(s): -Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.
-Results are reported on a dry weight basis.

Parameter	Result	RL	MDL	DF	Qual	Parameter	Result	RL	MDL	DF	Qual
Acenaphthene	29	21	3.8	1		Fluoranthene	390	21	2.1	1	B
Acenaphthylene	36	21	3.2	1		Fluorene	25	21	3.1	1	
Anthracene	80	21	1.7	1		Indeno (1,2,3-c,d) Pyrene	180	21	2.2	1	B
Benzo (a) Anthracene	290	21	3.3	1		2-Methylnaphthalene	14	21	3.8	1	J
Benzo (a) Pyrene	330	21	2.1	1		1-Methylnaphthalene	8.1	21	4.2	1	J
Benzo (b) Fluoranthene	460	21	2.1	1		1-Methylphenanthrene	ND	21	3.4	1	
Benzo (e) Pyrene	300	21	3.2	1		Naphthalene	35	21	6.3	1	
Benzo (g,h,i) Perylene	200	21	2.0	1	B	Perylene	83	21	3.7	1	
Benzo (k) Fluoranthene	360	21	2.9	1		Phenanthrene	100	21	2.1	1	
Biphenyl	7.3	21	2.9	1	J	Pyrene	610	21	2.1	1	B
Chrysene	420	21	2.5	1		1,6,7-Trimethylnaphthalene	4.3	21	3.0	1	J
Dibenz (a,h) Anthracene	66	21	2.2	1		Dibenzothiophene	10	21	2.8	1	J
2,6-Dimethylnaphthalene	19	21	3.5	1	J						

Surrogates:	REC (%)	Control Limits	Qual	Surrogates:	REC (%)	Control Limits	Qual
2-Fluorobiphenyl	59	14-146		Nitrobenzene-d5	53	18-162	
p-Terphenyl-d14	89	34-148					

Method Blank	**099-14-437-30**	**N/A**	**Solid**	**GC/MS AAA**	**06/20/12**	**06/26/12 02:11**	**120620L03**

Comment(s): -Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qual	Parameter	Result	RL	MDL	DF	Qual
Acenaphthene	ND	10	1.8	1		Fluoranthene	1.6	10	0.98	1	J
Acenaphthylene	ND	10	1.5	1		Fluorene	ND	10	1.5	1	
Anthracene	ND	10	0.81	1		Indeno (1,2,3-c,d) Pyrene	1.1	10	1.1	1	J
Benzo (a) Anthracene	ND	10	1.6	1		2-Methylnaphthalene	ND	10	1.8	1	
Benzo (a) Pyrene	ND	10	1.0	1		1-Methylnaphthalene	ND	10	2.0	1	
Benzo (b) Fluoranthene	ND	10	1.0	1		1-Methylphenanthrene	ND	10	1.6	1	
Benzo (e) Pyrene	ND	10	1.5	1		Naphthalene	ND	10	3.0	1	
Benzo (g,h,i) Perylene	1.8	10	0.94	1	J	Perylene	ND	10	1.7	1	
Benzo (k) Fluoranthene	ND	10	1.4	1		Phenanthrene	ND	10	1.0	1	
Biphenyl	ND	10	1.4	1		Pyrene	2.8	10	0.99	1	J
Chrysene	ND	10	1.2	1		1,6,7-Trimethylnaphthalene	ND	10	1.4	1	
Dibenz (a,h) Anthracene	ND	10	1.0	1		Dibenzothiophene	ND	10	1.3	1	
2,6-Dimethylnaphthalene	ND	10	1.7	1							

Surrogates:	REC (%)	Control Limits	Qual	Surrogates:	REC (%)	Control Limits	Qual
2-Fluorobiphenyl	90	14-146		Nitrobenzene-d5	106	18-162	
p-Terphenyl-d14	98	34-148					

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers

Calscience Environmental Laboratories, Inc.

Analytical Report

Pacific Ecorisk		Date Received:	06/16/12
2250 Cordelia Road		Work Order No:	12-06-1182
Fairfield, CA 94534-1912		Preparation:	EPA 3550B
		Method:	Organotins by Krone et al.
		Units:	ug/kg
Project: Levin Richmond Terminal 19733			Page 1 of 1

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
LRTC-DU1-Comp	**12-06-1182-1-D**	**05/31/12 08:15**	**Sediment**	**GC/MS JJJ**	**06/20/12**	**06/25/12 18:25**	**120620L08**

Comment(s): -Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.
-Results are reported on a dry weight basis.

Parameter	Result	RL	MDL	DF	Qual	Parameter	Result	RL	MDL	DF	Qual
Dibutyltin	6.1	6.4	1.4	1	J	Tetrabutyltin	ND	6.4	1.7	1	
Monobutyltin	ND	6.4	1.4	1		Tributyltin	6.3	6.4	1.2	1	J

Surrogates:	REC (%)	Control Limits	Qual
Tripentyltin	81	48-126	

LRTC-DU1-Comp (LAB DUP)	**12-06-1182-8-D**	**05/31/12 08:15**	**Sediment**	**GC/MS JJJ**	**06/20/12**	**06/25/12 18:56**	**120620L08**

Comment(s): -Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.
-Results are reported on a dry weight basis.

Parameter	Result	RL	MDL	DF	Qual	Parameter	Result	RL	MDL	DF	Qual
Dibutyltin	5.1	6.3	1.4	1	J	Tetrabutyltin	ND	6.3	1.6	1	
Monobutyltin	ND	6.3	1.4	1		Tributyltin	8.5	6.3	1.2	1	

Surrogates:	REC (%)	Control Limits	Qual
Tripentyltin	73	48-126	

Method Blank	**099-07-016-944**	**N/A**	**Solid**	**GC/MS JJJ**	**06/20/12**	**06/25/12 16:54**	**120620L08**

Comment(s): -Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qual	Parameter	Result	RL	MDL	DF	Qual
Dibutyltin	ND	3.0	0.65	1		Tetrabutyltin	ND	3.0	0.77	1	
Monobutyltin	ND	3.0	0.65	1		Tributyltin	ND	3.0	0.58	1	

Surrogates:	REC (%)	Control Limits	Qual
Tripentyltin	50	48-126	

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers

Calscience Environmental Laboratories, Inc.

Analytical Report

Pacific Ecorisk		Date Received:	06/16/12
2250 Cordelia Road		Work Order No:	12-06-1182
Fairfield, CA 94534-1912		Preparation:	EPA 7471A Total
		Method:	EPA 7471A

Project: Levin Richmond Terminal 19733

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
LRTC-DU1-Comp	**12-06-1182-1-A**	**05/31/12 08:15**	**Sediment**	**Mercury**	**06/18/12**	**06/18/12 16:32**	**120618L05E**

Comment(s): -Results are reported on a dry weight basis.
-Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qual	Units
Mercury	0.239	0.0429	0.0126	1		mg/kg

LRTC-DU1-Comp (LAB DUP)	**12-06-1182-8-A**	**05/31/12 08:15**	**Sediment**	**Mercury**	**06/18/12**	**06/18/12 16:53**	**120618L05E**

Comment(s): -Results are reported on a dry weight basis.
-Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qual	Units
Mercury	0.288	0.0423	0.0124	1		mg/kg

Method Blank	**099-12-452-311**	**N/A**	**Solid**	**Mercury**	**06/18/12**	**06/18/12 16:21**	**120618L05E**

Comment(s): -Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qual	Units
Mercury	ND	0.0200	0.00588	1		mg/kg

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers

Calscience Environmental Laboratories, Inc.

Analytical Report

Pacific Ecorisk		Date Received:	06/16/12
2250 Cordelia Road		Work Order No:	12-06-1182
Fairfield, CA 94534-1912		Preparation:	EPA 3050B
		Method:	EPA 6020
		Units:	mg/kg
Project: Levin Richmond Terminal 19733			Page 1 of 1

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
LRTC-DU1-Comp	**12-06-1182-1-D**	**05/31/12 08:15**	**Sediment**	**ICP/MS 05**	**06/18/12**	**06/19/12 03:51**	**120618L04E**

Comment(s): -Results are reported on a dry weight basis.

-Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qual	Parameter	Result	RL	MDL	DF	Qual
Arsenic	10.3	0.214	0.104	1		Nickel	72.4	0.214	0.0823	1	
Cadmium	0.348	0.214	0.123	1		Selenium	ND	0.214	0.117	1	
Chromium	66.4	0.214	0.133	1		Silver	0.332	0.214	0.0670	1	
Copper	65.3	0.214	0.0894	1		Zinc	158	2.14	1.70	1	
Lead	30.1	0.214	0.141	1							

LRTC-DU1-Comp (LAB DUP)	**12-06-1182-8-D**	**05/31/12 08:15**	**Sediment**	**ICP/MS 05**	**06/18/12**	**06/19/12 20:39**	**120618L04E**

Comment(s): -Results are reported on a dry weight basis.

-Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qual	Parameter	Result	RL	MDL	DF	Qual
Arsenic	12.9	0.211	0.102	1		Nickel	148	0.211	0.0810	1	
Cadmium	0.396	0.211	0.121	1		Selenium	ND	0.211	0.115	1	
Chromium	62.6	0.211	0.131	1		Silver	0.332	0.211	0.0660	1	
Copper	62.2	0.211	0.0881	1		Zinc	161	2.11	1.68	1	
Lead	30.2	0.211	0.139	1							

Method Blank	**099-15-254-7**	**N/A**	**Solid**	**ICP/MS 05**	**06/18/12**	**06/19/12 21:34**	**120618L04E**

Comment(s): -Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qual	Parameter	Result	RL	MDL	DF	Qual
Arsenic	ND	0.100	0.0485	1		Nickel	ND	0.100	0.0384	1	
Cadmium	ND	0.100	0.0572	1		Selenium	ND	0.100	0.0547	1	
Chromium	ND	0.100	0.0621	1		Silver	ND	0.100	0.0313	1	
Copper	ND	0.100	0.0417	1		Zinc	ND	1.00	0.795	1	
Lead	ND	0.100	0.0659	1							

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers

Calscience Environmental Laboratories, Inc.

PARTICLE SIZE SUMMARY

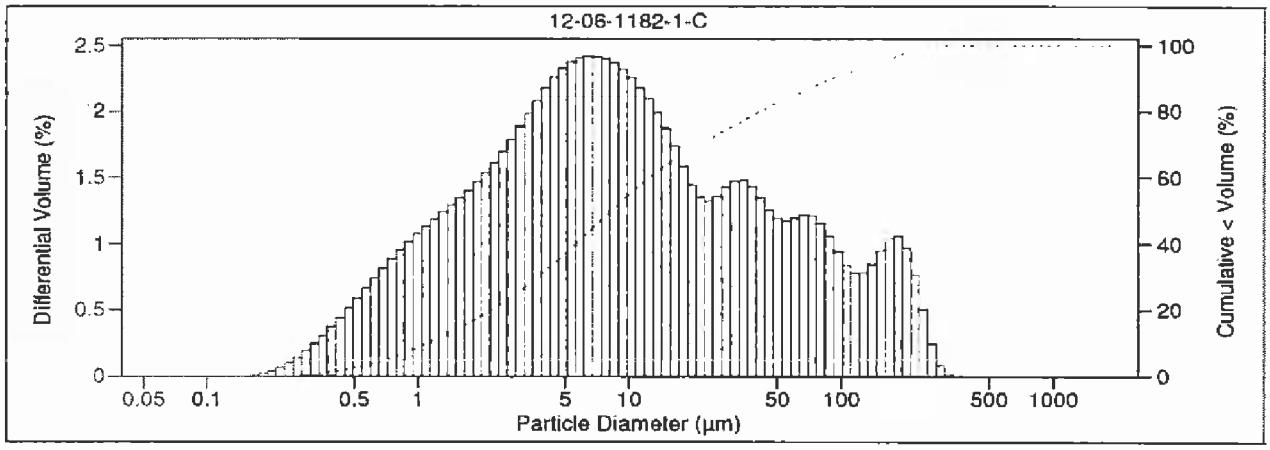
(ASTM D422 / D4464M)

Pacific Ecorisk		Date Sampled:	05/31/12
2250 Cordelia Road		Date Received:	06/16/12
Fairfield, CA		Work Order No:	12-06-1182
		Date Analyzed:	06/19/12
		Method:	ASTM D4464M

Project: Levin Richmond Terminal 19733

Sample ID	Depth ft	Description	Mean Grain Size mm
LRTC-DU1-Comp		Silt	0.030

Particle Size Distribution, wt by percent								
Total Gravel	Very Coarse Sand	Coarse Sand	Medium Sand	Fine Sand	Very Fine Sand	Silt	Clay	Total Silt & Clay
0.00	0.00	0.00	0.50	6.55	7.61	54.18	31.17	85.35



Calscience Environmental Laboratories, Inc.

PARTICLE SIZE SUMMARY

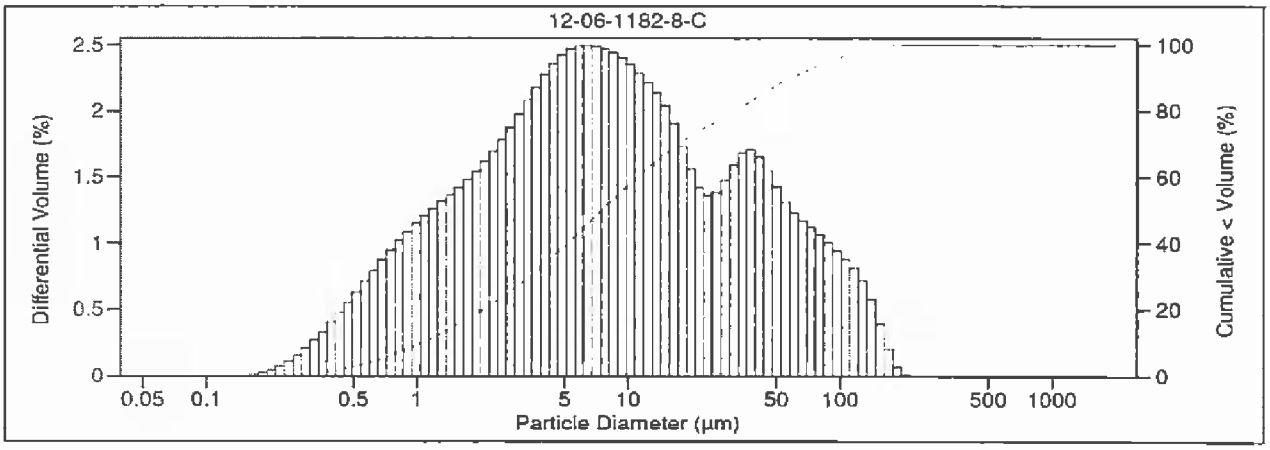
(ASTM D422 / D4464M)

Pacific Ecorisk		Date Sampled:	05/31/12
2250 Cordelia Road		Date Received:	06/16/12
Fairfield, CA		Work Order No:	12-06-1182
		Date Analyzed:	06/19/12
		Method:	ASTM D4464M

Project: Levin Richmond Terminal 19733

Sample ID	Depth ft	Description	Mean Grain Size mm
LRTC-DU1-Comp (LAB DUP)		Silt	0.020

Particle Size Distribution, wt by percent								Total Silt & Clay
Total Gravel	Very Coarse Sand	Coarse Sand	Medium Sand	Fine Sand	Very Fine Sand	Silt	Clay	
0.00	0.00	0.00	0.00	1.79	7.39	57.81	33.01	90.82



Calscience Environmental Laboratories, Inc.

Quality Control - Spike/Spike Duplicate

Pacific Ecorisk		Date Received:	06/16/12
2250 Cordelia Road		Work Order No:	12-06-1182
Fairfield, CA 94534-1912		Preparation:	EPA 3050B
		Method:	EPA 6020

Project Levin Richmond Terminal 19733

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
LRTC-DU1-Comp	**Sediment**	**ICP/MS 05**	**06/18/12**	**06/19/12**	**120618S04**

Parameter	SAMPLE CONC	SPIKE ADDED	MS CONC	MS %REC	MSD CONC	MSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Arsenic	4.787	25.00	31.49	107	32.76	112	80-120	4	0-20	
Cadmium	0.1625	25.00	26.12	104	26.43	105	80-120	1	0-20	
Chromium	31.02	25.00	55.51	98	57.24	105	80-120	3	0-20	
Copper	30.48	25.00	57.80	109	57.09	106	80-120	1	0-20	
Lead	14.06	25.00	48.86	139	51.58	150	80-120	5	0-20	3
Nickel	33.80	25.00	59.75	104	60.94	109	80-120	2	0-20	
Selenium	ND	25.00	29.33	117	28.58	114	80-120	3	0-20	
Silver	0.1551	12.50	13.40	106	13.56	107	80-120	1	0-20	
Zinc	73.74	25.00	106.5	131	108.3	138	80-120	2	0-20	3

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Quality Control - PDS / PDSD

