



## FINAL CLEANUP AND ABATEMENT COMPLETION REPORT SAN DIEGO SHIPYARD SEDIMENT SITE – SOUTH SHIPYARD

### **On behalf of**

National Steel and Shipbuilding Company

San Diego Bay Environmental Restoration Fund – South

### **Prepared by**

Anchor QEA, LLC

27201 Puerta Real, Suite 350

Mission Viejo, California 92691

**June 2014**

---

## TABLE OF CONTENTS

EXECUTIVE SUMMARY .....	ES-1
<b>1 INTRODUCTION .....</b>	<b>1</b>
1.1 Purpose and Organization of this Report .....	1
1.2 Summary of Cleanup and Abatement Completion Report Required by the CAO .....	2
1.3 Duty to Use Registered Professional .....	3
1.3.1 Statement of Qualifications.....	3
<b>2 SITE DESCRIPTION AND BACKGROUND .....</b>	<b>4</b>
<b>3 REMEDIAL ACTION OBJECTIVES .....</b>	<b>5</b>
<b>4 REMEDIAL DESIGN .....</b>	<b>6</b>
4.1 General Approach .....	6
4.2 Dredge Design .....	6
4.3 Sand Cover Design .....	8
<b>5 SUMMARY OF REMEDIAL ACTION.....</b>	<b>10</b>
5.1 Preparation and Use of the Sediment Management Area.....	10
5.2 Site Mobilization and Preparation Activities .....	11
5.3 Debris Removal .....	11
5.4 Timber Pier Demolition.....	11
5.5 Contaminated Sediment Dredging.....	12
5.5.1 Methods of Dredging and Transport of Dredged Material .....	13
5.5.2 Type and Volume of Dredged Material.....	13
5.5.3 Post-Dredge Confirmatory Sampling.....	14
5.5.3.1 Sampling Procedures .....	14
5.5.3.2 Analytical Results and Response Actions .....	15
5.5.4 Sediment Processing.....	20
5.5.5 Transport and Disposal.....	21
5.6 Sand Cover Placement .....	21
5.6.1 Cover Material Source Approval .....	22
5.6.2 Methods of Cover Placement.....	23
5.6.3 Post-Sand Cover Placement Surveys.....	24

5.6.4	Cover Material Quantities.....	24
5.7	Demobilization and Site Restoration .....	25
<b>6</b>	<b>ENVIRONMENTAL PROTECTION AND MONITORING.....</b>	<b>26</b>
6.1	Water Quality Monitoring .....	26
6.1.1	Pre-Construction Monitoring.....	27
6.1.2	Manual Monitoring .....	27
6.1.3	Automated Water Quality Buoys .....	28
6.2	Water Quality Protection .....	28
6.3	SWPPP Monitoring .....	28
6.4	Dust and Odor Control .....	29
6.5	Discharge Monitoring.....	30
6.6	Biological and Environmental Monitoring.....	30
6.6.1	Pre-Construction Biological Monitoring .....	30
6.6.2	Contractor Training.....	31
6.6.3	Green Sea Turtle and Marine Mammal Monitoring .....	31
6.6.4	Special Status Bird Monitoring.....	31
6.6.5	Eelgrass Monitoring .....	32
<b>7</b>	<b>REGULATORY COMPLIANCE.....</b>	<b>34</b>
7.1	Obtained Permits .....	34
7.2	Reporting.....	35
7.3	Geotracker .....	36
<b>8</b>	<b>SUMMARY AND COMPLETION STATEMENT.....</b>	<b>37</b>
8.1	Completion Statement .....	39
<b>9</b>	<b>REFERENCES .....</b>	<b>40</b>

### List of Tables

Table 1	Cleanup Objectives Mandated by the CAO .....	5
Table 2	Dredging Completion Schedule .....	13
Table 3	SMU Dredge Volumes .....	14
Table 4	SMU Decision Making Matrix .....	16

---

Table 5	Cover Placement Completion Schedule .....	22
Table 6	SMU Cover Placement Quantities .....	25
Table 7	Reporting Required By Project Permits .....	35
Table 8	Remedial Quantity Comparison.....	37

### List of Figures

Figure 1	Site Map
Figure 2	Typical Sediment Scow Haul Route
Figure 3	Post-Dredge Confirmatory Sampling Locations
Figure 4	Baseline Water Quality Sampling Stations
Figure 5	General Layout of Water Quality Sampling Locations for SMU-1
Figure 6	General Layout of Water Quality Sampling Locations for SMU-2
Figure 7	General Layout of Water Quality Sampling Locations for SMU-3
Figure 8	General Layout of Water Quality Sampling Locations for SMU-4
Figure 9	Special Status Bird Monitoring Areas

### List of Appendices

Appendix A	As-Built Drawings
Appendix B	Post-Dredge Confirmatory Sampling Core Logs
Appendix C	Post-Dredge Confirmatory Sampling Analytical Results
Appendix D	Sand Cover Gradation and Analytical Information
Appendix E	Summary of Manual Water Quality Results
Appendix F	Discharge Monitoring Laboratory Results
Appendix G	Summary of Biological Monitoring Results
Appendix H	CAO-Mandated Electronic Reporting Submittals

---

## LIST OF ACRONYMS AND ABBREVIATIONS

µg/kg	microgram per kilogram
BMP	best management practices
BODM	Basis of Design Memorandum
CAO	Cleanup and Abatement Order No. R9-2012-0024
CDP	Coastal Development Permit
COC	contaminant of concern
EIR	Environmental Impact Report
EnviroMatrix	EnviroMatrix Analytical, Inc.
ERL	effects range low
HPAH	high-molecular weight polycyclic aromatic hydrocarbon
IP	Individual Permit
IUDP	Industrial User Discharge Permit
mg/kg	milligram per kilogram
MLLW	mean lower low water
MM	Mitigation Measure
MMRP	Mitigation Monitoring and Reporting Program
NASSCO	National Steel and Shipbuilding Company
NOI	Notice of Intent
NOT	Notice of Termination
NTU	Nephelometric Turbidity Unit
PCB	polychlorinated biphenyl
RAP	<i>Remedial Action Plan</i>
RES	R.E. Staite Engineering, Inc.
RMP	<i>Remedial Monitoring Plan</i>
SAP	<i>Sampling and Analysis Plan</i>
SCEMP	Southern California Eelgrass Mitigation Policy

Site	San Diego Shipyard Sediment Site
SMA	Sediment Management Area
SMARTS	Storm Water Multiple Application and Report Tracking System
SMU	Sediment Management Unit
South Trust	San Diego Bay Environmental Restoration Fund – South
SWAC	Surface Weighted Average Concentration
SWPPP	Stormwater Pollution Prevention Plan
TDI	Tierra Data, Inc.
USACE	U.S. Army Corps of Engineers
USEPA	U.S. Environmental Protection Agency
Water Board	San Diego Regional Water Quality Control Board
WDID	Waste Discharge Identification Number
WDR/WQC	Waste Discharge Requirements/Water Quality Certification

---

**CERTIFICATION STATEMENT**

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

T. Michael Chee

NASSCO



Signature

6/24/14

Date

---

## EXECUTIVE SUMMARY

This Final Cleanup and Abatement Completion Report documents and verifies completion of the South Shipyard portion of the San Diego Shipyard Sediment Site (Site) cleanup project in San Diego, California, as mandated by Cleanup and Abatement Order No. R9-2012-0024 (CAO; Water Board 2012a). This report provides a demonstration, based on sound technical analysis and field-collected data, that sediment quality cleanup levels stipulated by Directive A.2 of the CAO have been achieved at the South Shipyard portion of the Site. The North Shipyard portion of the Site, also mandated for cleanup under the CAO, is being implemented separately; thus, a separate North Shipyard Final Cleanup and Abatement Completion Report will need to be provided by the Dischargers responsible for the North Shipyard cleanup following the completion of that project.

Using existing data and pre-construction field investigations, removal of sediments exceeding chemical parameters stipulated in the CAO was accomplished to the degree feasible. Mechanical dredging was used to remove impacted sediments. Sediments that could not be feasibly dredged (i.e., due to risk of undermining slopes or existing structures) were covered with clean sand.

Following completion of dredging, sand cover material was placed over the entire remedial area to address residual sediment and promote natural recovery of the bottom surface.

Dredged material was transported via barge to the Sediment Management Area, located at the southeastern end of the shipyard (known as the S-Lane Parcel). All dredged material was stabilized with Portland cement to pass the paint filter test and was subsequently hauled to the Otay Landfill in Chula Vista for disposal. All water generated during dredging operations and site stormwater was collected, treated on site, and discharged to the City of San Diego sewer system. Water quality monitoring was performed during demolition, dredging, and cover placement activities.

Sediment was removed from four distinct dredging areas at the Site. Approximately 28,660 cubic yards of sediments were dredged from the Site, as determined through pre-construction and post-dredge bathymetric surveys. This volume was the result of the

presence of the native Bay Point Formation, in several areas, existing above the expected remedial depths, based on data collected prior to issuance of the CAO. Approximately 19,760 tons of sand cover material were placed.

The S-Lane Parcel has since been restored to conditions similar to those existing prior to the commencement of dredging operations.

This report fulfills CAO Directive C, which requires the Dischargers to submit a Final Cleanup and Abatement Completion Report within 90 days of completion of remediation. As of the date of this report, dredging and sand cover placement has been concluded at the South Shipyard portion of the Site and eelgrass restoration is ongoing. Long-term monitoring will commence 2 years after notification of completion is received from the San Diego Regional Water Quality Control Board.

---

## 1 INTRODUCTION

This Final Cleanup and Abatement Completion Report provides a demonstration, based on sound technical analysis and field-collected data, that the conditions of Directive A.2 of Cleanup and Abatement Order No. R9-2012-0024 (CAO; Water Board 2012a) have been achieved at the South Shipyard portion of the San Diego Shipyard Sediment Site (Site).

This report is submitted to the San Diego Regional Water Quality Control Board (Water Board) on behalf of National Steel and Shipbuilding Company (NASSCO) and the San Diego Bay Environmental Restoration Fund – South (South Trust). This report documents and verifies completion of the South Shipyard portion of the Site in compliance with the CAO and the approved Remedial Action Plan (RAP; Anchor QEA 2012), as further detailed in Section 1.1. In accordance with site permits, this report includes the following elements:

- As-built drawings for the remedial action (see Appendix A)
- Description of the remedial work activities performed (see Section 5)
- Summary of the sediment disposal and water discharge (see Sections 5.5.5 and 6.5, respectively)
- Documentation that the remediation was performed in accordance with the CAO, the RAP, and the project’s Technical Specifications (Anchor QEA 2013a) (see Section 8)

### 1.1 Purpose and Organization of this Report

This report documents the construction activities of the remediation of the South Shipyard portion of the Site and provides a demonstration that the cleanup levels stipulated in the CAO have been achieved.

Specifically, this report summarizes the following aspects of the project:

- Section 2 – Site Description and Background
- Section 3 – Remedial Action Objectives
- Section 4 – Remedial Design
- Section 5 – Summary of Remedial Action
- Section 6 – Environmental Protection and Monitoring
- Section 7 – Reporting

- Section 8 – Summary and Completion Statement
- Section 9 – References

This report also includes supporting data and information in a series of appendices, as follows:

- Appendix A – As-Built Drawings
- Appendix B – Post-Dredge Confirmatory Sampling Core Logs
- Appendix C – Post-Dredge Confirmatory Sampling Analytical Results
- Appendix D – Sand Cover Gradation and Analytical Information
- Appendix E – Summary of Manual Water Quality Results
- Appendix F – Discharge Monitoring Laboratory Results
- Appendix G – Summary of Biological Monitoring Results
- Appendix H – CAO Mandated Electronic Reporting Submittals

## **1.2 Summary of Cleanup and Abatement Completion Report Required by the CAO**

As stated above, this report is submitted to meet CAO Directive C of the CAO, which states:

*Final Cleanup and Abatement Completion Report. The Discharges shall submit a final Cleanup and Abatement Completion Report verifying completion of the RAP activities for the Shipyard Sediment Site within 90 days of completion of remediation. The report shall provide a demonstration, based on sound technical analysis, that sediment quality cleanup levels in Directive A.2 have been achieved.*

Section 5 of this report includes a summary of the remedial action and provides a sound technical analysis showing the conditions of Directive A.2 have been achieved. Remediation was completed on March 25, 2014, which was the final day of sand cover placement. This report is being submitted prior to or on June 24, 2014, thus meeting the requirement that this report be submitted within 90 days of completion of remediation.

### 1.3 Duty to Use Registered Professional

This report was prepared under the direction of qualified professionals in accordance with the California Business and Professions Code Sections 6735, 7835, and 7835.1.

Michael Whelan, P.E.		6/24/14
Project Engineer Anchor QEA, LLC	Signature	Date

#### 1.3.1 Statement of Qualifications

Anchor QEA, LLC, was the lead designer and on-site construction manager for this work and prepared this report. Anchor QEA is a leading environmental and engineering consulting company that specializes in projects with aquatic, shoreline, and water resource components. Anchor QEA is nationally recognized for coastal development, engineering, landscape architecture, dredging management, resource and regulatory agency permitting, water quality, habitat restoration, and construction management.

Anchor QEA's staff in California and across the United States includes environmental planners, scientists, landscape architects, and construction managers who apply their technical skills and creativity on a wide range of projects. The firm has offices on the West, East, and Gulf coasts as well as the Great Lakes and Alaska, including locations in Southern California and the Bay Area. They lead and support many high-profile local, regional, and national waterfront cleanup projects, including such recent regional examples as the Rhine Channel sediment cleanup in Newport Beach; IR Site 7 (West Basin), Pier G slip fill, and Middle Harbor slip fill at the Port of Long Beach; and the Port of Hueneme Confined Aquatic Disposal Facility in Port Hueneme.

---

## 2 SITE DESCRIPTION AND BACKGROUND

Discharges of wastes to San Diego Bay over time have resulted in the accumulation of elevated levels of pollutants above background conditions in marine sediments along the eastern shore of central San Diego Bay. This accumulation resulted in conditions identified by the Water Board as adversely impacting beneficial uses (i.e., aquatic life, aquatic-dependent wildlife, and human health).

The Water Board identified affected areas as waters adjacent to two adjoining, active shipyard facilities in San Diego Bay—the North Shipyard and the South Shipyard, together termed the Site. In March 2012, the Water Board issued a CAO for remediation of marine sediments containing elevated chemical concentrations within the Site.

The South Shipyard is leased and operated by NASSCO, a business unit of General Dynamics, and is a full-service ship construction, modification, repair, and maintenance facility that spans 126 acres of tidelands property (80 acres on land and 46 acres offshore). The South Shipyard serves the U.S. Navy and commercial customers, and shipyard activities have taken place at this location since the early 1900s, and NASSCO has operated the site since approximately 1960. Other discharges into the area include, among others, releases and operations from prior tenants at the Site, stormwater runoff from Municipal Separate Storm System sources (including Chollas Creek), treated and untreated sewage discharges from the City of San Diego, U.S. Navy operations and releases, and redistribution of contaminants in San Diego Bay.

Figure 1 depicts the location of the Site and the layout of the North and South Shipyards. The remedial footprint extends from the U.S. Bulkhead Line (shoreline) to San Diego Bay's main shipping channel to the west.

In October 2012, a RAP was developed and submitted in compliance with CAO Directive B.1 and described the process by which the cleanup of the Site was managed, designed, planned, implemented, and monitored in accordance with the CAO and consistent with the U.S. Environmental Protection Agency's (USEPA's) National Contingency Plan.

---

### 3 REMEDIAL ACTION OBJECTIVES

The cleanup objectives for the primary contaminants of concern (COCs) were stipulated by the Water Board in the CAO (Water Board 2013a). COCs with established cleanup levels include copper, mercury, high-molecular weight polycyclic aromatic hydrocarbons (HPAHs), total polychlorinated biphenyls (PCBs), and tributyltin. Cleanup objectives stipulated by the CAO are presented below in Table 1.

**Table 1**  
**Cleanup Objectives Mandated by the CAO**

Chemical	Units (dry weight)	Targeted Post-Remedial Dredge Area Concentrations	Estimated Post-Remedial SWAC	Post-Remedial Trigger Concentrations
Copper	mg/kg	121	159	185
Mercury	mg/kg	0.57	0.68	0.78
HPAH <sup>1</sup>	µg/kg	663	2,451	3,208
Total PCB Congeners <sup>2</sup>	µg/kg	84	194	253
Tributyltin	µg/kg	22	110	156

Notes:

Table taken from the CAO (Water Board 2012a).

1 HPAHs = sum of six PAHs: Fluoranthene, Perylene, Benzo(a)anthracene, Chrysene, Benzo(a)pyrene, and Dibenzo(a,h)anthracene.

2 Total PCBs Congeners = sum of 41 congeners: 18, 28, 37, 44, 49, 52, 66, 70, 74, 77, 81, 87, 99, 101, 105, 110, 114, 118, 119, 123, 126, 128, 138, 149, 151, 153, 156, 157, 158, 167, 168, 169, 170, 177, 180, 183, 187, 189, 194, 201, and 206.

µg/kg = micrograms per kilogram

mg/kg = milligrams per kilogram

SWAC = Surface Weighted Average Concentration

---

## 4 REMEDIAL DESIGN

### 4.1 General Approach

The general approach for the remedial action is detailed in the *Basis of Design Memorandum* (BODM; Anchor QEA 2013b). The overall goal of project design was to remove chemically impacted sediments (those exceeding CAO-mandated concentrations) to the degree economically and technologically feasible. The approach involved mechanically dredging impacted sediments within a defined remedial footprint, transporting dredged material to an upland Sediment Management Area (SMA), stabilizing sediment, offloading dewatered sediment to haul trucks for off-site disposal, and placing sand cover at underpier, sloped, and dredged areas as determined by the Engineer.

### 4.2 Dredge Design

The dredge design accounted for technical feasibility and site restrictions that had the potential to hinder the construction and sediment removal process and thus the achievement of cleanup objectives. Important design considerations included sediment properties, physical constraints, equipment selection, and dredging performance criteria. To create an orderly and systematic dredge plan for a Contractor's use, the remedial footprint was divided into separate units of dredging, termed Sediment Management Units (SMUs). The SMU boundaries and cut elevations were established after considering a variety of physical and chemical properties of the sediment and the layout the remedial footprint, as detailed in the BODM (Anchor QEA 2013b).

The horizontal boundaries of SMUs, provided in the BODM (Anchor QEA 2012b), were developed based on the remedial footprint for the Site (i.e., North and South Shipyard), site physical boundaries such as the shoreline and existing structures, site bathymetry, and the vertical delineation of existing site sediment data. In particular, results of sediment coring conducted during the pre-design investigation phase and the observed depth to refusal in apparent native soils informed the selection of dredging depths. Physical site boundaries such as shorelines, bulkheads, and existing structures were analyzed for structural stability of support piles and stability of slopes by examining the geotechnical properties of adjacent sediments.

Precautionary measures were integrated into the dredge design to maintain the stability of site marine structures during dredging in their vicinity. The dredge design involved analyzing the stability of the structures and slopes and determining specific offsets or pile exposure limits that should be maintained during dredging operations. To properly evaluate structures and slopes, a variety of analytical models and programs were used to determine factors of safety and acceptable removal limits. Triton Engineers provided additional analytical evaluations for these site structures. The BODM provides a detailed analysis of the structural stability of site structures (Anchor QEA 2013b).

The dredging volume for the South Shipyard was originally estimated as 52,600 cubic yards. This original estimated volume was a conservative estimate; as the calculation was based on the entire remedial boundaries prescribed in the RAP (Anchor QEA 2012) before additional field investigations and design work were conducted. This conservative estimated volume was appropriate for obtaining project permits to avoid the need for increased volumes and potential permit modifications later.

During the design process, this volume was refined based on the following information. These revisions resulted in a reduction in volume required to be dredged.

- Slope stability assessment to prescribe appropriate side slopes
- Structural offsets from bulkheads and other marine structures
- Areas within dredge prisms in which dredging was infeasible, such as areas in which concrete pads or marine railways exist in SMU-3
- Dredge depth modifications based on identification of non-impacted sediment within the allowable removable limits, which included a reduction in the required sediment removal in sub SMU-3F from -33 to -31 feet mean lower low water (MLLW) and in sub SMU-2A

As a result, the design-level volume estimation equated to a volume of 33,000 cubic yards of sediment removed. An allowable overdredge depth of 1 foot increased the predicted removal volume by approximately 5,800 cubic yards; therefore, increasing the maximum removal volume for the designed dredge prism to approximately 38,800 cubic yards. The South Trust contracted dredging at a fixed price for the removal of up to 52,600 cubic yards, though a lesser amount was anticipated based on the final design. The South Trust used the RAP

volume estimate to ensure that there were sufficient allowances in the contract to meet the remedial objective. A comparison between the CAO-mandated and actual remedial quantities is presented in Section 8.

### **4.3 Sand Cover Design**

Sediment removal from beneath the access pier in SMU-2 and other site marine structures was technically infeasible and would threaten the structural stability of these structures; therefore, an alternative remedial approach was required to achieve cleanup objectives as identified in the CAO (Water Board 2012a). To promote physical isolation and stabilize contaminated sediments under piers and overwater structures within the remedial footprint, a nominal (average) 12-inch-thick layer of sand cover, in a continuous and consistent layer without significant gaps in coverage or excessively high mounded areas, was targeted for placement on the surface of the existing sediment layer, as achieved by the specified placement of 6 tons per 100 square feet. Additionally, placement of cover on shoreline slopes where full removal of sediment threatened structural stability and placement of sand cover in open-water areas was subject to the discretion of the Engineer following dredging operations. Design and preparation of the Technical Specifications for sand cover material (as documented in Section 352026 – Cover Material Placement; Anchor QEA 2013a) was consistent with cover placement requirements, pertinent to design and placement, as required by Mitigation Monitoring and Reporting Program (MMRP) Mitigation Measures (MMs) 4.2.7 and 4.2.8 (Water Board 2012b).

Sand cover placement was specified for four distinct areas in the South Shipyard:

- Beneath the Approach Pier in SMU-2 and immediately adjacent areas
- On top of the marine extensions from the Building Ways 4 and adjacent areas
- On top of the marine extensions from the Building Ways 3 and adjacent areas
- In the continuous open-water area spanning SMU-3C, -3D, -3G, and -3F including the riprap protection adjacent to the concrete slabs within the remedial footprint

Two types of sand cover material were specified: sand material and gravelly sand material. The sand material (containing particles smaller than 0.375 inch in size) was used over relatively flat areas of dredge prisms, including the underpier portion of SMU-2 and around

the marine extensions in front of Building Ways 3 and 4. The gravelly sand cover (containing 25 to 50 percent larger than 0.75 inch in size) was used over sloping areas due to its higher internal friction angle and greater ability to remain positioned over sloping ground surfaces.

---

## 5 SUMMARY OF REMEDIAL ACTION

This section describes the remedial activities undertaken to address impacted sediments at the Site. The activities are listed in chronological order and include the following:

- Preparation and use of SMA
- Site mobilization and preparation activities
- Debris removal
- Timber pier demolition
- Contaminated sediment dredging
- Sand cover placement
- Demobilization and site restoration

Each step was a necessary part of accomplishing the overall project goal of achieving the requirements of Directive A.2 of the CAO.

### 5.1 Preparation and Use of the Sediment Management Area

Prior to construction, the S-Lane Parcel was identified as the SMA available to the Contractor for dredged material and debris offloading, dewatering, and sediment management; haul truck loading; water management; and related staging activities. The S-Lane Parcel is owned by the U.S. Navy and was leased to NASSCO prior to the start of the project to support shipbuilding operations. The lease was amended prior to remediation to allow the S-Lane Parcel to be used as the SMA. The SMA measured approximately 620 feet by 115 feet (approximately 1.6 acres) and is located on the north side of Chollas Creek. Prior to mobilization, all structures and materials were removed from the area. Landside access to the SMA was via East Harbor Drive, entering the NASSCO facility through Gate 2. Contractor vessels accessed the SMA from water along the adjacent seawall. Temporary access from the S-Lane Parcel to the seawall was obtained as part of the license agreement between the U.S. Navy and NASSCO. This temporary access area, measuring approximately 34 feet by 500 feet, was made available to the Contractor for offloading activities. Water depths within Chollas Creek adjacent to the 500-foot temporary access area at the S-Lane Parcel were between -12 and -20 feet MLLW.

## 5.2 Site Mobilization and Preparation Activities

The Contractor, R.E. Staite Engineering, Inc. (RES), began mobilizing to the Site in mid-September 2013. Initial mobilization involved establishing the sandbag perimeter berm and k-rail barriers at the SMA. Six 21,000-gallon Baker tanks were leased from Bradley Tanks, Inc., to process water generated during dredging operations, truck washing activities, and pooled stormwater within the SMA. Four additional Baker tanks were brought on site on November 7 to further accommodate water storage needs.

With the approval of the U.S. Navy and NASSCO's Security Department, a long-reach excavator was staged on crane mats waterside of the asphalt berm in the S-Lane Parcel. By staging the long-reach excavator in this location, the Contractor was able to establish an offloading point from where the operator could reach sediment in the material scows and load directly to haul trucks positioned in the SMA.

## 5.3 Debris Removal

A total of four debris targets were identified during the design phase through analysis of the side-scan sonar survey (EDS 2013). The Contractor elected to remove the identified debris targets using a dredging bucket during dredging operations.

In addition to the identified debris, incidental debris (i.e., debris incidental to dredging and not identified during the design phase) was removed from within the remedial footprint during dredging operations. Typically, removed debris consisted of wooden piles, ropes, cables, chains, rocks, and small (less than a 2-foot diameter) miscellaneous scrap metal objects. All debris, including identified and incidental, was stockpiled and hauled separately from the dredged material and was transported under a debris manifest to the Otay Landfill.

## 5.4 Timber Pier Demolition

The previously existing timber pier in SMU-1 was approximately 180 feet long and 18 feet wide and consisted of a timber deck supported by pairs of steel HP14 piles spaced at 30 feet on-center. Closer to the shoreline existed two concrete pedestals, which supported additional timber and steel rail piles. Due to the age, condition, and limited utility of the structure, it was determined that the demolition of the timber pier was an economically

feasible and preferable approach to the remedial efforts, because the pier would not need to be replaced. Demolition efforts were less costly and complicated than reinforcing the existing pier to allow for dredging adjacent to, and placement of cover beneath, the structure. The removal of additional sediment (as opposed to the prescribed sand cover) would further allow the Site to reach intended Surface Weighted Average Concentration (SWACs), as stipulated in the CAO.

Demolition of the timber pier commenced on November 3, 2013, and was completed on November 14 prior to the start of dredging operations in SMU-1. Prior to demolition, the Contractor verified that all existing utilities on the pier were disconnected. Once all utilities were verified to be disconnected, the Contractor cut the pier deck into several sections that were removed using the Contractor's crane. Following removal of the pier decking, all piles were removed using a vibratory hammer. Removed material was stockpiled on a flat-deck barge, which was subsequently transported to the RES yard for further breakdown and was then transported under a debris manifest to the Otay Landfill. The existing concrete pedestals remained in place as they provide additional structural stability to the adjacent revetment shoreline and did not impact dredging operations.

## **5.5 Contaminated Sediment Dredging**

Dredging operations commenced on September 30, 2013, in SMU-4 and concluded on January 24, 2014, in SMU-2 (North). Consistent with the dredge design and regulatory requirements, dredging was conducted to the extent feasible without destabilizing or undermining existing structures and shoreline features.

Dredging operations in SMU-2 were completed by dividing the area into two sections, defined as the areas north of the drydock access pier and south of the drydock access pier (termed SMU-2 [North] and SMU-2 [South]). A detailed summary of completion dates for each SMU (inclusive of first and second pass dredging, as applicable) are provided in Table 2.

**Table 2**  
**Dredging Completion Schedule**

<b>SMU</b>	<b>Start Date</b>	<b>Completion Date</b>
SMU-1	November 19, 2013	December 12, 2013
SMU-2 (North)	January 8, 2014	January 24, 2014
SMU-2 (South)	December 17, 2013	January 7, 2014
SMU-3	October 26, 2013	November 27, 2013
SMU-4	September 30, 2013	November 16, 2013

### **5.5.1 Methods of Dredging and Transport of Dredged Material**

Dredging operations were conducted using mechanical dredging methodology supported by two separate cable-arm dredging platforms. Sediment was dredged using two types of clamshell buckets. The majority of dredging was conducted with an environmental clamshell bucket, which was positioned using GPS software. In some cases, dense material or debris was encountered, and a 5-cubic yard standard clamshell bucket was necessary to remove the material.

The dredged material was placed in water-tight scows that were transferred to the SMA by tugboats for processing. Typical scow haul routes from SMUs to the unloading area in the SMA are presented on Figure 2. During dredging operations, a loaded sediment barge was transported to the SMA every 2 to 3 days, as necessary. Sediment processing is detailed in Section 5.7.

### **5.5.2 Type and Volume of Dredged Material**

Consistent with the findings from the pre-design field investigations, material dredged from the Site primarily consisted of fine-grained material and sand. Following completion of dredging in each SMU, a third-party bathymetric survey was conducted to confirm dredge depths and used to determine final dredge volumes. Based on results of the post-dredge confirmatory sampling (discussed in Section 5.6.3), and at the discretion of the Engineer, an additional dredging pass was required in targeted areas and a second subsequent third-party survey was conducted to confirm completion. Total removal volumes per SMU (including first and second pass dredging, as applicable) are presented in Table 3.

**Table 3**  
**SMU Dredge Volumes**

SMU	Number of Dredging Passes	Actual Volume Removed (cubic yards)
SMU-1	2	4,210
SMU-2 (North)	1	3,760
SMU-2 (South)	1	2,910
SMU-3	2	12,700
SMU-4	2	5,080
Total	---	28,660

### **5.5.3 Post-Dredge Confirmatory Sampling**

Following review of third-party post-dredge survey data and field observations, post-dredge confirmatory samples were collected to analyze for chemical constituents in the remaining sediment subgrade. These results were then used, in conjunction with other observations of the dredging process, to determine whether further dredging was warranted. The sampling and decision-making processes were completed consistent with Section 3 of the *Remedial Monitoring Plan* (RMP; Appendix C of Anchor QEA 2012).

#### **5.5.3.1 Sampling Procedures**

All samples collected during post-dredge confirmatory sampling were collected in accordance with applicable sections of the RMP and *Sampling and Analysis Plan* (SAP; Appendices C and D of Anchor QEA 2012). All sample collection and handling procedures, sample processing, and quality assurance and quality control procedures were implemented as described in applicable sections of the RMP and SAP. The sediment core logs for each SMU (first and second pass dredging, as applicable) are included in Appendix B. The post-dredge confirmatory sampling locations are presented in Figure 3.

### 5.5.3.2 *Analytical Results and Response Actions*

Sediment samples were analyzed by Calscience Environmental Laboratories, Inc., for COCs established in the RMP (Appendix C of Anchor QEA 2012) and were compared to the post-remedial dredge area concentrations shown in Table 3 of the RMP. The threshold for additional action (including additional sampling, additional dredging, and clean sand placement) in an SMU was a chemical concentration greater than 120 percent of the post-remedial dredge area concentration (also provided in Table 3 of the RMP). Such cases triggered an evaluation of potential remedial actions, as discussed in Section 3.5 of the RMP.

Summary tables and laboratory analytical results for each SMU (first and second pass dredging, as applicable) are included in Appendix C. These analytical results, the post-dredge bathymetry, and other observations made by the Engineer were used to provide a sound technical analysis showing the requirements of Directive A.2 have been achieved. Table 4 presents a decision making matrix for each SMU. In some cases, an evaluation of potential remedial actions was performed, and the infeasibility of performing additional dredging (due to hard subgrade and/or Bay Point formation) prompted the selection of clean sand cover material placement in the SMU.

**Table 4**  
**SMU Decision Making Matrix**

Dredging Depths	Analytical Threshold <sup>1</sup>	Final Resolution
<b>SMU-1</b>		
<p>First pass dredging was completed on November 26, 2013. As results of the third-party bathymetry survey indicated that dredging operations met or exceeded design depths in the majority of the floor of the SMU, first pass post-dredge confirmatory sampling was directed by the Engineer. Due to elevated analyte concentrations measured during the first pass post-dredge confirmatory sampling, a focused second pass of dredging was directed by the Engineer.</p> <p>Second pass dredging was completed on December 12, 2013, and included removing additional material along the northern limits of the SMU and a thin layer of sediment from the entire dredge prism. Following the completion of second pass dredging, second pass post-dredge confirmatory sampling was directed by the Engineer. The results of this sampling are discussed in the “Analytical Thresholds” Column.</p>	<p>Second pass post-dredge confirmatory sampling was conducted on December 13, 2013, at the locations presented in Figure 3. Results of these analyses are summarized in Appendix C (Location ID SMU-1) and showed no analyte concentrations greater than the threshold for additional action.</p>	<p>Dredging operations met or exceeded design depths in the majority of the SMU, and the results of second pass post-dredge confirmatory sampling showed no analyte concentrations greater than the threshold for additional action. Due to these factors, the Engineer deemed dredging in the SMU complete. Cover placement was directed by the Engineer over all dredged areas. The sediment quality objectives have been met for this area.</p>

Dredging Depths	Analytical Threshold <sup>1</sup>	Final Resolution
<b>SMU-2 (North)</b>		
<p>First pass dredging operations were completed on January 24, 2014. As results of the third-party bathymetry survey indicated that dredging operations met or exceeded design depths in the majority of the SMU, first pass post-dredge confirmatory sampling was directed by the Engineer. The results of this sampling are discussed in the “Analytical Thresholds” Column.</p>	<p>First pass post-dredge confirmatory sampling was conducted on January 25, 2014, at the locations presented in Figure 3. Results of these analyses are summarized in Appendix C (Location ID SMU-2A/B) and showed the majority of chemicals analyzed were below the threshold for additional action. A minor exceedance of the threshold for additional action was identified for total HPAHs in one composite sample.</p>	<p>Dredging operations met or exceeded design depths in the majority of the SMU, and a hard surface (likely Bay Point Formation) in certain areas of the SMU precluded additional dredging. Thus the Engineer concluded that continued dredging was inefficient and unnecessary, and dredging in the SMU was deemed complete. Due to a minor exceedance of the threshold for additional action of total HPAHs, additional remedial actions were evaluated, and cover placement was directed by the Engineer over all dredged areas to promote bay floor habitat. The sediment quality objectives have been met for this area.</p>
<b>SMU-2 (South)</b>		
<p>First pass dredging operations were completed on January 7, 2014. As results of the third-party bathymetry survey indicated that dredging operations met or exceeded design depths in the majority of the floor of the SMU, first pass post-dredge confirmatory sampling was directed by the Engineer. The results of this sampling are discussed in the “Analytical Thresholds” Column.</p>	<p>First pass post-dredge confirmatory sampling was conducted on January 8, 2014, at the locations presented in Figure 3. Results of these analyses are summarized in Appendix C (Location ID SMU-2C/D) and showed no analyte concentrations greater than the threshold for additional action.</p>	<p>Dredging operations met or exceeded design depths in the majority of the SMU, and the results of the first pass post-dredge confirmatory sampling showed no analyte concentrations greater than the threshold for additional action. Due to these factors, the Engineer deemed dredging in the SMU complete. Cover placement was directed by the Engineer over all dredged areas. The sediment quality objectives have been met for this area.</p>

Dredging Depths	Analytical Threshold <sup>1</sup>	Final Resolution
<b>SMU-3</b>		
<p>First pass dredging was completed on November 15, 2013. Though the results of the third-party bathymetry survey indicated that dredging operations did not meet design depths in the majority of the SMU, first pass post-dredge confirmatory sampling was directed by the Engineer due to minimal sediment recovery in the final bucket loads of the first dredging pass resulting from the likely encounter of Bay Point Formation above design depths. Due to a minor exceedance in the threshold for additional action during the first pass post-dredge confirmatory sampling, a second-pass of dredging was directed by the Engineer.</p> <p>Second pass dredging was completed on November 27, 2013, in targeted areas within the SMU. Minimal sediment was recovered in the final bucket loads in the majority of dredged areas during second pass dredging (due to hard dredging conditions caused by the likely encounter of the Bay Point Formation). The results of the first round of post-dredge confirmatory sampling are discussed in the “Analytical Thresholds” Column.</p>	<p>First pass post-dredge confirmatory sampling was conducted on November 21, 2013, at the locations presented in Figure 3. Results of these analyses are summarized in Appendix C (Location IDs SMU-3A, 3B/C, and 3D) and showed the majority of chemicals analyzed were below the threshold for additional action. A minor exceedance of the threshold for additional action was identified for total PCBs in one composite sample. Note that a minimal amount of additional material was removed during second pass dredging following collection of these samples.</p>	<p>A hard surface (likely Bay Point Formation) was encountered in certain areas of the SMU and precluded additional dredging (confirmed through second pass dredging operations). Thus the Engineer concluded that continued dredging was inefficient and unnecessary, and dredging in the SMU was deemed complete. Due to a minor exceedance of the threshold for additional action of total PCBs (noted in samples obtained prior to second pass dredging), additional remedial actions were evaluated, and a focused second pass of dredging followed by cover placement over all dredged areas was directed by the Engineer to promote bay floor habitat. The sediment quality objectives have been met for this area.</p>

Dredging Depths	Analytical Threshold <sup>1</sup>	Final Resolution
<b>SMU-4</b>		
<p>First pass dredging was completed on October 24, 2013. Though the results of the third-party bathymetry survey indicated that dredging operations did not meet design depths in the majority of the SMU, confirmatory sampling was directed by the Engineer due to minimal sediment recovery in the final bucket loads of the first dredging pass resulting from the likely encounter of Bay Point Formation above design depths. As one of the samples collected indicated a significant thickness of soft silt (non-native sediment), a targeted second-pass of dredging was directed prior to conducting analytical testing on the sample.</p> <p>Second pass dredging was completed on November 16, 2013, and included removing a thin layer of sediment in targeted areas. Minimal recovery was observed in the second pass dredging operations (due to hard dredging conditions caused by the likely encounter of the Bay Point Formation). After completion of second pass dredging operations, second pass post-dredge confirmatory sampling was directed by the Engineer. The results of this sampling are discussed in the "Analytical Thresholds" Column.</p>	<p>Second pass post-dredge confirmatory sampling was conducted on November 18, 2013, at the location presented in Figure 3 (note that no sample was collected at location SD-S-C-SMU4A-D due to refusal of the vibrocore during first pass post-dredge sampling). Results of these analyses are summarized in Appendix C (Location ID SMU-4) and showed the majority of chemicals analyzed were below the threshold for additional action. A minor exceedance of the threshold for additional action was identified for mercury in one discrete sample.</p>	<p>A hard surface (likely Bay Point Formation) was encountered at certain areas of the SMU and precluded additional dredging (confirmed through second pass dredging operations). Thus, the Engineer concluded that continued dredging was inefficient and unnecessary, and dredging in the SMU was deemed complete. Due to a minor exceedance of the threshold for additional action of mercury, additional remedial actions were evaluated, and cover placement was directed by the Engineer over all dredged areas to promote bay floor habitat. The sediment quality objectives have been met for this area.</p>

## Note:

1 The analytical thresholds for additional action are defined as 120 percent of the post-remedial dredge area analytical concentrations.

#### **5.5.4 Sediment Processing**

As material scows were filled throughout the course of dredging, they were transported to the SMA for stabilization, offloaded, and transported off site for disposal. As the scows arrived at the SMA, free water generated during dredging operations was present in varying quantities. This water was pumped to the on-site water treatment system in the SMA to facilitate the sediment dewatering process. The on-site water treatment system consisted of multiple 21,000-gallon Baker tanks. The first tank in the series was a weir tank with three separate chambers that allowed sediment in the pumped water to settle to the bottom of the tank while water entered the subsequent chambers by passing over weirs. Following the weir tanks, a series of storage (open chamber) tanks were used to hold the water for a pre-determined length of time to allow fine particles to settle. After a significant amount of settled sediment accumulated at a base of a tank, the settled sediment was pumped back into a scow adjacent to the SMA, which contained dredged sediment. The returned settled sediment was then amended with Portland cement along with the dredged material and was disposed of along with the dredged sediment (Section 5.5.5).

Finally, water was pumped to a final Baker tank from which a discharge pump was suspended approximately 3 feet from the bottom of tank. The discharge pump was connected to a City of San Diego sewer connection in accordance with the City of San Diego Industrial User Discharge Permit (IUDP; Permit Number 11-0563), which was issued on September 17, 2013, and terminated on April 15, 2014. Approximately 1,128,000 gallons of water were discharged during construction. As the discharge pump was suspended 3 feet from the bottom of the compliance baker tank, the final 3 feet of residual water and any settled fine particles within the tank were unable to be discharged into the City of San Diego sewer system. As a result of this setup configuration, the residual water and fine particles were vacuumed into a haul truck and hauled off site for upland disposal. The final cleanout of the compliance Baker tank was conducted on April 4, 2014, by North State Environmental and disposed of at Klean Waters, Inc.'s disposal facility in Orange County, California.

After the free water was pumped into the Baker tanks, sediment contained within the material scows was mixed with Portland cement at the SMA. Mixing was conducted by pouring cement directly into the bucket of the offloading excavator and then placing the

cement into the full scow. The cement was then mixed with the dredged material using the excavator bucket to rotate the material. Approximately 5 percent cement by weight was mixed into the barge depending on the composition of the dredged material (i.e., dense, sandier material required less cement for proper stabilization). Following a stabilization period, typically between 12 and 24 hours, a paint filter test (USEPA Method 9095B) was conducted by the Engineer to determine acceptability for transport. One passed paint filter test was required for each barge offloaded during construction. If the paint filter test failed, the Contractor was required to modify the material until the test could be passed, which occurred through further mixing and/or additional Portland cement. Once the material passed the paint filter test, the material was offloaded directly to covered haul trucks using the offloading long-reach excavator.

#### **5.5.5 Transport and Disposal**

Trucks loaded with dewatered and/or stabilized sediment (following the material passing the paint filter test) were used to transport dredged material from the SMA to the Otay Landfill for final disposal. Trucking operations began on October 19, 2013, and were conducted throughout dredging operations with the bulk of the dredged material being transported off site by the end of January 2014. Trucking operations were conducted 3 to 4 days per week, on average, between October 2013 and January 2014. Disposal trucking was conducted sporadically in February and March 2014 to dispose of the sediment from the last scow, sediment that had settled in the water management system tanks and sediment collected in the truck wash station area. The final load of sediment (one roll-off bin) was transported to the landfill on April 4, 2014.

### **5.6 Sand Cover Placement**

Prior to conducting cover placement, approval of the cover material was required by the Engineer and the U.S. Army Corps of Engineers (USACE) (discussed in Section 5.10.1). Cover placement commenced on February 10, 2014, in SMU-4 and concluded on March 25 in SMU-2 (North). Cover placement was conducted in accordance with the project's Technical Specifications and regulatory requirements. Placement limits included all dredged areas as directed by the Engineer and detailed in Section 5.5.4.2.

A detailed summary of completion dates for each SMU are provided in Table 5.

**Table 5**  
**Cover Placement Completion Schedule**

SMU	Start Date	Completion Date
SMU-1	March 20, 2014	March 24, 2014
SMU-2 (North)	March 13, 2014	March 25, 2014
SMU-2 (South)	February 20, 2014	March 19, 2014
SMU-3	February 25, 2014	March 22, 2014
SMU-4	February 10, 2014	February 19, 2014

### 5.6.1 Cover Material Source Approval

All cover placement material was provided by the Vulcan Materials Company's Chula Vista plant at 2041 Heritage Road. Vulcan Materials Company provided both the 3/8 inches minus sand cover and the 4 inches minus gravelly sand cover material. Both materials were mined from aggregate pits, with crushing required for the gravelly material, and both materials underwent screening and washing as necessary to achieve the desired physical gradations. Materials were then stockpiled in preparation for loading and hauling to the Site.

The following sand cover gradation documentation is provided in Appendix D:

- Gradation of material used as sand cover, which was washed concrete sand with minimal fines (i.e., 2.6 percent) from Vulcan Materials Company
- Gradation of material used as the gravelly sand cover, which was a gravel cover material with minimal fines (i.e., 1.1 percent) from Vulcan Materials Company
- Sand cover material chemical analysis completed by EnviroMatrix Analytical, Inc. (EnviroMatrix)
- Gravelly sand cover material chemical analysis completed by EnviroMatrix

As per the project's Technical Specifications, the Contractor submitted samples and analytical testing results for both materials for approval prior to any material being transported to the Site. Based on review of chemical and physical data, the two submitted materials were approved and confirmed by the Engineer. Analytical results were compared

to the effects range low (ERLs) limits set forth in published technical documents (Long et al. 1995) and were evaluated according to the Technical Specifications (Anchor QEA 2013a). Reporting or detection limits were met for all analytes except hexachlorobutadiene, which was not detected in the cover material above 7.09 micrograms per kilogram ( $\mu\text{g}/\text{kg}$ ). Dimethyl phthalate was detected in the gravel material slightly above the target reporting limit of 36  $\mu\text{g}/\text{kg}$ , at 42.3  $\mu\text{g}/\text{kg}$ .

Concentrations measured for both compounds are below the target detection limits recommended by USEPA (1995), representing “not less than 10 times lower than available regional or international dredged material guidelines for potential biological effects associated with sediment chemical contamination.” Accordingly, the Engineer approved the materials for use at the Site. Approval for use of the materials at the Site was also received from the USACE on February 3, 2014, via email communication (Smith 2014).

### **5.6.2 Methods of Cover Placement**

Cover placement were conducted using three distinct operations: 1) the RES Palomar crane barge equipped with a 24-cubic yard slip box; 2) the RES 180 crane barge equipped with a 10-cubic yard slip box; and 3) a telescoping conveyor-belt system mounted to a floating platform.

The two slip box operations were conducted by placing the slip box onto the material barge and loading the box to a pre-determined fill line using a piece of loading equipment (which consisted of a loader, mini-excavator, or skid steer based on the material barge being used). Once full, the boxes were lifted into position using the crane and GPS software to determine location. The boxes were then tilted to open the box side gate to a pre-determined fixed height (approximately 6 to 12 inches). Prior to the start of in-water cover placement operations, mock-ups were conducted on land, which were overseen by the Engineer to verify the capability of the equipment to achieve a consistent cover material thickness suitable for in-water placement. The two slip box operations were used for all open-water placement areas.

The underpier placement assembly consisted of a telescoping conveyor belt mounted on to a floating, flat-deck barge. The conveyor belt was fed continuously from a 22-cubic yard hopper that was loaded by a mini-excavator operating from the material barge. An operator positioned on the conveyor-belt barge remotely controlled the telescoping belt to extend/retract and move laterally beneath the pile-supported pier structure. Similar to the slip-box operations discussed above, a mock-up was conducted on land in that the Engineer verified the capability of the equipment to achieve a consistent cover material thickness.

### **5.6.3 Post-Sand Cover Placement Surveys**

Following completion of cover placement in a particular SMU, a third-party survey was conducted to determine the placement thicknesses and compliance with requirements of the project's Technical Specifications by comparing the survey with the third-party post-dredge survey. In the event that significant gaps or incomplete coverage was identified, and/or if the calculated average placement thickness of the placement footprint was less than 12 inches, the Contractor was provided targeted placement zones by the Engineer and additional placement was performed. An additional third-party survey was conducted in the event that additional placement of targeted areas was necessary. The final post-sand cover surveys are presented in the as-built drawings (Appendix A).

### **5.6.4 Cover Material Quantities**

Throughout placement, material delivery weigh tickets were collected and tabulated to verify that the proper amount of sand cover had been delivered to the Site. Weigh tickets, field observations, and survey analysis were used to verify the required quantity of material had been placed in the underpier and open-water areas in appropriate thicknesses and without significant gaps. Table 6 provides the design and estimated placed tonnages for each SMU (including both sand and gravelly sand cover materials).

**Table 6**  
**SMU Cover Placement Quantities**

<b>SMU</b>	<b>Design Cover Placement (tons)</b>	<b>Estimated Cover Placement (tons)</b>
SMU-1	1,180	1,800
SMU-2 (North)	1,490	1,900
SMU-2 (Underpier)	1,420	2,000
SMU-2 (South)	630	800
SMU-3	7,310	10,460
SMU-4	2,350	2,800
Total	14,380	19,760

### **5.7 Demobilization and Site Restoration**

Demobilization efforts began near the completion of cover placement operations in late March 2014. The site inspection to determine substantial completion was conducted at the Site on March 31, and a punchlist of actions was issued to the Contractor on March 31. Final completion of the required punchlist actions was completed by the Contractor on April 15.

---

## 6 ENVIRONMENTAL PROTECTION AND MONITORING

Monitoring conducted as part of this project is described below.

### 6.1 Water Quality Monitoring

Water quality monitoring was conducted during dredging and cover placement in accordance with the approved RAP (Anchor QEA 2012). Water quality monitoring was conducted via automated water quality buoys (Section 6.1.3) and was supplemented by a manual monitoring program. Prior to dredging operations, baseline water quality monitoring was conducted, as discussed in Section 6.1.1. The monitoring stations used for manual water monitoring are described below:

- **Compliance Stations.** Four compliance stations were located 500 feet from the construction area. Two compliance stations were located on the north and south sides of the 500-foot compliance arc at approximately the same distance from shore as the construction activity. Two additional compliance stations (Compliance Station Offshore, North and Compliance Station Offshore, South) were located on the north and south sides of the 500-foot compliance arc offshore from the construction activity.
- **Early Warning Stations.** Two early warning stations were located 250 feet from the construction area. The north and south early warning stations were spaced evenly along the north and south sides of the 250-foot early warning arc. The early warning stations were used to alert the Contractor of potential water quality impacts at the construction work area and to adjust dredging operations or best management practices (BMPs) before an exceedance occurred at the compliance station.
- **Background Station.** The background station was located 1,000 feet from the remedial footprint (located in the vicinity of the Coronado Bridge) in the direction of the head of the bay and beyond the influence of dredging operations. The background station was monitored during every event, because the turbidity criterion is based on an acceptably small increase in the vicinity of the construction activity relative to ambient background levels.

Water quality measurements were taken at a depth of 10 feet below the water surface at each of the stations.

### **6.1.1 Pre-Construction Monitoring**

Prior to the start of dredging operations, pre-construction manual water quality measurements were taken to provide a baseline for the upcoming water quality events. The pre-construction monitoring was performed on September 27, 2013, at the background station and 10 locations spatially distributed throughout the Site (Figure 4). A summary of the baseline monitoring results are included in Appendix E.

### **6.1.2 Manual Monitoring**

Manual water quality (i.e., turbidity, dissolved oxygen, and pH) monitoring was performed on a daily basis at the initiation of dredging and cover placement. All water quality parameter measurements were monitored on two arcs (at the locations discussed in Section 6.1) at a depth of 10 feet below water. Two early warning and four compliance stations were spaced evenly along the arcs to capture all tidal and current conditions, as shown on Figures 5 through 8. In accordance with Section 34.1.1 of the Technical Report (Water Board 2012c), sampling was reduced to weekly as no water quality exceedances were observed after 3 consecutive days of monitoring during both intensive events. Temperature, water depth, and visual indicators were also recorded at each sampling station.

Throughout the duration of construction, one apparent turbidity exceedance was recorded but was subsequently judged to be a false reading based on all other evidence. On January 21, 2014, turbidity concentrations at one early warning station and compliance station were more than 20 percent greater than the reference, indicating a potential water quality issue. Visual evidence was evaluated in which no discoloration, turbidity, or surface pollution was observed. In addition, dredging BMPs were found to be working properly, including the double silt curtain. No damage, discoloration, or gaps were observed. Due to the visual evidence observed, it was concluded that dredging operations were not the cause of the apparent turbidity exceedance.

A summary of the monitoring results is included in Appendix E.

### **6.1.3 Automated Water Quality Buoys**

Consistent with MM 4.2.1 of the MMRP (Water Board 2012b), turbidity and other water quality conditions (dissolved oxygen and pH) were monitored using an automatic system throughout dredging and cover placement. Automated turbidity monitoring buoys were installed by Tierra Data, Inc. (TDI) at strategic locations at the Site to monitor turbidity. Three buoys were installed: two early warning stations positioned approximately 300 feet from the limits of the dredging operations and a background station positioned outside of the remedial footprint, approximately 800 yards from dredging operations. The early warning station measurements were continuously compared to the readings at the background station to determine a relative increase in turbidity near dredging operations. In the event that one of the early warning stations recorded a turbidity measurement in excess of 5 Nephelometric Turbidity Units (NTUs) above the background station, an early warning alert was sent to the project team via text message. One early warning notification (on October 17, 2013) was recorded during dredging and cover placement. On that occasion, dredging operations were slowed until the early warning station measurements were within limits. TDI performed regular maintenance of the buoys and data-loggers to verify the systems were performing properly. Turbidity readings were logged and available real-time throughout construction and subsequently archived.

## **6.2 Water Quality Protection**

Throughout dredging and cover placement operations, silt curtains were used to localize the effects of resuspended sediment. A double silt curtain configuration was used at all times during dredging operations. The double silt curtain configuration typically consisted of a larger, outer silt curtain encompassing the entire SMU and a localized inner silt curtain encompassing an approximate 200-foot radius of the active dredging. Each silt curtain included an oil boom component contained within the silt curtain, which floated on the water surface. Silt curtains were weighted and positioned by the Contractor using anchors, marine structures, and shoreline tie-off locations.

## **6.3 SWPPP Monitoring**

A Stormwater Pollution Prevention Plan (SWPPP, Padre Associates 2013) was developed for the Site to effectively control stormwater runoff to San Diego Bay. SWPPP inspections were

typically conducted weekly during construction, with additional inspections being conducted before, during (every 24 hours), and after each rain event (rainfall greater than 0.5 inch as measured by the on-site rain gauge). Inspections were conducted to ensure that all runoff controls were properly maintained, and any repairs or adjustments to the BMPs were immediately discussed with the Contractor. In addition, discharge into the City of San Diego sewer system was not allowed during rain events (measured through the San Diego Airport weather station as opposed to the on-site rain gauge) due to the City of San Diego's stormwater capacity.

The Annual Report and Notice of Termination (NOT) were submitted into the Storm Water Multiple Application and Report Tracking System (SMARTS) following the substantial demobilization of the contractor from the SMA. Compliance with the SWPPP was documented in the Annual Report, which was submitted to the Water Board on April 16, 2014. The NOT was submitted on April 17, in which approval was received from the Water Board on April 24, thus discontinuing the Site's Waste Discharge Identification Number (WDID). The SWPPP and inspection forms will be maintained on site for a period of 3 years following the approval of the NOT.

#### **6.4 Dust and Odor Control**

Trucks loaded with sediment were subject to cleaning prior to departure from the Site to avoid material being tracked out of the SMA. The truck washing operation consisted of a raised washing platform filled with 3- to 5-inch aggregate, underlain by a series of liners and geotextiles. Loaded trucks drove on to the platform and were then washed by two crew members using pressure washers. Sediment and water generated during the washing procedure was contained on the liner and confined by a sandbag perimeter berm. Wash water was collected and pumped to the on-site water treatment system described in Section 5.7.

Throughout the course of dredging and cover placement operations, general maintenance of the SMA area was conducted to manage accumulation of dust, sediment, and/or sand material. A vacuum truck and bobcat with a sweeper attachment were used by the

Contractor throughout construction, as necessary. Additionally, the Contractor occasionally used a third-party street sweeper to clean the SMA and surrounding areas.

## **6.5 Discharge Monitoring**

Sampling of the water treatment system was conducted in accordance with the IUDP, which included an allowable discharge rate between 50 and 250 gallons per minute pumped from a height of 3 feet above the bottom of the compliance tank. The water treatment system is described in detail in Section 5.6 above. In general, discharge sampling was conducted monthly, with discharge samples analyzed for chemical oxygen demand and total suspended solids. Additional parameters were measured quarterly, including copper, lead, nickel, zinc, arsenic, mercury, and PCBs. Results of all discharge monitoring events are included in Appendix F.

## **6.6 Biological and Environmental Monitoring**

Biological monitoring was conducted during dredging and cover placement to comply with the MMRP (Water Board 2012b), USACE Individual Permit (IP; USACE 2013), and the Waste Discharge Requirements/Water Quality Certification (WDR/WQC; Water Board 2013a). Specifically, monitoring included training of the Contractor's crew on eelgrass avoidance and sea turtles, marine mammals, and special status bird life and observing, documenting, and reporting the presence and behaviors of these species.

### **6.6.1 Pre-Construction Biological Monitoring**

Per MM 4.5.9, a pre-construction biological monitoring event was conducted prior to commencing dredging operations. The project biologist performed pre-construction monitoring for the presence and behavior of California least tern (*Sternula antillarum browni*) and other special status birds. This monitoring included a monitoring event performed on September 29, 2013, prior to the start of dredging on September 30. The monitoring event was dedicated specifically to observing (via binoculars) the Site for special status birds. Observations were conducted within monitoring areas as identified on Figure 9, which correspond to approximately 500 feet surrounding the anticipated dredging operations. No California least terns or other special status birds were observed during pre-

construction monitoring. Results of the pre-construction biological monitoring are provided in Appendix G.

### **6.6.2 Contractor Training**

Per MMs 4.5.3 and 4.5.6 and WDR/WQC Discharge Requirement VI-C, the project biologist trained the Contractor's crew to identify potential sea turtles, marine mammals, and special status birds, such as California least tern. This training was conducted periodically with project staff, typically on a monthly basis. Training included identifying characteristics of species with the potential to be present at the Site and providing instructions on how to contact the project biologist if these species were observed. Additional information was given regarding eelgrass protection when work occurred in these areas.

### **6.6.3 Green Sea Turtle and Marine Mammal Monitoring**

Per MM 4.5.5, WDR/WQC Section V-N.10, WDR/WQC VI-C, and USACE IP Essential Fish Habitat and Green Sea Turtle Condition 1, barges and work vessels were operated in a manner to ensure that green sea turtles (*Chelonia mydas*) and marine mammals were not injured or harassed through excessive vessel speed or propeller damage. No green sea turtles were sighted during dredging operations. Minimal marine animal activity was observed at the Site, which consisted of observing a harbor seal (*Phoca vitulina*) on two occasions. On January 31, 2014, the harbor seal was not within the work area and no action was taken. On March 8, work was stopped for approximately 30 minutes until the harbor seal left the immediate work area (over 100 meters), at which point work was resumed (in accordance with MM 4.5.7 and WDR/WQC VI-C).

### **6.6.4 Special Status Bird Monitoring**

Special status bird species are defined herein as those that are federally listed (endangered, threatened, or proposed endangered or threatened or candidate) under the Endangered Species Act or classified with special status in the State of California (endangered, threatened, rare, candidate endangered or threatened; species of special concern; or special animal; Water Board 2012b).

In accordance with MM 4.5.9, WDR/WQC VI-B, and USACE IP Endangered Species Act Condition 1, a qualified biologist familiar with the California least tern and other special status seabirds and waterfowl was on site to assess the roosting and foraging behavior of special status seabirds and waterfowl at the Site and the staging area. In addition, all dredging, disposal, and cover placement occurred outside the California least tern breeding season (April 1 through September 1).

Daily and weekly monitoring was performed (in the areas identified on Figure 9) to document observations of special status bird species while performing other project duties. Daily monitoring began at the start of dredging on September 29, 2013, and was suspended on November 9 as the observations determined that the dredging operations were not adversely affecting the special status birds (in accordance with MM 4.5.9). Weekly monitoring was conducted through the end of construction. Various special status birds were observed during the daily and weekly monitoring, which included the California brown pelican (*Pelecanus occidentalis*), osprey (*Pandio haliaetus*), and the double-crested cormorant (*Phalacrocorax auritus*), in which no disturbance occurred during the project. Results of the weekly biological monitoring are provided in Appendix G.

### **6.6.5 Eelgrass Monitoring**

Per MM 4.5.4, the project biologist inspected and confirmed that protective measures were implemented for eelgrass when project-related barges and work vessels were operating in areas where eelgrass beds exist. In addition, the project biologist inspected and confirmed that all operations were conducted in a manner to minimize the potential impacts to eelgrass beds through grounding, propeller damage, or other activities that may have disturbed the seafloor.

To effectively implement the remedial design in SMU-2, eelgrass was disturbed during dredging and cover placement. The post-construction eelgrass survey was conducted on April 2, 2014, to investigate any impacts to eelgrass and the potential need for mitigation. Based on differences between the pre-construction and post-construction eelgrass surveys, and after considering the activities undertaken and physical evidence of work conducted in the area, it was concluded that the remediation work resulted in a loss of 15 square meters of

eelgrass. Given the small area of eelgrass impact and the conditions developed following the remedial cleanup actions, it was recommended that eelgrass restoration be conducted through use of bareroot eelgrass planting unit restoration methods. Based on the 1.2:1 eelgrass replacement ratio outlined in the Southern California Eelgrass Mitigation Policy (SCEMP), 18 square meters of eelgrass habitat was recommended to be planted as mitigation impacted by the remedial cleanup actions (Merkel & Associates 2014). Based on these recommendations, a Letter of Approval to transplant eelgrass has been requested and received from the California Department of Fish and Wildlife. Transplant of eelgrass was conducted on June 9, 2014. A separate submittal detailing results of the eelgrass transplant will be provided to the Water Board under separate cover.

---

## 7 REGULATORY COMPLIANCE

### 7.1 Obtained Permits

Several state and federal permits and approvals were received prior to the implementation of the remedial action, which included the following:

- **California Environmental Quality Act.** The Water Board certified the Final Program Environmental Impact Report (EIR; Water Board 2012d) on March 14, 2012, in which all work complied with the preferred alternative selected. An addendum to the EIR was issued by the Water Board on June 27, 2013 (Water Board 2013b), which addressed changes to the project since the previous issuance of the EIR. Changes included identifying the S-Lane Parcel as the SMA and increasing the overall dredging volume (for both the North and South Shipyards).
- **USACE IP.** USACE IP (SPL-2013-00147-RRS) was issued by the USACE on September 13, 2013.
- **Unified Port of San Diego Coastal Development Permit (CDP).** The CDP (CDP-2013-07) was issued by the Unified Port of San Diego on August 1, 2013.
- **IUDP.** The IUDP (Industry Number 11-0563) was issued by the City of San Diego on September 17, 2013.
- **California State Lands Commission Dredging Lease.** The fully executed dredging lease (Lease PRC 9076.9) was issued by the California State Lands Commission on August 5, 2013.
- **State Water Resources Control Board General Permit to Discharge Storm Water Associated with Construction Activity.** A WDID number (9 37C367613) was received on September 05, 2013, after the submittal of the Notice of Intent (NOI). The SWPPP was submitted as part of the NOI.
- **Water Board WQC/WDR/WQC.** The final version of the WDR/WQC was issued by the Water Board on July 10, 2013.

All work was completed in accordance with the requirements of the above permits, and permit closeout requirements are in process of being fulfilled at the date of this document.

## 7.2 Reporting

A significant amount of reporting was required by the project permits discussed in Section 7.1. These reporting requirements are detailed in Table 7.

**Table 7**  
**Reporting Required By Project Permits**

Required Reporting	Regulatory Reference	Frequency
<b>CAO</b>		
Final Cleanup and Abatement Completion Report	CAO Directive C	One time following project completion
Quarterly Progress Reports	CAO Directive E	Quarterly
<b>Mitigation Monitoring and Reporting Program</b>		
Weekly Water Quality Monitoring Report	MM 4.2.4	Weekly
Monthly Biological and Environmental Monitoring Report <sup>1</sup>	MM 4.5.3 MM 4.5.4 MM 4.5.5 MM 4.5.6	Monthly
Annual Report into SMARTS	MM 4.2.12	Annually
Notice of Termination into SMARTS	MM 4.2.12	One time following final stabilization of SMA
Pre-Construction Eelgrass/Caulerpa Survey	MM 4.5.1 WDR/WQC VI.A WDR/WQC VII C Special Condition 5	One time prior to construction
Post-Construction Eelgrass Survey	MM 4.5.1 WDR/WQC VI A	One time following project completion
Final Eelgrass Mitigation Plan	MM 4.5.1 WDR/WQC VI A	One time following project completion
<b>USACE IP</b>		
Weekly Biological and Environmental Monitoring Report	Dredging Condition 16	Weekly
Monthly Biological and Environmental Monitoring Report <sup>1</sup>	Endangered Species Act Condition 1	Monthly
Pre- and Post-project Eelgrass Survey	Special Condition 6	One time following project completion

Required Reporting	Regulatory Reference	Frequency
Essential Fish Habitat Mitigation Plan <sup>2</sup>	Special Condition 7	One time following USACE direction
Post-Project Implementation and Dredging Completion Memorandum	Special Condition 1 Dredging Condition 18	One time following project completion
Structure Survey	Special Condition 11	One time following project completion
<b>WDR/WQC</b>		
Monthly Water Quality Monitoring Report	VIII A	Monthly
Compensatory Mitigation Completion Report <sup>3</sup>	VIII B	One time following eelgrass planting
MMRP Verification Report	VIII E	One time following construction
<b>IUDP</b>		
Monthly Industrial User Discharge Report	Attachment B	Monthly
Quarterly Industrial User Discharge Report	Attachment B	Quarterly
<b>California States Lands Commission Dredging Lease</b>		
Dredging Report <sup>4</sup>	Dredging Lease	Annually

## Notes:

All the above reports were completed and submitted as required by regulatory documents.

- 1 Monthly Biological and Environmental Monitoring Reports were submitted to both the Water Board and the USACE. The monthly and weekly reports were combined for the final monitoring report for each month.
- 2 The Essential Fish Habitat Mitigation Plan has not been requested by the USACE.
- 3 The Compensatory Mitigation Completion Report has not been submitted at the date of this report and will be submitted following the completion of eelgrass planting in accordance with Post-Project Eelgrass Survey.
- 4 The Dredging Report includes the Final Cleanup and Abatement Completion Report and the Lessee's Yearly Report of Operations.

### 7.3 Geotracker

In addition to the reporting listed above, Directive G.10 the CAO listed the electronic and paper media reporting requirements, which detailed how submittals to the Water Board must be conducted. As part of these requirements, Provision G.10(b) describes various electronic data submittal requirements for the project that must be submitted into the Water Board's Geotracker database. Appendix H includes a summary of the provisions and a list of documents and/or data submitted to the Water Board's Geotracker database.

## 8 SUMMARY AND COMPLETION STATEMENT

As presented in Section 3, the cleanup objectives for the primary COCs were stipulated by the Water Board in the CAO, which include established cleanup levels for copper, mercury, HPAHs, PCBs, and tributyltin. As documented in this report, remedial action at the South Shipyard portion of the Site achieved the required CAO remedial goals and was conducted in accordance with all CAO requirements. The North Shipyard portion of the Site will be remediated separately, and a separate Final Cleanup and Abatement Completion Report will be compiled following its completion. Table 8 provides a comparison between remedial quantities prescribed in Attachment 4 of the CAO and actual remedial quantities achieved.

**Table 8**  
**Remedial Quantity Comparison**

Remedial Quantity	CAO-Mandated Quantity	Actual Achieved Quantity	Discussion
Dredge remedial area (square feet)	217,800	162,085	Area of entire dredge area, including side slopes, from design plans, after accounting for final design setbacks from existing slopes and structures. Areas that could not be dredged due to presence of existing structures were covered with sand cover.
Designated cover placement for protection of existing structures (square feet) <sup>1</sup>	N/A	67,375	Specified areas for cover placement in open-water areas, required to maintain stability of existing slopes, structures, and bulkheads.
Under pier remedial area (square feet)	13,725	10,440	SMU-2 (Underpier) only. Timber pier was removed in SMU-1, allowing for dredging to take place in that underpier area.
Total remedial area (square feet)	231,495	239,900	Total remedial footprint for dredging, cover placement, or a combination of the two.
Volume (cubic yards)	52,600	28,660	Actual dredge volumes generated during construction. Volumes were reduced by final design setbacks from existing slopes and structures, and by incidence of native materials (Bay Point formation) encountered at shallower depths than expected in several areas, confirmed by post-dredge sampling.

Remedial Quantity	CAO-Mandated Quantity	Actual Achieved Quantity	Discussion
Total Maximum Daily Load area (square feet)	218,060	N/A	Total Maximum Daily Load area refers to the remedial footprint per the CAO, consistent with the construction work achieved.

## Notes:

1 Not specifically quantified in CAO

N/A = Not Applicable

The remedial action for the project consisted of mechanically removing approximately 28,660 cubic yards of material from a dredging footprint measuring approximately 162,085 square feet in area. The excavated dredge prism was designed to remove impacted sediment located at the Site. The dredged material was stabilized at the SMA with Portland cement and transported via truck to the Otay Landfill where it was disposed.

Approximately 1,128,000 gallons of water were treated on site over the course of the project, using multiple Baker tanks to allow the suspended sediment to settle, and then eventually discharged into the City of San Diego sewer system.

To protect newly exposed sediment at the base of the dredge prism, as well as cover potentially contaminated sediments that were unable to be dredged (alongside slopes and underpier in SMU-2), 19,760 tons of cover material were placed, including 11,890 tons of sand and 7,870 tons of gravelly sand. The resulting cover placement resulted in an average of over 1 foot of sand cover overlying the remedial footprint.

The Site has since been restored to conditions similar to those existing prior to commencement of dredging-related activities.

Post-remedial monitoring will be conducted in accordance with the submitted *Post-Remedial Monitoring Plan* (Exponent 2012), which was designed to verify that the remaining pollutant concentrations in the sediment will not unreasonable affect San Diego Bay beneficial uses. Post-remedial monitoring will be conducted 2 and 5 years after the completion of remediation to confirm the Year 2 and Year 5 remedial goals are met. If the Year 5 remedial goals are not met, additional testing will be conducted in Year 10. As such,

confirmation that the remedial action objectives were made will be provided under a separate cover after completion of post-remedial monitoring.

### 8.1 Completion Statement

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and believe, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

To the best of my knowledge, information and belief, based on observation of the work during and upon completion of construction by myself or the Resident Engineer under my supervision, the San Diego Shipyard Sediment Site – South Shipyard construction was completed in general conformance with the contract and permit documents and the project objectives as described in this Final Cleanup and Abatement Completion Report.

David Templeton		6/24/14
Project Manager Anchor QEA, LLC	Signature	Date

---

## 9 REFERENCES

- Anchor QEA, L.P., 2012. *Remedial Action Plan*. San Diego Shipyard Sediment Site. October 2012.
- Anchor QEA, 2013a. Technical Specifications. San Diego Shipyard Sediment Site – North South Shipyard. July 2013. Revised September 2013.
- Anchor QEA, 2013b. *Basis of Design Memorandum*. San Diego Shipyard Sediment Site – North South Shipyard. August 2013.
- Environmental Data Solutions, 2013. NASSCO Shipyards Sidescan Sonar Target Identification. April 10-12, 2013.
- Exponent, 2012. Work Plan for the San Diego Shipyards Post-Remedial Monitoring. Cleanup and Abatement Order No. R9-2012-024. September 2012.
- Long, E.R., D.D. MacDonald, S.L. Smith, and F.D. Calder, 1995. Incidence of adverse biological effects within ranges of chemical concentrations in marine and estuarine sediments. *Environmental Management* 19(1):81-97
- Merkel & Associates, Inc., 2014. *Post-Construction Eelgrass Report for the San Diego Shipyard Sediment Matter – Cleanup and Abatement Order No. R9-2012-0024 South Shipyard Sediment Cleanup Project*. April 15, 2014.
- Padre Associates, Inc., 2013. *Storm Water Pollution Prevention Plan*. San Diego Shipyard Sediment Remediation Project S-Lane Sediment Management Area, Risk Level 1. September 2013.
- Smith, R., 2014. Regarding: Sand Cover Material Specification (San Diego Shipyard Sediment Site). Email to M. Whelan, Anchor QEA, LLC. February 3, 2014.
- USACE (U.S. Army Corps of Engineers), 2013. Department of the Army Permit, File No. SPL-2013-00147-RRS. Issued on September 13, 2013.
- USEPA (U.S. Environmental Protection Agency), 1995. QA/QC Guidance for Sampling and Analysis of Sediments, Water, and Tissues for Dredged Material Evaluations - Chemical Evaluations. USEPA-823-B 95 001.
- Water Board (San Diego Regional Water Quality Control Board), 2012a. Cleanup and Abatement Order R9-2012-0024 for the Shipyard Sediment Site. March 14, 2012.