Pacific Ecorisk		Date Received	06/16/12
2250 Cordelia Road		Work Order No:	12-06-1182
Fairfield, CA 94534-1912		Preparation:	EPA 3050B
		Method:	EPA 6020

Project: Levin Richmond Terminal 19733

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	PDS / PDSD Batch Number
LRTC-DU1-Comp	**Sediment**	**ICP/MS 05**	**06/18/12**	**06/19/12**	**120618S04**

Parameter	SAMPLE CONC	SPIKE ADDED	PDS CONC	PDS %REC	PDSD CONC	PDSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Arsenic	4.787	25.00	32.15	109	31.67	108	75-125	2	0-20	
Cadmium	0.1625	25.00	26.31	105	26.83	107	75-125	2	0-20	
Chromium	31.02	25.00	56.88	103	54.75	95	75-125	4	0-20	
Copper	30.48	25.00	56.67	105	57.36	108	75-125	1	0-20	
Lead	14.06	25.00	40.23	105	39.95	104	75-125	1	0-20	
Nickel	33.80	25.00	58.68	99	58.87	100	75-125	0	0-20	
Selenium	ND	25.00	27.61	110	28.00	112	75-125	1	0-20	
Silver	0.1551	12.50	11.66	92	12.06	95	75-125	3	0-20	
Zinc	73.74	25.00	98.76	100	101.8	112	75-125	3	0-20	

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Quality Control - Spike/Spike Duplicate

Pacific Ecorisk		Date Received:	06/16/12
2250 Cordelia Road		Work Order No:	12-06-1182
Fairfield, CA 94534-1912		Preparation:	N/A
		Method:	EPA 9060A

Project Levin Richmond Terminal 19733

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
12-06-1183-1	**Sediment**	**TOC 5**	**06/21/12**	**06/21/12**	**C0621TOCS2**

Parameter	SAMPLE CONC	SPIKE ADDED	MS CONC	MS %REC	MSD CONC	MSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Carbon, Total Organic	0.30	3.0	2.9	87	3.2	98	75-125	11	0-25	

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Quality Control - Duplicate

Pacific Ecorisk		Date Received:	06/16/12
2250 Cordelia Road		Work Order No:	12-06-1182
Fairfield, CA 94534-1912		Preparation:	N/A
		Method:	SM 2540 B

Project: Levin Richmond Terminal 19733

Quality Control Sample ID	Matrix	Instrument	Date Prepared:	Date Analyzed:	Duplicate Batch Number
LRTC-DU1-Comp	**Sediment**	**N/A**	**06/21/12**	**06/21/12**	**C0621TSD4**

Parameter	Sample Conc	DUP Conc	RPD	RPD CL	Qualifiers
Solids, Total	46.7	49.2	5	0-10	

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Quality Control - Spike/Spike Duplicate

Pacific Ecorisk		Date Received:	06/16/12
2250 Cordelia Road		Work Order No:	12-06-1182
Fairfield, CA 94534-1912		Preparation:	EPA 7471A Total
		Method:	EPA 7471A

Project Levin Richmond Terminal 19733

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
LRTC-DU1-Comp	**Sediment**	**Mercury**	**06/18/12**	**06/18/12**	**120618S05**

Parameter	SAMPLE CONC	SPIKE ADDED	MS CONC	MS %REC	MSD CONC	MSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Mercury	0.1115	0.8350	0.8680	91	0.8179	85	76-136	6	0-16	

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Quality Control - Spike/Spike Duplicate

Pacific Ecorisk		Date Received:	06/16/12
2250 Cordelia Road		Work Order No:	12-06-1182
Fairfield, CA 94534-1912		Preparation:	EPA 3550B
		Method:	Organotins by Krone et al.

Project Levin Richmond Terminal 19733

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
LRTC-DU1-Comp	**Sediment**	**GC/MS JJJ**	**06/20/12**	**06/25/12**	**120620S08**

Parameter	SAMPLE CONC	SPIKE ADDED	MS CONC	MS %REC	MSD CONC	MSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Tetrabutyltin	ND	100.0	98.60	99	114.8	115	79-175	15	0-31	
Tributyltin	ND	100.0	94.80	95	166.0	166	69-135	55	0-29	4,3

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Quality Control - Spike/Spike Duplicate

Pacific Ecorisk		Date Received:	06/16/12
2250 Cordelia Road		Work Order No:	12-06-1182
Fairfield, CA 94534-1912		Preparation:	EPA 3545
		Method:	EPA 8081A

Project Levin Richmond Terminal 19733

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
LRTC-DU1-Comp	**Sediment**	**GC 51**	**06/20/12**	**06/22/12**	**120620S01**

Parameter	SAMPLE CONC	SPIKE ADDED	MS CONC	MS %REC	MSD CONC	MSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Aldrin	ND	5.000	4.704	94	4.641	93	50-135	1	0-25	
Alpha-BHC	ND	5.000	5.271	105	4.802	96	50-135	9	0-25	
Beta-BHC	ND	5.000	6.896	138	7.261	145	50-135	5	0-25	3
Delta-BHC	ND	5.000	5.114	102	4.974	99	50-135	3	0-25	
Gamma-BHC	ND	5.000	4.872	97	4.140	83	50-135	16	0-25	
Dieldrin	1.974	5.000	6.160	84	6.148	83	50-135	0	0-25	
4,4'-DDD	50.33	5.000	24.36	0	24.11	0	50-135	1	0-25	3
4,4'-DDE	7.749	5.000	10.88	63	10.64	58	50-135	2	0-25	
4,4'-DDT	30.89	5.000	24.08	0	16.57	0	50-135	37	0-25	3,4
Endosulfan I	ND	5.000	5.593	112	5.032	101	50-135	11	0-25	
Endosulfan II	ND	5.000	4.995	100	5.113	102	50-135	2	0-25	
Endosulfan Sulfate	ND	5.000	5.186	104	4.886	98	50-135	6	0-25	
Endrin	ND	5.000	5.341	107	5.370	107	50-135	1	0-25	
Endrin Aldehyde	ND	5.000	3.426	69	4.061	81	50-135	17	0-25	
Endrin Ketone	ND	5.000	6.658	133	6.103	122	50-135	9	0-25	
Heptachlor	ND	5.000	4.833	97	4.361	87	50-135	10	0-25	
Heptachlor Epoxide	ND	5.000	6.284	126	6.020	120	50-135	4	0-25	
Methoxychlor	ND	5.000	6.768	135	5.976	120	50-135	12	0-25	
Alpha Chlordane	ND	5.000	5.090	102	5.315	106	50-135	4	0-25	
Gamma Chlordane	ND	5.000	5.317	106	4.743	95	50-135	11	0-25	

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Quality Control - Spike/Spike Duplicate

Pacific Ecorisk		Date Received:	06/16/12
2250 Cordelia Road		Work Order No:	12-06-1182
Fairfield, CA 94534-1912		Preparation:	EPA 3545
		Method:	EPA 8270C SIM PAHs

Project Levin Richmond Terminal 19733

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
LRTC-DU1-Comp	**Sediment**	**GC/MS AAA**	**06/20/12**	**06/28/12**	**120620S03**

Parameter	SAMPLE CONC	SPIKE ADDED	MS CONC	MS %REC	MSD CONC	MSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Acenaphthene	12.01	100.0	68.23	56	69.22	57	40-160	1	0-20	
Acenaphthylene	23.74	100.0	58.21	34	60.11	36	40-160	3	0-20	3
Anthracene	53.34	100.0	75.07	22	74.42	21	40-160	1	0-20	3
Benzo (a) Anthracene	128.6	100.0	154.9	26	155.0	26	40-160	0	0-20	3
Benzo (a) Pyrene	147.8	100.0	153.4	6	152.8	5	40-160	0	0-20	3
Benzo (b) Fluoranthene	191.8	100.0	173.0	0	169.5	0	40-160	2	0-20	3
Benzo (g,h,i) Perylene	79.52	100.0	121.9	42	122.2	43	40-160	0	0-20	
Benzo (k) Fluoranthene	160.2	100.0	151.3	0	155.6	0	40-160	3	0-20	3
Chrysene	215.3	100.0	190.1	0	188.0	0	40-160	1	0-20	3
Dibenz (a,h) Anthracene	23.54	100.0	89.05	66	89.79	66	40-160	1	0-20	
Fluoranthene	305.1	100.0	175.1	0	171.2	0	40-160	2	0-20	3
Fluorene	13.54	100.0	71.15	58	72.15	59	40-160	1	0-20	
Indeno (1,2,3-c,d) Pyrene	72.24	100.0	120.2	48	121.9	50	40-160	1	0-20	
2-Methylnaphthalene	ND	100.0	62.12	62	62.33	62	40-160	0	0-20	
1-Methylnaphthalene	ND	100.0	63.00	63	62.30	62	40-160	1	0-20	
Naphthalene	12.24	100.0	69.59	57	69.73	57	40-160	0	0-20	
Phenanthrene	64.41	100.0	105.7	41	108.7	44	40-160	3	0-20	
Pyrene	352.3	100.0	268.6	0	268.6	0	40-160	0	0-46	3