Water Board, 2012b. Final Environmental Impact Report. March 14, 2012.

Water Board, 2012c. Technical Report for Cleanup and Abatement Order No. R9-2012-0024 for the Shipyard Sediment Site. March 14, 2012.

Water Board, 2012d. *Final Environmental Impact Report*. March 14, 2012.

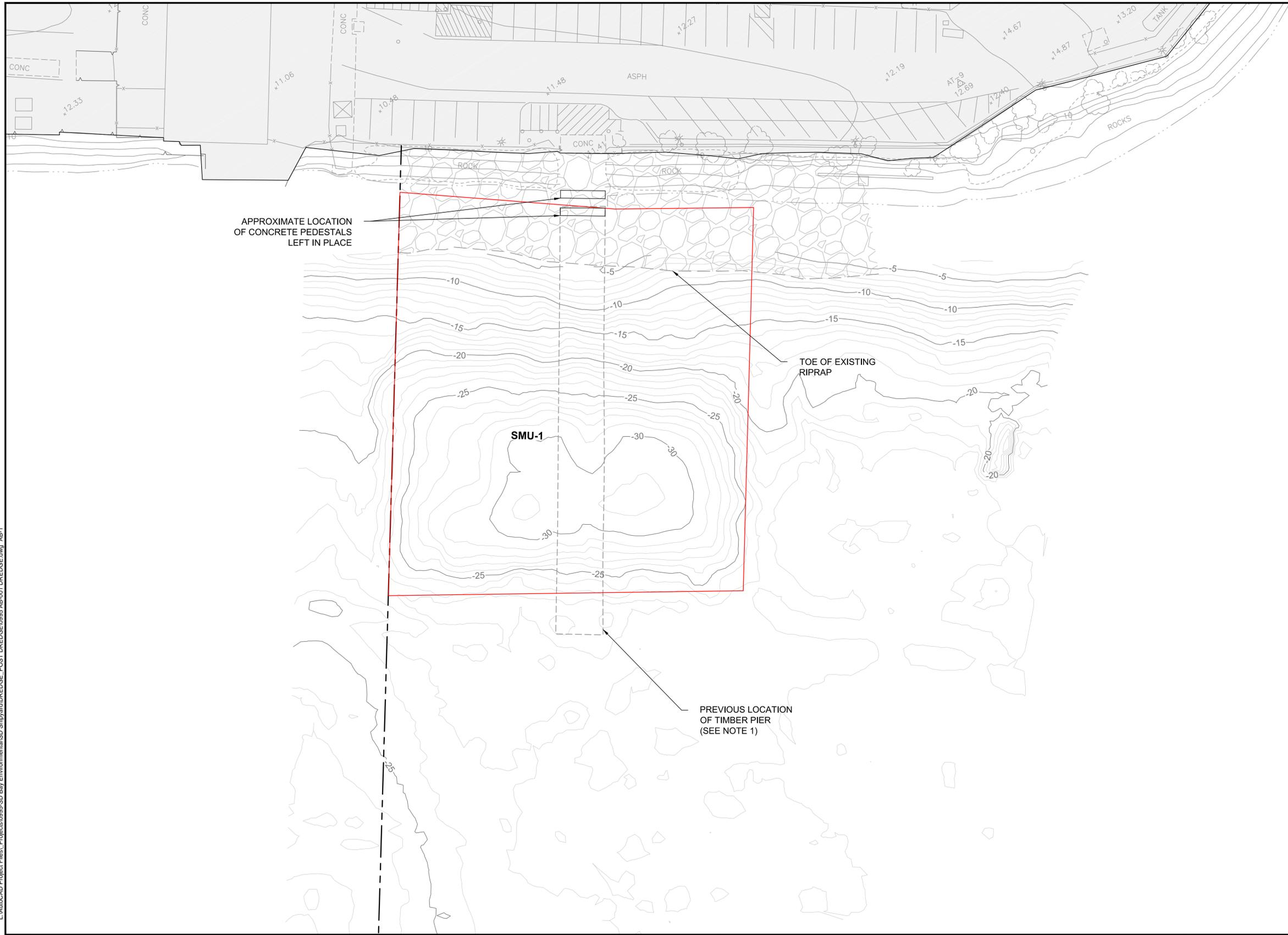
Water Board, 2013a. Waste Discharge Requirements for National Steel and Shipbuilding Company, BAE Systems San Diego Ship Repair, Inc., San Diego Unified Port District. Order No. R9-2013-0093. San Diego Shipyard Sediment Remediation, San Diego Bay, San Diego, California. Issued on July 10, 2013.

Water Board, 2013b. San Diego Shipyard Sediment Remediation Project, Addendum to the Final Program Environmental Impact Report Related to Project Changes Identified in Tentative Order No. R9-2013-0093. June 27, 2013.

APPENDIX A  
AS-BUILT DRAWINGS

---

L:\AutoCAD Project Files\Projects\0995-SD Bay Environmental\SD Shipyard\DREDGE\_POST DREDGE\0995-AB-001 DREDGE.dwg, AB-1  
 May 20, 2014 4:35pm mpratschner



APPROXIMATE LOCATION  
OF CONCRETE PEDESTALS  
LEFT IN PLACE

TOE OF EXISTING  
RIPRAP

PREVIOUS LOCATION  
OF TIMBER PIER  
(SEE NOTE 1)

**NOTES:**

1. TIMBER PIER DEMOLISHED FOR REMEDIAL DREDGING ACCESS.
2. BATHYMETRY FROM SURVEY PERFORMED BY GAHAGAN & BRYANT ASSOCIATES, INC., ON MARCH 25, 2014.

**LEGEND:**

- SMU BOUNDARY
- 40— EXISTING MAJOR CONTOUR (5' INTERVAL)
- 38— EXISTING MINOR CONTOUR (1' INTERVAL)
- - - LEASE HOLD LINE
- EXISTING RIPRAP (APPROXIMATE LIMITS)



**PROJECT DATUMS:**

1. HORIZONTAL DATUM: CALIFORNIA STATE PLANE, ZONE 6, NAD 83, U.S. FEET.
2. IN WATER VERTICAL DATUM: MEAN LOWER LOW WATER (MLLW).
3. UPLAND VERTICAL DATUM: MLLW

ONE INCH  
 AT FULL SIZE, IF NOT ONE  
 INCH SCALE ACCORDINGLY



REVISIONS				
REV	DATE	BY	APP'D	DESCRIPTION

DRAWN BY: M PRATSCHNER  
 CHECKED BY: M WHELAN  
 APPROVED BY: J VERDUIN  
 SCALE: AS INDICATED  
 DATE: APRIL 15, 2014

**SEDIMENT REMEDIAL ACTION  
AT SOUTH SHIPYARD**

**AS-BUILT CONDITIONS (1)**

**AB-1**

SHEET NO. 1 OF 4

L:\AutoCAD Project Files\Projects\095-SD Bay Environmental\SD Shipyard\DREDGE POST DREDGE\095-AB-001 DREDGE.dwg AB-2

Apr 24, 2014 12:20pm mpratschner



**NOTE:**  
 1. BATHYMETRY FROM SURVEYS PERFORMED BY GAHAGAN & BRYANT ASSOCIATES, INC., ON FEBRUARY 27 AND MARCH 25, 2014.

- LEGEND:**
- SMU BOUNDARY
  - -40— EXISTING MAJOR CONTOUR (5' INTERVAL)
  - -38— EXISTING MINOR CONTOUR (1' INTERVAL)
  - - - RELOCATED UNDERWATER PIPE
  - MARINE STRUCTURE
  - EXISTING RIPRAP (APPROXIMATE LIMITS)



- PROJECT DATUMS:**
1. HORIZONTAL DATUM: CALIFORNIA STATE PLANE, ZONE 6, NAD 83, U.S. FEET.
  2. IN WATER VERTICAL DATUM: MEAN LOWER LOW WATER (MLLW).
  3. UPLAND VERTICAL DATUM: MLLW

ONE INCH  
 AT FULL SIZE; IF NOT ONE  
 INCH SCALE ACCORDINGLY



REVISIONS				
REV	DATE	BY	APP'D	DESCRIPTION

DRAWN BY: M PRATSCNER  
 CHECKED BY: M WHELAN  
 APPROVED BY: J VERDUIN  
 SCALE: AS INDICATED  
 DATE: APRIL 15, 2014

**SEDIMENT REMEDIAL ACTION  
 AT SOUTH SHIPYARD**

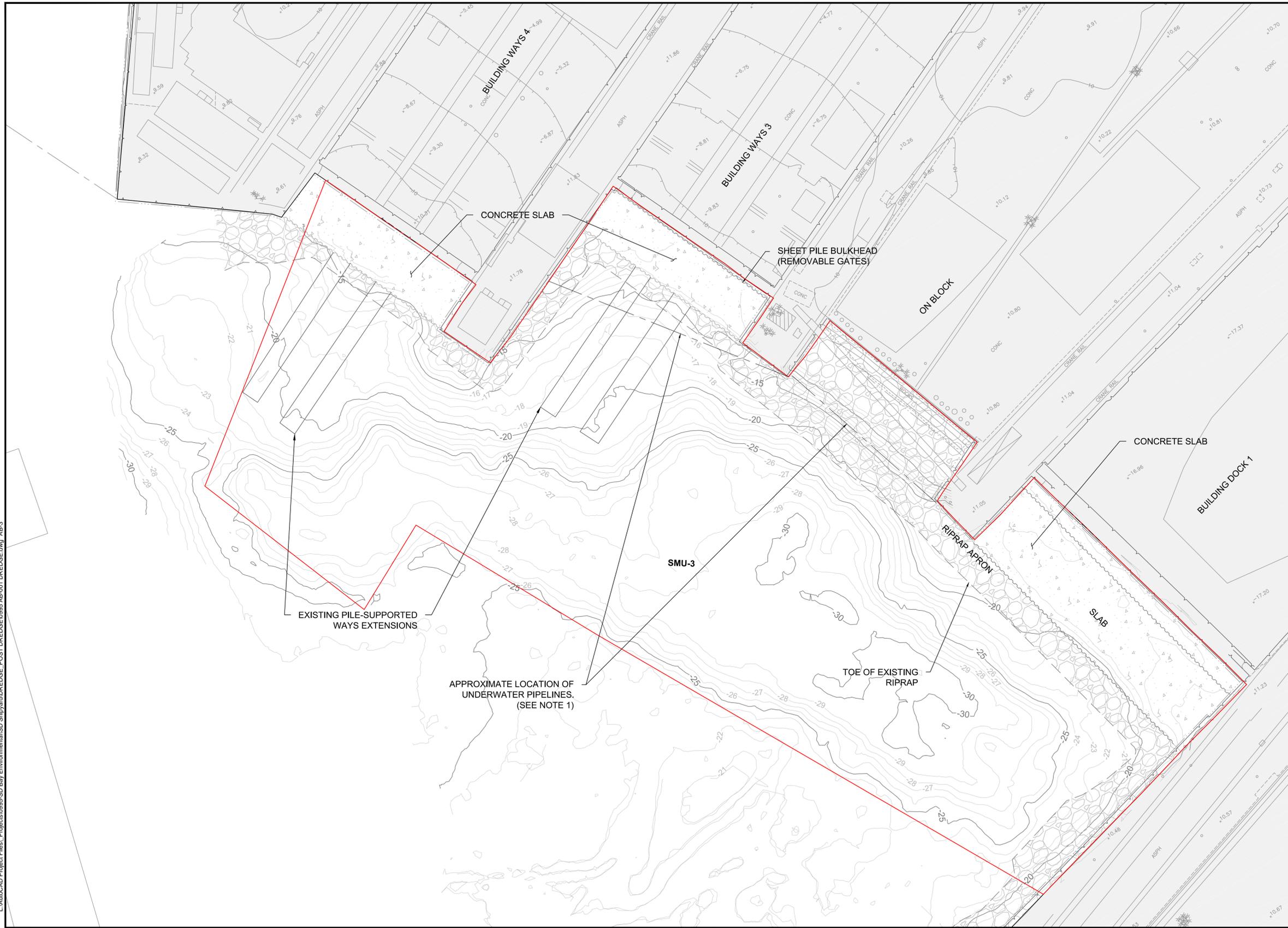
**AS-BUILT CONDITIONS (2)**

**AB-2**

SHEET NO. 2 OF 4

L:\AutoCAD Project Files\Projects\0995-SD Bay Environmental\SD Shipyard\REDGE\_POST DREDGE\0995 AB-001 DREDGE.dwg AB-3

Apr 24, 2014 12:30pm mpratschner



**NOTES:**

1. RELOCATION OF UNDERWATER PIPELINE IN SMU-3 WAS NOT REQUIRED FOR REMEDIAL DREDGING.
2. BATHYMETRY FROM SURVEY PERFORMED BY GAHAGAN & BRYANT ASSOCIATES, INC., ON MARCH 24, 2014.

**LEGEND:**

- SMU BOUNDARY
- -40— EXISTING MAJOR CONTOUR (5' INTERVAL)
- -38— EXISTING MINOR CONTOUR (1' INTERVAL)
- - - EXISTING UNDERWATER PIPE
- EXISTING RIPRAP (APPROXIMATE LIMITS)



**PROJECT DATUMS:**

1. HORIZONTAL DATUM: CALIFORNIA STATE PLANE, ZONE 6, NAD 83, U.S. FEET.
2. IN WATER VERTICAL DATUM: MEAN LOWER LOW WATER (MLLW).
3. UPLAND VERTICAL DATUM: MLLW

ONE INCH  
AT FULL SIZE; IF NOT ONE  
INCH SCALE ACCORDINGLY



REVISIONS				
REV	DATE	BY	APP'D	DESCRIPTION

DRAWN BY: M PRATSCNER  
 CHECKED BY: M WHELAN  
 APPROVED BY: J VERDUIN  
 SCALE: AS INDICATED  
 DATE: APRIL 15, 2014

**SEDIMENT REMEDIAL ACTION  
AT SOUTH SHIPYARD**

**AS-BUILT CONDITIONS (3)**

**AB-3**

SHEET NO. 3 OF 4



APPENDIX B  
POST-DREDGE CONFIRMATORY  
SAMPLING CORE LOGS

---

**Project Number:** 1315100800  
**Project Manager:** Barry Snyder  
**Logged and Sampled By:** KB/KG  
**Sample Type:** Vibracore  
**Date:** 12/13/2013 **Time:** 10:55

**Latitude:** 32°41.398  
**Longitude:** -117°08.562  
**Project Depth (ft MLLW):** -31.5 to -32.0  
**Mudline Elevation (ft MLLW):** -31.5

Depth (CM)	Lithology	Sediment Description	Color	Munsell Color Notation	Odor	Remarks
0		Sandy Silt	Very Dark Greenish-gray	Gley I 10Y 3/1	Strong Hydrocarbon	Shell hash Core is mostly unconsolidated
5						
10		Silty Sand with Clay	Olive Brown	2.5Y 4/3	Less Hydrocarbon	Core is more consolidated
15		Fine grained Sand				
20						
25						
30						
35						
40						
45						
50						
55						
60						
65						
70						
75						
80						Refusal at 80cm
85						
90						
95						
100						

**Water Depth (ft):** 33.1    **Target Penetration (cm):** 35.0  
**Tide (ft):** 1.56    **Actual Penetration (cm):** 80.0  
**Recovered Core Length (cm):** 80.0

**Log of Station ID:** SD-S-C-SMU1A-D-Attempt 1

**Additional Notes:** Inside toe line verified with most recent shapefiles & real time monitoring, GPS precalibrated to points on shore (corners of land), depth verified using leadline.

**Project Number:** 1315100800  
**Project Manager:** Barry Snyder  
**Logged and Sampled By:** KG/KB  
**Sample Type:** Vibracore  
**Date:** 12/13/2013 **Time:** 11:35

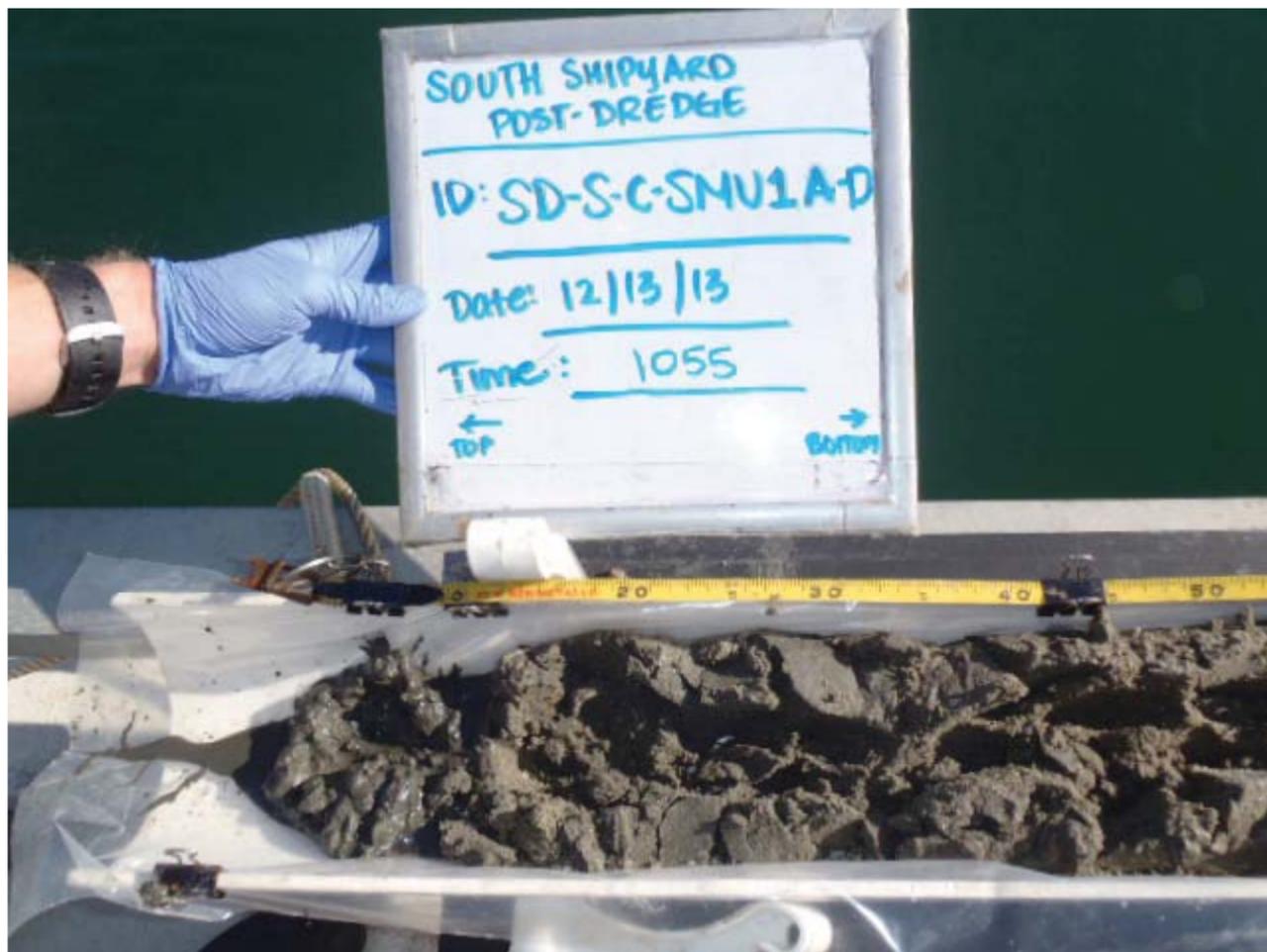
**Latitude:** 32°41.391  
**Longitude:** -117°08.5616  
**Project Depth (ft MLLW):** -31.5 to 32.0'  
**Mudline Elevation (ft MLLW):** -32.5

Depth (CM)	Lithology	Sediment Description	Color	Munsell Color Notation	Odor	Remarks
0		Fine grained Sand	Olive Brown	2.5Y 4/3	None	Core is consolidated Looks clean/native No odors
5						
10						
15						
20						
25						
30						
35						
40						
45						
50						
55						
60						
65						
70						
75						
80						Refusal at 80cm
85						
90						
95						
100						

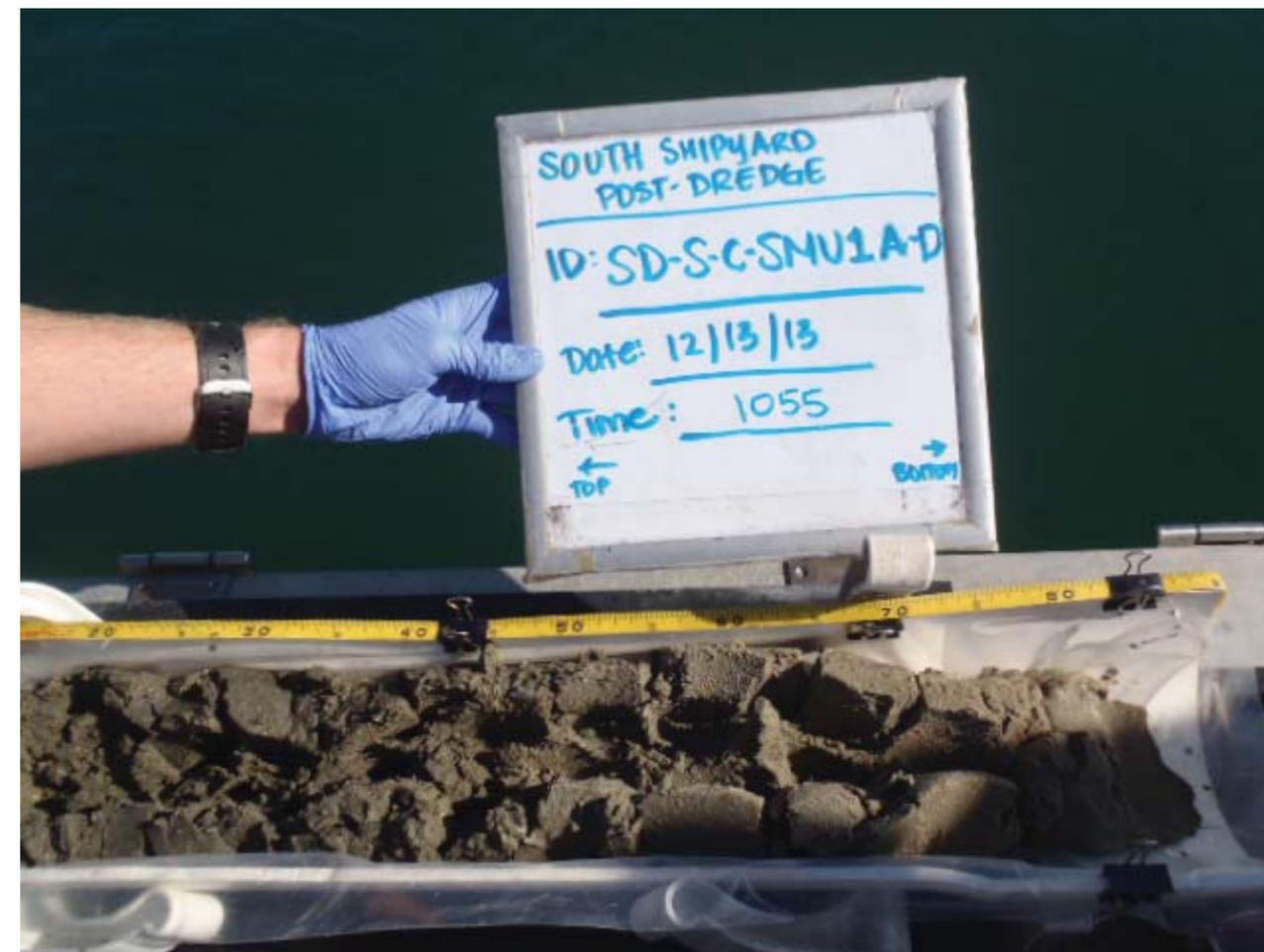
**Water Depth (ft):** 33.3    **Target Penetration (cm):** 35.0  
**Tide (ft):** 0.74    **Actual Penetration (cm):** 80.0  
**Recovered Core Length (cm):** 80.0

**Log of Station ID:** SD-S-C-SMU1B-D-Attempt 1

**Additional Notes:** Inside toe line verified with most recent shapefiles & real time monitoring, GPS precalibrated to points on shore (corners of land), depth verified using leadline.



Location: South Shipyard - San Diego Bay  
Sample ID: SD-S-C-SMU1A-D  
Core Length: 0 - 50 cm.  
Sample Date & Time: 12/13/2013 1055



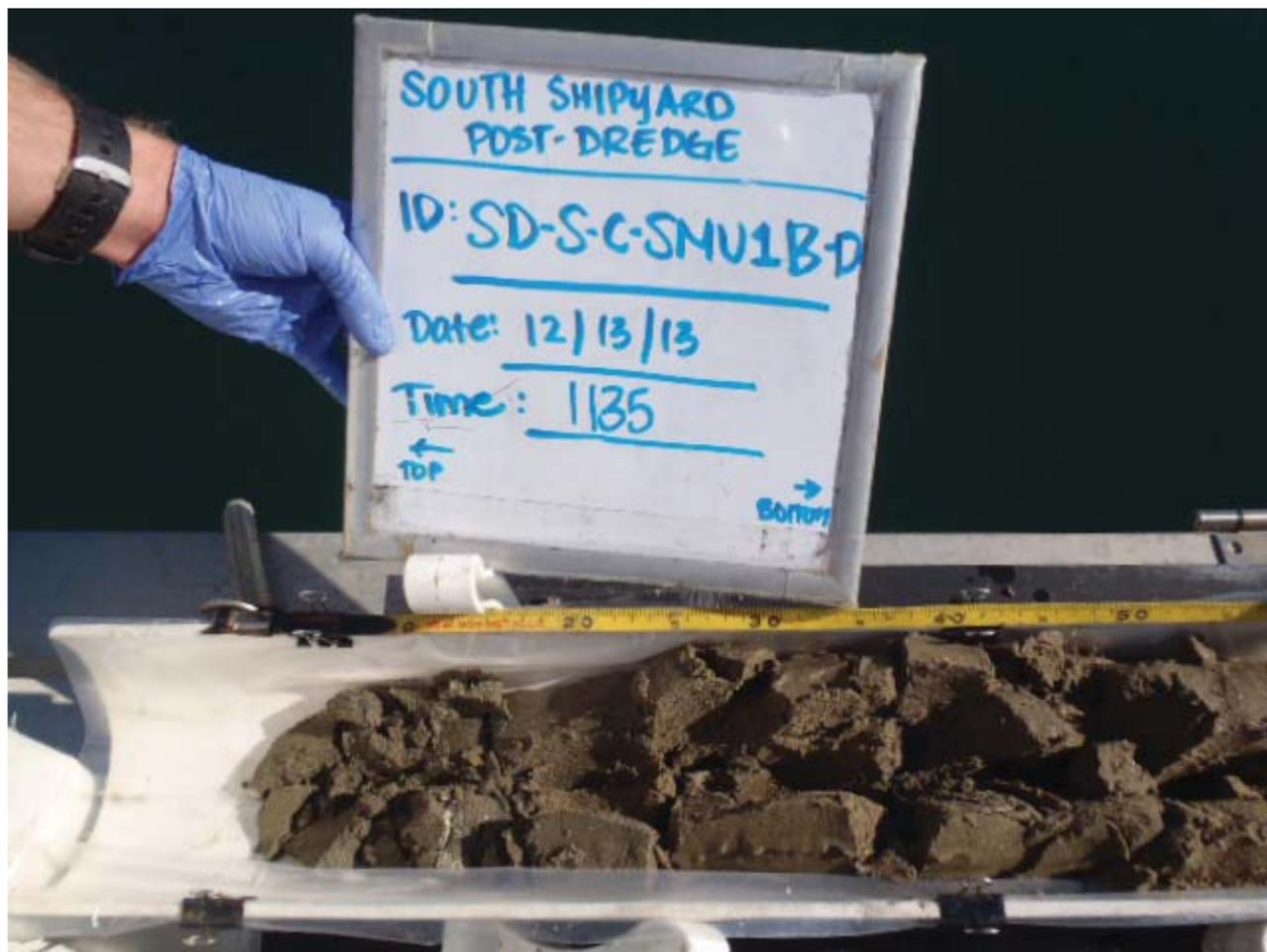
Location: South Shipyard - San Diego Bay  
Sample ID: SD-S-C-SMU1A-D  
Core Length: 20 - 80 cm.  
Sample Date & Time: 12/13/2013 1055



Location: South Shipyard - San Diego Bay  
Sample ID: SD-S-C-SMU1A-D  
Core Length: Plug  
Sample Date & Time: 12/13/2013 1055



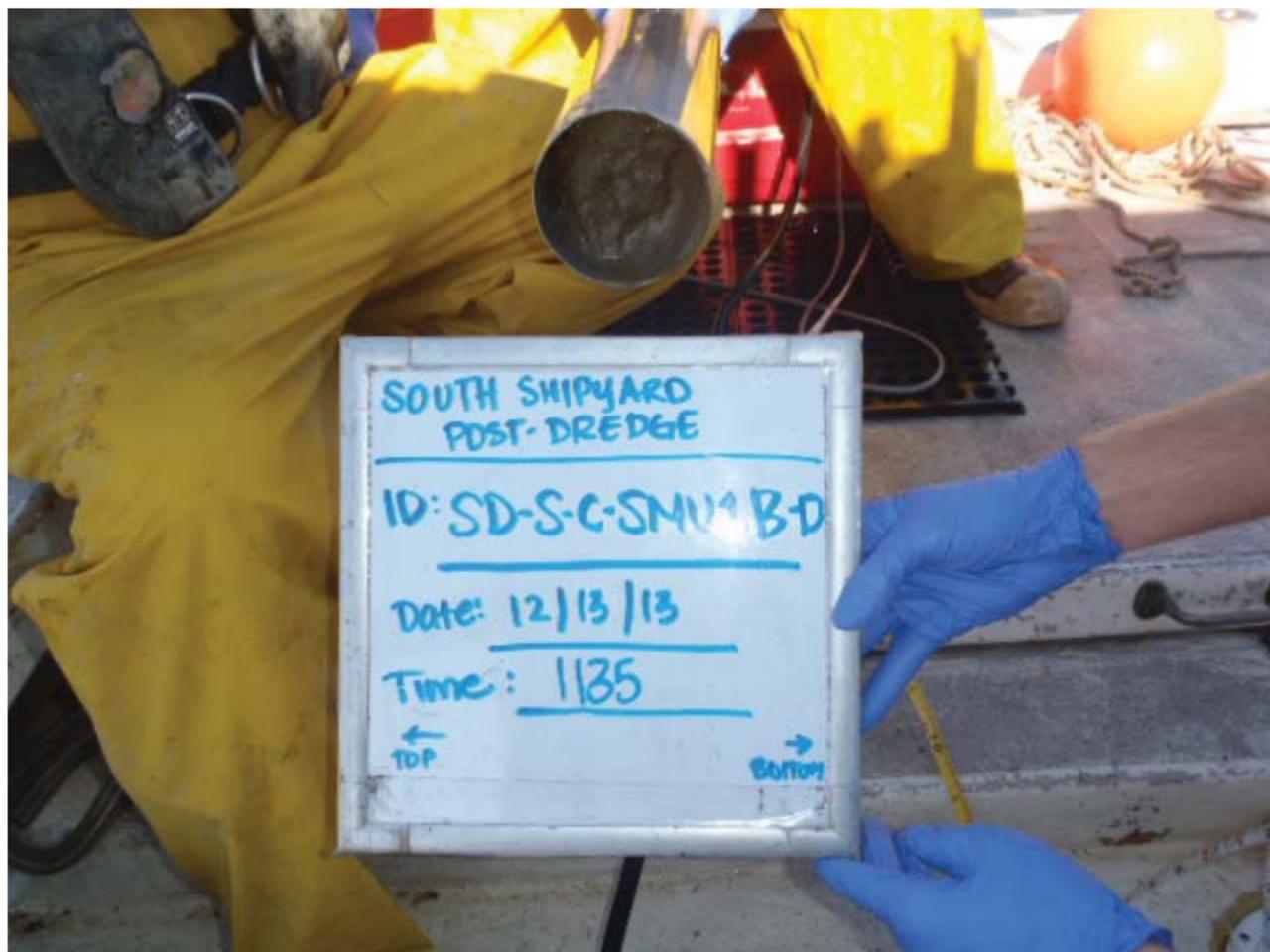
Location: South Shipyard - San Diego Bay  
Sample ID: SD-S-C-SMU1A-D  
Core Length: Plug Closeup  
Sample Date & Time: 12/13/2013 1055



Location: South Shipyard - San Diego Bay  
Sample ID: SD-S-C-SMU1B-D  
Core Length: 0 - 50 cm.  
Sample Date & Time: 12/13/2013 1135



Location: South Shipyard - San Diego Bay  
Sample ID: SD-S-C-SMU1B-D  
Core Length: 20 - 80 cm.  
Sample Date & Time: 12/13/2013 1135



Location: South Shipyard - San Diego Bay  
Sample ID: SD-S-C-SMU1B-D  
Core Length: Plug  
Sample Date & Time: 12/13/2013 1135



Location: South Shipyard - San Diego Bay  
Sample ID: SD-S-C-SMU1B-D  
Core Length: Plug Closeup  
Sample Date & Time: 12/13/2013 1135

**Project Number:** 1315100800  
**Project Manager:** Barry Snyder  
**Logged and Sampled By:** KG/BL  
**Sample Type:** Vibracore  
**Date:** 1/25/2014      **Time:** 11:40

**Latitude:** 32°41.412  
**Longitude:** -117°08.379  
**Project Depth (ft MLLW):** -29.5 to -31.0  
**Mudline Elevation (ft MLLW):** -30.7

Depth (CM)	Lithology	Sediment Description	Color	Munsell Color Notation	Odor	Remarks
0		Sand	Olive Brown	2.5Y 4/3	None	Shell hash to 50cm
5						Core in unconsolidated from 0 to 10cm
10						
15						
20						
25						
30						
35						
40						
45						
50		Very fine grained Sand	Brown	10YR 4/3		Very uniform, clean native
55						
60						Refusal at 60cm
65						
70						
75						
80						
85						
90						
95						
100						

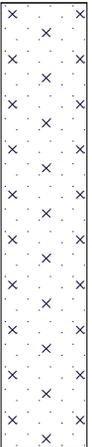
**Water Depth (ft):** 31.3      **Target Penetration (cm):** 35.0  
**Tide (ft):** -0.6      **Actual Penetration (cm):** 60.0  
**Recovered Core Length (cm):** 60.0

**Log of Station ID:** SD-S-C-SMU2A-D-Attempt 1

**Additional Notes:** Inside toe line verified with most recent shapefiles & real time monitoring, GPS precalibrated to points on shore (Corners of land), depth verified using leadline; sample composited with SMU2B; sample appeared clean throughout.

**Project Number:** 1315100800  
**Project Manager:** Barry Snyder  
**Logged and Sampled By:** KG/BL  
**Sample Type:** Vibracore  
**Date:** 1/25/2014 **Time:** 12:45

**Latitude:** 32°41.402  
**Longitude:** -117°08.373  
**Project Depth (ft MLLW):** -46.5 to -47.5  
**Mudline Elevation (ft MLLW):** -47.5

Depth (CM)	Lithology	Sediment Description	Color	Munsell Color Notation	Odor	Remarks
0		Silty Sand with Shell Hash	Very Dark Greenish-gray	Gley 1 5GY 3/1	Slight Hydrocarbon	Sheen Core is less consolidated
5						
10						
15						
20						
25						
30		Sand with Shell Hash	Olive Brown	2.5Y 4/3	None	Large (5cm) shell
35						
40						
45		Clay with very fine grained Sand				Native, core is hard/consolidated, mottled with clay
50						
55						
60						Refusal at 65cm
65						
70						
75						
80						
85						
90						
95						
100						

**Water Depth (ft):** 48.3    **Target Penetration (cm):** 35.0  
**Tide (ft):** -0.8    **Actual Penetration (cm):** 65.0  
**Recovered Core Length (cm):** 65.0

**Log of Station ID:** SD-S-C-SMU2B-D-Attempt 1

**Additional Notes:** Inside toe line verified with most recent shapefiles & real time monitoring, GPS precalibrated to points on shore (Corners of land), depth verified using leadline; sample composited with SMU2A; sample had trash in core barrel and hydrocarbon odor at surface.



Location: South Shipyard - San Diego Bay  
Sample ID: SD-S-C-SMU2A  
Core Length: 0 - 60 cm.  
Sample Date & Time: 01/25/2014 1140



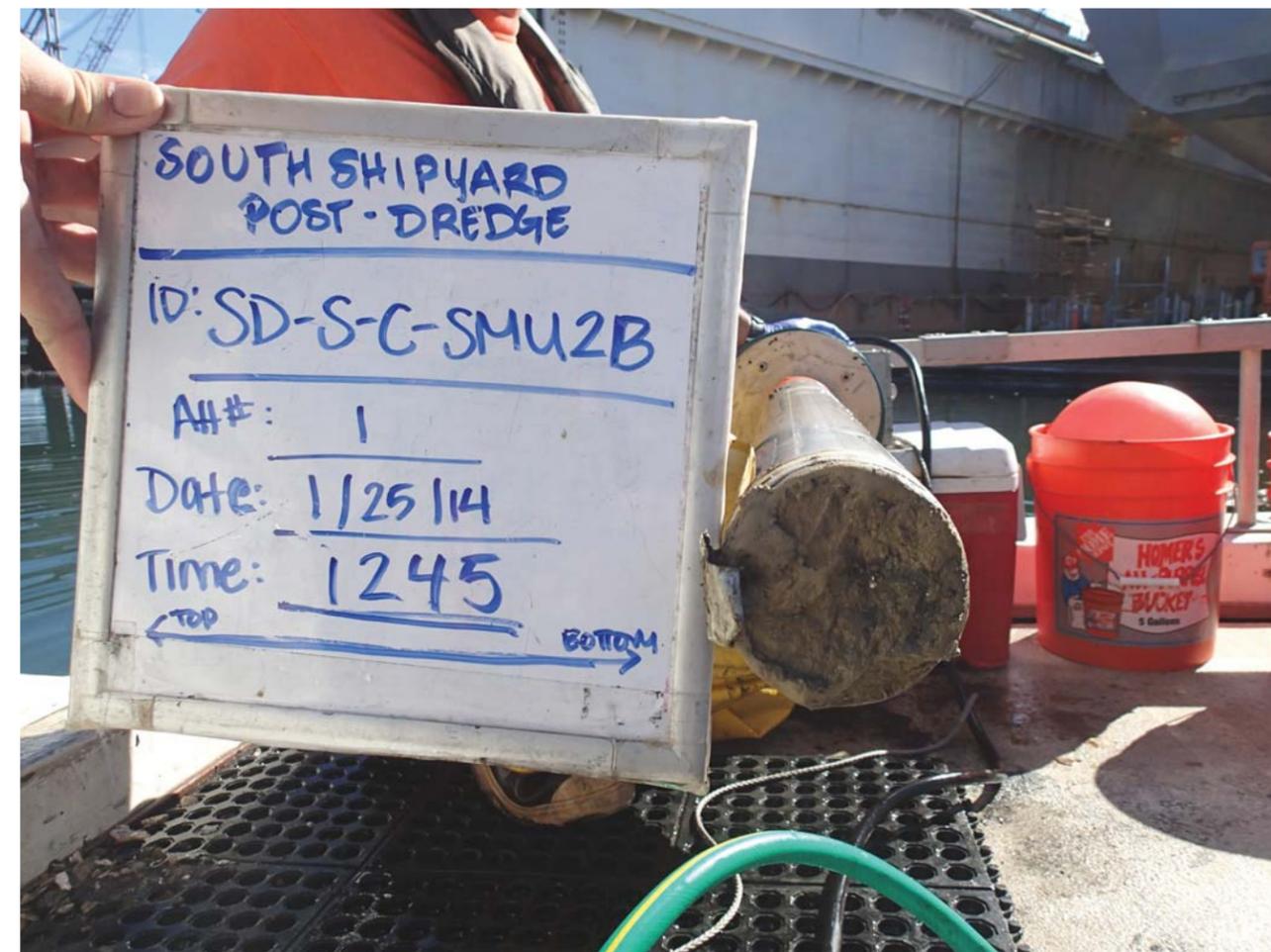
Location: South Shipyard - San Diego Bay  
Sample ID: SD-S-C-SMU2A  
Core Length: Plug  
Sample Date & Time: 01/25/2014 1140



Location: South Shipyard - San Diego Bay  
Sample ID: SD-S-C-SMU2A  
Core Length: Plug Closeup  
Sample Date & Time: 01/25/2014 1140



Location: South Shipyard - San Diego Bay  
Sample ID: SD-S-C-SMU2B  
Core Length: 0 - 65 cm.  
Sample Date & Time: 01/25/2014 1245



Location: South Shipyard - San Diego Bay  
Sample ID: SD-S-C-SMU2B  
Core Length: Plug  
Sample Date & Time: 01/25/2014 1245



Location: South Shipyard - San Diego Bay  
Sample ID: SD-S-C-SMU2B  
Core Length: Plug Closeup  
Sample Date & Time: 01/25/2014 1245

**Project Number:** 1315100800  
**Project Manager:** Barry Snyder  
**Logged and Sampled By:** KG/CCS  
**Sample Type:** Vibracore  
**Date:** 1/8/2014      **Time:** 11:25

**Latitude:** 32°41.388  
**Longitude:** -117°08.326  
**Project Depth (ft MLLW):** -22.2 to -23.2  
**Mudline Elevation (ft MLLW):** -23.3

Depth (CM)	Lithology	Sediment Description	Color	Munsell Color Notation	Odor	Remarks
0		Medium grained Sand	Olive Brown	2.5Y 4/3	None	With minor 2cm gravel
5			Fine grained Sand			Sand fines below 25cm appears clean/native throughout
10						
15						
20		Fine grained Sand with Clay				
25						
30		Fine grained Sand				
35						
40						
45						
50						
55						
60						
65						
70						
75						
80						
85						
90						Refusal at 90cm
95						
100						

**Water Depth (ft):** 24.8      **Target Penetration (cm):** 35.0  
**Tide (ft):** -1.5      **Actual Penetration (cm):** 90.0  
**Recovered Core Length (cm):** 90.0

**Log of Station ID:** SD-S-C-SMU2C-Attempt 1

**Additional Notes:** Inside toe line verified with most recent shapefiles & real time monitoring, GPS precalibrated to points on shore (corners of land), depth verified using leadline.

**Project Number:** 1315100800  
**Project Manager:** Barry Snyder  
**Logged and Sampled By:** KG/CCS  
**Sample Type:** Vibracore  
**Date:** 1/8/2014 **Time:** 13:10

**Latitude:** 32°41.388  
**Longitude:** -117°08.347  
**Project Depth (ft MLLW):** -46.0 to -47.5  
**Mudline Elevation (ft MLLW):** -47.2

Depth (CM)	Lithology	Sediment Description	Color	Munsell Color Notation	Odor	Remarks
0		Fine grained Sand	Olive Brown	2.5Y 4/3	None	Core is unconsolidated to approximately 10cm With shell hash Appears clean/native
5						
10						
15						
20						
25						
30						
35						
40						
45						
50						Proportion of shell hash increases at 45cm
55						
60						
65						Shell hash disappears at 65cm
70						
75						
80						
85						Refusal at 85cm
90						Core becomes very hard at 85cm
95						
100						

**Water Depth (ft):** 49.2    **Target Penetration (cm):** 35.0  
**Tide (ft):** -2.0    **Actual Penetration (cm):** 85.0  
**Recovered Core Length (cm):** 85.0

**Log of Station ID:** SD-S-C-SMU2D-Attempt 1

**Additional Notes:** GPS signal bouncing due to interference with dry dock. Ensured proper depths & location within footprint on GPS. Visual confirmation to achieve sampling location based on CAD file map with land features. Inside toe line verified with most recent shapefiles & real time monitoring, GPS precalibrated to points on shore (corners of land), depth verified using leadline.



Location: South Shipyard - San Diego Bay  
Sample ID: SD-S-C-SMU2C  
Core Length: 0 - 50 cm.  
Sample Date & Time: 1/8/2014 1125



Location: South Shipyard - San Diego Bay  
Sample ID: SD-S-C-SMU2C  
Core Length: 50 - 90 cm.  
Sample Date & Time: 1/8/2014 1125



Location: South Shipyard - San Diego Bay  
Sample ID: SD-S-C-SMU2C  
Core Length: Plug  
Sample Date & Time: 1/8/2014 1125



Location: South Shipyard - San Diego Bay  
Sample ID: SD-S-C-SMU2C  
Core Length: Plug Closeup  
Sample Date & Time: 1/8/2014 1125



Location: South Shipyard - San Diego Bay  
Sample ID: SD-S-C-SMU2D  
Core Length: 0 - 30 cm.  
Sample Date & Time: 1/8/2014 1310



Location: South Shipyard - San Diego Bay  
Sample ID: SD-S-C-SMU2D  
Core Length: 30 - 85 cm.  
Sample Date & Time: 1/8/2014 1310



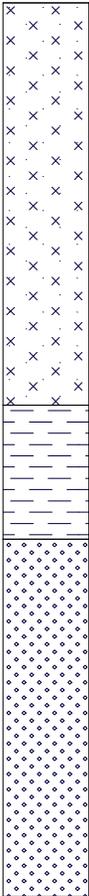
Location: South Shipyard - San Diego Bay  
Sample ID: SD-S-C-SMU2D  
Core Length: Plug  
Sample Date & Time: 1/8/2014 1310



Location: South Shipyard - San Diego Bay  
Sample ID: SD-S-C-SMU2D  
Core Length: Plug Closeup  
Sample Date & Time: 1/8/2014 1310

**Project Number:** 1315100800  
**Project Manager:** Barry Snyder  
**Logged and Sampled By:** KG  
**Sample Type:** Vibracore  
**Date:** 11/21/2013 **Time:** 12:10

**Latitude:** 32°41.3222  
**Longitude:** -117°08.331  
**Project Depth (ft MLLW):** -29.5 to -30.5  
**Mudline Elevation (ft MLLW):** 29.9

Depth (CM)	Lithology	Sediment Description	Color	Munsell Color Notation	Odor	Remarks
0		Sandy Silt	Very Dark Greenish-gray	Gley 1 10Y 3/1	None	Bottom very hard, vibracore bouncing
5		Clay	Dark Grayish-brown	2.5Y 4/2		
10		Fine grained Sand	Brown	7.5YR 4/4		
15						Looks like clean/native material
20						
25						
30						
35						Refusal at 60cm
40						
45						
50						
55						
60						
65						
70						
75						
80						
85						
90						
95						
100						

**Water Depth (ft):** 34.7    **Target Penetration (cm):** 35.0  
**Tide (ft):** 4.8    **Actual Penetration (cm):** 60.0  
**Recovered Core Length (cm):** 60.0

**Log of Station ID:** SD-S-C-SMU3A-D-Attempt 1

**Additional Notes:** Inside toe line verified with most recent shapefiles & real time monitoring, GPS precalibrated to points on shore (corners of land), depth verified using leadline.

**Project Number:** 1315100800  
**Project Manager:** Barry Snyder  
**Logged and Sampled By:** KG  
**Sample Type:** Vibracore  
**Date:** 11/21/2013

**Latitude:** 32°41.308  
**Longitude:** -117°08.296  
**Project Depth (ft MLLW):** -28.0 to -29.0  
**Mudline Elevation (ft MLLW):** 29.6

**Time:** 13:15

Depth (CM)	Lithology	Sediment Description	Color	Munsell Color Notation	Odor	Remarks
0		Sandy Silt	Very Dark Greenish-gray	Gley I 10Y 3/1	Organic Odor	Very unconsolidated to 5cm
5		Silt				Rock at surface
10						Density increases, core holds form
15						
20						
25						
30						
35		Very Fine grained Sand	Brown	7.5YR 4/4	None	Looks clean/native
40						
45						Refusal at 43cm
50						
55						
60						
65						
70						
75						
80						
85						
90						
95						
100						

**Water Depth (ft):** 33.4    **Target Penetration (cm):** 35.0  
**Tide (ft):** 3.8    **Actual Penetration (cm):** 45.0  
**Recovered Core Length (cm):** 43.0

**Log of Station ID:** SD-S-C-SMU3B-D-Attempt 1

**Additional Notes:** Same positioning as SMU3A protocol performed

**Project Number:** 1315100800  
**Project Manager:** Barry Snyder  
**Logged and Sampled By:** KG  
**Sample Type:** Vibracore  
**Date:** 11/21/2013 **Time:** 14:15

**Latitude:** 32°41.302  
**Longitude:** -117°08.301  
**Project Depth (ft MLLW):** -28.9 to -30.1  
**Mudline Elevation (ft MLLW):** 29.6

Depth (CM)	Lithology	Sediment Description	Color	Munsell Color Notation	Odor	Remarks
0		Medium grained Sand	Dark Grayish-brown	2.5Y 4/2	None	Core very homogeneous
5						
10						
15						
20						
25						
30						
35						
40						
45						
50						
55						
60						
65						
70		Clay	Brown	10YR 4/3		Sand on outside of clay, but distinct native plug
75						
80						
85						Refusal at 83cm
90						
95						
100						

**Water Depth (ft):** 32.3 **Target Penetration (cm):** 35.0  
**Tide (ft):** 2.7 **Actual Penetration (cm):** 90.0  
**Recovered Core Length (cm):** 82.0

**Log of Station ID:** SD-S-C-SMU3C-D-Attempt 1

**Additional Notes:** Positioning determined with same methods as SMU3A.

**Project Number:** 1315100800  
**Project Manager:** Barry Snyder  
**Logged and Sampled By:** KG  
**Sample Type:** Vibracore  
**Date:** 11/21/2013 **Time:** 14:55

**Latitude:** 32°41.273  
**Longitude:** -117°08.285  
**Project Depth (ft MLLW):** -30.5 to -31.5  
**Mudline Elevation (ft MLLW):** 30.6

Depth (CM)	Lithology	Sediment Description	Color	Munsell Color Notation	Odor	Remarks
0		Sandy Silt	Very Dark Greenish-gray	Gley I 10Y 3/1	None	With Shell hash, mostly unconsolidated/liquidy
5		Medium grained Sand	Dark Grayish-brown	2.5Y 4/2		Some shell hash at 10cm Surface layer is mixed with layer below to 20cm
10						
15						
20						
25						
30						
35						
40						
45						
50						
55						
60						
65						
70						
75						
80						
85						
90						
95						Refusal at 95cm
100						

**Water Depth (ft):** 34.4    **Target Penetration (cm):** 35.0  
**Tide (ft):** 3.8    **Actual Penetration (cm):** 95.0  
**Recovered Core Length (cm):** 95.0

**Log of Station ID:** SD-S-C-SMU3D-D-Attempt 1

**Additional Notes:** Positioning determined with same methods as SMU3A.



Location: South Shipyard - San Diego Bay  
Sample ID: SD-S-C-SMU3A-D  
Attempt #: 1  
Core Length: 0 - 50 cm.  
Sample Date & Time: 11/21/2013 1210



Location: South Shipyard - San Diego Bay  
Sample ID: SD-S-C-SMU3A-D  
Attempt #: 1  
Core Length: 15 - 60 cm.  
Sample Date & Time: 11/21/2013 1210



Location: South Shipyard - San Diego Bay  
Sample ID: SD-S-C-SMU3A-D  
Attempt #: 1  
Core Length: Plug  
Sample Date & Time: 11/21/2013 1210



Location: South Shipyard - San Diego Bay  
Sample ID: SD-S-C-SMU3A-D  
Attempt #: 1  
Core Length: Plug Closeup  
Sample Date & Time: 11/21/2013 1210



Location: South Shipyard - San Diego Bay  
Sample ID: SD-S-C-SMU3B-D  
Attempt #: 1  
Core Length: 0 - 43 cm.  
Sample Date & Time: 11/21/2013 1315



Location: South Shipyard - San Diego Bay  
Sample ID: SD-S-C-SMU3B-D  
Attempt #: 1  
Core Length: 0 - 43 cm. Closeup  
Sample Date & Time: 11/21/2013 1315



Location: South Shipyard - San Diego Bay  
Sample ID: SD-S-C-SMU3B-D  
Attempt #: 1  
Core Length: Plug  
Sample Date & Time: 11/21/2013 1315



Location: South Shipyard - San Diego Bay  
Sample ID: SD-S-C-SMU3B-D  
Attempt #: 1  
Core Length: Plug Closeup  
Sample Date & Time: 11/21/2013 1315



Location: South Shipyard - San Diego Bay  
Sample ID: SD-S-C-SMU3C-D  
Attempt #: 1  
Core Length: 0 - 55 cm.  
Sample Date & Time: 11/21/2013 1415



Location: South Shipyard - San Diego Bay  
Sample ID: SD-S-C-SMU3C-D  
Attempt #: 1  
Core Length: 30 - 82 cm.  
Sample Date & Time: 11/21/2013 1415



Location: South Shipyard - San Diego Bay  
Sample ID: SD-S-C-SMU3C-D  
Attempt #: 1  
Core Length: Plug  
Sample Date & Time: 11/21/2013 1415



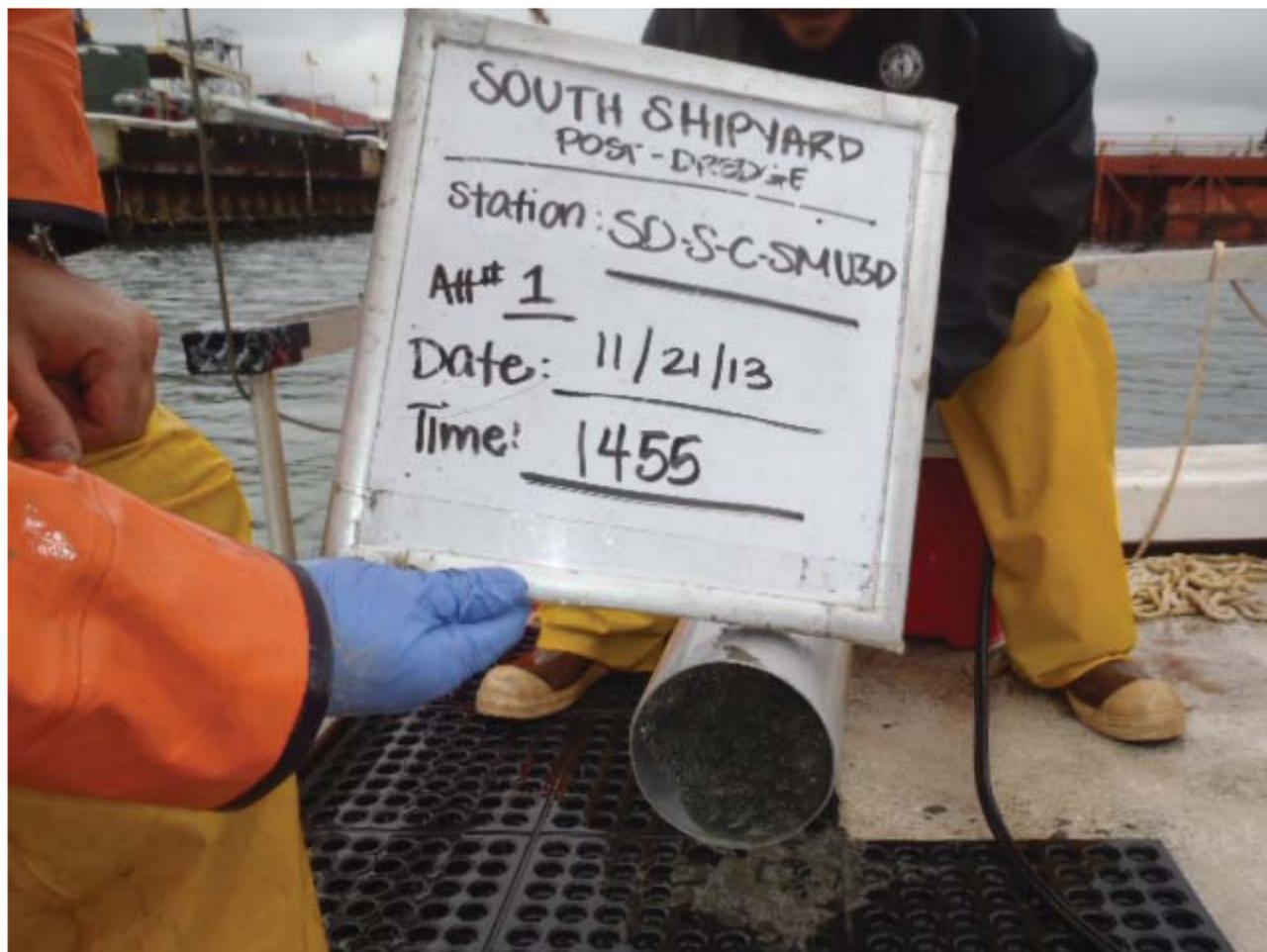
Location: South Shipyard - San Diego Bay  
Sample ID: SD-S-C-SMU3C-D  
Attempt #: 1  
Core Length: Plug Closeup  
Sample Date & Time: 11/21/2013 1415



Location: South Shipyard - San Diego Bay  
Sample ID: SD-S-C-SMU3D-D  
Attempt #: 1  
Core Length: 0 - 65 cm.  
Sample Date & Time: 11/21/2013 1455



Location: South Shipyard - San Diego Bay  
Sample ID: SD-S-C-SMU3D-D  
Attempt #: 1  
Core Length: 30 - 95 cm.  
Sample Date & Time: 11/21/2013 1455



Location: South Shipyard - San Diego Bay  
Sample ID: SD-S-C-SMU3D-D  
Attempt #: 1  
Core Length: Plug  
Sample Date & Time: 11/21/2013 1455



Location: South Shipyard - San Diego Bay  
Sample ID: SD-S-C-SMU3D-D  
Attempt #: 1  
Core Length: 0 - 20 cm. Sample Closeup  
Sample Date & Time: 11/21/2013 1455

**Project Number:** 1315100800  
**Project Manager:** Barry Snyder  
**Logged and Sampled By:** KG/BL  
**Sample Type:** Vibracore  
**Date:** 10/25/2013     **Time:** 13:15-15:00

**Latitude:** 32°41.2516  
**Longitude:** -117°08.3390  
**Project Depth (ft MLLW):** N/A  
**Mudline Elevation (ft MLLW):** 34.0

Depth (CM)	Lithology	Sediment Description	Color	Munsell Color Notation	Odor	Remarks
0						No Recovery
5						
10						
15						
20						
25						
30						
35						
40						
45						
50						
55						
60						
65						
70						
75						
80						
85						
90						
95						
100						

**Water Depth (ft):** 38.5     **Target Penetration (cm):** N/A  
**Tide (ft):** 4.5     **Actual Penetration (cm):** N/A  
**Recovered Core Length (cm):** 0.0

**Log of Station ID:** SD-S-C-SMU4A-D-Attempt 1-3

**Additional Notes:** 3 attempts - no recovery

**Project Number:** 1315100800  
**Project Manager:** Barry Snyder  
**Logged and Sampled By:** KG/TH  
**Sample Type:** Vibracore  
**Date:** 11/18/2013 **Time:** 08:35

**Latitude:** 32°41.250  
**Longitude:** -117°08.367  
**Project Depth (ft MLLW):** N/A  
**Mudline Elevation (ft MLLW):** 32.1

Depth (CM)	Lithology	Sediment Description	Color	Munsell Color Notation	Odor	Remarks
0		Silt	Very Dark Greenish-gray	Gley 1 10Y 3/1	None	Some small gravel & shell hash at surface
5						
10		Silt with Sand			Very sticky, unconsolidated	
15						
20						
25		Fine grained Sand with Silt	Brown	10YR 4/3		Native material, very consolidated
30						
35						Refusal at 35cm
40						
45						
50						
55						
60						
65						
70						
75						
80						
85						
90						
95						
100						

**Water Depth (ft):** 38.1 **Target Penetration (cm):** 35.0  
**Tide (ft):** 6.0 **Actual Penetration (cm):** 45.0  
**Recovered Core Length (cm):** 45.0

**Log of Station ID:** SD-S-C-SMU4B-D-Attempt 1

**Additional Notes:** Sub sampled 0 - 5cm set aside/homogenized for (A) archive - 8oz jar, 5 - 35cm sampled & homogenized - 16oz jar (A) & set aside for SMU overall composite



Location: South Shipyard - San Diego Bay  
Sample ID: SD-S-C-SMU4B-D  
Attempt #: 1  
Core Length: 0 - 45 cm.  
Sample Date & Time: 11/18/2013 0835



Location: South Shipyard - San Diego Bay  
Sample ID: SD-S-C-SMU4B-D  
Attempt #: 1  
Core Length: Plug  
Sample Date & Time: 11/18/2013 0835

APPENDIX C  
POST-DREDGE CONFIRMATORY  
SAMPLING ANALYTICAL RESULTS

---

**Table 1**  
**San Diego Shipyard Sediment Report for SMU-1**

		Location ID		SMU-1
		Sample ID		SD-S-C-SMU1-C-0535_20131213
		Sample Type		Sediment
		Date		12/13/2013
		Latitude		32.68996, 32.68985
		Longitude		-117.1427,-117.14269
		Post Remedial Dredge Area Concentration	120 Percent of Post Remedial Dredge Area Concentration	
<b>HPAHs (ug/kg)</b>				
BENZO(A)ANTHRACENE	--	--	--	<b>13</b>
BENZO(A)PYRENE	--	--	--	<b>8.2 J</b>
CHRYSENE	--	--	--	<b>13</b>
DIBENZ(A,H)ANTHRACENE	--	--	--	13 U
FLUORANTHENE	--	--	--	<b>58</b>
PERYLENE	--	--	--	13 U
Total HPAHs	663	796		<b>118.2</b>
<b>METALS (mg/kg)</b>				
COPPER	121	145		<b>5.91</b>
MERCURY	0.57	0.68		<b>0.0303</b>
<b>PCBs (ug/kg)</b>				
PCB-018	--	--	--	0.64 U
PCB-028	--	--	--	0.64 U
PCB-037	--	--	--	0.64 U
PCB-044	--	--	--	0.64 U
PCB-049	--	--	--	0.64 U
PCB-052	--	--	--	0.64 U
PCB-066	--	--	--	0.64 U
PCB-070	--	--	--	0.64 U
PCB-074	--	--	--	0.64 U
PCB-077	--	--	--	0.64 U
PCB-081	--	--	--	0.64 U
PCB-087	--	--	--	0.64 U
PCB-099	--	--	--	0.64 U
PCB-101	--	--	--	0.64 U
PCB-105	--	--	--	0.64 U
PCB-110	--	--	--	0.64 U
PCB-114	--	--	--	0.64 U
PCB-118	--	--	--	0.64 U
PCB-119	--	--	--	0.64 U
PCB-123	--	--	--	0.64 U
PCB-126	--	--	--	0.64 U
PCB-128	--	--	--	0.64 U
PCB-138/158	--	--	--	1.3 U
PCB-149	--	--	--	0.64 U
PCB-151	--	--	--	0.64 U
PCB-153	--	--	--	0.64 U
PCB-156	--	--	--	0.64 U
PCB-157	--	--	--	0.64 U
PCB-167	--	--	--	0.64 U
PCB-168	--	--	--	0.64 U
PCB-169	--	--	--	0.64 U
PCB-170	--	--	--	0.64 U
PCB-177	--	--	--	0.64 U
PCB-180	--	--	--	0.64 U
PCB-183	--	--	--	0.64 U
PCB-187	--	--	--	0.64 U
PCB-189	--	--	--	0.64 U
PCB-194	--	--	--	0.64 U
PCB-201	--	--	--	0.64 U
PCB-206	--	--	--	0.64 U
Total PCBs	84	101		<b>26.26</b>
<b>TRIBUTYL TIN (ug/kg)</b>				
TRIBUTYL TIN	22	26		3.8 U

 Detected concentration is greater than Post Remedial Dredge Area Concentration Level (Cleanup and Abatement Order - (Water Board 2012a))

 Detected concentration is greater than 120 Percent of Post Remedial Dredge Area Concentration Level (Cleanup and Abatement Order - (Water Board 2012a))

 Non-detected concentration is above one or more identified screening levels

**Bold** Detected Result

J Estimated value

U Compound analyzed, but not detected above detection limit

ug/kg micrograms per kilogram

mg/kg milligrams per kilogram

HPAHs high-molecular weight polycyclic aromatic hydrocarbons

PCBs polychlorinated biphenyls

Total HPAHs sum of six PAHs: Fluoranthene, Perylene, Benzo(a)anthracene, Chrysene, Benzo(a)pyrene, and Dibenzo(a,h)anthracene.

Total PCBs sum of 41 congeners: 18, 28, 37, 44, 49, 52, 66, 70, 74, 77, 81, 87, 99, 101, 105, 110, 114, 118, 119, 123, 126, 128, 138, 149, 151, 153, 156, 157, 158, 167, 168, 169, 170, 177, 180, 183, 187, 189, 194, 201, and 206.

**Table 1**  
**San Diego Shipyard Sediment Report For SMU-2 North**

	Location ID		SMU2A/B
	Sample ID		SD-S-C-SMU2A/B-C-0535
	Sample Type		Sediment
	Date		1/25/2014
	Latitude		32.69020, 32.69003
	Longitude		-117.13965, -117.13955
	Post Remedial Dredge Area Concentration	120 Percent of Post Remedial Dredge Area Concentration	
<b>HPAHs (ug/kg)</b>			
Benzo(a)anthracene	--	--	<b>150</b>
Benzo(a)pyrene	--	--	<b>280</b>
Chrysene	--	--	<b>160</b>
Dibenzo(a,h)anthracene	--	--	<b>42</b>
Fluoranthene	--	--	<b>360</b>
Perylene	--	--	<b>53</b>
Total HPAHs	663	796	<b>1045</b>
<b>METALS (mg/kg)</b>			
Copper	121	145	<b>134</b>
Mercury	0.57	0.68	<b>0.566</b>
<b>PCBs (ug/kg)</b>			
PCB-018	--	--	0.72 U
PCB-028	--	--	0.72 U
PCB-037	--	--	0.72 U
PCB-044	--	--	0.72 U
PCB-049	--	--	0.72 U
PCB-052	--	--	0.72 U
PCB-066	--	--	0.72 U
PCB-070	--	--	0.72 U
PCB-074	--	--	0.72 U
PCB-077	--	--	0.72 U
PCB-081	--	--	0.72 U
PCB-087	--	--	0.72 U
PCB-099	--	--	0.72 U
PCB-101	--	--	0.72 U
PCB-105	--	--	0.72 U
PCB-110	--	--	0.72 U
PCB-114	--	--	0.72 U
PCB-118	--	--	0.72 U
PCB-119	--	--	0.72 U
PCB-123	--	--	0.72 U
PCB-126	--	--	0.72 U
PCB-128	--	--	0.72 U
PCB-138/158	--	--	1.4 U
PCB-149	--	--	0.72 U
PCB-151	--	--	0.72 U
PCB-153	--	--	0.72 U
PCB-156	--	--	0.72 U
PCB-157	--	--	0.72 U
PCB-167	--	--	0.72 U
PCB-168	--	--	0.72 U
PCB-169	--	--	0.72 U
PCB-170	--	--	0.72 U
PCB-177	--	--	0.72 U
PCB-180	--	--	0.72 U
PCB-183	--	--	0.72 U
PCB-187	--	--	0.72 U
PCB-189	--	--	0.72 U
PCB-194	--	--	0.72 U
PCB-201	--	--	0.72 U
PCB-206	--	--	0.72 U
Total PCBs	84	101	<b>29.48</b>
<b>TRIBUTYL TIN (ug/kg)</b>			
Tributyltin	22	26	<b>5.4</b>

 Detected concentration is greater than Post Remedial Dredge Area Concentration Level (Cleanup and Abatement Order - (Water Board 2012a))

 Detected concentration is greater than 120 Percent of Post Remedial Dredge Area Concentration Level (Cleanup and Abatement Order - (Water Board 2012a))

 Non-detected concentration is above one or more identified screening levels

**Bold** Detected Result

J Estimated value

U Compound analyzed, but not detected above detection limit

ug/kg micrograms per kilogram

mg/kg milligrams per kilogram

HPAHs high-molecular weight polycyclic aromatic hydrocarbons

PCBs polychlorinated biphenyls

Total HPAHs sum of six PAHs: Fluoranthene, Perylene, Benzo(a)anthracene, Chrysene, Benzo(a)pyrene, and Dibenzo(a,h)anthracene.

Total PCBs sum of 41 congeners: 18, 28, 37, 44, 49, 52, 66, 70, 74, 77, 81, 87, 99, 101, 105, 110, 114, 118, 119, 123, 126, 128, 138, 149, 151, 153, 156, 157, 158, 167, 168, 169, 170, 177, 180, 183, 187, 189, 194, 201, and 206.

**Table 1**  
San Diego Shipyard Sediemnt Report For SMU-2

		Location ID	SMU2C/D
		Sample ID	SD-S-C-SMU2-C1D-C-0535
		Sample Type	Sediment
		Date	1/8/2014
		Latitude	32.68980, 32.68980
		Longitude	-117.13876, -117.13912
		Post Remedial Dredge Area Concentration	120 Percent of Post Remedial Dredge Area Concentration
<b>HPAHs (ug/kg)</b>			
BENZO(A)ANTHRACENE	--	--	<b>8.8 J</b>
BENZO(A)PYRENE	--	--	<b>28</b>
CHRYSENE	--	--	<b>11 J</b>
DIBENZ(A,H)ANTHRACENE	--	--	<b>3.2 J</b>
FLUORANTHENE	--	--	<b>24</b>
PERYLENE	--	--	13 U
Total HPAHs	663	796	<b>88</b>
<b>METALS (mg/kg)</b>			
COPPER	121	145	<b>12.5</b>
MERCURY	0.57	0.68	<b>0.0245 J</b>
<b>PCBs (ug/kg)</b>			
PCB-018	--	--	<b>0.63</b>
PCB-028	--	--	<b>0.65 B</b>
PCB-037	--	--	0.63 U
PCB-044	--	--	<b>1</b>
PCB-049	--	--	<b>0.77</b>
PCB-052	--	--	<b>1.3</b>
PCB-066	--	--	<b>0.98</b>
PCB-070	--	--	<b>0.91</b>
PCB-074	--	--	<b>0.37 J</b>
PCB-077	--	--	<b>0.42 J</b>
PCB-081	--	--	0.63 U
PCB-087	--	--	<b>0.45 J</b>
PCB-099	--	--	<b>0.62 J</b>
PCB-101	--	--	<b>1.6</b>
PCB-105	--	--	<b>0.8</b>
PCB-110	--	--	<b>1</b>
PCB-114	--	--	0.63 U
PCB-118	--	--	<b>1.4 B</b>
PCB-119	--	--	0.63 U
PCB-123	--	--	0.63 U
PCB-126	--	--	<b>0.48 J</b>
PCB-128	--	--	<b>0.51 J</b>
PCB-138/158	--	--	<b>1.2 J</b>
PCB-149	--	--	<b>0.67</b>
PCB-151	--	--	<b>0.16 J</b>
PCB-153	--	--	<b>1.3 B</b>
PCB-156	--	--	0.63 U
PCB-157	--	--	0.63 U
PCB-167	--	--	0.63 U
PCB-168	--	--	0.63 U
PCB-169	--	--	0.63 U
PCB-170	--	--	<b>0.68</b>
PCB-177	--	--	0.63 U
PCB-180	--	--	<b>0.76</b>
PCB-183	--	--	0.63 U
PCB-187	--	--	<b>0.56 J</b>
PCB-189	--	--	0.63 U
PCB-194	--	--	0.63 U
PCB-201	--	--	<b>0.31 J</b>
PCB-206	--	--	<b>0.47 J</b>
Total PCBs	84	101	<b>28.82</b>
<b>TRIBUTYL TIN (ug/kg)</b>			
TRIBUTYL TIN	22	26	3.8 U

 Detected concentration is greater than Post Remedial Dredge Area Concentration Level (Cleanup and Abatement Order - (Water Board 2012a))

 Detected concentration is greater than 120 Percent of Post Remedial Dredge Area Concentration Level (Cleanup and Abatement Order - (Water Board 2012a))

 Non-detected concentration is above one or more identified screening levels

**Bold** Detected Result

**J** Estimated value

**U** Compound analyzed, but not detected above detection limit

**ug/kg** micrograms per kilogram

**mg/kg** milligrams per kilogram

**HPAHs** high-molecular weight polycyclic aromatic hydrocarbons

**PCBs** polychlorinated biphenyls

**Total HPAHs** sum of six PAHs: Fluoranthene, Perylene, Benzo(a)anthracene, Chrysene, Benzo(a)pyrene, and Dibenzo(a,h)anthracene.