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Quality Control - Spike/Spike Duplicate

Pacific Ecorisk
2250 Cordelia Road
Fairfield, CA 94534-1912

Date Received: 06/16/12
Work Order No: 12-06-1182
Preparation: EPA 3545
Method: EPA 8082A (M)/ECD

Project Levin Richmond Terminal 19733

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
LRTC-DU1-Comp	**Sediment**	**GC 41**	**06/20/12**	**06/25/12**	**120620S02A**

Parameter	SAMPLE CONC	SPIKE ADDED	MS CONC	MS %REC	MSD CONC	MSD %REC	%REC CL	RPD	RPD CL	Qualifiers
PCB008	ND	2.000	1.454	73	1.443	72	50-200	1	0-30	
PCB018	1.644	2.000	1.647	0	1.616	0	50-200	2	0-30	3
PCB028	1.018	2.000	1.428	21	1.468	23	50-200	3	0-30	3
PCB044	1.799	2.000	1.778	0	1.766	0	50-200	1	0-30	3
PCB052	3.916	2.000	2.725	0	2.696	0	50-200	1	0-30	3
PCB066	1.908	2.000	1.745	0	1.708	0	50-200	2	0-30	3
PCB077	2.823	2.000	2.680	0	2.670	0	50-200	0	0-30	3
PCB101	5.838	2.000	3.975	0	3.998	0	50-200	1	0-30	3
PCB105	1.009	2.000	1.596	29	1.635	31	50-200	2	0-30	3
PCB118	3.906	2.000	2.669	0	2.626	0	50-200	2	0-30	3
PCB126	ND	2.000	1.341	67	1.062	53	50-200	23	0-30	
PCB128	0.7772	2.000	1.436	33	1.476	35	50-200	3	0-30	3
PCB138/158	ND	2.000	1.772	89	1.817	91	50-200	2	0-30	
PCB153	ND	2.000	1.816	91	2.314	116	50-200	24	0-30	
PCB170	ND	2.000	1.232	62	1.438	72	50-200	15	0-30	
PCB180	0.9934	2.000	1.652	33	1.697	35	50-200	3	0-30	3
PCB187	ND	2.000	1.464	73	1.444	72	50-200	1	0-30	
PCB195	ND	2.000	1.287	64	1.246	62	50-200	3	0-30	
PCB206	ND	2.000	2.066	103	2.179	109	50-200	5	0-30	
PCB209	ND	2.000	1.130	56	1.070	53	50-200	5	0-30	

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Quality Control - LCS/LCS Duplicate

Pacific Ecorisk		Date Received:	N/A
2250 Cordelia Road		Work Order No:	12-06-1182
Fairfield, CA 94534-1912		Preparation:	EPA 3050B
		Method:	EPA 6020

Project: Levin Richmond Terminal 19733

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-15-254-7	Solid	ICP/MS 05	06/18/12	06/19/12	120618L04E

Parameter	SPIKE ADDED	LCS CONC	LCS %REC	LCSD CONC	LCSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Arsenic	25.00	25.86	103	25.62	102	80-120	1	0-20	
Cadmium	25.00	26.17	105	26.04	104	80-120	0	0-20	
Chromium	25.00	26.36	105	25.80	103	80-120	2	0-20	
Copper	25.00	27.46	110	27.53	110	80-120	0	0-20	
Lead	25.00	26.13	105	25.36	101	80-120	3	0-20	
Nickel	25.00	26.42	106	26.24	105	80-120	1	0-20	
Selenium	25.00	25.98	104	25.69	103	80-120	1	0-20	
Silver	12.50	11.83	95	11.97	96	80-120	1	0-20	
Zinc	25.00	27.25	109	27.83	111	80-120	2	0-20	

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Quality Control - LCS/LCS Duplicate

Pacific Ecorisk		Date Received:	N/A
2250 Cordelia Road		Work Order No:	12-06-1182
Fairfield, CA 94534-1912		Preparation:	N/A
		Method:	EPA 9060A

Project: Levin Richmond Terminal 19733

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-06-013-739	Solid	TOC 5	06/21/12	06/21/12	C0621TOCL1

Parameter	SPIKE ADDED	LCS CONC	LCS %REC	LCSD CONC	LCSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Carbon, Total Organic	0.60	0.58	97	0.57	94	80-120	2	0-20	

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Quality Control - LCS/LCS Duplicate

Pacific Ecorisk		Date Received:	N/A
2250 Cordelia Road		Work Order No:	12-06-1182
Fairfield, CA 94534-1912		Preparation:	EPA 7471A Total
		Method:	EPA 7471A

Project: Levin Richmond Terminal 19733

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-12-452-311	**Solid**	Mercury	**06/18/12**	**06/18/12**	**120618L05E**

Parameter	SPIKE ADDED	LCS CONC	LCS %REC	LCSD CONC	LCSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Mercury	0.8350	0.8197	98	0.8145	98	82-124	1	0-16	

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Quality Control - LCS/LCS Duplicate

Pacific Ecorisk		Date Received:	N/A
2250 Cordelia Road		Work Order No:	12-06-1182
Fairfield, CA 94534-1912		Preparation:	EPA 3550B
		Method:	Organotins by Krone et al.

Project: Levin Richmond Terminal 19733

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-07-016-944	Solid	GC/MS JJJ	06/20/12	06/25/12	120620L08

Parameter	SPIKE ADDED	LCS CONC	LCS %REC	LCSD CONC	LCSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Tetrabutyltin	100.0	99.57	100	106.4	106	79-151	7	0-20	
Tributyltin	100.0	53.79	54	55.22	55	51-129	3	0-20	

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Quality Control - LCS/LCS Duplicate

Pacific Ecorisk		Date Received:	N/A
2250 Cordelia Road		Work Order No:	12-06-1182
Fairfield, CA 94534-1912		Preparation:	EPA 3545
		Method:	EPA 8081A

Project: Levin Richmond Terminal 19733

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-12-858-146	Solid	GC 51	06/20/12	06/22/12	120620L01

Parameter	SPIKE ADDED	LCS CONC	LCS %REC	LCSD CONC	LCSD %REC	%REC CL	ME_CL	RPD	RPD CL	Qualifiers
Aldrin	5.000	4.235	85	4.514	90	50-135	36-149	6	0-25	
Alpha-BHC	5.000	4.385	88	4.813	96	50-135	36-149	9	0-25	
Beta-BHC	5.000	4.074	81	4.431	89	50-135	36-149	8	0-25	
Delta-BHC	5.000	3.990	80	4.258	85	50-135	36-149	6	0-25	
Gamma-BHC	5.000	4.324	86	4.774	95	50-135	36-149	10	0-25	
Dieldrin	5.000	4.425	89	4.809	96	50-135	36-149	8	0-25	
4,4'-DDD	5.000	4.110	82	4.276	86	50-135	36-149	4	0-25	
4,4'-DDE	5.000	4.380	88	4.372	87	50-135	36-149	0	0-25	
4,4'-DDT	5.000	4.690	94	4.772	95	50-135	36-149	2	0-25	
Endosulfan I	5.000	4.517	90	5.084	102	50-135	36-149	12	0-25	
Endosulfan II	5.000	4.321	86	4.663	93	50-135	36-149	8	0-25	
Endosulfan Sulfate	5.000	4.284	86	4.504	90	50-135	36-149	5	0-25	
Endrin	5.000	4.148	83	4.540	91	50-135	36-149	9	0-25	
Endrin Aldehyde	5.000	4.307	86	4.699	94	50-135	36-149	9	0-25	
Endrin Ketone	5.000	4.762	95	4.990	100	50-135	36-149	5	0-25	
Heptachlor	5.000	4.626	93	4.993	100	50-135	36-149	8	0-25	
Heptachlor Epoxide	5.000	4.317	86	4.574	91	50-135	36-149	6	0-25	
Methoxychlor	5.000	4.850	97	4.814	96	50-135	36-149	1	0-25	
Alpha Chlordane	5.000	4.323	86	4.690	94	50-135	36-149	8	0-25	
Gamma Chlordane	5.000	4.409	88	4.723	94	50-135	36-149	7	0-25	