**Total PCBs** sum of 41 congeners: 18, 28, 37, 44, 49, 52, 66, 70, 74, 77, 81, 87, 99, 101, 105, 110, 114, 118, 119, 123, 126, 128, 138, 149, 151, 153, 156, 157, 158, 167, 168, 169, 170, 177, 180, 183, 187, 189, 194, 201, and 206.

Table 2  
San Diego Shipyard Sediment Report for SMU-3

	Location ID		SMU-3A	SMU-3B/C	SMU-3D
	Sample ID		SD-S-C-SMU3A-D-0535	SD-S-C-SMU3B/C-C-0535	SD-S-C-SMU3D-D-0535
	Sample Type		Discrete	Composite	Discrete
	Date		11/21/2013	11/21/2013	11/21/2013
	Latitude		32.68870	32.68846, 32.68836	32.68788
	Longitude		-117.13885	-117.13826, -117.13845	-117.1380833
	Post Remedial Dredge Area Concentration	120 Percent of post Remedial Dredge Area Concentration			
<b>HPAHs (ug/kg)</b>					
BENZO(A)ANTHRACENE	--	--	25	20	13 U
BENZO(A)PYRENE	--	--	74	88	20
CHRYSENE	--	--	32	21	13 U
DIBENZ(A,H)ANTHRACENE	--	--	17 U	15 U	13 U
FLUORANTHENE	--	--	33	26	13 U
PERYLENE	--	--	17 U	15 U	13 U
Total HPAHs	663	796	198	185	85
<b>METALS (mg/kg)</b>					
COPPER	121	145	128	49.2	56.3
MERCURY	0.57	0.68	0.478	0.636	0.808
<b>TRIBUTYL TIN (ug/kg)</b>					
TRIBUTYL TIN	22	26	25	4.4 U	26
<b>PCBs (ug/kg)</b>					
PCB-018	--	--	1.2	1.9	0.41 J
PCB-028	--	--	1.4	1.7	0.6 J
PCB-037	--	--	0.84 U	0.73 U	0.63 U
PCB-044	--	--	2.7	5.2	0.99
PCB-049	--	--	2.7	4	1.1
PCB-052	--	--	4.5	11	2.3
PCB-066	--	--	2.5	3.1	0.92
PCB-070	--	--	2.9	7.3	1.2
PCB-074	--	--	1.2	2.2	0.52 J
PCB-077	--	--	0.84 U	0.87	0.63 U
PCB-081	--	--	0.84 U	0.73 U	0.63 U
PCB-087	--	--	2	6.5	0.92
PCB-099	--	--	2.3	5.9	1.2
PCB-101	--	--	5.7	16	2.7
PCB-105	--	--	2.1	5.6	0.93
PCB-110	--	--	4.7	14	2.1
PCB-114	--	--	0.84 U	0.73 U	0.63 U
PCB-118	--	--	4.9	14	2.2
PCB-119	--	--	0.16 J	0.73 U	0.63 U
PCB-123	--	--	0.84 U	0.73 U	0.63 U
PCB-126	--	--	0.84 U	0.73 U	0.63 U
PCB-128	--	--	0.99	2.9	0.54 J
PCB-138/158	--	--	5.1	15	2.3
PCB-149	--	--	3.1	8.6	1.3
PCB-151	--	--	0.84 J	2.2	0.34 J
PCB-153	--	--	5.2	13	2.3
PCB-156	--	--	0.54 J	2	0.29 J
PCB-157	--	--	0.4 J	0.96	0.25 J
PCB-167	--	--	0.18 J	0.61 J	0.63 U
PCB-168	--	--	0.84 U	0.73 U	0.63 U
PCB-169	--	--	0.84 U	0.57 J	0.63 U
PCB-170	--	--	1.4	3.3	0.59 J
PCB-177	--	--	0.56 J	1.1	0.16 J
PCB-180	--	--	2.2	5.2	0.89
PCB-183	--	--	0.58 J	1.4	0.2 J
PCB-187	--	--	1.4	2.7	0.48 J
PCB-189	--	--	0.84 U	0.15 J	0.63 U
PCB-194	--	--	0.52 J	1.1	0.63 U
PCB-201	--	--	0.84 U	0.17 J	0.63 U
PCB-206	--	--	0.52 J	0.58 J	0.63 U
Total PCBs	84	101	72.89	165.92	36.55

**Notes:**

Detected concentration is greater than Post Remedial Dredge Area Concentration Level (Cleanup and Abatement Order - (Water Board 2012a))

Detected concentration is greater than 120 Percent of post Remedial Dredge Area Concentration Level (Cleanup and Abatement Order - (Water Board 2012a))

Non-detected concentration is above one or more identified screening levels

- Bold** Detected result
  - J Estimated value
  - U Compound analyzed, but not detected above detection limit
  - ug/kg micrograms per kilogram
  - HPAHs high-molecular weight polycyclic aromatic hydrocarbons
  - mg/kg milligrams per kilogram
  - PCBs polychlorinated biphenyls
- (1) HPAHs sum of six PAHs: Fluoranthene, Perylene, Benzo(a)anthracene, Chrysene, Benzo(a)pyrene, and Dibenzo(a,h)anthracene.  
(2) Total PCBs sum of 41 congeners: 18, 28, 37, 44, 49, 52, 66, 70, 74, 77, 81, 87, 99, 101, 105, 110, 114, 118, 119, 123, 126, 128, 138, 149, 151, 153, 156, 157, 158, 167, 168, 169, 170, 177, 180, 183, 187, 189, 194, 201, and 206.

**Table 1**  
San Diego Shipyard Sediment Report for SMU-4

Location ID		SMU-4	
Sample ID		SD-S-C-SMU4B-D-0535	
Sample Type		Composite	
Date		11/18/2013	
X		XXXXXX	
Y		XXXXXX	
Post Remedial Dredge Area Concentration	120 Percent of post Remedial Dredge Area Concentration		
<b>HPAHs (ug/kg)</b>			
BENZO(A)ANTHRACENE	--	--	<b>33</b>
BENZO(A)PYRENE	--	--	<b>150</b>
CHRYSENE	--	--	<b>36</b>
DIBENZ(A,H)ANTHRACENE	--	--	<b>16</b>
FLUORANTHENE	--	--	<b>62</b>
PERYLENE	--	--	<b>25</b>
(1) Total HPAHs	663	796	<b>322</b>
<b>METALS (mg/kg)</b>			
COPPER	121	145	<b>40.4</b>
MERCURY	0.57	0.68	<b>0.724</b>
NICKEL	--	--	<b>10.1</b>
SILVER	--	--	<b>0.883</b>
ZINC	--	--	<b>114</b>
<b>TRIBUTYL TIN (ug/kg)</b>			
TRIBUTYL TIN	22	26	4.4 U
<b>PCBs (ug/kg)</b>			
PCB-018	--	--	<b>1.8</b>
PCB-028	--	--	<b>5</b>
PCB-037	--	--	0.73 U
PCB-044	--	--	<b>2.1</b>
PCB-049	--	--	<b>6.4</b>
PCB-052	--	--	<b>2.4</b>
PCB-066	--	--	<b>1.3</b>
PCB-070	--	--	<b>1.4</b>
PCB-074	--	--	<b>0.92</b>
PCB-077	--	--	0.73 U
PCB-081	--	--	0.73 U
PCB-087	--	--	0.73 U
PCB-099	--	--	<b>1.2</b>
PCB-101	--	--	<b>3.1</b>
PCB-105	--	--	0.73 U
PCB-110	--	--	<b>2.1</b>
PCB-114	--	--	<b>0.48 J</b>
PCB-118	--	--	<b>2.8</b>
PCB-119	--	--	0.73 U
PCB-123	--	--	0.73 U
PCB-126	--	--	0.73 U
PCB-128	--	--	<b>0.46 J</b>
PCB-138/158	--	--	<b>3.7</b>
PCB-149	--	--	<b>2.4</b>
PCB-151	--	--	<b>0.68 J</b>
PCB-153	--	--	<b>3.6</b>
PCB-156	--	--	0.73 U
PCB-157	--	--	<b>2.3</b>
PCB-167	--	--	0.73 U
PCB-168	--	--	0.73 U
PCB-169	--	--	<b>0.71 J</b>
PCB-170	--	--	<b>1.2</b>
PCB-177	--	--	<b>0.48 J</b>
PCB-180	--	--	<b>2.4</b>
PCB-183	--	--	<b>0.53 J</b>
PCB-187	--	--	<b>1.5</b>
PCB-189	--	--	0.73 U
PCB-194	--	--	0.73 U
PCB-201	--	--	0.73 U
PCB-206	--	--	<b>1.1</b>
(2) Total PCBs	84	101	62.3
<b>Other (%)</b>			
TOTAL SOLIDS	--	--	68.8

**Notes:**

Detected concentration is greater than Post Remedial Dredge Area Concentration Level (Cleanup and Abatement Order - (Water Board 2012a))

Detected concentration is greater than 120 Percent of post Remedial Dredge Area Concentration Level (Cleanup and Abatement Order - (Water Board 2012a))

Non-detected concentration is above one or more identified screening levels

**Bold** Detected result  
**J** Estimated value  
**U** Compound analyzed, but not detected above detection limit  
**ug/kg** micrograms per kilogram  
**HPAHs** high-molecular weight polycyclic aromatic hydrocarbons  
**mg/kg** milligrams per kilogram  
**PCBs** polychlorinated biphenyls

(1) HPAHs sum of six PAHs: Fluoranthene, Perylene, Benzo(a)anthracene, Chrysene, Benzo(a)pyrene, and Dibenzo(a,h)anthracene.  
(2) Total PCBs sum of 41 congeners: 18, 28, 37, 44, 49, 52, 66, 70, 74, 77, 81, 87, 99, 101, 105, 110, 114, 118, 119, 123, 126, 128, 138, 149, 151, 153, 156, 157, 158, 167, 168, 169, 170, 177, 180, 183, 187, 189, 194, 201, and 206.



## CERTIFICATION

All analyses were conducted at a laboratory certified for such analyses by the California Department of Public Health in accordance with applicable USEPA and NELAP accreditation procedures.

I certify under penalty of law that the data generated for Calscience Work Order No. 13-12-1128 were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. The Project Manager or designee who signed the Calscience Work Order has been specifically authorized and approved to do so.

The information submitted is, to the best of my knowledge and belief, true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of a fine and imprisonment for knowing violations.

  
\_\_\_\_\_  
Signature, Laboratory Director

May 20, 2014  
Date

Name of Laboratory:  
Address of Laboratory:

**Calscience Environmental Laboratories**  
**7440 Lincoln Way**  
**Garden Grove, CA 92841-1432**

This Certification signed by:

**Steve Lane**





# CALSCIENCE

## WORK ORDER NUMBER: 13-12-1128

*The difference is service*



AIR | SOIL | WATER | MARINE CHEMISTRY

### Analytical Report For

**Client:** San Diego Bay Environmental Restoration Fund South

**Client Project Name:** South Shipyard Post Dredge

**Attention:** Mike Palmer  
C/O de maximis, Inc.  
1322 Scott Street, Suite 104  
San Diego, CA 92106-2727

Approved for release on 12/18/2013 by:  
Danielle Gonsman  
Project Manager

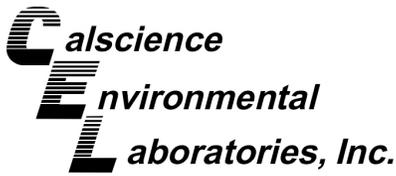
ResultLink ▶

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.





# Contents

Client Project Name: South Shipyard Post Dredge  
Work Order Number: 13-12-1128

1	Work Order Narrative. . . . .	3
2	Sample Summary. . . . .	4
3	Client Sample Data. . . . .	5
	3.1 SM 2540 B (M) Total Solids (Solid). . . . .	5
	3.2 EPA 6020 ICP/MS Metals (Solid). . . . .	6
	3.3 EPA 7471A Mercury (Solid). . . . .	7
	3.4 EPA 8270C SIM PAHs (Solid). . . . .	8
	3.5 EPA 8270C SIM PCB Congeners (Solid). . . . .	10
	3.6 Krone et al. Organotins (Solid). . . . .	14
4	Quality Control Sample Data. . . . .	15
	4.1 MS/MSD. . . . .	15
	4.2 PDS/PDSD. . . . .	20
	4.3 Sample Duplicate. . . . .	21
	4.4 LCS/LCSD. . . . .	22
5	Glossary of Terms and Qualifiers. . . . .	27
6	Chain of Custody/Sample Receipt Form. . . . .	28

**Work Order Narrative**

Work Order: 13-12-1128

Page 1 of 1

**Condition Upon Receipt:**

Samples were received under Chain of Custody (COC) on 12/13/13. They were assigned to Work Order 13-12-1128.

Unless otherwise noted on the Sample Receiving forms all samples were received in good condition and within the recommended EPA temperature criteria for the methods noted on the COC. The COC and Sample Receiving Documents are integral elements of the analytical report and are presented at the back of the report.

**Holding Times:**

All samples were analyzed within prescribed holding times (HT) and/or in accordance with the Calscience Sample Acceptance Policy unless otherwise noted in the analytical report and/or comprehensive case narrative, if required.

Any parameter identified in 40CFR Part 136.3 Table II that is designated as "analyze immediately" with a holding time of  $\leq 15$  minutes (40CFR-136.3 Table II, footnote 4), is considered a "field" test and the reported results will be qualified as being received outside of the stated holding time unless received at the laboratory within 15 minutes of the collection time.

**Quality Control:**

All quality control parameters (QC) were within established control limits except where noted in the QC summary forms or described further within this report.

**Additional Comments:**

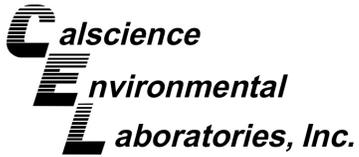
Air - Sorbent-extracted air methods (EPA TO-4A, EPA TO-10, EPA TO-13A, EPA TO-17): Analytical results are converted from mass/sample basis to mass/volume basis using client-supplied air volumes.

New York NELAP air certification does not certify for all reported methods and analytes, reference the accredited items here: [http://www.calscience.com/PDF/New\\_York.pdf](http://www.calscience.com/PDF/New_York.pdf)

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

**Subcontractor Information:**

Unless otherwise noted below (or on the subcontract form), no samples were subcontracted.



## Sample Summary

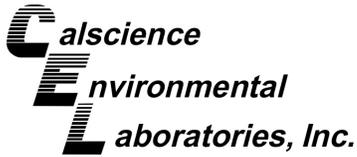
---

Client: San Diego Bay Environmental Restoration Fund	Work Order:	13-12-1128
South	Project Name:	South Shipyard Post Dredge
C/O de maximis, Inc., 1322 Scott Street, Suite	PO Number:	
104	Date/Time	12/13/13 19:00
San Diego, CA 92106-2727	Received:	
	Number of	1
	Containers:	

Attn: Mike Palmer

---

Sample Identification	Lab Number	Collection Date and Time	Number of Containers	Matrix
SD-S-C-SMU1-C-0535	13-12-1128-1	12/13/13 12:00	1	Sediment



## Analytical Report

San Diego Bay Environmental Restoration Fund South  
 C/O de maximis, Inc., 1322 Scott Street, Suite 104  
 San Diego, CA 92106-2727

Date Received: 12/13/13  
 Work Order: 13-12-1128  
 Preparation: N/A  
 Method: SM 2540 B (M)  
 Units: %

Project: South Shipyard Post Dredge

Page 1 of 1

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SD-S-C-SMU1-C-0535	13-12-1128-1-A	12/13/13 12:00	Sediment	N/A	12/14/13	12/14/13 17:00	D1214TSB2

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

Parameter	Result	RL	MDL	DF	Qualifiers
Solids, Total	78.2	0.100	0.100	1	

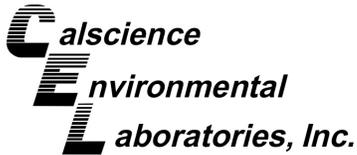
Method Blank	099-05-019-2439	N/A	Solid	N/A	12/14/13	12/14/13 17:00	D1214TSB2
--------------	-----------------	-----	-------	-----	----------	-------------------	-----------

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

Parameter	Result	RL	MDL	DF	Qualifiers
Solids, Total	ND	0.100	0.100	1	

Return to Contents

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.



## Analytical Report

San Diego Bay Environmental Restoration Fund South  
 C/O de maximis, Inc., 1322 Scott Street, Suite 104  
 San Diego, CA 92106-2727

Date Received: 12/13/13  
 Work Order: 13-12-1128  
 Preparation: EPA 3050B  
 Method: EPA 6020  
 Units: mg/kg

Project: South Shipyard Post Dredge

Page 1 of 1

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SD-S-C-SMU1-C-0535	13-12-1128-1-A	12/13/13 12:00	Sediment	ICP/MS 03	12/16/13	12/16/13 18:48	131216L03E

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

Parameter	Result	RL	MDL	DF	Qualifiers
Copper	5.91	0.128	0.0536	1	
Nickel	2.68	0.128	0.0647	1	
Silver	ND	0.128	0.0400	1	
Zinc	24.3	1.28	1.02	1	

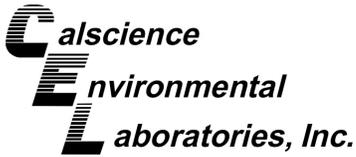
Method Blank	099-15-254-177	N/A	Solid	ICP/MS 03	12/16/13	12/16/13 18:28	131216L03E
--------------	----------------	-----	-------	-----------	----------	-------------------	------------

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

Parameter	Result	RL	MDL	DF	Qualifiers
Copper	ND	0.100	0.0419	1	
Nickel	ND	0.100	0.0506	1	
Silver	ND	0.100	0.0313	1	
Zinc	ND	1.00	0.795	1	

Return to Contents

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.



## Analytical Report

San Diego Bay Environmental Restoration Fund South  
 C/O de maximis, Inc., 1322 Scott Street, Suite 104  
 San Diego, CA 92106-2727

Date Received: 12/13/13  
 Work Order: 13-12-1128  
 Preparation: EPA 7471A Total  
 Method: EPA 7471A  
 Units: mg/kg

Project: South Shipyard Post Dredge

Page 1 of 1

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
<b>SD-S-C-SMU1-C-0535</b>	<b>13-12-1128-1-A</b>	<b>12/13/13 12:00</b>	<b>Sediment</b>	<b>Mercury</b>	<b>12/16/13</b>	<b>12/16/13 14:29</b>	<b>131216L04E</b>

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

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>MDL</u>	<u>DF</u>	<u>Qualifiers</u>
Mercury	0.0303	0.0256	0.00752	1	

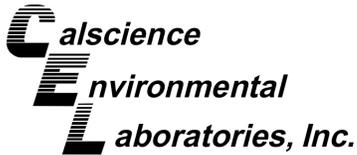
<b>Method Blank</b>	<b>099-12-452-439</b>	<b>N/A</b>	<b>Solid</b>	<b>Mercury</b>	<b>12/16/13</b>	<b>12/16/13 14:25</b>	<b>131216L04E</b>
---------------------	-----------------------	------------	--------------	----------------	-----------------	---------------------------	-------------------

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

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>MDL</u>	<u>DF</u>	<u>Qualifiers</u>
Mercury	ND	0.0200	0.00588	1	

↑  
Return to Contents

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.



## Analytical Report

San Diego Bay Environmental Restoration Fund South  
 C/O de maximis, Inc., 1322 Scott Street, Suite 104  
 San Diego, CA 92106-2727

Date Received: 12/13/13  
 Work Order: 13-12-1128  
 Preparation: EPA 3545  
 Method: EPA 8270C SIM PAHs  
 Units: ug/kg

Project: South Shipyard Post Dredge

Page 1 of 2

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SD-S-C-SMU1-C-0535	13-12-1128-1-A	12/13/13 12:00	Sediment	GC/MS AAA	12/14/13	12/16/13 20:49	131214L02

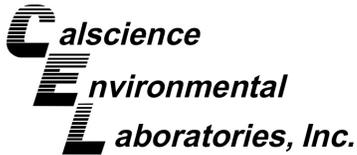
Comment(s): - Results are reported on a dry weight basis.

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

Parameter	Result	RL	MDL	DF	Qualifiers
Benzo (a) Anthracene	13	13	2.0	1	
Benzo (a) Pyrene	8.2	13	1.3	1	J
Benzo (b) Fluoranthene	9.0	13	1.3	1	J
Benzo (g,h,i) Perylene	3.6	13	1.2	1	J
Benzo (k) Fluoranthene	7.8	13	1.8	1	J
Chrysene	13	13	1.5	1	
Dibenz (a,h) Anthracene	ND	13	1.3	1	
Fluoranthene	58	13	1.3	1	
Indeno (1,2,3-c,d) Pyrene	3.1	13	1.4	1	J
Perylene	ND	13	12	1	
Pyrene	55	13	1.3	1	
Surrogate	Rec. (%)	Control Limits	Qualifiers		
2-Fluorobiphenyl	90	14-146			
Nitrobenzene-d5	88	18-162			
p-Terphenyl-d14	87	34-148			

Return to Contents

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.



## Analytical Report

San Diego Bay Environmental Restoration Fund South  
 C/O de maximis, Inc., 1322 Scott Street, Suite 104  
 San Diego, CA 92106-2727

Date Received: 12/13/13  
 Work Order: 13-12-1128  
 Preparation: EPA 3545  
 Method: EPA 8270C SIM PAHs  
 Units: ug/kg

Project: South Shipyard Post Dredge

Page 2 of 2

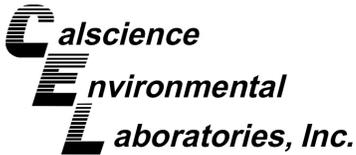
Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	099-14-097-119	N/A	Solid	GC/MS AAA	12/14/13	12/17/13 11:46	131214L02

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

Parameter	Result	RL	MDL	DF	Qualifiers
Benzo (a) Anthracene	ND	10	1.6	1	
Benzo (a) Pyrene	ND	10	1.0	1	
Benzo (b) Fluoranthene	ND	10	1.0	1	
Benzo (g,h,i) Perylene	ND	10	0.94	1	
Benzo (k) Fluoranthene	ND	10	1.4	1	
Chrysene	ND	10	1.2	1	
Dibenz (a,h) Anthracene	ND	10	1.0	1	
Fluoranthene	ND	10	0.98	1	
Indeno (1,2,3-c,d) Pyrene	ND	10	1.1	1	
Perylene	ND	10	9.8	1	
Pyrene	ND	10	0.99	1	
Surrogate	Rec. (%)	Control Limits	Qualifiers		
2-Fluorobiphenyl	81	14-146			
Nitrobenzene-d5	73	18-162			
p-Terphenyl-d14	80	34-148			

Return to Contents

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.



## Analytical Report

San Diego Bay Environmental Restoration Fund South  
 C/O de maximis, Inc., 1322 Scott Street, Suite 104  
 San Diego, CA 92106-2727

Date Received: 12/13/13  
 Work Order: 13-12-1128  
 Preparation: EPA 3545  
 Method: EPA 8270C SIM PCB Congeners  
 Units: ug/kg

Project: South Shipyard Post Dredge

Page 1 of 4

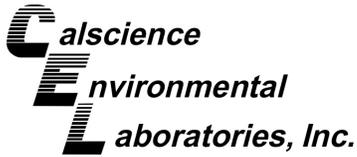
Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SD-S-C-SMU1-C-0535	13-12-1128-1-A	12/13/13 12:00	Sediment	GC/MS HHH	12/14/13	12/16/13 16:45	131214L01

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

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

Parameter	Result	RL	MDL	DF	Qualifiers
PCB018	ND	0.64	0.20	1	
PCB028	ND	0.64	0.13	1	
PCB037	ND	0.64	0.17	1	
PCB044	ND	0.64	0.17	1	
PCB049	ND	0.64	0.15	1	
PCB052	ND	0.64	0.12	1	
PCB066	ND	0.64	0.12	1	
PCB070	ND	0.64	0.10	1	
PCB074	ND	0.64	0.12	1	
PCB077	ND	0.64	0.12	1	
PCB081	ND	0.64	0.16	1	
PCB087	ND	0.64	0.13	1	
PCB099	ND	0.64	0.11	1	
PCB101	ND	0.64	0.10	1	
PCB105	ND	0.64	0.13	1	
PCB110	ND	0.64	0.13	1	
PCB114	ND	0.64	0.13	1	
PCB118	ND	0.64	0.17	1	
PCB119	ND	0.64	0.11	1	
PCB123	ND	0.64	0.11	1	
PCB126	ND	0.64	0.18	1	
PCB128	ND	0.64	0.13	1	
PCB138/158	ND	1.3	0.26	1	
PCB149	ND	0.64	0.11	1	
PCB151	ND	0.64	0.13	1	
PCB153	ND	0.64	0.13	1	
PCB156	ND	0.64	0.13	1	
PCB157	ND	0.64	0.12	1	
PCB167	ND	0.64	0.13	1	
PCB168	ND	0.64	0.11	1	
PCB169	ND	0.64	0.10	1	
PCB170	ND	0.64	0.12	1	
PCB177	ND	0.64	0.16	1	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.



## Analytical Report

San Diego Bay Environmental Restoration Fund South  
 C/O de maximis, Inc., 1322 Scott Street, Suite 104  
 San Diego, CA 92106-2727

Date Received: 12/13/13  
 Work Order: 13-12-1128  
 Preparation: EPA 3545  
 Method: EPA 8270C SIM PCB Congeners  
 Units: ug/kg

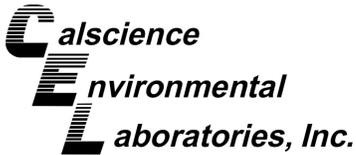
Project: South Shipyard Post Dredge

Page 2 of 4

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>MDL</u>	<u>DF</u>	<u>Qualifiers</u>
PCB180	ND	0.64	0.078	1	
PCB183	ND	0.64	0.14	1	
PCB187	ND	0.64	0.13	1	
PCB189	ND	0.64	0.11	1	
PCB194	ND	0.64	0.12	1	
PCB201	ND	0.64	0.073	1	
PCB206	ND	0.64	0.11	1	
<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>		
2-Fluorobiphenyl	121	19-133			
p-Terphenyl-d14	105	33-147			

Return to Contents

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.



## Analytical Report

San Diego Bay Environmental Restoration Fund South  
 C/O de maximis, Inc., 1322 Scott Street, Suite 104  
 San Diego, CA 92106-2727

Date Received: 12/13/13  
 Work Order: 13-12-1128  
 Preparation: EPA 3545  
 Method: EPA 8270C SIM PCB Congeners  
 Units: ug/kg

Project: South Shipyard Post Dredge

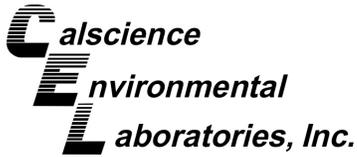
Page 3 of 4

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	099-14-341-145	N/A	Solid	GC/MS HHH	12/14/13	12/16/13 16:17	131214L01

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

Parameter	Result	RL	MDL	DF	Qualifiers
PCB018	ND	0.50	0.16	1	
PCB028	ND	0.50	0.099	1	
PCB037	ND	0.50	0.13	1	
PCB044	ND	0.50	0.13	1	
PCB049	ND	0.50	0.12	1	
PCB052	ND	0.50	0.097	1	
PCB066	ND	0.50	0.091	1	
PCB070	ND	0.50	0.082	1	
PCB074	ND	0.50	0.094	1	
PCB077	ND	0.50	0.097	1	
PCB081	ND	0.50	0.12	1	
PCB087	ND	0.50	0.10	1	
PCB099	ND	0.50	0.085	1	
PCB101	ND	0.50	0.081	1	
PCB105	ND	0.50	0.10	1	
PCB110	ND	0.50	0.10	1	
PCB114	ND	0.50	0.10	1	
PCB118	ND	0.50	0.13	1	
PCB119	ND	0.50	0.087	1	
PCB123	ND	0.50	0.087	1	
PCB126	ND	0.50	0.14	1	
PCB128	ND	0.50	0.10	1	
PCB138/158	ND	1.0	0.20	1	
PCB149	ND	0.50	0.089	1	
PCB151	ND	0.50	0.10	1	
PCB153	ND	0.50	0.10	1	
PCB156	ND	0.50	0.098	1	
PCB157	ND	0.50	0.096	1	
PCB167	ND	0.50	0.10	1	
PCB168	ND	0.50	0.086	1	
PCB169	ND	0.50	0.082	1	
PCB170	ND	0.50	0.093	1	
PCB177	ND	0.50	0.12	1	
PCB180	ND	0.50	0.061	1	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.



## Analytical Report

San Diego Bay Environmental Restoration Fund South  
 C/O de maximis, Inc., 1322 Scott Street, Suite 104  
 San Diego, CA 92106-2727

Date Received: 12/13/13  
 Work Order: 13-12-1128  
 Preparation: EPA 3545  
 Method: EPA 8270C SIM PCB Congeners  
 Units: ug/kg

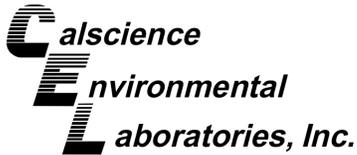
Project: South Shipyard Post Dredge

Page 4 of 4

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>MDL</u>	<u>DF</u>	<u>Qualifiers</u>
PCB183	ND	0.50	0.11	1	
PCB187	ND	0.50	0.10	1	
PCB189	ND	0.50	0.086	1	
PCB194	ND	0.50	0.096	1	
PCB201	ND	0.50	0.057	1	
PCB206	ND	0.50	0.083	1	
<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>		
2-Fluorobiphenyl	73	19-133			
p-Terphenyl-d14	93	33-147			

Return to Contents

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.



## Analytical Report

San Diego Bay Environmental Restoration Fund South  
C/O de maximis, Inc., 1322 Scott Street, Suite 104  
San Diego, CA 92106-2727

Date Received: 12/13/13  
Work Order: 13-12-1128  
Preparation: EPA 3550B (M)  
Method: Organotins by Krone et al.  
Units: ug/kg

Project: South Shipyard Post Dredge

Page 1 of 1

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SD-S-C-SMU1-C-0535	13-12-1128-1-A	12/13/13 12:00	Sediment	GC/MS Y	12/14/13	12/17/13 18:59	131214L03

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

Parameter	Result	RL	MDL	DF	Qualifiers
Tributyltin	ND	3.8	0.74	1	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Tripentyltin	70	27-135	

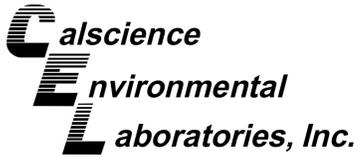
Method Blank	099-07-016-1110	N/A	Solid	GC/MS Y	12/14/13	12/17/13 17:34	131214L03
--------------	-----------------	-----	-------	---------	----------	-------------------	-----------

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

Parameter	Result	RL	MDL	DF	Qualifiers
Tributyltin	ND	3.0	0.58	1	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Tripentyltin	96	27-135	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.