Total number of LCS compounds : 20
Total number of ME compounds : 0
Total number of ME compounds allowed : 1
LCS ME CL validation result : Pass

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Quality Control - LCS/LCS Duplicate

Pacific Ecorisk	Date Received:	N/A
2250 Cordelia Road	Work Order No:	12-06-1182
Fairfield, CA 94534-1912	Preparation:	EPA 3545
	Method:	EPA 8270C SIM PAHs

Project: Levin Richmond Terminal 19733

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-14-437-30	Solid	GC/MS AAA	06/20/12	06/25/12	120620L03

Parameter	SPIKE ADDED	LCS CONC	LCS %REC	LCSD CONC	LCSD %REC	%REC CL	ME_CL	RPD	RPD CL	Qualifiers
Acenaphthene	100.0	90.41	90	90.37	90	48-108	38-118	0	0-11	
Acenaphthylene	100.0	83.82	84	83.50	84	40-160	20-180	0	0-20	
Anthracene	100.0	76.40	76	76.54	77	40-160	20-180	0	0-20	
Benzo (a) Anthracene	100.0	108.0	108	107.5	108	40-160	20-180	0	0-20	
Benzo (a) Pyrene	100.0	96.26	96	96.18	96	40-160	20-180	0	0-20	
Benzo (b) Fluoranthene	100.0	110.9	111	110.2	110	40-160	20-180	1	0-20	
Benzo (g,h,i) Perylene	100.0	101.0	101	100.7	101	40-160	20-180	0	0-20	
Benzo (k) Fluoranthene	100.0	103.6	104	103.3	103	40-160	20-180	0	0-20	
Chrysene	100.0	90.42	90	90.49	90	40-160	20-180	0	0-20	
Dibenz (a,h) Anthracene	100.0	98.11	98	98.16	98	40-160	20-180	0	0-20	
Fluoranthene	100.0	98.14	98	98.27	98	40-160	20-180	0	0-20	
Fluorene	100.0	96.92	97	97.02	97	40-160	20-180	0	0-20	
Indeno (1,2,3-c,d) Pyrene	100.0	108.6	109	108.6	109	40-160	20-180	0	0-20	
2-Methylnaphthalene	100.0	92.38	92	91.56	92	40-160	20-180	1	0-20	
1-Methylnaphthalene	100.0	102.8	103	101.5	102	40-160	20-180	1	0-20	
Naphthalene	100.0	89.56	90	89.35	89	40-160	20-180	0	0-20	
Phenanthrene	100.0	90.96	91	91.66	92	40-160	20-180	1	0-20	
Pyrene	100.0	100.9	101	100.2	100	40-160	20-180	1	0-16	

Total number of LCS compounds : 18
Total number of ME compounds : 0
Total number of ME compounds allowed : 1
LCS ME CL validation result : Pass

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Quality Control - LCS/LCS Duplicate

Pacific Ecorisk		Date Received:	N/A
2250 Cordelia Road		Work Order No:	12-06-1182
Fairfield, CA 94534-1912		Preparation:	EPA 3545
		Method:	EPA 8082A (M)/ECD

Project: Levin Richmond Terminal 19733

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-15-202-19	Solid	GC 41	06/20/12	06/22/12	120620L02

Parameter	SPIKE ADDED	LCS CONC	LCS %REC	LCSD CONC	LCSD %REC	%REC CL	ME_CL	RPD	RPD CL	Qualifiers
PCB008	2.000	1.788	89	1.998	100	50-200	25-225	11	0-30	
PCB018	2.000	1.997	100	2.497	125	50-200	25-225	22	0-30	
PCB028	2.000	2.154	108	2.269	113	50-200	25-225	5	0-30	
PCB044	2.000	1.888	94	2.342	117	50-200	25-225	21	0-30	
PCB052	2.000	1.574	79	2.042	102	50-200	25-225	26	0-30	
PCB066	2.000	2.052	103	2.215	111	50-200	25-225	8	0-30	
PCB077	2.000	2.378	119	2.540	127	50-200	25-225	7	0-30	
PCB101	2.000	2.661	133	2.498	125	50-200	25-225	6	0-30	
PCB105	2.000	2.060	103	2.274	114	50-200	25-225	10	0-30	
PCB118	2.000	2.013	101	2.230	112	50-200	25-225	10	0-30	
PCB126	2.000	1.849	92	2.036	102	50-200	25-225	10	0-30	
PCB128	2.000	2.082	104	2.355	118	50-200	25-225	12	0-30	
PCB138/158	2.000	1.755	88	1.906	95	50-200	25-225	8	0-30	
PCB153	2.000	1.954	98	2.055	103	50-200	25-225	5	0-30	
PCB170	2.000	2.164	108	2.427	121	50-200	25-225	11	0-30	
PCB180	2.000	1.970	99	2.188	109	50-200	25-225	10	0-30	
PCB187	2.000	1.981	99	2.184	109	50-200	25-225	10	0-30	
PCB195	2.000	2.020	101	2.178	109	50-200	25-225	8	0-30	
PCB206	2.000	2.361	118	2.547	127	50-200	25-225	8	0-30	
PCB209	2.000	1.829	91	1.962	98	50-200	25-225	7	0-30	

Total number of LCS compounds : 20
Total number of ME compounds : 0
Total number of ME compounds allowed : 1
LCS ME CL validation result : Pass

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Glossary of Terms and Qualifiers

Work Order Number: 12-06-1182

Qualifier	Definition
*	See applicable analysis comment.
<	Less than the indicated value.
>	Greater than the indicated value.
1	Surrogate compound recovery was out of control due to a required sample dilution. Therefore, the sample data was reported without further clarification.
2	Surrogate compound recovery was out of control due to matrix interference. The associated method blank surrogate spike compound was in control and, therefore, the sample data was reported without further clarification.
3	Recovery of the Matrix Spike (MS) or Matrix Spike Duplicate (MSD) compound was out of control due to matrix interference. The associated LCS and/or LCSD was in control and, therefore, the sample data was reported without further clarification.
4	The MS/MSD RPD was out of control due to matrix interference. The LCS/LCSD RPD was in control and, therefore, the sample data was reported without further clarification.
5	The PDS/PDSD or PES/PESD associated with this batch of samples was out of control due to a matrix interference effect. The associated batch LCS/LCSD was in control and, hence, the associated sample data was reported without further clarification.
6	Surrogate recovery below the acceptance limit.
7	Surrogate recovery above the acceptance limit.
B	Analyte was present in the associated method blank.
BU	Sample analyzed after holding time expired.
E	Concentration exceeds the calibration range.
ET	Sample was extracted past end of recommended max. holding time.
HD	The chromatographic pattern was inconsistent with the profile of the reference fuel standard.
HDH	The sample chromatographic pattern for TPH matches the chromatographic pattern of the specified standard but heavier hydrocarbons were also present (or detected).
HDL	The sample chromatographic pattern for TPH matches the chromatographic pattern of the specified standard but lighter hydrocarbons were also present (or detected).
J	Analyte was detected at a concentration below the reporting limit and above the laboratory method detection limit. Reported value is estimated.
ME	LCS/LCSD Recovery Percentage is within Marginal Exceedance (ME) Control Limit range.
ND	Parameter not detected at the indicated reporting limit.
Q	Spike recovery and RPD control limits do not apply resulting from the parameter concentration in the sample exceeding the spike concentration by a factor of four or greater.
SG	The sample extract was subjected to Silica Gel treatment prior to analysis.
X	% Recovery and/or RPD out-of-range.
Z	Analyte presence was not confirmed by second column or GC/MS analysis.

Solid - Unless otherwise indicated, solid sample data is reported on a wet weight basis, not corrected for % moisture. All QC results are reported on a wet weight basis.
MPN - Most Probable Number

CHAIN OF CUSTODY RECORD

12-06-1182

PACIFIC ECORISK
2250 Cordelia Rd
Fairfield, CA 94534
Ph: (707) 207-7760
Fax: (707) 207-7916
www.pacificecorisk.com

RESULTS TO: Same
Attn: Jeff Cotsifas
Phone:
Email:

BILL TO: Same
Attn: Cynthia Garcia
Phone:
Email:

PROJECT: Levin Richmond terminal 19733

	SAMPLE IDENTIFICATION	DATE	TIME	SAMPLE MATRIX	GRAB/ COMP.	# CONTAINERS/TYPE	ANALYSES REQUESTED: See Analyte List #1	See Analyte List #2							REMARKS
1	LRTC-DU1-Comp	5/31/12	0815	Seal	—	2 / 16 oz Glass	✓								
	LRTC-DU1-Comp	5/31/12	0815	Seal	—	1 / Zip loc	✓								
2	LRTC-DU1-01	5/31/12	0815	Seal	—	1 / 16 oz Glass		✓							
3	LRTC-DU1-02	5/31/12	0950	Seal	—	1 / 16 oz Glass		✓							
4	LRTC-DU1-03	5/31/12	~~0~~ 1140	Seal	—	1 / 16 oz Glass		✓							
5	LRTC-DU1-04	5/31/12	1400	Seal	—	1 / 16 oz Glass		✓							
6	LRTC-DU1-05	5/31/12	1515	Seal	—	1 / 16 oz Glass		✓							
7	LRTC-DU1-Z-Comp	5/31/12	0815	Seal	—	1 / 16 oz Glass		✓							

METHOD OF SHIPMENT: FedEx: ____ UPS: ____ HAND: X OTHER: ____

COMMENTS:

CODES:

RELINQUISHED BY: (SIGNATURE)	DATE	TIME	RECEIVED BY: (SIGNATURE)	DATE	TIME	PAGE #
Y. Khadiyeva	6-15-~~12~~	1410	Tomally CLE	6/15/12	1410	OF
Tomally TO GSO	6/15/12	1800	[signature] TEL	6/16/12	0850	

WHITE - RETURN W/ SAMPLE YELLOW - KEEP FOR YOUR RECORDS.

81/88

ANALYTE LIST #1

Project Proponent: Levin Richmond Terminal
Project #: 19733
Site #: LRTC-DU1-Comp

Standard Ocean Disposal List (SF Bay)

1182

Analyte	Method Use	SAP Targeted MRL	
Solids, Total	EPA 160.3	±0.1%	X
Total Organic Carbon	EPA 415.1 or Plumb 1981	±0.1%	X
Grain Size	ASTM 1992 or Plumb 1981	±0.1%	X
Arsenic	EPA 6020	2 mg/kg	X
Cadmium	EPA 6020	0.3 mg/kg	X
Chromium	EPA 6020	5 mg/kg	X
Copper	EPA 6020	5 mg/kg	X
Lead	EPA 6020	5 mg/kg	X
Nickel	EPA 6020	5 mg/kg	X
Silver	EPA 6020	0.2 mg/kg	X
Zinc	EPA 6020	1 mg/kg	X
Mercury	EPA 7471A	0.02 mg/kg	X
Selenium	EPA 7742	0.1 mg/kg	X
2,4'-DDD	EPA 8081B	2 µg/kg	X
2,4'-DDE	EPA 8081B	2 µg/kg	X
2,4'-DDT	EPA 8081B	2 µg/kg	X
4,4'-DDD	EPA 8081B	2 µg/kg	X
4,4'-DDE	EPA 8081B	2 µg/kg	X
4,4'-DDT	EPA 8081B	2 µg/kg	X
Total DDT	EPA 8081B	2 µg/kg	X
Aldrin	EPA 8081B	2 µg/kg	X
alpha-BHC	EPA 8081B	2 µg/kg	X
beta-BHC	EPA 8081B	2 µg/kg	X
Chlordane	EPA 8081B	20 µg/kg	X
delta-BHC	EPA 8081B	2 µg/kg	X
Dieldrin	EPA 8081B	2 µg/kg	X
Endosulfan I	EPA 8081B	2 µg/kg	X
Endosulfan II	EPA 8081B	2 µg/kg	X
Endosulfan Sulfate	EPA 8081B	2 µg/kg	X
Endrin	EPA 8081B	2 µg/kg	X
Endrin Aldehyde	EPA 8081B	2 µg/kg	X
gamma-BHC (Lindane)	EPA 8081B	2 µg/kg	X
Heptachlor	EPA 8081B	2 µg/kg	X
Heptachlor Epoxide	EPA 8081B	2 µg/kg	X
Toxaphene	EPA 8081B	20 µg/kg	X
PCB 008	EPA 8082 (congeners)	0.5 µg/kg	X
PCB 018	EPA 8082 (congeners)	0.5 µg/kg	X
PCB 028	EPA 8082 (congeners)	0.5 µg/kg	X
PCB 031	EPA 8082 (congeners)	0.5 µg/kg	X
PCB 033	EPA 8082 (congeners)	0.5 µg/kg	X
PCB 044	EPA 8082 (congeners)	0.5 µg/kg	X
PCB 049	EPA 8082 (congeners)	0.5 µg/kg	X
PCB 052	EPA 8082 (congeners)	0.5 µg/kg	X
PCB 056	EPA 8082 (congeners)	0.5 µg/kg	X
PCB 060	EPA 8082 (congeners)	0.5 µg/kg	X
PCB 066	EPA 8082 (congeners)	0.5 µg/kg	X
PCB 070	EPA 8082 (congeners)	0.5 µg/kg	X
PCB 074	EPA 8082 (congeners)	0.5 µg/kg	X
PCB 087	EPA 8082 (congeners)	0.5 µg/kg	X
PCB 095	EPA 8082 (congeners)	0.5 µg/kg	X
PCB 097	EPA 8082 (congeners)	0.5 µg/kg	X
PCB 099	EPA 8082 (congeners)	0.5 µg/kg	X
PCB 101	EPA 8082 (congeners)	0.5 µg/kg	X
PCB 105	EPA 8082 (congeners)	0.5 µg/kg	X
PCB 110	EPA 8082 (congeners)	0.5 µg/kg	X
PCB 118	EPA 8082 (congeners)	0.5 µg/kg	X

ANALYTE LIST #1

Project Proponent: **Levin Richmond Terminal**
Project #: 19733
Site #: LRTC-DU1-Comp

1182

Standard Ocean Disposal List (SF Bay)			
PCB 128	EPA 8082 (congeners)	0.5 µg/kg	X
PCB 132	EPA 8082 (congeners)	0.5 µg/kg	X
PCB 138	EPA 8082 (congeners)	0.5 µg/kg	X
PCB 141	EPA 8082 (congeners)	0.5 µg/kg	X
PCB 149	EPA 8082 (congeners)	0.5 µg/kg	X
PCB 151	EPA 8082 (congeners)	0.5 µg/kg	X
PCB 153	EPA 8082 (congeners)	0.5 µg/kg	X
PCB 156	EPA 8082 (congeners)	0.5 µg/kg	X
PCB 158	EPA 8082 (congeners)	0.5 µg/kg	X
PCB 170	EPA 8082 (congeners)	0.5 µg/kg	X
PCB 174	EPA 8082 (congeners)	0.5 µg/kg	X
PCB 177	EPA 8082 (congeners)	0.5 µg/kg	X
PCB 180	EPA 8082 (congeners)	0.5 µg/kg	X
PCB 183	EPA 8082 (congeners)	0.5 µg/kg	X
PCB 187	EPA 8082 (congeners)	0.5 µg/kg	X
PCB 194	EPA 8082 (congeners)	0.5 µg/kg	X
PCB 195	EPA 8082 (congeners)	0.5 µg/kg	X
PCB 201	EPA 8082 (congeners)	0.5 µg/kg	X
PCB 203	EPA 8082 (congeners)	0.5 µg/kg	X
Acenaphthene	EPA 8270C	20 µg/kg	X
Acenaphthylene	EPA 8270C	20 µg/kg	X
Anthracene	EPA 8270C	20 µg/kg	X
Benz(a)anthracene	EPA 8270C	20 µg/kg	X
Benzo(a)pyrene	EPA 8270C	20 µg/kg	X
Benzo(e)pyrene	EPA 8270C	20 µg/kg	X
Benzo(b)fluoranthene	EPA 8270C	20 µg/kg	X
Benzo(g,h,i)perylene	EPA 8270C	20 µg/kg	X
Benzo(k)fluoranthene	EPA 8270C	20 µg/kg	X
Biphenyl	EPA 8270C	20 µg/kg	X
Chrysene	EPA 8270C	20 µg/kg	X
Dibenz(a,h)anthracene	EPA 8270C	20 µg/kg	X
Dibenzothiophene	EPA 8270C	20 µg/kg	X
Dimethylnapthalene 2, 6-	EPA 8270C	20 µg/kg	X
Fluoranthene	EPA 8270C	20 µg/kg	X
Fluorene	EPA 8270C	20 µg/kg	X
Indeno(1,2,3-cd)pyrene	EPA 8270C	20 µg/kg	X
Methylnapthalene, 1-	EPA 8270C	20 µg/kg	X
Methylnapthalene, 2-	EPA 8270C	20 µg/kg	X
Methylphenanthrene, 1-	EPA 8270C	20 µg/kg	X
Methylphenanthrene, 2-	EPA 8270C	20 µg/kg	X
Naphthalene	EPA 8270C	20 µg/kg	X
Perylene	EPA 8270C	20 µg/kg	X
Phenanthrene	EPA 8270C	20 µg/kg	X
Pyrene	EPA 8270C	20 µg/kg	X
Trimethylnapthalene, 2, 3, 5-	EPA 8270C	20 µg/kg	X
Di-butyltin	Krone 1989	10 µg/kg	X
Mono-Butyltin	Krone 1989	10 µg/kg	X
Tetra-butyltin	Krone 1989	10 µg/kg	X
Tri-butyltin	Krone 1989	10 µg/kg	X
QA/QC			
DMMO QA/QC	Perform Duplicate on LRTC-DU1-Comp site sample.		X