## Quality Control - Spike/Spike Duplicate

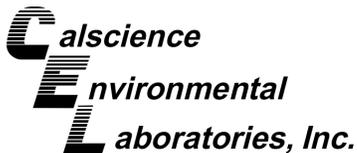
San Diego Bay Environmental Restoration Fund South  
 C/O de maximis, Inc., 1322 Scott Street, Suite 104  
 San Diego, CA 92106-2727

Date Received: 12/13/13  
 Work Order: 13-12-1128  
 Preparation: EPA 3050B  
 Method: EPA 6020

Project: South Shipyard Post Dredge

Page 1 of 5

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number					
<b>SD-S-C-SMU1-C-0535</b>	<b>Sediment</b>	<b>ICP/MS 03</b>	<b>12/16/13</b>	<b>12/16/13 18:35</b>	<b>131216S03</b>					
Parameter	Sample Conc.	Spike Added	MS Conc.	MS %Rec.	MSD Conc.	MSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
Copper	4.622	25.00	28.48	95	29.28	99	80-120	3	0-20	
Nickel	2.097	25.00	24.51	90	25.56	94	80-120	4	0-20	
Silver	ND	12.50	11.93	95	12.51	100	80-120	5	0-20	
Zinc	19.04	25.00	43.43	98	43.04	96	80-120	1	0-20	



**Quality Control - Spike/Spike Duplicate**

San Diego Bay Environmental Restoration Fund South  
 C/O de maximis, Inc., 1322 Scott Street, Suite 104  
 San Diego, CA 92106-2727

Date Received: 12/13/13  
 Work Order: 13-12-1128  
 Preparation: EPA 7471A Total  
 Method: EPA 7471A

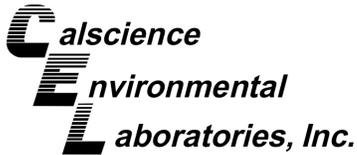
Project: South Shipyard Post Dredge

Page 2 of 5

Quality Control Sample ID	Matrix		Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number				
<b>SD-S-C-SMU1-C-0535</b>	<b>Sediment</b>		<b>Mercury</b>	<b>12/16/13</b>	<b>12/16/13 14:31</b>	<b>131216S04</b>				
<u>Parameter</u>	<u>Sample Conc.</u>	<u>Spike Added</u>	<u>MS Conc.</u>	<u>MS %Rec.</u>	<u>MSD Conc.</u>	<u>MSD %Rec.</u>	<u>%Rec. CL</u>	<u>RPD</u>	<u>RPD CL</u>	<u>Qualifiers</u>
Mercury	0.02373	0.8350	0.6971	81	0.7378	86	76-136	6	0-16	

Return to Contents 

RPD: Relative Percent Difference. CL: Control Limits



## Quality Control - Spike/Spike Duplicate

San Diego Bay Environmental Restoration Fund South  
 C/O de maximis, Inc., 1322 Scott Street, Suite 104  
 San Diego, CA 92106-2727

Date Received: 12/13/13  
 Work Order: 13-12-1128  
 Preparation: EPA 3545  
 Method: EPA 8270C SIM PAHs

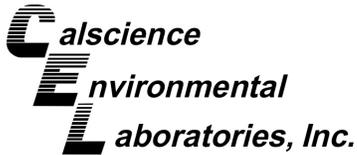
Project: South Shipyard Post Dredge

Page 3 of 5

Quality Control Sample ID	Matrix		Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number				
<b>SD-S-C-SMU1-C-0535</b>	<b>Sediment</b>		<b>GC/MS AAA</b>	<b>12/14/13</b>	<b>12/16/13 21:12</b>	<b>131214S02</b>				
Parameter	Sample Conc.	Spike Added	MS Conc.	MS %Rec.	MSD Conc.	MSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
Benzo (a) Anthracene	10.33	100.0	92.80	82	102.4	92	40-160	10	0-20	
Benzo (a) Pyrene	ND	100.0	84.83	85	93.41	93	40-160	10	0-20	
Benzo (b) Fluoranthene	ND	100.0	98.18	98	108.1	108	40-160	10	0-20	
Benzo (g,h,i) Perylene	ND	100.0	71.03	71	77.57	78	40-160	9	0-20	
Benzo (k) Fluoranthene	ND	100.0	91.12	91	100.3	100	40-160	10	0-20	
Chrysene	10.52	100.0	89.98	79	99.91	89	40-160	10	0-20	
Dibenz (a,h) Anthracene	ND	100.0	63.99	64	69.40	69	40-160	8	0-20	
Fluoranthene	45.34	100.0	132.9	88	147.4	102	40-160	10	0-20	
Indeno (1,2,3-c,d) Pyrene	ND	100.0	68.61	69	74.35	74	40-160	8	0-20	
Pyrene	42.90	100.0	130.4	87	144.3	101	40-160	10	0-46	

Return to Contents

RPD: Relative Percent Difference. CL: Control Limits



## Quality Control - Spike/Spike Duplicate

San Diego Bay Environmental Restoration Fund South  
 C/O de maximis, Inc., 1322 Scott Street, Suite 104  
 San Diego, CA 92106-2727

Date Received: 12/13/13  
 Work Order: 13-12-1128  
 Preparation: EPA 3545  
 Method: EPA 8270C SIM PCB Congeners

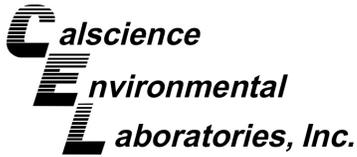
Project: South Shipyard Post Dredge

Page 4 of 5

Quality Control Sample ID	Matrix		Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number				
<b>SD-S-C-SMU1-C-0535</b>	<b>Sediment</b>		<b>GC/MS HHH</b>	<b>12/14/13</b>	<b>12/16/13 17:13</b>	<b>131214S01</b>				
Parameter	Sample Conc.	Spike Added	MS Conc.	MS %Rec.	MSD Conc.	MSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
PCB018	ND	25.00	21.95	88	21.95	88	50-125	0	0-30	
PCB028	ND	25.00	23.07	92	23.46	94	50-125	2	0-30	
PCB044	ND	25.00	23.46	94	23.57	94	50-125	0	0-30	
PCB052	ND	25.00	23.03	92	23.32	93	50-125	1	0-30	
PCB066	ND	25.00	23.99	96	23.66	95	50-125	1	0-30	
PCB077	ND	25.00	24.43	98	24.34	97	50-125	0	0-30	
PCB101	ND	25.00	23.15	93	23.13	93	50-125	0	0-30	
PCB105	ND	25.00	22.92	92	22.70	91	50-125	1	0-30	
PCB118	ND	25.00	26.04	104	25.80	103	50-125	1	0-30	
PCB126	ND	25.00	21.93	88	22.25	89	50-125	1	0-30	
PCB128	ND	25.00	20.37	81	20.42	82	50-125	0	0-30	
PCB153	ND	25.00	22.11	88	22.22	89	50-125	1	0-30	
PCB170	ND	25.00	23.53	94	23.43	94	50-125	0	0-30	
PCB180	ND	25.00	21.56	86	21.37	85	50-125	1	0-30	
PCB187	ND	25.00	21.26	85	21.05	84	50-125	1	0-30	
PCB206	ND	25.00	26.13	105	25.83	103	50-125	1	0-30	

Return to Contents

RPD: Relative Percent Difference. CL: Control Limits



## Quality Control - Spike/Spike Duplicate

San Diego Bay Environmental Restoration Fund South  
 C/O de maximis, Inc., 1322 Scott Street, Suite 104  
 San Diego, CA 92106-2727

Date Received: 12/13/13  
 Work Order: 13-12-1128  
 Preparation: EPA 3550B (M)  
 Method: Organotins by Krone et al.

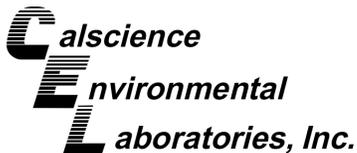
Project: South Shipyard Post Dredge

Page 5 of 5

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number					
<b>SD-S-C-SMU1-C-0535</b>	<b>Sediment</b>	<b>GC/MS Y</b>	<b>01/01/95</b>	<b>12/17/13 19:13</b>	<b>131214S03</b>					
Parameter	Sample Conc.	Spike Added	MS Conc.	MS %Rec.	MSD Conc.	MSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
Tributyltin	ND	100.0	67.90	68	82.86	83	34-142	20	0-50	

Return to Contents

RPD: Relative Percent Difference. CL: Control Limits



Quality Control - PDS/PDSD

San Diego Bay Environmental Restoration Fund South  
 C/O de maximis, Inc., 1322 Scott Street, Suite 104  
 San Diego, CA 92106-2727

Date Received: 12/13/13  
 Work Order: 13-12-1128  
 Preparation: EPA 3050B  
 Method: EPA 6020

Project: South Shipyard Post Dredge

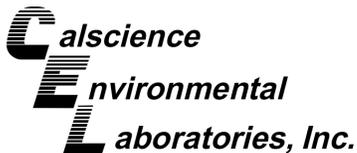
Page 1 of 1

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	PDS/PDSD Batch Number
<b>SD-S-C-SMU1-C-0535</b>	<b>Sediment</b>	<b>ICP/MS 03</b>	<b>12/16/13 00:00</b>	<b>12/16/13 18:41</b>	<b>131216S03</b>

<u>Parameter</u>	<u>Sample Conc.</u>	<u>Spike Added</u>	<u>PDS Conc.</u>	<u>PDS %Rec.</u>	<u>%Rec. CL</u>	<u>Qualifiers</u>
Copper	4.622	25.00	31.03	106	75-125	
Nickel	2.097	25.00	26.77	99	75-125	
Silver	ND	12.50	11.03	88	75-125	
Zinc	19.04	25.00	43.87	99	75-125	

Return to Contents

RPD: Relative Percent Difference. CL: Control Limits



**Quality Control - Sample Duplicate**

San Diego Bay Environmental Restoration Fund South  
 C/O de maximis, Inc., 1322 Scott Street, Suite 104  
 San Diego, CA 92106-2727

Date Received: 12/13/13  
 Work Order: 13-12-1128  
 Preparation: N/A  
 Method: SM 2540 B (M)

Project: South Shipyard Post Dredge

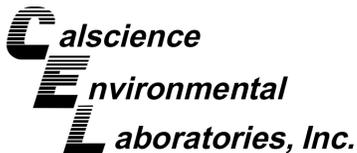
Page 1 of 1

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	Duplicate Batch Number
<b>SD-S-C-SMU1-C-0535</b>	<b>Sediment</b>	<b>N/A</b>	<b>12/14/13 00:00</b>	<b>12/14/13 17:00</b>	<b>D1214TSD2</b>

<u>Parameter</u>	<u>Sample Conc.</u>	<u>DUP Conc.</u>	<u>RPD</u>	<u>RPD CL</u>	<u>Qualifiers</u>
Solids, Total	78.20	78.40	0	0-10	

Return to Contents 

RPD: Relative Percent Difference. CL: Control Limits



Quality Control - LCS

San Diego Bay Environmental Restoration Fund South  
 C/O de maximis, Inc., 1322 Scott Street, Suite 104  
 San Diego, CA 92106-2727

Date Received: 12/13/13  
 Work Order: 13-12-1128  
 Preparation: EPA 3050B  
 Method: EPA 6020

Project: South Shipyard Post Dredge

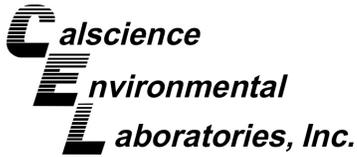
Page 1 of 5

Quality Control Sample ID	Matrix	Instrument	Date Analyzed	LCS Batch Number
<b>099-15-254-177</b>	<b>Solid</b>	<b>ICP/MS 03</b>	<b>12/16/13 18:31</b>	<b>131216L03E</b>

<u>Parameter</u>	<u>Spike Added</u>	<u>Conc. Recovered</u>	<u>LCS %Rec.</u>	<u>%Rec. CL</u>	<u>Qualifiers</u>
Copper	25.00	29.01	116	80-120	
Nickel	25.00	26.80	107	80-120	
Silver	12.50	11.42	91	80-120	
Zinc	25.00	29.43	118	80-120	

Return to Contents

RPD: Relative Percent Difference. CL: Control Limits



## Quality Control - LCS

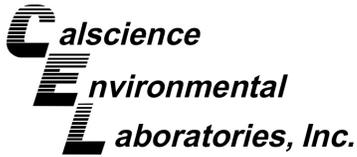
San Diego Bay Environmental Restoration Fund South  
 C/O de maximis, Inc., 1322 Scott Street, Suite 104  
 San Diego, CA 92106-2727

Date Received: 12/13/13  
 Work Order: 13-12-1128  
 Preparation: EPA 7471A Total  
 Method: EPA 7471A

Project: South Shipyard Post Dredge

Page 2 of 5

Quality Control Sample ID	Matrix	Instrument	Date Analyzed	LCS Batch Number	
<b>099-12-452-439</b>	<b>Solid</b>	<b>Mercury</b>	<b>12/16/13 14:27</b>	<b>131216L04E</b>	
<u>Parameter</u>	<u>Spike Added</u>	<u>Conc. Recovered</u>	<u>LCS %Rec.</u>	<u>%Rec. CL</u>	<u>Qualifiers</u>
Mercury	0.8350	0.7826	94	82-124	



## Quality Control - LCS

San Diego Bay Environmental Restoration Fund South  
 C/O de maximis, Inc., 1322 Scott Street, Suite 104  
 San Diego, CA 92106-2727

Date Received: 12/13/13  
 Work Order: 13-12-1128  
 Preparation: EPA 3545  
 Method: EPA 8270C SIM PAHs

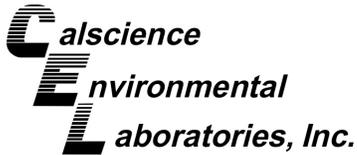
Project: South Shipyard Post Dredge

Page 3 of 5

Quality Control Sample ID	Matrix	Instrument	Date Analyzed	LCS Batch Number	
<b>099-14-097-119</b>	<b>Solid</b>	<b>GC/MS AAA</b>	<b>12/17/13 12:09</b>	<b>131214L02</b>	
<u>Parameter</u>	<u>Spike Added</u>	<u>Conc. Recovered</u>	<u>LCS %Rec.</u>	<u>%Rec. CL</u>	<u>Qualifiers</u>
Benzo (a) Anthracene	100.0	83.55	84	40-160	
Benzo (a) Pyrene	100.0	79.95	80	40-160	
Benzo (b) Fluoranthene	100.0	88.33	88	40-160	
Benzo (g,h,i) Perylene	100.0	98.68	99	40-160	
Benzo (k) Fluoranthene	100.0	88.40	88	40-160	
Chrysene	100.0	88.28	88	40-160	
Dibenz (a,h) Anthracene	100.0	80.77	81	40-160	
Fluoranthene	100.0	103.5	104	40-160	
Indeno (1,2,3-c,d) Pyrene	100.0	90.93	91	40-160	
Pyrene	100.0	105.7	106	40-160	

Return to Contents

RPD: Relative Percent Difference. CL: Control Limits



## Quality Control - LCS

San Diego Bay Environmental Restoration Fund South  
 C/O de maximis, Inc., 1322 Scott Street, Suite 104  
 San Diego, CA 92106-2727

Date Received: 12/13/13  
 Work Order: 13-12-1128  
 Preparation: EPA 3545  
 Method: EPA 8270C SIM PCB Congeners

Project: South Shipyard Post Dredge

Page 4 of 5

Quality Control Sample ID	Matrix	Instrument	Date Analyzed	LCS Batch Number		
<b>099-14-341-145</b>	<b>Solid</b>	<b>GC/MS HHH</b>	<b>12/16/13 15:48</b>	<b>131214L01</b>		
Parameter	Spike Added	Conc. Recovered	LCS %Rec.	%Rec. CL	ME CL	Qualifiers
PCB018	25.00	23.60	94	50-125	38-138	
PCB028	25.00	23.90	96	50-125	38-138	
PCB044	25.00	24.47	98	50-125	38-138	
PCB052	25.00	23.78	95	50-125	38-138	
PCB066	25.00	24.72	99	50-125	38-138	
PCB077	25.00	25.74	103	50-125	38-138	
PCB101	25.00	25.09	100	50-125	38-138	
PCB105	25.00	25.21	101	50-125	38-138	
PCB118	25.00	28.14	113	50-125	38-138	
PCB126	25.00	25.49	102	50-125	38-138	
PCB128	25.00	24.52	98	50-125	38-138	
PCB153	25.00	24.63	99	50-125	38-138	
PCB170	25.00	22.89	92	50-125	38-138	
PCB180	25.00	25.63	103	50-125	38-138	
PCB187	25.00	24.58	98	50-125	38-138	
PCB206	25.00	26.49	106	50-125	38-138	

Total number of LCS compounds: 16

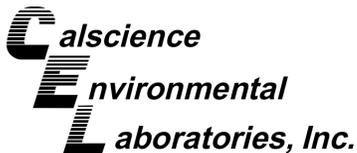
Total number of ME compounds: 0

Total number of ME compounds allowed: 1

LCS ME CL validation result: Pass

Return to Contents

RPD: Relative Percent Difference. CL: Control Limits



Quality Control - LCS

San Diego Bay Environmental Restoration Fund South  
 C/O de maximis, Inc., 1322 Scott Street, Suite 104  
 San Diego, CA 92106-2727

Date Received: 12/13/13  
 Work Order: 13-12-1128  
 Preparation: EPA 3550B (M)  
 Method: Organotins by Krone et al.

Project: South Shipyard Post Dredge

Page 5 of 5

Quality Control Sample ID	Matrix	Instrument	Date Analyzed	LCS Batch Number
<b>099-07-016-1110</b>	<b>Solid</b>	<b>GC/MS Y</b>	<b>12/17/13 17:49</b>	<b>131214L03</b>

<u>Parameter</u>	<u>Spike Added</u>	<u>Conc. Recovered</u>	<u>LCS %Rec.</u>	<u>%Rec. CL</u>	<u>Qualifiers</u>
Tributyltin	100.0	78.30	78	33-147	

Return to Contents

RPD: Relative Percent Difference. CL: Control Limits

## Glossary of Terms and Qualifiers

Work Order: 13-12-1128

Page 1 of 1

<u>Qualifiers</u>	<u>Definition</u>
*	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 suspected matrix interference. The associated LCS recovery was in control.
4	The MS/MSD RPD was out of control due to suspected matrix interference.
5	The PDS/PDSD or PES/PESD associated with this batch of samples was out of control due to suspected matrix interference.
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.
BV	Sample received 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.
JA	Analyte positively identified but quantitation is an estimate.
ME	LCS Recovery Percentage is within Marginal Exceedance (ME) Control Limit range (+/- 4 SD from the mean).
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.

Any parameter identified in 40CFR Part 136.3 Table II that is designated as "analyze immediately" with a holding time of  $\leq 15$  minutes (40CFR-136.3 Table II, footnote 4), is considered a "field" test and the reported results will be qualified as being received outside of the stated holding time unless received at the laboratory within 15 minutes of the collection time.

A calculated total result (Example: Total Pesticides) is the summation of each component concentration and/or, if "J" flags are reported, estimated concentration. Component concentrations showing not detected (ND) are summed into the calculated total result as zero concentrations.

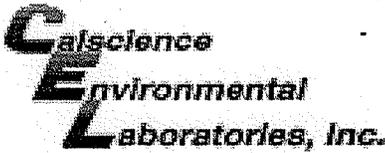


# CHAIN OF CUSTODY RECORD

DATE: 12/13/13  
PAGE: 1 OF 1

alscience  
Environmental  
Laboratories, Inc.  
7440 LINCOLN WAY  
GARDEN GROVE, CA 92841-1427  
TEL: (714) 895-5494 . FAX: (714) 894-7501

LABORATORY CLIENT: <b>San Diego Bay Environmental Restoration Fund South</b>		CLIENT PROJECT NAME / NUMBER: <b>SOUTH SHIPYARD</b>		P.O. NO.: 13190806-0004.01	
ADDRESS: C/O de maximis, Inc. 1322 Scott Street, Suite 104		PROJECT CONTACT: Mike Palmer and Adam Gale		LAB CONTACT OR QUOTE NO.:	
CITY: San Diego		STATE: CA		ZIP: 92106-2727	
TEL: 619-546-8377		E-MAIL: mpalmer@demaximis.com agale@anchoragea.com		SAMPLER(S), (SIGNATURE): <i>[Signature]</i>	
TURNAROUND TIME: <input type="checkbox"/> SAME DAY <input type="checkbox"/> 24 HR <input type="checkbox"/> 48 HR <input type="checkbox"/> 72 HR <input type="checkbox"/> 5 DAYS <input type="checkbox"/> 10 DAYS		<b>REQUESTED ANALYSIS</b>			
SPECIAL REQUIREMENTS (ADDITIONAL COSTS MAY APPLY) <input type="checkbox"/> RWQCB REPORTING <input type="checkbox"/> ARCHIVE SAMPLES UNTIL ___ / ___ / ___					
SPECIAL INSTRUCTIONS: Low level sediment detection limits  <i>Danielle Gonsman is PM</i>		Organotins by Krone et al. (Tributyltin only)		<input checked="" type="checkbox"/>	
LAB USE ONLY		EPA 8270C SIM PAHs (target list)		<input checked="" type="checkbox"/>	
SAMPLE ID		EPA 8270C SIM PCB Congeners		<input checked="" type="checkbox"/>	
LOCATION / DESCRIPTION		Ag, Zn		<input checked="" type="checkbox"/>	
DATE		EPA 6020 / 7471A Cu, Hg, Ni		<input checked="" type="checkbox"/>	
TIME		SM 2540B Total Solids		<input checked="" type="checkbox"/>	
NO. OF CONT.					
MATRIX		SED			
DATE		12/13/13			
TIME		1200			
RECEIVED BY (SIGNATURE)		<i>[Signature]</i>		Date: 12/13/13	
RECEIVED BY (SIGNATURE)		<i>[Signature]</i>		Time: 1555	
RECEIVED BY (SIGNATURE)		<i>[Signature]</i>		Date: 12/13/13	
RECEIVED BY (SIGNATURE)		<i>[Signature]</i>		Time: 1900	



WORK ORDER #: 13-12-

# SAMPLE RECEIPT FORM

Cooler 1 of 1

CLIENT: AMEC

DATE: 12/13/13

**TEMPERATURE:** Thermometer ID: SC2 (Criteria: 0.0°C – 6.0°C, not frozen except sediment/tissue)

Temperature 1.7 °C - 0.2°C (CF) = 1.5 °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

Checked by: 671

**CUSTODY SEALS INTACT:**

Cooler  \_\_\_\_\_  No (Not Intact)  Not Present  N/A

Sample  \_\_\_\_\_  No (Not Intact)  Not Present

Checked by: 671  
802

SAMPLE CONDITION:	Yes	No	N/A
Chain-Of-Custody (COC) document(s) received with samples.....	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
COC document(s) received complete.....	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> Collection date/time, matrix, and/or # of containers logged in based on sample labels.			
<input type="checkbox"/> No analysis requested. <input type="checkbox"/> Not relinquished. <input type="checkbox"/> No date/time relinquished.			
Sampler's name indicated on COC.....	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Sample container label(s) consistent with COC.....	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Sample container(s) intact and good condition.....	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Proper containers and sufficient volume for analyses requested.....	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Analyses received within holding time.....	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Aqueous samples received within 15-minute holding time			
<input type="checkbox"/> pH <input type="checkbox"/> Residual Chlorine <input type="checkbox"/> Dissolved Sulfides <input type="checkbox"/> Dissolved Oxygen.....	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Proper preservation noted on COC or sample container.....	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/> Unpreserved vials received for Volatiles analysis			
Volatile analysis container(s) free of headspace.....	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Tedlar bag(s) free of condensation.....	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTAINER TYPE:**

Solid:  4ozCGJ  8ozCGJ  16ozCGJ  Sleeve (\_\_\_\_)  EnCores®  TerraCores®  \_\_\_\_\_

Aqueous:  VOA  VOA<sub>h</sub>  VOA<sub>na2</sub>  125AGB  125AGB<sub>h</sub>  125AGB<sub>p</sub>  1AGB  1AGB<sub>na2</sub>  1AGB<sub>s</sub>

500AGB  500AGJ  500AGJ<sub>s</sub>  250AGB  250CGB  250CGB<sub>s</sub>  1PB  1PB<sub>na</sub>  500PB

250PB  250PB<sub>n</sub>  125PB  125PB<sub>znna</sub>  100PJ  100PJ<sub>na2</sub>  \_\_\_\_\_  \_\_\_\_\_  \_\_\_\_\_

Air:  Tedlar®  Canister Other:  \_\_\_\_\_ Trip Blank Lot#: \_\_\_\_\_ Labeled/Checked by: 802

Container: C: Clear A: Amber P: Plastic G: Glass J: Jar B: Bottle Z: Ziploc/Resealable Bag E: Envelope Reviewed by: 681

Preservative: h: HCL n: HNO<sub>3</sub> na<sub>2</sub>: Na<sub>2</sub>S<sub>2</sub>O<sub>3</sub> na: NaOH p: H<sub>3</sub>PO<sub>4</sub> s: H<sub>2</sub>SO<sub>4</sub> u: Ultra-pure znna: ZnAc<sub>2</sub>+NaOH f: Filtered Scanned by: 681

Return to Contents



## CERTIFICATION

All analyses were conducted at a laboratory certified for such analyses by the California Department of Public Health in accordance with applicable USEPA and NELAP accreditation procedures.

I certify under penalty of law that the data generated for Calscience Work Order No. 14-01-1523 were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. The Project Manager or designee who signed the Calscience Work Order has been specifically authorized and approved to do so.

The information submitted is, to the best of my knowledge and belief, true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of a fine and imprisonment for knowing violations.

  
\_\_\_\_\_  
Signature, Laboratory Director

May 20, 2014  
Date

Name of Laboratory:  
Address of Laboratory:

**Calscience Environmental Laboratories**  
**7440 Lincoln Way**  
**Garden Grove, CA 92841-1432**

This Certification signed by:

**Steve Lane**



Supplemental Report 2

The original report has been revised/corrected.

**CALSCIENCE****WORK ORDER NUMBER: 14-01-1523***The difference is service*

AIR | SOIL | WATER | MARINE CHEMISTRY

**Analytical Report For****Client:** San Diego Bay Environmental Restoration Fund South**Client Project Name:** South Shipyard Post Dredge Sampling**Attention:** Mike Palmer  
C/O de maximis, Inc.  
1322 Scott Street, Suite 104  
San Diego, CA 92106-2727

Approved for release on 01/31/2014 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.



Client Project Name: South Shipyard Post Dredge  
Work Order Number: 14-01-1523

1	Work Order Narrative. . . . .	3
2	Sample Summary. . . . .	4
3	Client Sample Data. . . . .	5
	3.1 SM 2540 B (M) Total Solids (Solid). . . . .	5
	3.2 EPA 6020 ICP/MS Metals (Solid). . . . .	6
	3.3 EPA 7471A Mercury (Solid). . . . .	7
	3.4 EPA 8270C SIM PAHs (Solid). . . . .	8
	3.5 EPA 8270C SIM PCB Congeners (Solid). . . . .	10
	3.6 Krone et al. Organotins (Solid). . . . .	14
4	Quality Control Sample Data. . . . .	15
	4.1 MS/MSD. . . . .	15
	4.2 PDS/PDSD. . . . .	20
	4.3 Sample Duplicate. . . . .	21
	4.4 LCS/LCSD. . . . .	22
5	Glossary of Terms and Qualifiers. . . . .	27
6	Chain of Custody/Sample Receipt Form. . . . .	28

**Condition Upon Receipt:**

Samples were received under Chain of Custody (COC) on 01/25/14. They were assigned to Work Order 14-01-1523.

Unless otherwise noted on the Sample Receiving forms all samples were received in good condition and within the recommended EPA temperature criteria for the methods noted on the COC. The COC and Sample Receiving Documents are integral elements of the analytical report and are presented at the back of the report.

**Holding Times:**

All samples were analyzed within prescribed holding times (HT) and/or in accordance with the Calscience Sample Acceptance Policy unless otherwise noted in the analytical report and/or comprehensive case narrative, if required.

Any parameter identified in 40CFR Part 136.3 Table II that is designated as "analyze immediately" with a holding time of  $\leq 15$  minutes (40CFR-136.3 Table II, footnote 4), is considered a "field" test and the reported results will be qualified as being received outside of the stated holding time unless received at the laboratory within 15 minutes of the collection time.

**Quality Control:**

All quality control parameters (QC) were within established control limits except where noted in the QC summary forms or described further within this report.

**Additional Comments:**

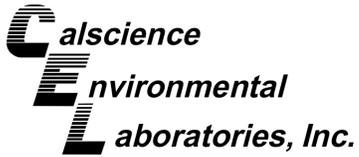
Air - Sorbent-extracted air methods (EPA TO-4A, EPA TO-10, EPA TO-13A, EPA TO-17): Analytical results are converted from mass/sample basis to mass/volume basis using client-supplied air volumes.

New York NELAP air certification does not certify for all reported methods and analytes, reference the accredited items here: [http://www.calscience.com/PDF/New\\_York.pdf](http://www.calscience.com/PDF/New_York.pdf)

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

**Subcontractor Information:**

Unless otherwise noted below (or on the subcontract form), no samples were subcontracted.



## Sample Summary

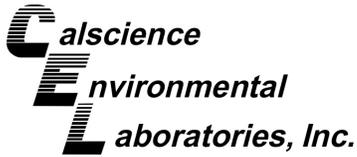
---

Client: San Diego Bay Environmental Restoration Fund	Work Order:	14-01-1523
South	Project Name:	South Shipyard Post Dredge
C/O de maximis, Inc., 1322 Scott Street, Suite	PO Number:	
104	Date/Time	01/25/14 16:07
San Diego, CA 92106-2727	Received:	
	Number of	
	Containers:	1

Attn: Mike Palmer

---

Sample Identification	Lab Number	Collection Date and Time	Number of Containers	Matrix
SD-S-C-SMU2A/B-C-0535	14-01-1523-1	01/25/14 14:00	1	Sediment



## Analytical Report

San Diego Bay Environmental Restoration Fund South  
 C/O de maximis, Inc., 1322 Scott Street, Suite 104  
 San Diego, CA 92106-2727

Date Received: 01/25/14  
 Work Order: 14-01-1523  
 Preparation: N/A  
 Method: SM 2540 B (M)  
 Units: %

Project: South Shipyard Post Dredge

Page 1 of 1

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SD-S-C-SMU2A/B-C-0535	14-01-1523-1-AA	01/25/14 14:00	Sediment	N/A	01/28/14	01/28/14 18:10	E0128TSB1

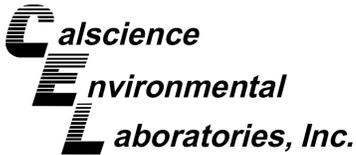
Parameter	Result	RL	DF	Qualifiers
Solids, Total	68.5	0.100	1	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	099-05-019-2462	N/A	Solid	N/A	01/28/14	01/28/14 18:10	E0128TSB1

Parameter	Result	RL	DF	Qualifiers
Solids, Total	ND	0.100	1	

Return to Contents

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.



## Analytical Report

San Diego Bay Environmental Restoration Fund South  
 C/O de maximis, Inc., 1322 Scott Street, Suite 104  
 San Diego, CA 92106-2727

Date Received: 01/25/14  
 Work Order: 14-01-1523  
 Preparation: EPA 3050B  
 Method: EPA 6020  
 Units: mg/kg

Project: South Shipyard Post Dredge

Page 1 of 1

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SD-S-C-SMU2A/B-C-0535	14-01-1523-1-AA	01/25/14 14:00	Sediment	ICP/MS 03	01/27/14	01/27/14 22:12	140127L03E

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

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

Parameter	Result	RL	MDL	DF	Qualifiers
Copper	134	0.146	0.0612	1	
Nickel	9.18	0.146	0.0739	1	
Silver	0.435	0.146	0.0457	1	
Zinc	153	1.46	1.16	1	

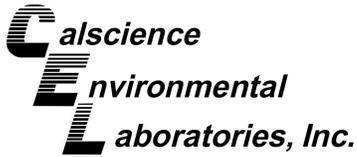
Method Blank	099-15-254-184	N/A	Solid	ICP/MS 03	01/27/14	01/27/14 21:14	140127L03E
--------------	----------------	-----	-------	-----------	----------	-------------------	------------

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

Parameter	Result	RL	MDL	DF	Qualifiers
Copper	ND	0.100	0.0419	1	
Nickel	ND	0.100	0.0506	1	
Silver	ND	0.100	0.0313	1	
Zinc	ND	1.00	0.795	1	

Return to Contents

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.



## Analytical Report

San Diego Bay Environmental Restoration Fund South  
 C/O de maximis, Inc., 1322 Scott Street, Suite 104  
 San Diego, CA 92106-2727

Date Received: 01/25/14  
 Work Order: 14-01-1523  
 Preparation: EPA 7471A Total  
 Method: EPA 7471A  
 Units: mg/kg

Project: South Shipyard Post Dredge

Page 1 of 1

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SD-S-C-SMU2A/B-C-0535	14-01-1523-1-AA	01/25/14 14:00	Sediment	Mercury	01/27/14	01/27/14 20:46	140127L06E

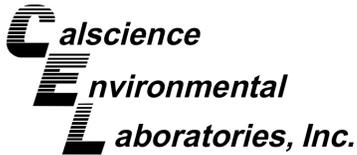
Comment(s): - Results are reported on a dry weight basis.

Parameter	Result	RL	DF	Qualifiers
Mercury	0.566	0.0293	0.599	

Method Blank	099-12-452-448	N/A	Solid	Mercury	01/27/14	01/27/14 18:36	140127L06E
--------------	----------------	-----	-------	---------	----------	-------------------	------------

Parameter	Result	RL	DF	Qualifiers
Mercury	ND	0.0200	1	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.



## Analytical Report

San Diego Bay Environmental Restoration Fund South  
 C/O de maximis, Inc., 1322 Scott Street, Suite 104  
 San Diego, CA 92106-2727

Date Received: 01/25/14  
 Work Order: 14-01-1523  
 Preparation: EPA 3545  
 Method: EPA 8270C SIM PAHs  
 Units: ug/kg

Project: South Shipyard Post Dredge

Page 1 of 2

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SD-S-C-SMU2A/B-C-0535	14-01-1523-1-AA	01/25/14 14:00	Sediment	GC/MS AAA	01/27/14	01/28/14 12:24	140127L02

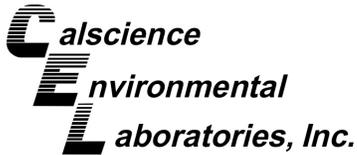
Comment(s): - Results are reported on a dry weight basis.

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

Parameter	Result	RL	MDL	DF	Qualifiers
Benzo (a) Anthracene	150	15	2.3	1	
Benzo (a) Pyrene	280	15	1.5	1	
Benzo (b) Fluoranthene	340	15	1.5	1	
Benzo (g,h,i) Perylene	150	15	1.4	1	
Benzo (k) Fluoranthene	230	15	2.0	1	
Chrysene	160	15	1.7	1	
Dibenz (a,h) Anthracene	42	15	1.5	1	
Fluoranthene	360	15	1.4	1	
Indeno (1,2,3-c,d) Pyrene	180	15	1.5	1	
Perylene	53	15	14	1	
Pyrene	500	15	1.4	1	
Surrogate	Rec. (%)	Control Limits	Qualifiers		
2-Fluorobiphenyl	145	14-146			
Nitrobenzene-d5	117	18-162			
p-Terphenyl-d14	90	34-148			

Return to Contents

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.



## Analytical Report

San Diego Bay Environmental Restoration Fund South  
 C/O de maximis, Inc., 1322 Scott Street, Suite 104  
 San Diego, CA 92106-2727

Date Received: 01/25/14  
 Work Order: 14-01-1523  
 Preparation: EPA 3545  
 Method: EPA 8270C SIM PAHs  
 Units: ug/kg

Project: South Shipyard Post Dredge

Page 2 of 2

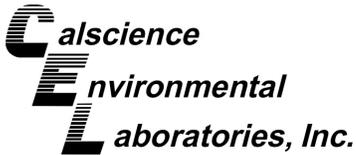
Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	099-14-097-123	N/A	Solid	GC/MS AAA	01/27/14	01/28/14 11:37	140127L02

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

Parameter	Result	RL	MDL	DF	Qualifiers
Benzo (a) Anthracene	ND	10	1.6	1	
Benzo (a) Pyrene	ND	10	1.0	1	
Benzo (b) Fluoranthene	ND	10	1.0	1	
Benzo (g,h,i) Perylene	ND	10	0.94	1	
Benzo (k) Fluoranthene	ND	10	1.4	1	
Chrysene	ND	10	1.2	1	
Dibenz (a,h) Anthracene	ND	10	1.0	1	
Fluoranthene	ND	10	0.98	1	
Indeno (1,2,3-c,d) Pyrene	ND	10	1.1	1	
Perylene	ND	10	9.8	1	
Pyrene	ND	10	0.99	1	
Surrogate	Rec. (%)	Control Limits	Qualifiers		
2-Fluorobiphenyl	82	14-146			
Nitrobenzene-d5	100	18-162			
p-Terphenyl-d14	83	34-148			

Return to Contents

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.



## Analytical Report

San Diego Bay Environmental Restoration Fund South  
 C/O de maximis, Inc., 1322 Scott Street, Suite 104  
 San Diego, CA 92106-2727

Date Received: 01/25/14  
 Work Order: 14-01-1523  
 Preparation: EPA 3545  
 Method: EPA 8270C SIM PCB Congeners  
 Units: ug/kg

Project: South Shipyard Post Dredge

Page 1 of 4

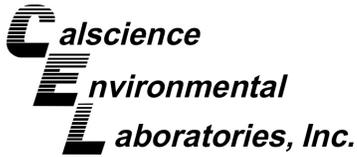
Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SD-S-C-SMU2A/B-C-0535	14-01-1523-1-AA	01/25/14 14:00	Sediment	GC/MS HHH	01/29/14	01/29/14 15:49	140129L03

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

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

Parameter	Result	RL	MDL	DF	Qualifiers
PCB018	ND	0.72	0.23	1	
PCB028	ND	0.72	0.14	1	
PCB037	ND	0.72	0.19	1	
PCB044	ND	0.72	0.19	1	
PCB049	ND	0.72	0.17	1	
PCB052	ND	0.72	0.14	1	
PCB066	ND	0.72	0.13	1	
PCB070	ND	0.72	0.12	1	
PCB074	ND	0.72	0.14	1	
PCB077	ND	0.72	0.14	1	
PCB081	ND	0.72	0.18	1	
PCB087	ND	0.72	0.15	1	
PCB099	ND	0.72	0.12	1	
PCB101	ND	0.72	0.12	1	
PCB105	ND	0.72	0.15	1	
PCB110	ND	0.72	0.15	1	
PCB114	ND	0.72	0.14	1	
PCB118	ND	0.72	0.19	1	
PCB119	ND	0.72	0.12	1	
PCB123	ND	0.72	0.13	1	
PCB126	ND	0.72	0.20	1	
PCB128	ND	0.72	0.15	1	
PCB138/158	ND	1.4	0.29	1	
PCB149	ND	0.72	0.13	1	
PCB151	ND	0.72	0.15	1	
PCB153	ND	0.72	0.15	1	
PCB156	ND	0.72	0.14	1	
PCB157	ND	0.72	0.14	1	
PCB167	ND	0.72	0.14	1	
PCB168	ND	0.72	0.12	1	
PCB169	ND	0.72	0.12	1	
PCB170	ND	0.72	0.13	1	
PCB177	ND	0.72	0.18	1	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.