If you have any questions regarding this request as checked,
please call Jeff Cotsifas at (707)207-7760

ANALYTE LIST #2

Project Proponent: **Levin Richmond Terminal**
Project #: 19733
Site #: LRTC-DU1-01, LRTC-DU1-02, LRTC-DU1-03, LRTC-DU1-04, LRTC-DU1-05, LRTC-DU1-Z-Comp

Standard Ocean Disposal List (SF Bay)

1182

Analyte	Method Use	SAP Targeted MRL	
Solids, Total	EPA 160.3	±0.1%	
Total Organic Carbon	EPA 415.1 or Plumb 1981	±0.1%	
Grain Size	ASTM 1992 or Plumb 1981	±0.1%	
Arsenic	EPA 6020	2 mg/kg	
Cadmium	EPA 6020	0.3 mg/kg	
Chromium	EPA 6020	5 mg/kg	
Copper	EPA 6020	5 mg/kg	
Lead	EPA 6020	5 mg/kg	
Nickel	EPA 6020	5 mg/kg	
Silver	EPA 6020	0.2 mg/kg	
Zinc	EPA 6020	1 mg/kg	
Mercury	EPA 7471A	0.02 mg/kg	
Selenium	EPA 7742	0.1 mg/kg	
2,4'-DDD	EPA 8081B	2 µg/kg	X
2,4'-DDE	EPA 8081B	2 µg/kg	X
2,4'-DDT	EPA 8081B	2 µg/kg	X
4,4'-DDD	EPA 8081B	2 µg/kg	X
4,4'-DDE	EPA 8081B	2 µg/kg	X
4,4'-DDT	EPA 8081B	2 µg/kg	X
Total DDT	EPA 8081B	2 µg/kg	X
Aldrin	EPA 8081B	2 µg/kg	X
alpha-BHC	EPA 8081B	2 µg/kg	X
beta-BHC	EPA 8081B	2 µg/kg	X
Chlordane	EPA 8081B	20 µg/kg	X
delta-BHC	EPA 8081B	2 µg/kg	X
Dieldrin	EPA 8081B	2 µg/kg	X
Endosulfan I	EPA 8081B	2 µg/kg	X
Endosulfan II	EPA 8081B	2 µg/kg	X
Endosulfan Sulfate	EPA 8081B	2 µg/kg	X
Endrin	EPA 8081B	2 µg/kg	X
Endrin Aldehyde	EPA 8081B	2 µg/kg	X
gamma-BHC (Lindane)	EPA 8081B	2 µg/kg	X
Heptachlor	EPA 8081B	2 µg/kg	X
Heptachlor Epoxide	EPA 8081B	2 µg/kg	X
Toxaphene	EPA 8081B	20 µg/kg	X
PCB 008	EPA 8082 (congeners)	0.5 µg/kg	X
PCB 018	EPA 8082 (congeners)	0.5 µg/kg	X
PCB 028	EPA 8082 (congeners)	0.5 µg/kg	X
PCB 031	EPA 8082 (congeners)	0.5 µg/kg	X
PCB 033	EPA 8082 (congeners)	0.5 µg/kg	X
PCB 044	EPA 8082 (congeners)	0.5 µg/kg	X
PCB 049	EPA 8082 (congeners)	0.5 µg/kg	X
PCB 052	EPA 8082 (congeners)	0.5 µg/kg	X
PCB 056	EPA 8082 (congeners)	0.5 µg/kg	X
PCB 060	EPA 8082 (congeners)	0.5 µg/kg	X
PCB 066	EPA 8082 (congeners)	0.5 µg/kg	X
PCB 070	EPA 8082 (congeners)	0.5 µg/kg	X
PCB 074	EPA 8082 (congeners)	0.5 µg/kg	X
PCB 087	EPA 8082 (congeners)	0.5 µg/kg	X
PCB 095	EPA 8082 (congeners)	0.5 µg/kg	X
PCB 097	EPA 8082 (congeners)	0.5 µg/kg	X
PCB 099	EPA 8082 (congeners)	0.5 µg/kg	X
PCB 101	EPA 8082 (congeners)	0.5 µg/kg	X
PCB 105	EPA 8082 (congeners)	0.5 µg/kg	X
PCB 110	EPA 8082 (congeners)	0.5 µg/kg	X
PCB 118	EPA 8082 (congeners)	0.5 µg/kg	X

ANALYTE LIST #2

Project Proponent: **Levin Richmond Terminal**
Project #: 19733
Site #: LRTC-DU1-01, LRTC-DU1-02, LRTC-DU1-03, LRTC-DU1-04, LRTC-DU1-05, LRTC-DU1-Z-Comp

1182

Standard Ocean Disposal List (SF Bay)			
PCB 128	EPA 8082 (congeners)	0.5 µg/kg	X
PCB 132	EPA 8082 (congeners)	0.5 µg/kg	X
PCB 138	EPA 8082 (congeners)	0.5 µg/kg	X
PCB 141	EPA 8082 (congeners)	0.5 µg/kg	X
PCB 149	EPA 8082 (congeners)	0.5 µg/kg	X
PCB 151	EPA 8082 (congeners)	0.5 µg/kg	X
PCB 153	EPA 8082 (congeners)	0.5 µg/kg	X
PCB 156	EPA 8082 (congeners)	0.5 µg/kg	X
PCB 158	EPA 8082 (congeners)	0.5 µg/kg.	X
PCB 170	EPA 8082 (congeners)	0.5 µg/kg	X
PCB 174	EPA 8082 (congeners)	0.5 µg/kg	X
PCB 177	EPA 8082 (congeners)	0.5 µg/kg	X
PCB 180	EPA 8082 (congeners)	0.5 µg/kg	X
PCB 183	EPA 8082 (congeners)	0.5 µg/kg	X
PCB 187	EPA 8082 (congeners)	0.5 µg/kg	X
PCB 194	EPA 8082 (congeners)	0.5 µg/kg	X
PCB 195	EPA 8082 (congeners)	0.5 µg/kg	X
PCB 201	EPA 8082 (congeners)	0.5 µg/kg	X
PCB 203	EPA 8082 (congeners)	0.5 µg/kg	X
Acenaphthene	EPA 8270C	20 µg/kg	
Acenaphthylene	EPA 8270C	20 µg/kg	
Anthracene	EPA 8270C	20 µg/kg	
Benz(a)anthracene	EPA 8270C	20 µg/kg	
Benzo(a)pyrene	EPA 8270C	20 µg/kg	
Benzo(e)pyrene	EPA 8270C	20 µg/kg	
Benzo(b)fluoranthene	EPA 8270C	20 µg/kg	
Benzo(g,h,i)perylene	EPA 8270C	20 µg/kg	
Benzo(k)fluoranthene	EPA 8270C	20 µg/kg	
Biphenyl	EPA 8270C	20 µg/kg	
Chrysene	EPA 8270C	20 µg/kg	
Dibenz(a,h)anthracene	EPA 8270C	20 µg/kg	
Dibenzothiophene	EPA 8270C	20 µg/kg	
Dimethylnapthalene 2, 6-	EPA 8270C	20 µg/kg	
Fluoranthene	EPA 8270C	20 µg/kg	
Fluorene	EPA 8270C	20 µg/kg	
Indeno(1,2,3-cd)pyrene	EPA 8270C	20 µg/kg	
Methylnapthalene, 1-	EPA 8270C	20 µg/kg	
Methylnapthalene, 2-	EPA 8270C	20 µg/kg	
Methylphenanthrene, 1-	EPA 8270C	20 µg/kg	
Methylphenanthrene, 2-	EPA 8270C	20 µg/kg	
Naphthalene	EPA 8270C	20 µg/kg	
Perylene	EPA 8270C	20 µg/kg	
Phenanthrene	EPA 8270C	20 µg/kg	
Pyrene	EPA 8270C	20 µg/kg	
Trimethylnapthalene, 2, 3, 5-	EPA 8270C	20 µg/kg	
Di-butyltin	Krone 1989	10 µg/kg	
Mono-Butyltin	Krone 1989	10 µg/kg	
Tetra-butyltin	Krone 1989	10 µg/kg	
Tri-butyltin	Krone 1989	10 µg/kg	
QA/QC			
DMMO QA/QC See Analyte List #1			

If you have any questions regarding this request as checked, please call Jeff Cotsifas at (707)207-7760

GSO

WebShip

800-322-5555 www.gso.com

Ship From:
ALAN KEMP
CAL SCIENCE- CONCORD
5063 COMMERCIAL CIRCLE #H
CONCORD, CA 94520

Ship To:
SAMPLE RECEIVING
CEL
7440 LINCOLN WAY
GARDEN GROVE, CA 92841

COD:
$0.00

Reference:
ALAN KROPP,PACIFIC ECO RISK

Delivery Instructions:

Signature Type:
SIGNATURE REQUIRED

Tracking #: 519350577

SDS

ORC

A

GARDEN GROVE

D92841A

(1182)

2218507

Print Date : 06/15/12 17:55 PM

Package 1 of 1

Send Label To Printer | ☑ Print All | Edit Shipment | Finish

LABEL INSTRUCTIONS:

Do not copy or reprint this label for additional shipments - each package must have a unique barcode.

STEP 1 - Use the "Send Label to Printer" button on this page to print the shipping label on a laser or inkjet printer.

STEP 2 - Fold this page in half.

STEP 3 - Securely attach this label to your package, do not cover the barcode.

STEP 4 - Request an on-call pickup for your package, if you do not have scheduled daily pickup service or Drop-off your package at the nearest GSO drop box. Locate nearest GSO dropbox locations using this link.

ADDITIONAL OPTIONS:

Send Label Via Email | Create Return Label

TERMS AND CONDITIONS:

By giving us your shipment to deliver, you agree to all the service terms and conditions described in this section.
Our liability for loss or damage to any package is limited to your actual damages or $100 whichever is less, unless you pay for and declare a higher authorized value. If you declare a higher value and pay the additional charge, our liability will be the lesser of your declared value or the actual value of your loss or damage. In any event, we will not be liable for any damage, whether direct, incidental, special or consequential, in excess of the declared value of a shipment whether or not we had knowledge that such damage might be incurred including but not limited to loss of income or profit. We will not be liable for your acts or omissions, including but not limited to improper or insufficient packaging, securing, marking or addressing. Also, we will not be liable if you or the recipient violates any of the terms of our agreement. We will not be liable for loss, damage or delay caused by events we cannot control, including but not limited to acts of God, perils of the air, weather conditions, act of public enemies, war, strikes, or civil commotion. The highest declared value for our GSO Priority Letter or GSO Priority Package is $500. For other shipments the highest declared value is $10,000 unless your package contains items of "extraordinary value", in which case the highest declared value we allow is $500. Items of "extraordinary value" include, but or not limited to, artwork, jewelry, furs, precious metals, tickets, negotiable instruments and other items with intrinsic value.

Calscience Environmental Laboratories, Inc.

WORK ORDER #: 12-06-1182

SAMPLE RECEIPT FORM

Cooler 1 of 1

CLIENT: Pacific EcoRisk

DATE: 06/16/12

TEMPERATURE: Thermometer ID: SC2 (Criteria: 0.0 °C – 6.0 °C, not frozen)

Temperature -3.7 °C - 0.3 °C (CF) = -4.0 °C ☐ Blank ☑ Sample

☐ Sample(s) outside temperature criteria (PM/APM contacted by: _____).

☐ Sample(s) outside temperature criteria but received on ice/chilled on same day of sampling.

☐ **Received at ambient temperature, placed on ice for transport by Courier.**

Ambient Temperature: ☐ Air ☐ Filter Initial: TN

CUSTODY SEALS INTACT:

☑ Cooler ☐_____ ☐ No (Not Intact) ☐ Not Present ☐ N/A Initial: TN

☐ Sample ☐_____ ☐ No (Not Intact) ☑ Not Present Initial: [illegible]

SAMPLE CONDITION:	Yes	No	N/A
Chain-Of-Custody (COC) document(s) received with samples	☑	☐	☐
COC document(s) received complete	☑	☐	☐
☐ Collection date/time, matrix, and/or # of containers logged in based on sample labels.			
☐ No analysis requested. ☐ Not relinquished. ☐ No date/time relinquished.			
Sampler's name indicated on COC	☐	☐	☑
Sample container label(s) consistent with COC	☐	☑	☐
Sample container(s) intact and good condition	☑	☐	☐
Proper containers and sufficient volume for analyses requested	☑	☐	☐
Analyses received within holding time	☑	☐	☐
pH / Res. Chlorine / Diss. Sulfide / Diss. Oxygen received within 24 hours	☐	☐	☑
Proper preservation noted on COC or sample container	☐	☐	☑
☐ Unpreserved vials received for Volatiles analysis			
Volatile analysis container(s) free of headspace	☐	☐	☑
Tedlar bag(s) free of condensation	☐	☐	☑

CONTAINER TYPE:

Solid: ☐4ozCGJ ☐8ozCGJ ☑16ozCGJ ☐Sleeve (_____) ☐EnCores® ☐TerraCores® ☑ Z

Water: ☐VOA ☐VOAh ☐VOAna_2 ☐125AGB ☐125AGBh ☐125AGBp ☐1AGB ☐1AGBna_2 ☐1AGBs ☐500AGB ☐500AGJ ☐500AGJs ☐250AGB ☐250CGB ☐250CGBs ☐1PB ☐1PBna ☐500PB ☐250PB ☐250PBn ☐125PB ☐125PBznna ☐100PJ ☐100PJna_2 ☐_____ ☐_____ ☐_____

Air: ☐Tedlar® ☐Summa® **Other:** ☐_____ **Trip Blank Lot#:**_____ **Labeled/Checked by:** [illegible]

Container: C: Clear A: Amber P: Plastic G: Glass J: Jar B: Bottle Z: Ziploc/Resealable Bag E: Envelope **Reviewed by:** WLC

Preservative: h: HCL n: HNO_3 na_2: $Na_2S_2O_3$ na: NaOH p: H_3PO_4 s: H_2SO_4 u: Ultra-pure znna: $ZnAc_2$+NaOH f: Filtered **Scanned by:** WLC

Calscience Environmental Laboratories, Inc.

WORK ORDER #: 12-06-1182

SAMPLE ANOMALY FORM

SAMPLES - CONTAINERS & LABELS:

- ☐ **Sample(s) NOT RECEIVED but listed on COC**
- ☐ **Sample(s) received but NOT LISTED on COC**
- ☐ **Holding time expired** – list sample ID(s) and test
- ☐ **Insufficient quantities for analysis** – list test
- ☐ **Improper container(s) used** – list test
- ☐ **Improper preservative used** – list test
- ☐ **No preservative noted on COC or label** – list test & notify lab
- ☐ **Sample labels illegible** – note test/container type
- ☑ **Sample label(s) do not match COC** – Note in comments
  - ☑ **Sample ID**
  - ☐ **Date and/or Time Collected**
  - ☐ **Project Information**
  - ☐ **# of Container(s)**
  - ☐ **Analysis**
- ☐ **Sample container(s) compromised** – Note in comments
  - ☐ **Water present in sample container**
  - ☐ **Broken**
- ☐ **Sample container(s) not labeled**
- ☐ **Air sample container(s) compromised** – Note in comments
  - ☐ **Flat**
  - ☐ **Very low in volume**
  - ☐ **Leaking (Not transferred - duplicate bag submitted)**
  - ☐ **Leaking (transferred into Calscience Tedlar® Bag*)**
  - ☐ **Leaking (transferred into Client's Tedlar® Bag*)**
- ☐ **Other:** _____

Comments:

(-1) to (-7) all Jar labeled as "LRT-xx-xx, date and time match., but "LRTC"-xx-xx per coc.

HEADSPACE – Containers with Bubble > 6mm or ¼ inch:

Sample #	Container ID(s)	# of Vials Received	Sample #	Container ID(s)	# of Vials Received	Sample #	Container ID(s)	# of Cont. received	Analysis

Comments: _____

*Transferred at Client's request.

Initial / Date: WS 06/16/12