## Analytical Report

San Diego Bay Environmental Restoration Fund South  
 C/O de maximis, Inc., 1322 Scott Street, Suite 104  
 San Diego, CA 92106-2727

Date Received: 01/25/14  
 Work Order: 14-01-1523  
 Preparation: EPA 3545  
 Method: EPA 8270C SIM PCB Congeners  
 Units: ug/kg

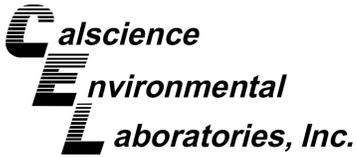
Project: South Shipyard Post Dredge

Page 2 of 4

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>MDL</u>	<u>DF</u>	<u>Qualifiers</u>
PCB180	ND	0.72	0.088	1	
PCB183	ND	0.72	0.16	1	
PCB187	ND	0.72	0.15	1	
PCB189	ND	0.72	0.12	1	
PCB194	ND	0.72	0.14	1	
PCB201	ND	0.72	0.082	1	
PCB206	ND	0.72	0.12	1	
<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>		
2-Fluorobiphenyl	85	19-133			
p-Terphenyl-d14	77	33-147			

Return to Contents

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.



## Analytical Report

San Diego Bay Environmental Restoration Fund South  
 C/O de maximis, Inc., 1322 Scott Street, Suite 104  
 San Diego, CA 92106-2727

Date Received: 01/25/14  
 Work Order: 14-01-1523  
 Preparation: EPA 3545  
 Method: EPA 8270C SIM PCB Congeners  
 Units: ug/kg

Project: South Shipyard Post Dredge

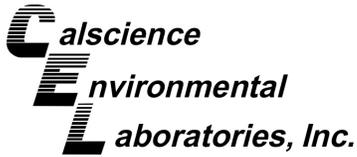
Page 3 of 4

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	099-14-341-152	N/A	Solid	GC/MS HHH	01/29/14	01/29/14 15:21	140129L03

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

Parameter	Result	RL	MDL	DF	Qualifiers
PCB018	ND	0.50	0.16	1	
PCB028	ND	0.50	0.099	1	
PCB037	ND	0.50	0.13	1	
PCB044	ND	0.50	0.13	1	
PCB049	ND	0.50	0.12	1	
PCB052	ND	0.50	0.097	1	
PCB066	ND	0.50	0.091	1	
PCB070	ND	0.50	0.082	1	
PCB074	ND	0.50	0.094	1	
PCB077	ND	0.50	0.097	1	
PCB081	ND	0.50	0.12	1	
PCB087	ND	0.50	0.10	1	
PCB099	ND	0.50	0.085	1	
PCB101	ND	0.50	0.081	1	
PCB105	ND	0.50	0.10	1	
PCB110	ND	0.50	0.10	1	
PCB114	ND	0.50	0.10	1	
PCB118	ND	0.50	0.13	1	
PCB119	ND	0.50	0.087	1	
PCB123	ND	0.50	0.087	1	
PCB126	ND	0.50	0.14	1	
PCB128	ND	0.50	0.10	1	
PCB138/158	ND	1.0	0.20	1	
PCB149	ND	0.50	0.089	1	
PCB151	ND	0.50	0.10	1	
PCB153	ND	0.50	0.10	1	
PCB156	ND	0.50	0.098	1	
PCB157	ND	0.50	0.096	1	
PCB167	ND	0.50	0.10	1	
PCB168	ND	0.50	0.086	1	
PCB169	ND	0.50	0.082	1	
PCB170	ND	0.50	0.093	1	
PCB177	ND	0.50	0.12	1	
PCB180	ND	0.50	0.061	1	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.



## Analytical Report

San Diego Bay Environmental Restoration Fund South  
 C/O de maximis, Inc., 1322 Scott Street, Suite 104  
 San Diego, CA 92106-2727

Date Received: 01/25/14  
 Work Order: 14-01-1523  
 Preparation: EPA 3545  
 Method: EPA 8270C SIM PCB Congeners  
 Units: ug/kg

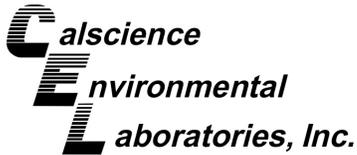
Project: South Shipyard Post Dredge

Page 4 of 4

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>MDL</u>	<u>DF</u>	<u>Qualifiers</u>
PCB183	ND	0.50	0.11	1	
PCB187	ND	0.50	0.10	1	
PCB189	ND	0.50	0.086	1	
PCB194	ND	0.50	0.096	1	
PCB201	ND	0.50	0.057	1	
PCB206	ND	0.50	0.083	1	
<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>		
2-Fluorobiphenyl	110	19-133			
p-Terphenyl-d14	96	33-147			

Return to Contents

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.



## Analytical Report

San Diego Bay Environmental Restoration Fund South  
 C/O de maximis, Inc., 1322 Scott Street, Suite 104  
 San Diego, CA 92106-2727

Date Received: 01/25/14  
 Work Order: 14-01-1523  
 Preparation: EPA 3550B (M)  
 Method: Organotins by Krone et al.  
 Units: ug/kg

Project: South Shipyard Post Dredge

Page 1 of 1

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SD-S-C-SMU2A/B-C-0535	14-01-1523-1-AA	01/25/14 14:00	Sediment	GC/MS Y	01/27/14	01/28/14 11:30	140127L08

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

Parameter	Result	RL	MDL	DF	Qualifiers
Tributyltin	5.4	4.3	0.83	1	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Tripentyltin	67	27-135	

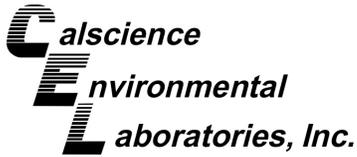
Method Blank	099-07-016-1118	N/A	Solid	GC/MS Y	01/27/14	01/28/14 10:58	140127L08
--------------	-----------------	-----	-------	---------	----------	-------------------	-----------

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

Parameter	Result	RL	MDL	DF	Qualifiers
Tributyltin	ND	3.0	0.58	1	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Tripentyltin	69	27-135	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.



## Quality Control - Spike/Spike Duplicate

San Diego Bay Environmental Restoration Fund South  
 C/O de maximis, Inc., 1322 Scott Street, Suite 104  
 San Diego, CA 92106-2727

Date Received: 01/25/14  
 Work Order: 14-01-1523  
 Preparation: EPA 3050B  
 Method: EPA 6020

Project: South Shipyard Post Dredge

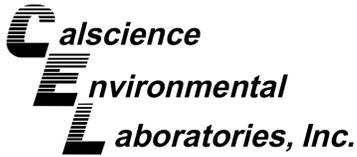
Page 1 of 5

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
SD-S-C-SMU2A/B-C-0535	Sample	Sediment	ICP/MS 03	01/27/14	01/27/14 22:12	140127S03
SD-S-C-SMU2A/B-C-0535	Matrix Spike	Sediment	ICP/MS 03	01/27/14	01/27/14 21:24	140127S03
SD-S-C-SMU2A/B-C-0535	Matrix Spike Duplicate	Sediment	ICP/MS 03	01/27/14	01/27/14 21:27	140127S03

Parameter	Sample Conc.	Spike Added	MS Conc.	MS %Rec.	MSD Conc.	MSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
Copper	92.01	25.00	109.4	69	113.7	87	80-120	4	0-20	3
Nickel	6.288	25.00	30.88	98	32.52	105	80-120	5	0-20	
Silver	0.2980	12.50	14.01	110	14.25	112	80-120	2	0-20	
Zinc	104.5	25.00	122.7	4X	128.7	4X	80-120	4X	0-20	Q

Return to Contents

RPD: Relative Percent Difference. CL: Control Limits



## Quality Control - Spike/Spike Duplicate

San Diego Bay Environmental Restoration Fund South  
 C/O de maximis, Inc., 1322 Scott Street, Suite 104  
 San Diego, CA 92106-2727

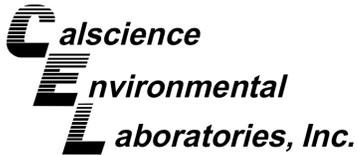
Date Received: 01/25/14  
 Work Order: 14-01-1523  
 Preparation: EPA 7471A Total  
 Method: EPA 7471A

Project: South Shipyard Post Dredge

Page 2 of 5

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
SD-S-C-SMU2A/B-C-0535	Sample	Sediment	Mercury	01/27/14	01/27/14 20:46	140127S06
SD-S-C-SMU2A/B-C-0535	Matrix Spike	Sediment	Mercury	01/27/14	01/27/14 20:49	140127S06
SD-S-C-SMU2A/B-C-0535	Matrix Spike Duplicate	Sediment	Mercury	01/27/14	01/27/14 20:51	140127S06

Parameter	Sample Conc.	Spike Added	MS Conc.	MS %Rec.	MSD Conc.	MSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
Mercury	0.3876	0.8350	1.341	114	1.278	107	76-136	5	0-16	



## Quality Control - Spike/Spike Duplicate

San Diego Bay Environmental Restoration Fund South  
C/O de maximis, Inc., 1322 Scott Street, Suite 104  
San Diego, CA 92106-2727

Date Received: 01/25/14  
Work Order: 14-01-1523  
Preparation: EPA 3545  
Method: EPA 8270C SIM PAHS

Project: South Shipyard Post Dredge

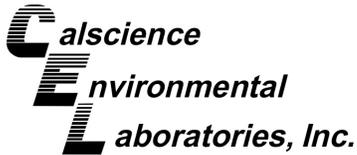
Page 3 of 5

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
SD-S-C-SMU2A/B-C-0535	Sample	Sediment	GC/MS AAA	01/27/14	01/28/14 12:24	140127S02
SD-S-C-SMU2A/B-C-0535	Matrix Spike	Sediment	GC/MS AAA	01/27/14	01/28/14 12:47	140127S02
SD-S-C-SMU2A/B-C-0535	Matrix Spike Duplicate	Sediment	GC/MS AAA	01/27/14	01/28/14 13:10	140127S02

Parameter	Sample Conc.	Spike Added	MS Conc.	MS %Rec.	MSD Conc.	MSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
Benzo (a) Anthracene	104.6	100.0	216.0	111	196.3	92	40-160	10	0-20	
Benzo (a) Pyrene	189.2	100.0	301.6	112	278.7	89	40-160	8	0-20	
Benzo (b) Fluoranthene	231.9	100.0	360.1	128	342.2	110	40-160	5	0-20	
Benzo (g,h,i) Perylene	102.2	100.0	200.1	98	184.6	82	40-160	8	0-20	
Benzo (k) Fluoranthene	156.5	100.0	221.4	65	227.0	71	40-160	2	0-20	
Chrysene	113.0	100.0	214.8	102	200.9	88	40-160	7	0-20	
Dibenz (a,h) Anthracene	29.09	100.0	151.7	123	140.5	111	40-160	8	0-20	
Fluoranthene	247.9	100.0	323.0	75	343.2	95	40-160	6	0-20	
Indeno (1,2,3-c,d) Pyrene	125.4	100.0	252.2	127	242.0	117	40-160	4	0-20	
Pyrene	341.3	100.0	516.4	175	458.7	117	40-160	12	0-46	3

Return to Contents

RPD: Relative Percent Difference. CL: Control Limits



## Quality Control - Spike/Spike Duplicate

San Diego Bay Environmental Restoration Fund South  
 C/O de maximis, Inc., 1322 Scott Street, Suite 104  
 San Diego, CA 92106-2727

Date Received: 01/25/14  
 Work Order: 14-01-1523  
 Preparation: EPA 3545  
 Method: EPA 8270C SIM PCB Congeners

Project: South Shipyard Post Dredge

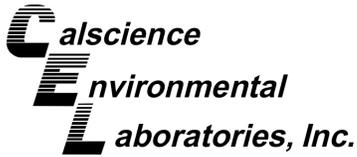
Page 4 of 5

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
SD-S-C-SMU2A/B-C-0535	Sample	Sediment	GC/MS HHH	01/29/14	01/29/14 15:49	140129S03
SD-S-C-SMU2A/B-C-0535	Matrix Spike	Sediment	GC/MS HHH	01/29/14	01/29/14 16:18	140129S03
SD-S-C-SMU2A/B-C-0535	Matrix Spike Duplicate	Sediment	GC/MS HHH	01/29/14	01/29/14 16:47	140129S03

Parameter	Sample Conc.	Spike Added	MS Conc.	MS %Rec.	MSD Conc.	MSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
PCB018	ND	25.00	15.31	61	13.27	53	50-125	14	0-30	
PCB028	ND	25.00	16.52	66	15.96	64	50-125	3	0-30	
PCB044	ND	25.00	16.91	68	16.12	64	50-125	5	0-30	
PCB052	ND	25.00	21.68	87	20.30	81	50-125	7	0-30	
PCB066	ND	25.00	16.79	67	16.09	64	50-125	4	0-30	
PCB077	ND	25.00	14.10	56	13.34	53	50-125	6	0-30	
PCB101	ND	25.00	21.88	88	20.61	82	50-125	6	0-30	
PCB105	ND	25.00	16.19	65	15.47	62	50-125	5	0-30	
PCB118	ND	25.00	22.53	90	21.49	86	50-125	5	0-30	
PCB126	ND	25.00	14.06	56	13.51	54	50-125	4	0-30	
PCB128	ND	25.00	16.04	64	15.36	61	50-125	4	0-30	
PCB153	ND	25.00	20.37	81	19.31	77	50-125	5	0-30	
PCB170	ND	25.00	15.26	61	14.75	59	50-125	3	0-30	
PCB180	ND	25.00	16.93	68	16.51	66	50-125	2	0-30	
PCB187	ND	25.00	14.74	59	14.17	57	50-125	4	0-30	
PCB206	ND	25.00	19.76	79	19.10	76	50-125	3	0-30	

Return to Contents

RPD: Relative Percent Difference. CL: Control Limits



## Quality Control - Spike/Spike Duplicate

San Diego Bay Environmental Restoration Fund South  
 C/O de maximis, Inc., 1322 Scott Street, Suite 104  
 San Diego, CA 92106-2727

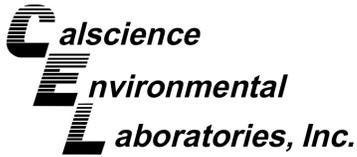
Date Received: 01/25/14  
 Work Order: 14-01-1523  
 Preparation: EPA 3550B (M)  
 Method: Organotins by Krone et al.

Project: South Shipyard Post Dredge

Page 5 of 5

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
SD-S-C-SMU2A/B-C-0535	Sample	Sediment	GC/MS Y	01/27/14	01/28/14 11:30	140127S08
SD-S-C-SMU2A/B-C-0535	Matrix Spike	Sediment	GC/MS Y	01/27/14	01/28/14 11:46	140127S08
SD-S-C-SMU2A/B-C-0535	Matrix Spike Duplicate	Sediment	GC/MS Y	01/27/14	01/28/14 12:03	140127S08

Parameter	Sample Conc.	Spike Added	MS Conc.	MS %Rec.	MSD Conc.	MSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
Tributyltin	3.693	100.0	80.14	76	78.44	75	34-142	2	0-50	



## Quality Control - PDS/PDSD

San Diego Bay Environmental Restoration Fund South  
 C/O de maximis, Inc., 1322 Scott Street, Suite 104  
 San Diego, CA 92106-2727

Date Received: 01/25/14  
 Work Order: 14-01-1523  
 Preparation: EPA 3050B  
 Method: EPA 6020

Project: South Shipyard Post Dredge

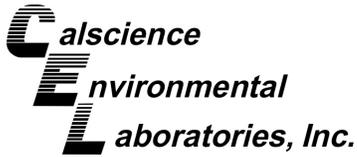
Page 1 of 1

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	PDS/PDSD Batch Number
SD-S-C-SMU2A/B-C-0535	Sample	Sediment	ICP/MS 03	01/27/14 00:00	01/27/14 22:12	140127S03
SD-S-C-SMU2A/B-C-0535	PDS	Sediment	ICP/MS 03	01/27/14 00:00	01/27/14 21:30	140127S03

Parameter	Sample Conc.	Spike Added	PDS Conc.	PDS %Rec.	%Rec. CL	Qualifiers
Copper	92.01	25.00	112.6	82	75-125	
Nickel	6.288	25.00	31.70	102	75-125	
Silver	0.2980	12.50	10.19	79	75-125	
Zinc	104.5	25.00	126.5	4X	75-125	Q

Return to Contents

RPD: Relative Percent Difference. CL: Control Limits



## Quality Control - Sample Duplicate

San Diego Bay Environmental Restoration Fund South  
 C/O de maximis, Inc., 1322 Scott Street, Suite 104  
 San Diego, CA 92106-2727

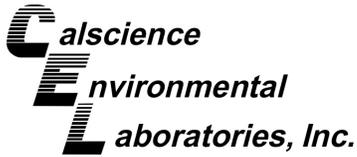
Date Received: 01/25/14  
 Work Order: 14-01-1523  
 Preparation: N/A  
 Method: SM 2540 B (M)

Project: South Shipyard Post Dredge

Page 1 of 1

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	Duplicate Batch Number
14-01-1488-1	Sample	Sediment	N/A	01/28/14 00:00	01/28/14 18:10	E0128TSD1
14-01-1488-1	Sample Duplicate	Sediment	N/A	01/28/14 00:00	01/28/14 18:10	E0128TSD1

Parameter	Sample Conc.	DUP Conc.	RPD	RPD CL	Qualifiers
Solids, Total	20.40	19.70	3	0-10	



## Quality Control - LCS

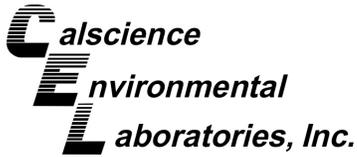
San Diego Bay Environmental Restoration Fund South  
 C/O de maximis, Inc., 1322 Scott Street, Suite 104  
 San Diego, CA 92106-2727

Date Received: 01/25/14  
 Work Order: 14-01-1523  
 Preparation: EPA 3050B  
 Method: EPA 6020

Project: South Shipyard Post Dredge

Page 1 of 5

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS Batch Number
<b>099-15-254-184</b>	<b>LCS</b>	<b>Solid</b>	<b>ICP/MS 03</b>	<b>01/27/14</b>	<b>01/28/14 18:15</b>	<b>140127L03E</b>
<u>Parameter</u>		<u>Spike Added</u>	<u>Conc. Recovered</u>	<u>LCS %Rec.</u>	<u>%Rec. CL</u>	<u>Qualifiers</u>
Copper		25.00	26.77	107	80-120	
Nickel		25.00	25.75	103	80-120	
Silver		12.50	10.01	80	80-120	
Zinc		25.00	28.38	114	80-120	



## Quality Control - LCS

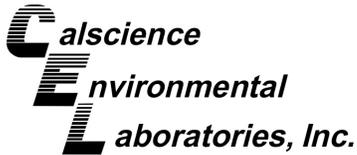
San Diego Bay Environmental Restoration Fund South  
 C/O de maximis, Inc., 1322 Scott Street, Suite 104  
 San Diego, CA 92106-2727

Date Received: 01/25/14  
 Work Order: 14-01-1523  
 Preparation: EPA 7471A Total  
 Method: EPA 7471A

Project: South Shipyard Post Dredge

Page 2 of 5

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS Batch Number
<b>099-12-452-448</b>	<b>LCS</b>	<b>Solid</b>	<b>Mercury</b>	<b>01/27/14</b>	<b>01/28/14 12:26</b>	<b>140127L06E</b>
<u>Parameter</u>		<u>Spike Added</u>	<u>Conc. Recovered</u>	<u>LCS %Rec.</u>	<u>%Rec. CL</u>	<u>Qualifiers</u>
Mercury		0.8350	0.7528	90	82-124	



## Quality Control - LCS

San Diego Bay Environmental Restoration Fund South  
 C/O de maximis, Inc., 1322 Scott Street, Suite 104  
 San Diego, CA 92106-2727

Date Received: 01/25/14  
 Work Order: 14-01-1523  
 Preparation: EPA 3545  
 Method: EPA 8270C SIM PAHs

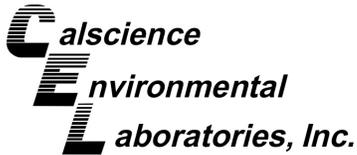
Project: South Shipyard Post Dredge

Page 3 of 5

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS Batch Number
<b>099-14-097-123</b>	<b>LCS</b>	<b>Solid</b>	<b>GC/MS AAA</b>	<b>01/27/14</b>	<b>01/28/14 12:00</b>	<b>140127L02</b>
<u>Parameter</u>		<u>Spike Added</u>	<u>Conc. Recovered</u>	<u>LCS %Rec.</u>	<u>%Rec. CL</u>	<u>Qualifiers</u>
Benzo (a) Anthracene		100.0	82.79	83	40-160	
Benzo (a) Pyrene		100.0	82.37	82	40-160	
Benzo (b) Fluoranthene		100.0	91.96	92	40-160	
Benzo (g,h,i) Perylene		100.0	87.45	87	40-160	
Benzo (k) Fluoranthene		100.0	81.93	82	40-160	
Chrysene		100.0	76.05	76	40-160	
Dibenz (a,h) Anthracene		100.0	93.37	93	40-160	
Fluoranthene		100.0	84.09	84	40-160	
Indeno (1,2,3-c,d) Pyrene		100.0	100.9	101	40-160	
Pyrene		100.0	80.20	80	40-160	

Return to Contents

RPD: Relative Percent Difference. CL: Control Limits



## Quality Control - LCS

San Diego Bay Environmental Restoration Fund South  
 C/O de maximis, Inc., 1322 Scott Street, Suite 104  
 San Diego, CA 92106-2727

Date Received: 01/25/14  
 Work Order: 14-01-1523  
 Preparation: EPA 3545  
 Method: EPA 8270C SIM PCB Congeners

Project: South Shipyard Post Dredge

Page 4 of 5

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS Batch Number	
<b>099-14-341-152</b>	<b>LCS</b>	<b>Solid</b>	<b>GC/MS HHH</b>	<b>01/29/14</b>	<b>01/29/14 14:51</b>	<b>140129L03</b>	
<u>Parameter</u>		<u>Spike Added</u>	<u>Conc. Recovered</u>	<u>LCS %Rec.</u>	<u>%Rec. CL</u>	<u>ME CL</u>	<u>Qualifiers</u>
PCB018		25.00	26.28	105	50-125	38-138	
PCB028		25.00	26.87	107	50-125	38-138	
PCB044		25.00	25.99	104	50-125	38-138	
PCB052		25.00	24.43	98	50-125	38-138	
PCB066		25.00	26.80	107	50-125	38-138	
PCB077		25.00	27.49	110	50-125	38-138	
PCB101		25.00	25.80	103	50-125	38-138	
PCB105		25.00	26.62	106	50-125	38-138	
PCB118		25.00	27.94	112	50-125	38-138	
PCB126		25.00	27.30	109	50-125	38-138	
PCB128		25.00	27.89	112	50-125	38-138	
PCB153		25.00	26.09	104	50-125	38-138	
PCB170		25.00	24.90	100	50-125	38-138	
PCB180		25.00	28.14	113	50-125	38-138	
PCB187		25.00	26.60	106	50-125	38-138	
PCB206		25.00	28.68	115	50-125	38-138	

Total number of LCS compounds: 16

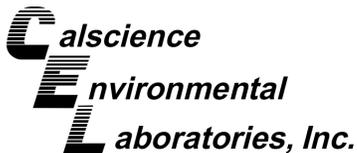
Total number of ME compounds: 0

Total number of ME compounds allowed: 1

LCS ME CL validation result: Pass

Return to Contents

RPD: Relative Percent Difference. CL: Control Limits



Quality Control - LCS

San Diego Bay Environmental Restoration Fund South  
 C/O de maximis, Inc., 1322 Scott Street, Suite 104  
 San Diego, CA 92106-2727

Date Received: 01/25/14  
 Work Order: 14-01-1523  
 Preparation: EPA 3550B (M)  
 Method: Organotins by Krone et al.

Project: South Shipyard Post Dredge

Page 5 of 5

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS Batch Number
099-07-016-1118	LCS	Solid	GC/MS Y	01/27/14	01/28/14 11:14	140127L08

Parameter	Spike Added	Conc. Recovered	LCS %Rec.	%Rec. CL	Qualifiers
Tributyltin	100.0	69.66	70	33-147	



RPD: Relative Percent Difference. CL: Control Limits

## Glossary of Terms and Qualifiers

Work Order: 14-01-1523

Page 1 of 1

<u>Qualifiers</u>	<u>Definition</u>
*	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 suspected matrix interference. The associated LCS recovery was in control.
4	The MS/MSD RPD was out of control due to suspected matrix interference.
5	The PDS/PDSD or PES/PESD associated with this batch of samples was out of control due to suspected matrix interference.
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.
BV	Sample received 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.
JA	Analyte positively identified but quantitation is an estimate.
ME	LCS Recovery Percentage is within Marginal Exceedance (ME) Control Limit range (+/- 4 SD from the mean).
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.

Any parameter identified in 40CFR Part 136.3 Table II that is designated as "analyze immediately" with a holding time of  $\leq$  15 minutes (40CFR-136.3 Table II, footnote 4), is considered a "field" test and the reported results will be qualified as being received outside of the stated holding time unless received at the laboratory within 15 minutes of the collection time.

A calculated total result (Example: Total Pesticides) is the summation of each component concentration and/or, if "J" flags are reported, estimated concentration. Component concentrations showing not detected (ND) are summed into the calculated total result as zero concentrations.



WORK ORDER #: **14-01-1523**

**SAMPLE RECEIPT FORM**

Cooler 0 of 0

CLIENT: Anchor

DATE: 01/25/14

**TEMPERATURE:** Thermometer ID: SC1 (Criteria: 0.0 °C – 6.0 °C, not frozen except sediment/tissue)

Temperature 5.2 °C - 0.3 °C (CF) = 4.9 °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    Checked by: 681

**CUSTODY SEALS INTACT:**

Cooler     \_\_\_\_\_     No (Not Intact)     Not Present     N/A    Checked by: 681

Sample     \_\_\_\_\_     No (Not Intact)     Not Present    Checked by: 681

SAMPLE CONDITION:	Yes	No	N/A
Chain-Of-Custody (COC) document(s) received with samples.....	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
COC document(s) received complete.....	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> Collection date/time, matrix, and/or # of containers logged in based on sample labels. <input type="checkbox"/> No analysis requested. <input type="checkbox"/> Not relinquished. <input type="checkbox"/> No date/time relinquished.			
Sampler's name indicated on COC.....	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Sample container label(s) consistent with COC.....	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Sample container(s) intact and good condition.....	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Proper containers and sufficient volume for analyses requested.....	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Analyses received within holding time.....	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Aqueous samples received within 15-minute holding time			
<input type="checkbox"/> pH <input type="checkbox"/> Residual Chlorine <input type="checkbox"/> Dissolved Sulfides <input type="checkbox"/> Dissolved Oxygen.....	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Proper preservation noted on COC or sample container.....	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/> Unpreserved vials received for Volatiles analysis			
Volatile analysis container(s) free of headspace.....	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Tedlar bag(s) free of condensation.....	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<b>CONTAINER TYPE:</b>			
<b>Solid:</b> <input type="checkbox"/> 4ozCGJ <input type="checkbox"/> 8ozCGJ <input checked="" type="checkbox"/> 16ozCGJ <input type="checkbox"/> Sleeve (____) <input type="checkbox"/> EnCores® <input type="checkbox"/> TerraCores® <input type="checkbox"/> _____			
<b>Aqueous:</b> <input type="checkbox"/> VOA <input type="checkbox"/> VOA <sub>h</sub> <input type="checkbox"/> VOA <sub>na2</sub> <input type="checkbox"/> 125AGB <input type="checkbox"/> 125AGB <sub>h</sub> <input type="checkbox"/> 125AGB <sub>p</sub> <input type="checkbox"/> 1AGB <input type="checkbox"/> 1AGB <sub>na2</sub> <input type="checkbox"/> 1AGB <sub>s</sub>			
<input type="checkbox"/> 500AGB <input type="checkbox"/> 500AGJ <input type="checkbox"/> 500AGJ <sub>s</sub> <input type="checkbox"/> 250AGB <input type="checkbox"/> 250CGB <input type="checkbox"/> 250CGB <sub>s</sub> <input type="checkbox"/> 1PB <input type="checkbox"/> 1PB <sub>na</sub> <input type="checkbox"/> 500PB			
<input type="checkbox"/> 250PB <input type="checkbox"/> 250PB <sub>n</sub> <input type="checkbox"/> 125PB <input type="checkbox"/> 125PB <sub>znna</sub> <input type="checkbox"/> 100PJ <input type="checkbox"/> 100PJ <sub>na2</sub> <input type="checkbox"/> _____ <input type="checkbox"/> _____ <input type="checkbox"/> _____			
<b>Air:</b> <input type="checkbox"/> Tedlar® <input type="checkbox"/> Canister <b>Other:</b> <input type="checkbox"/> _____ <b>Trip Blank Lot#:</b> _____ <b>Labeled/Checked by:</b> <u>681</u>			
<b>Container:</b> C: Clear    A: Amber    P: Plastic    G: Glass    J: Jar    B: Bottle    Z: Ziploc/Resealable Bag    E: Envelope <b>Reviewed by:</b> <u>739</u>			
<b>Preservative:</b> h: HCL    n: HNO <sub>3</sub> na <sub>2</sub> : Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub> na: NaOH    p: H <sub>3</sub> PO <sub>4</sub> s: H <sub>2</sub> SO <sub>4</sub> u: Ultra-pure    znna: ZnAc <sub>2</sub> +NaOH    f: Filtered <b>Scanned by:</b> <u>739</u>			

Return to Contents

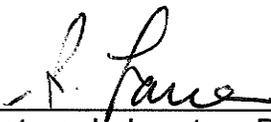


**CERTIFICATION**

All analyses were conducted at a laboratory certified for such analyses by the California Department of Public Health in accordance with applicable USEPA and NELAP accreditation procedures.

I certify under penalty of law that the data generated for Calscience Work Order No. 14-01-0352 were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. The Project Manager or designee who signed the Calscience Work Order has been specifically authorized and approved to do so.

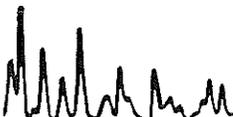
The information submitted is, to the best of my knowledge and belief, true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of a fine and imprisonment for knowing violations.

  
\_\_\_\_\_  
Signature, Laboratory Director

May 20, 2014  
Date

Name of Laboratory: **Calscience Environmental Laboratories**  
Address of Laboratory: **7440 Lincoln Way**  
**Garden Grove, CA 92841-1432**

This Certification signed by: **Steve Lane**





# CALSCIENCE

## WORK ORDER NUMBER: 14-01-0352

*The difference is service*



AIR | SOIL | WATER | MARINE CHEMISTRY

### Analytical Report For

**Client:** San Diego Bay Environmental Restoration Fund South

**Client Project Name:** South Shipyard

**Attention:** Mike Palmer  
C/O de maximis, Inc.  
1322 Scott Street, Suite 104  
San Diego, CA 92106-2727

Approved for release on 01/10/2014 by:  
Danielle Gonsman  
Project Manager

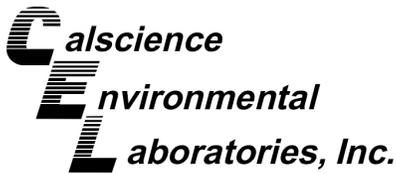
ResultLink ▶

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.





# Contents

Client Project Name: South Shipyard  
Work Order Number: 14-01-0352

1	Work Order Narrative. . . . .	3
2	Sample Summary. . . . .	4
3	Client Sample Data. . . . .	5
	3.1 SM 2540 B (M) Total Solids (Solid). . . . .	5
	3.2 EPA 6020 ICP/MS Metals (Solid). . . . .	6
	3.3 EPA 7471A Mercury (Solid). . . . .	7
	3.4 EPA 8270C SIM PAHs (Solid). . . . .	8
	3.5 EPA 8270C SIM PCB Congeners (Solid). . . . .	10
	3.6 Krone et al. Organotins (Solid). . . . .	14
4	Quality Control Sample Data. . . . .	15
	4.1 MS/MSD. . . . .	15
	4.2 PDS/PDSD. . . . .	20
	4.3 Sample Duplicate. . . . .	21
	4.4 LCS/LCSD. . . . .	22
5	Glossary of Terms and Qualifiers. . . . .	27
6	Chain of Custody/Sample Receipt Form. . . . .	28

**Work Order Narrative**

Work Order: 14-01-0352

Page 1 of 1

**Condition Upon Receipt:**

Samples were received under Chain of Custody (COC) on 01/08/14. They were assigned to Work Order 14-01-0352.

Unless otherwise noted on the Sample Receiving forms all samples were received in good condition and within the recommended EPA temperature criteria for the methods noted on the COC. The COC and Sample Receiving Documents are integral elements of the analytical report and are presented at the back of the report.

**Holding Times:**

All samples were analyzed within prescribed holding times (HT) and/or in accordance with the Calscience Sample Acceptance Policy unless otherwise noted in the analytical report and/or comprehensive case narrative, if required.

Any parameter identified in 40CFR Part 136.3 Table II that is designated as "analyze immediately" with a holding time of  $\leq 15$  minutes (40CFR-136.3 Table II, footnote 4), is considered a "field" test and the reported results will be qualified as being received outside of the stated holding time unless received at the laboratory within 15 minutes of the collection time.

**Quality Control:**

All quality control parameters (QC) were within established control limits except where noted in the QC summary forms or described further within this report.

**Additional Comments:**

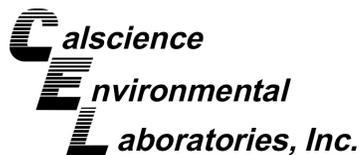
Air - Sorbent-extracted air methods (EPA TO-4A, EPA TO-10, EPA TO-13A, EPA TO-17): Analytical results are converted from mass/sample basis to mass/volume basis using client-supplied air volumes.

New York NELAP air certification does not certify for all reported methods and analytes, reference the accredited items here: [http://www.calscience.com/PDF/New\\_York.pdf](http://www.calscience.com/PDF/New_York.pdf)

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

**Subcontractor Information:**

Unless otherwise noted below (or on the subcontract form), no samples were subcontracted.



## Sample Summary

---

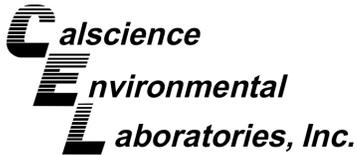
Client: San Diego Bay Environmental Restoration Fund	Work Order:	14-01-0352
South	Project Name:	South Shipyard
C/O de maximis, Inc., 1322 Scott Street, Suite	PO Number:	
104	Date/Time	01/08/14 17:45
San Diego, CA 92106-2727	Received:	
	Number of	
	Containers:	1

Attn: Mike Palmer

---

Sample Identification	Lab Number	Collection Date and Time	Number of Containers	Matrix
SD-S-C-SMU2-C1D-C-0535	14-01-0352-1	01/08/14 13:30	1	Sediment

Return to Contents 



## Analytical Report

San Diego Bay Environmental Restoration Fund South  
 C/O de maximis, Inc., 1322 Scott Street, Suite 104  
 San Diego, CA 92106-2727

Date Received: 01/08/14  
 Work Order: 14-01-0352  
 Preparation: N/A  
 Method: SM 2540 B (M)  
 Units: %

Project: South Shipyard

Page 1 of 1

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SD-S-C-SMU2-C1D-C-0535	14-01-0352-1-A	01/08/14 13:30	Sediment	N/A	01/08/14	01/09/14 12:00	E0109TSB1

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

Parameter	Result	RL	MDL	DF	Qualifiers
Solids, Total	79.8	0.100	0.100	1	

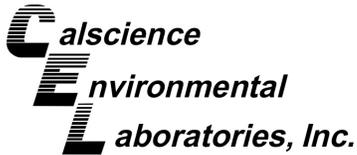
Method Blank	099-05-019-2453	N/A	Solid	N/A	01/08/14	01/09/14 12:00	E0109TSB1
--------------	-----------------	-----	-------	-----	----------	-------------------	-----------

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

Parameter	Result	RL	MDL	DF	Qualifiers
Solids, Total	ND	0.100	0.100	1	


 Return to Contents

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.



## Analytical Report

San Diego Bay Environmental Restoration Fund South  
 C/O de maximis, Inc., 1322 Scott Street, Suite 104  
 San Diego, CA 92106-2727

Date Received: 01/08/14  
 Work Order: 14-01-0352  
 Preparation: EPA 3050B  
 Method: EPA 6020  
 Units: mg/kg

Project: South Shipyard

Page 1 of 1

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SD-S-C-SMU2-C1D-C-0535	14-01-0352-1-A	01/08/14 13:30	Sediment	ICP/MS 03	01/08/14	01/09/14 13:28	140108L03E

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

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

Parameter	Result	RL	MDL	DF	Qualifiers
Copper	12.5	0.125	0.0525	1	
Nickel	4.25	0.125	0.0634	1	
Silver	ND	0.125	0.0392	1	
Zinc	33.9	1.25	0.996	1	

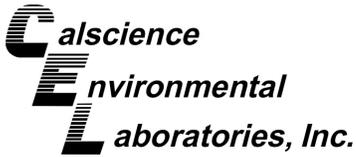
Method Blank	099-15-254-180	N/A	Solid	ICP/MS 03	01/08/14	01/10/14 12:28	140108L03E
--------------	----------------	-----	-------	-----------	----------	-------------------	------------

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

Parameter	Result	RL	MDL	DF	Qualifiers
Copper	ND	0.100	0.0419	1	
Nickel	ND	0.100	0.0506	1	
Silver	ND	0.100	0.0313	1	
Zinc	ND	1.00	0.795	1	

Return to Contents

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.



## Analytical Report

San Diego Bay Environmental Restoration Fund South  
 C/O de maximis, Inc., 1322 Scott Street, Suite 104  
 San Diego, CA 92106-2727

Date Received: 01/08/14  
 Work Order: 14-01-0352  
 Preparation: EPA 7471A Total  
 Method: EPA 7471A  
 Units: mg/kg

Project: South Shipyard

Page 1 of 1

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SD-S-C-SMU2-C1D-C-0535	14-01-0352-1-A	01/08/14 13:30	Sediment	Mercury	01/09/14	01/09/14 11:15	140109L02E

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

Parameter	Result	RL	MDL	DF	Qualifiers
Mercury	0.0245	0.0251	0.00737	1	J

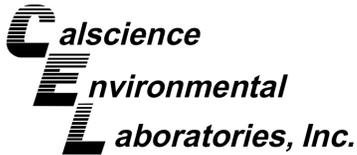
Method Blank	099-12-452-443	N/A	Solid	Mercury	01/09/14	01/09/14 11:11	140109L02E
--------------	----------------	-----	-------	---------	----------	-------------------	------------

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

Parameter	Result	RL	MDL	DF	Qualifiers
Mercury	ND	0.0200	0.00588	1	

Return to Contents

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.



## Analytical Report

San Diego Bay Environmental Restoration Fund South  
 C/O de maximis, Inc., 1322 Scott Street, Suite 104  
 San Diego, CA 92106-2727

Date Received: 01/08/14  
 Work Order: 14-01-0352  
 Preparation: EPA 3545  
 Method: EPA 8270C SIM PAHs  
 Units: ug/kg

Project: South Shipyard

Page 1 of 2

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SD-S-C-SMU2-C1D-C-0535	14-01-0352-1-A	01/08/14 13:30	Sediment	GC/MS AAA	01/09/14	01/09/14 17:14	140109L01

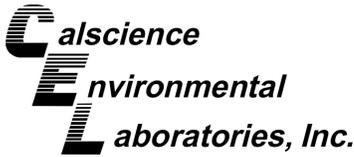
Comment(s): - Results are reported on a dry weight basis.

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

Parameter	Result	RL	MDL	DF	Qualifiers
Benzo (a) Anthracene	8.8	13	2.0	1	J
Benzo (a) Pyrene	28	13	1.3	1	
Benzo (b) Fluoranthene	38	13	1.3	1	
Benzo (g,h,i) Perylene	16	13	1.2	1	
Benzo (k) Fluoranthene	29	13	1.7	1	
Chrysene	11	13	1.5	1	J
Dibenz (a,h) Anthracene	3.2	13	1.3	1	J
Fluoranthene	24	13	1.2	1	
Indeno (1,2,3-c,d) Pyrene	16	13	1.3	1	
Perylene	ND	13	1.2	1	
Pyrene	27	13	1.2	1	
Surrogate	Rec. (%)	Control Limits	Qualifiers		
2-Fluorobiphenyl	93	14-146			
Nitrobenzene-d5	95	18-162			
p-Terphenyl-d14	92	34-148			

Return to Contents

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.



Analytical Report

San Diego Bay Environmental Restoration Fund South  
 C/O de maximis, Inc., 1322 Scott Street, Suite 104  
 San Diego, CA 92106-2727

Date Received: 01/08/14  
 Work Order: 14-01-0352  
 Preparation: EPA 3545  
 Method: EPA 8270C SIM PAHs  
 Units: ug/kg

Project: South Shipyard

Page 2 of 2

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	099-14-097-120	N/A	Solid	GC/MS AAA	01/09/14	01/09/14 16:27	140109L01

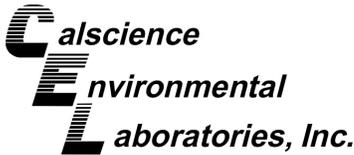
Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Benzo (a) Anthracene	ND	10	1.6	1	
Benzo (a) Pyrene	ND	10	1.0	1	
Benzo (b) Fluoranthene	ND	10	1.0	1	
Benzo (g,h,i) Perylene	ND	10	0.94	1	
Benzo (k) Fluoranthene	ND	10	1.4	1	
Chrysene	ND	10	1.2	1	
Dibenz (a,h) Anthracene	ND	10	1.0	1	
Fluoranthene	ND	10	0.98	1	
Indeno (1,2,3-c,d) Pyrene	ND	10	1.1	1	
Perylene	ND	10	9.8	1	
Pyrene	ND	10	0.99	1	

Surrogate	Rec. (%)	Control Limits	Qualifiers
2-Fluorobiphenyl	107	14-146	
Nitrobenzene-d5	110	18-162	
p-Terphenyl-d14	106	34-148	

Return to Contents

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.



## Analytical Report

San Diego Bay Environmental Restoration Fund South  
 C/O de maximis, Inc., 1322 Scott Street, Suite 104  
 San Diego, CA 92106-2727

Date Received: 01/08/14  
 Work Order: 14-01-0352  
 Preparation: EPA 3545  
 Method: EPA 8270C SIM PCB Congeners  
 Units: ug/kg

Project: South Shipyard

Page 1 of 4

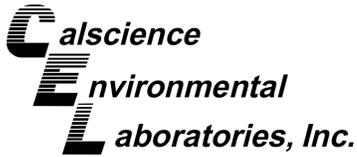
Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SD-S-C-SMU2-C1D-C-0535	14-01-0352-1-A	01/08/14 13:30	Sediment	GC/MS HHH	01/09/14	01/09/14 18:39	140109L02

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

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

Parameter	Result	RL	MDL	DF	Qualifiers
PCB018	0.63	0.63	0.20	1	
PCB028	0.65	0.63	0.12	1	B
PCB037	ND	0.63	0.16	1	
PCB044	1.0	0.63	0.16	1	
PCB049	0.77	0.63	0.15	1	
PCB052	1.3	0.63	0.12	1	
PCB066	0.98	0.63	0.11	1	
PCB070	0.91	0.63	0.10	1	
PCB074	0.37	0.63	0.12	1	J
PCB077	0.42	0.63	0.12	1	J
PCB081	ND	0.63	0.15	1	
PCB087	0.45	0.63	0.13	1	J
PCB099	0.62	0.63	0.11	1	J
PCB101	1.6	0.63	0.10	1	
PCB105	0.80	0.63	0.13	1	
PCB110	1.0	0.63	0.13	1	
PCB114	ND	0.63	0.12	1	
PCB118	1.4	0.63	0.17	1	B
PCB119	ND	0.63	0.11	1	
PCB123	ND	0.63	0.11	1	
PCB126	0.48	0.63	0.17	1	J
PCB128	0.51	0.63	0.13	1	J
PCB138/158	1.2	1.3	0.25	1	J
PCB149	0.67	0.63	0.11	1	
PCB151	0.16	0.63	0.13	1	J
PCB153	1.3	0.63	0.13	1	B
PCB156	ND	0.63	0.12	1	
PCB157	ND	0.63	0.12	1	
PCB167	ND	0.63	0.13	1	
PCB168	ND	0.63	0.11	1	
PCB169	ND	0.63	0.10	1	
PCB170	0.68	0.63	0.12	1	
PCB177	ND	0.63	0.15	1	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.



## Analytical Report

San Diego Bay Environmental Restoration Fund South  
 C/O de maximis, Inc., 1322 Scott Street, Suite 104  
 San Diego, CA 92106-2727

Date Received: 01/08/14  
 Work Order: 14-01-0352  
 Preparation: EPA 3545  
 Method: EPA 8270C SIM PCB Congeners  
 Units: ug/kg

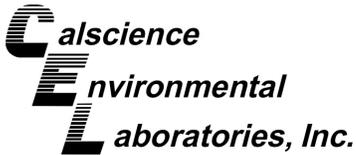
Project: South Shipyard

Page 2 of 4

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>MDL</u>	<u>DF</u>	<u>Qualifiers</u>
PCB180	0.76	0.63	0.077	1	
PCB183	ND	0.63	0.14	1	
PCB187	0.56	0.63	0.13	1	J
PCB189	ND	0.63	0.11	1	
PCB194	ND	0.63	0.12	1	
PCB201	0.31	0.63	0.071	1	J
PCB206	0.47	0.63	0.10	1	J
<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>		
2-Fluorobiphenyl	99	19-133			
p-Terphenyl-d14	95	33-147			

Return to Contents

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.



## Analytical Report

San Diego Bay Environmental Restoration Fund South  
 C/O de maximis, Inc., 1322 Scott Street, Suite 104  
 San Diego, CA 92106-2727

Date Received: 01/08/14  
 Work Order: 14-01-0352  
 Preparation: EPA 3545  
 Method: EPA 8270C SIM PCB Congeners  
 Units: ug/kg

Project: South Shipyard

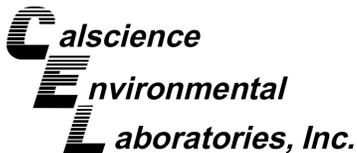
Page 3 of 4

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	099-14-341-148	N/A	Solid	GC/MS HHH	01/09/14	01/09/14 18:12	140109L02

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

Parameter	Result	RL	MDL	DF	Qualifiers
PCB018	ND	0.50	0.16	1	
PCB028	0.11	0.50	0.099	1	J
PCB037	ND	0.50	0.13	1	
PCB044	ND	0.50	0.13	1	
PCB049	ND	0.50	0.12	1	
PCB052	ND	0.50	0.097	1	
PCB066	ND	0.50	0.091	1	
PCB070	ND	0.50	0.082	1	
PCB074	ND	0.50	0.094	1	
PCB077	ND	0.50	0.097	1	
PCB081	0.15	0.50	0.12	1	J
PCB087	ND	0.50	0.10	1	
PCB099	ND	0.50	0.085	1	
PCB101	ND	0.50	0.081	1	
PCB105	ND	0.50	0.10	1	
PCB110	ND	0.50	0.10	1	
PCB114	0.12	0.50	0.10	1	J
PCB118	0.14	0.50	0.13	1	J
PCB119	ND	0.50	0.087	1	
PCB123	0.12	0.50	0.087	1	J
PCB126	ND	0.50	0.14	1	
PCB128	ND	0.50	0.10	1	
PCB138/158	ND	1.0	0.20	1	
PCB149	ND	0.50	0.089	1	
PCB151	ND	0.50	0.10	1	
PCB153	0.17	0.50	0.10	1	J
PCB156	ND	0.50	0.098	1	
PCB157	0.17	0.50	0.096	1	J
PCB167	0.11	0.50	0.10	1	J
PCB168	ND	0.50	0.086	1	
PCB169	ND	0.50	0.082	1	
PCB170	ND	0.50	0.093	1	
PCB177	ND	0.50	0.12	1	
PCB180	ND	0.50	0.061	1	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.



### Analytical Report

San Diego Bay Environmental Restoration Fund South  
 C/O de maximis, Inc., 1322 Scott Street, Suite 104  
 San Diego, CA 92106-2727

Date Received: 01/08/14  
 Work Order: 14-01-0352  
 Preparation: EPA 3545  
 Method: EPA 8270C SIM PCB Congeners  
 Units: ug/kg

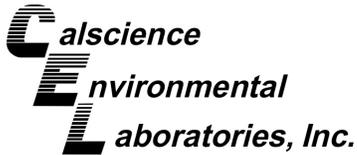
Project: South Shipyard

Page 4 of 4

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>MDL</u>	<u>DF</u>	<u>Qualifiers</u>
PCB183	ND	0.50	0.11	1	
PCB187	ND	0.50	0.10	1	
PCB189	ND	0.50	0.086	1	
PCB194	ND	0.50	0.096	1	
PCB201	ND	0.50	0.057	1	
PCB206	ND	0.50	0.083	1	
<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>		
2-Fluorobiphenyl	81	19-133			
p-Terphenyl-d14	98	33-147			



RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.



## Analytical Report

San Diego Bay Environmental Restoration Fund South  
 C/O de maximis, Inc., 1322 Scott Street, Suite 104  
 San Diego, CA 92106-2727

Date Received: 01/08/14  
 Work Order: 14-01-0352  
 Preparation: EPA 3550B (M)  
 Method: Organotins by Krone et al.  
 Units: ug/kg

Project: South Shipyard

Page 1 of 1

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SD-S-C-SMU2-C1D-C-0535	14-01-0352-1-A	01/08/14 13:30	Sediment	GC/MS Y	01/07/14	01/09/14 14:27	140107L10

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

Parameter	Result	RL	MDL	DF	Qualifiers
Tributyltin	ND	3.8	0.72	1	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Tripentyltin	102	27-135	

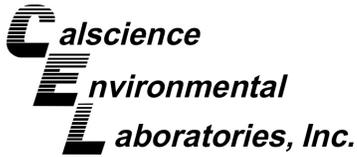
Method Blank	099-07-016-1116	N/A	Solid	GC/MS Y	01/07/14	01/09/14 11:43	140107L10
--------------	-----------------	-----	-------	---------	----------	-------------------	-----------

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

Parameter	Result	RL	MDL	DF	Qualifiers
Tributyltin	ND	3.0	0.58	1	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Tripentyltin	101	27-135	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.



## Quality Control - Spike/Spike Duplicate

San Diego Bay Environmental Restoration Fund South  
 C/O de maximis, Inc., 1322 Scott Street, Suite 104  
 San Diego, CA 92106-2727

Date Received: 01/08/14  
 Work Order: 14-01-0352  
 Preparation: EPA 3050B  
 Method: EPA 6020

Project: South Shipyard

Page 1 of 5

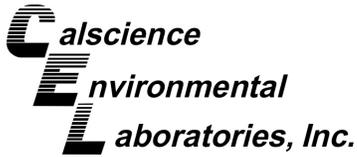
Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
SD-S-C-SMU2-C1D-C-0535	Sample	Sediment	ICP/MS 03	01/08/14	01/09/14 13:28	140108S03
SD-S-C-SMU2-C1D-C-0535	Matrix Spike	Sediment	ICP/MS 03	01/08/14	01/09/14 13:02	140108S03
SD-S-C-SMU2-C1D-C-0535	Matrix Spike Duplicate	Sediment	ICP/MS 03	01/08/14	01/09/14 13:15	140108S03

Parameter	Sample Conc.	Spike Added	MS Conc.	MS %Rec.	MSD Conc.	MSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
Copper	9.956	25.00	33.16	93	38.67	115	80-120	15	0-20	
Nickel	3.394	25.00	24.03	83	27.44	96	80-120	13	0-20	
Silver	ND	12.50	11.78	94	13.32	107	80-120	12	0-20	
Zinc	27.07	25.00	54.48	110	59.27	129	80-120	8	0-20	3

Return to Contents

RPD: Relative Percent Difference. CL: Control Limits



## Quality Control - Spike/Spike Duplicate

San Diego Bay Environmental Restoration Fund South  
 C/O de maximis, Inc., 1322 Scott Street, Suite 104  
 San Diego, CA 92106-2727

Date Received: 01/08/14  
 Work Order: 14-01-0352  
 Preparation: EPA 7471A Total  
 Method: EPA 7471A

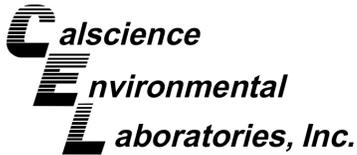
Project: South Shipyard

Page 2 of 5

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
SD-S-C-SMU2-C1D-C-0535	Sample	Sediment	Mercury	01/09/14	01/09/14 11:15	140109S02
SD-S-C-SMU2-C1D-C-0535	Matrix Spike	Sediment	Mercury	01/09/14	01/09/14 11:17	140109S02
SD-S-C-SMU2-C1D-C-0535	Matrix Spike Duplicate	Sediment	Mercury	01/09/14	01/09/14 11:19	140109S02

Parameter	Sample Conc.	Spike Added	MS Conc.	MS %Rec.	MSD Conc.	MSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
Mercury	ND	0.8350	0.7333	88	0.7279	87	76-136	1	0-16	



## Quality Control - Spike/Spike Duplicate

San Diego Bay Environmental Restoration Fund South  
 C/O de maximis, Inc., 1322 Scott Street, Suite 104  
 San Diego, CA 92106-2727

Date Received: 01/08/14  
 Work Order: 14-01-0352  
 Preparation: EPA 3545  
 Method: EPA 8270C SIM PAHs

Project: South Shipyard

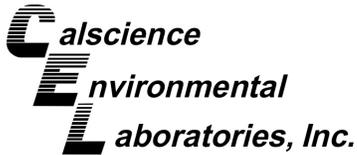
Page 3 of 5

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
SD-S-C-SMU2-C1D-C-0535	Sample	Sediment	GC/MS AAA	01/09/14	01/09/14 17:14	140109S01
SD-S-C-SMU2-C1D-C-0535	Matrix Spike	Sediment	GC/MS AAA	01/09/14	01/09/14 17:37	140109S01
SD-S-C-SMU2-C1D-C-0535	Matrix Spike Duplicate	Sediment	GC/MS AAA	01/09/14	01/09/14 18:00	140109S01

Parameter	Sample Conc.	Spike Added	MS Conc.	MS %Rec.	MSD Conc.	MSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
Benzo (a) Anthracene	ND	100.0	98.36	98	95.72	96	40-160	3	0-20	
Benzo (a) Pyrene	22.72	100.0	112.5	90	110.5	88	40-160	2	0-20	
Benzo (b) Fluoranthene	30.24	100.0	128.3	98	132.4	102	40-160	3	0-20	
Benzo (g,h,i) Perylene	13.06	100.0	107.5	94	104.4	91	40-160	3	0-20	
Benzo (k) Fluoranthene	23.14	100.0	104.0	81	97.63	74	40-160	6	0-20	
Chrysene	ND	100.0	96.41	96	93.06	93	40-160	4	0-20	
Dibenz (a,h) Anthracene	ND	100.0	89.03	89	87.83	88	40-160	1	0-20	
Fluoranthene	19.39	100.0	127.4	108	123.8	104	40-160	3	0-20	
Indeno (1,2,3-c,d) Pyrene	13.00	100.0	115.3	102	114.9	102	40-160	0	0-20	
Pyrene	21.84	100.0	126.0	104	119.0	97	40-160	6	0-46	

Return to Contents

RPD: Relative Percent Difference. CL: Control Limits



## Quality Control - Spike/Spike Duplicate

San Diego Bay Environmental Restoration Fund South  
C/O de maximis, Inc., 1322 Scott Street, Suite 104  
San Diego, CA 92106-2727

Date Received: 01/08/14  
Work Order: 14-01-0352  
Preparation: EPA 3545  
Method: EPA 8270C SIM PCB Congeners

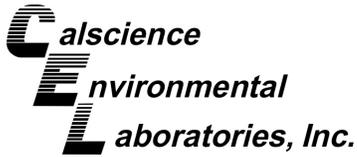
Project: South Shipyard

Page 4 of 5

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number				
SD-S-C-SMU2-C1D-C-0535	Sample	Sediment	GC/MS HHH	01/09/14	01/09/14 18:39	140109S02				
SD-S-C-SMU2-C1D-C-0535	Matrix Spike	Sediment	GC/MS HHH	01/09/14	01/09/14 19:07	140109S02				
SD-S-C-SMU2-C1D-C-0535	Matrix Spike Duplicate	Sediment	GC/MS HHH	01/09/14	01/09/14 19:35	140109S02				
Parameter	Sample Conc.	Spike Added	MS Conc.	MS %Rec.	MSD Conc.	MSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
PCB018	0.5006	25.00	22.91	90	24.35	95	50-125	6	0-30	
PCB028	0.5148	25.00	24.83	97	25.59	100	50-125	3	0-30	
PCB044	0.8162	25.00	24.25	94	25.09	97	50-125	3	0-30	
PCB052	1.043	25.00	25.85	99	26.27	101	50-125	2	0-30	
PCB066	0.7855	25.00	23.84	92	24.65	95	50-125	3	0-30	
PCB077	ND	25.00	22.47	90	23.09	92	50-125	3	0-30	
PCB101	1.294	25.00	24.11	91	25.10	95	50-125	4	0-30	
PCB105	0.6344	25.00	21.26	83	21.76	84	50-125	2	0-30	
PCB118	1.128	25.00	25.77	99	26.08	100	50-125	1	0-30	
PCB126	ND	25.00	20.12	80	20.66	83	50-125	3	0-30	
PCB128	ND	25.00	18.96	76	19.33	77	50-125	2	0-30	
PCB153	1.020	25.00	22.00	84	22.55	86	50-125	2	0-30	
PCB170	0.5397	25.00	20.28	79	21.02	82	50-125	4	0-30	
PCB180	0.6034	25.00	19.71	76	20.11	78	50-125	2	0-30	
PCB187	ND	25.00	19.88	80	19.85	79	50-125	0	0-30	
PCB206	ND	25.00	21.85	87	22.18	89	50-125	2	0-30	

Return to Contents

RPD: Relative Percent Difference. CL: Control Limits



## Quality Control - Spike/Spike Duplicate

San Diego Bay Environmental Restoration Fund South  
 C/O de maximis, Inc., 1322 Scott Street, Suite 104  
 San Diego, CA 92106-2727

Date Received: 01/08/14  
 Work Order: 14-01-0352  
 Preparation: EPA 3550B (M)  
 Method: Organotins by Krone et al.

Project: South Shipyard

Page 5 of 5

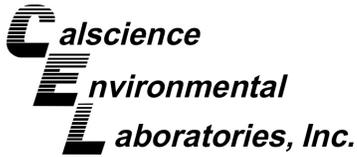
Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
14-01-0113-3	Sample	Sediment	GC/MS Y	01/07/14	01/09/14 13:05	140107S10
14-01-0113-3	Matrix Spike	Sediment	GC/MS Y	01/07/14	01/09/14 12:16	140107S10
14-01-0113-3	Matrix Spike Duplicate	Sediment	GC/MS Y	01/07/14	01/09/14 12:32	140107S10

Parameter	Sample Conc.	Spike Added	MS Conc.	MS %Rec.	MSD Conc.	MSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
Tributyltin	ND	100.0	109.3	109	95.23	95	34-142	14	0-50	

Return to Contents

RPD: Relative Percent Difference. CL: Control Limits



## Quality Control - PDS/PDSD

San Diego Bay Environmental Restoration Fund South  
 C/O de maximis, Inc., 1322 Scott Street, Suite 104  
 San Diego, CA 92106-2727

Date Received: 01/08/14  
 Work Order: 14-01-0352  
 Preparation: EPA 3050B  
 Method: EPA 6020

Project: South Shipyard

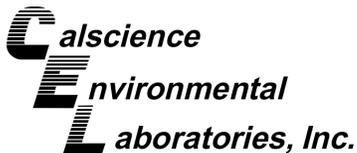
Page 1 of 1

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	PDS/PDSD Batch Number
SD-S-C-SMU2-C1D-C-0535	Sample	Sediment	ICP/MS 03	01/08/14 00:00	01/09/14 13:28	140108S03
SD-S-C-SMU2-C1D-C-0535	PDS	Sediment	ICP/MS 03	01/08/14 00:00	01/09/14 13:18	140108S03

Parameter	Sample Conc.	Spike Added	PDS Conc.	PDS %Rec.	%Rec. CL	Qualifiers
Copper	9.956	25.00	36.31	105	75-125	
Nickel	3.394	25.00	26.95	94	75-125	
Silver	ND	12.50	12.29	98	75-125	
Zinc	27.07	25.00	54.55	110	75-125	

  
Return to Contents

RPD: Relative Percent Difference. CL: Control Limits



Quality Control - Sample Duplicate

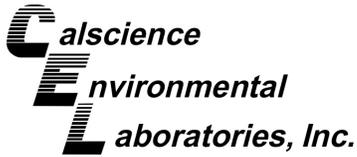
San Diego Bay Environmental Restoration Fund South	Date Received:	01/08/14
C/O de maximis, Inc., 1322 Scott Street, Suite 104	Work Order:	14-01-0352
San Diego, CA 92106-2727	Preparation:	N/A
	Method:	SM 2540 B (M)
Project: South Shipyard		Page 1 of 1

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	Duplicate Batch Number
14-01-0113-3	Sample	Sediment	N/A	01/08/14 00:00	01/09/14 12:00	E0109TSD1
14-01-0113-3	Sample Duplicate	Sediment	N/A	01/08/14 00:00	01/09/14 12:00	E0109TSD1

Parameter	Sample Conc.	DUP Conc.	RPD	RPD CL	Qualifiers
Solids, Total	40.60	39.80	2	0-10	

Return to Contents

RPD: Relative Percent Difference. CL: Control Limits



## Quality Control - LCS

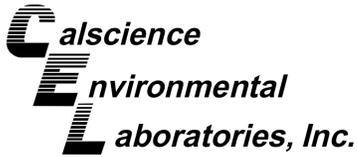
San Diego Bay Environmental Restoration Fund South  
 C/O de maximis, Inc., 1322 Scott Street, Suite 104  
 San Diego, CA 92106-2727

Date Received: 01/08/14  
 Work Order: 14-01-0352  
 Preparation: EPA 3050B  
 Method: EPA 6020

Project: South Shipyard

Page 1 of 5

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS Batch Number
<b>099-15-254-180</b>	<b>LCS</b>	<b>Solid</b>	<b>ICP/MS 03</b>	<b>01/08/14</b>	<b>01/09/14 12:59</b>	<b>140108L03E</b>
<u>Parameter</u>		<u>Spike Added</u>	<u>Conc. Recovered</u>	<u>LCS %Rec.</u>	<u>%Rec. CL</u>	<u>Qualifiers</u>
Copper		25.00	27.19	109	80-120	
Nickel		25.00	24.18	97	80-120	
Silver		12.50	12.45	100	80-120	
Zinc		25.00	28.08	112	80-120	



## Quality Control - LCS

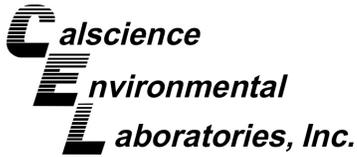
San Diego Bay Environmental Restoration Fund South  
 C/O de maximis, Inc., 1322 Scott Street, Suite 104  
 San Diego, CA 92106-2727

Date Received: 01/08/14  
 Work Order: 14-01-0352  
 Preparation: EPA 7471A Total  
 Method: EPA 7471A

Project: South Shipyard

Page 2 of 5

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS Batch Number
<b>099-12-452-443</b>	<b>LCS</b>	<b>Solid</b>	<b>Mercury</b>	<b>01/09/14</b>	<b>01/09/14 11:13</b>	<b>140109L02E</b>
<u>Parameter</u>		<u>Spike Added</u>	<u>Conc. Recovered</u>	<u>LCS %Rec.</u>	<u>%Rec. CL</u>	<u>Qualifiers</u>
Mercury		0.8350	0.8144	98	82-124	



## Quality Control - LCS

San Diego Bay Environmental Restoration Fund South  
 C/O de maximis, Inc., 1322 Scott Street, Suite 104  
 San Diego, CA 92106-2727

Date Received: 01/08/14  
 Work Order: 14-01-0352  
 Preparation: EPA 3545  
 Method: EPA 8270C SIM PAHs

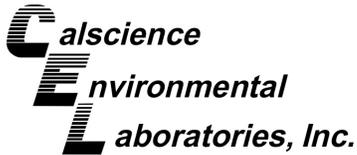
Project: South Shipyard

Page 3 of 5

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS Batch Number
<b>099-14-097-120</b>	<b>LCS</b>	<b>Solid</b>	<b>GC/MS AAA</b>	<b>01/09/14</b>	<b>01/09/14 16:51</b>	<b>140109L01</b>
<u>Parameter</u>		<u>Spike Added</u>	<u>Conc. Recovered</u>	<u>LCS %Rec.</u>	<u>%Rec. CL</u>	<u>Qualifiers</u>
Benzo (a) Anthracene		100.0	94.35	94	40-160	
Benzo (a) Pyrene		100.0	90.75	91	40-160	
Benzo (b) Fluoranthene		100.0	99.48	99	40-160	
Benzo (g,h,i) Perylene		100.0	98.78	99	40-160	
Benzo (k) Fluoranthene		100.0	105.0	105	40-160	
Chrysene		100.0	97.17	97	40-160	
Dibenz (a,h) Anthracene		100.0	90.56	91	40-160	
Fluoranthene		100.0	101.5	101	40-160	
Indeno (1,2,3-c,d) Pyrene		100.0	96.25	96	40-160	
Pyrene		100.0	97.47	97	40-160	

Return to Contents

RPD: Relative Percent Difference. CL: Control Limits



## Quality Control - LCS

San Diego Bay Environmental Restoration Fund South  
 C/O de maximis, Inc., 1322 Scott Street, Suite 104  
 San Diego, CA 92106-2727

Date Received: 01/08/14  
 Work Order: 14-01-0352  
 Preparation: EPA 3545  
 Method: EPA 8270C SIM PCB Congeners

Project: South Shipyard

Page 4 of 5

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS Batch Number	
<b>099-14-341-148</b>	<b>LCS</b>	<b>Solid</b>	<b>GC/MS HHH</b>	<b>01/09/14</b>	<b>01/09/14 17:44</b>	<b>140109L02</b>	
<u>Parameter</u>		<u>Spike Added</u>	<u>Conc. Recovered</u>	<u>LCS %Rec.</u>	<u>%Rec. CL</u>	<u>ME CL</u>	<u>Qualifiers</u>
PCB018		25.00	26.12	104	50-125	38-138	
PCB028		25.00	26.85	107	50-125	38-138	
PCB044		25.00	26.50	106	50-125	38-138	
PCB052		25.00	25.43	102	50-125	38-138	
PCB066		25.00	26.64	107	50-125	38-138	
PCB077		25.00	26.67	107	50-125	38-138	
PCB101		25.00	25.84	103	50-125	38-138	
PCB105		25.00	24.75	99	50-125	38-138	
PCB118		25.00	28.21	113	50-125	38-138	
PCB126		25.00	23.72	95	50-125	38-138	
PCB128		25.00	22.19	89	50-125	38-138	
PCB153		25.00	24.16	97	50-125	38-138	
PCB170		25.00	22.27	89	50-125	38-138	
PCB180		25.00	21.82	87	50-125	38-138	
PCB187		25.00	22.89	92	50-125	38-138	
PCB206		25.00	23.83	95	50-125	38-138	

Total number of LCS compounds: 16

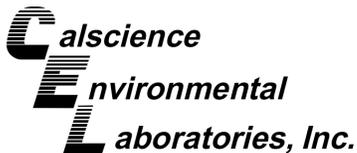
Total number of ME compounds: 0

Total number of ME compounds allowed: 1

LCS ME CL validation result: Pass

Return to Contents

RPD: Relative Percent Difference. CL: Control Limits



Quality Control - LCS

San Diego Bay Environmental Restoration Fund South  
 C/O de maximis, Inc., 1322 Scott Street, Suite 104  
 San Diego, CA 92106-2727

Date Received: 01/08/14  
 Work Order: 14-01-0352  
 Preparation: EPA 3550B (M)  
 Method: Organotins by Krone et al.

Project: South Shipyard

Page 5 of 5

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS Batch Number
099-07-016-1116	LCS	Solid	GC/MS Y	01/07/14	01/09/14 11:27	140107L10

Parameter	Spike Added	Conc. Recovered	LCS %Rec.	%Rec. CL	Qualifiers
Tributyltin	100.0	84.01	84	33-147	

Return to Contents

RPD: Relative Percent Difference. CL: Control Limits

## Glossary of Terms and Qualifiers

Work Order: 14-01-0352

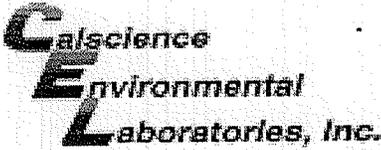
Page 1 of 1

<u>Qualifiers</u>	<u>Definition</u>
*	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 suspected matrix interference. The associated LCS recovery was in control.
4	The MS/MSD RPD was out of control due to suspected matrix interference.
5	The PDS/PDSD or PES/PESD associated with this batch of samples was out of control due to suspected matrix interference.
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.
BV	Sample received 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.
JA	Analyte positively identified but quantitation is an estimate.
ME	LCS Recovery Percentage is within Marginal Exceedance (ME) Control Limit range (+/- 4 SD from the mean).
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.

Any parameter identified in 40CFR Part 136.3 Table II that is designated as "analyze immediately" with a holding time of  $\leq 15$  minutes (40CFR-136.3 Table II, footnote 4), is considered a "field" test and the reported results will be qualified as being received outside of the stated holding time unless received at the laboratory within 15 minutes of the collection time.

A calculated total result (Example: Total Pesticides) is the summation of each component concentration and/or, if "J" flags are reported, estimated concentration. Component concentrations showing not detected (ND) are summed into the calculated total result as zero concentrations.





WORK ORDER #: 14-01-0352

SAMPLE RECEIPT FORM

Cooler 1 of 1

CLIENT: DE MAXIMIS, INC

DATE: 01/08/14

TEMPERATURE: Thermometer ID: SC1 (Criteria: 0.0°C - 6.0°C, not frozen except sediment/tissue)
Temperature 2.0°C - 0.3°C (CF) = 1.7°C
Checked by: 671

CUSTODY SEALS INTACT:
Checked by: 671
Checked by: 300

SAMPLE CONDITION:
Chain-Of-Custody (COC) document(s) received with samples...
CONTAINER TYPE:
Solid: 16ozCGJ
Aqueous:
Air:
Labeled/Checked by: 300
Reviewed by: 836
Scanned by: 836

Return to Contents



**CERTIFICATION**

All analyses were conducted at a laboratory certified for such analyses by the California Department of Public Health in accordance with applicable USEPA and NELAP accreditation procedures.

I certify under penalty of law that the data generated for Calscience Work Order No. 13-11-1792 were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. The Project Manager or designee who signed the Calscience Work Order has been specifically authorized and approved to do so.

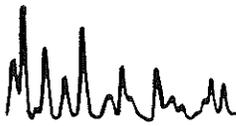
The information submitted is, to the best of my knowledge and belief, true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of a fine and imprisonment for knowing violations.

  
\_\_\_\_\_  
Signature, Laboratory Director

May 20, 2014  
Date

Name of Laboratory: **Calscience Environmental Laboratories**  
Address of Laboratory: **7440 Lincoln Way**  
**Garden Grove, CA 92841-1432**

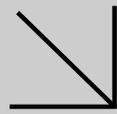
This Certification signed by: **Steve Lane**





Supplemental Report 2

The original report has been revised/corrected.

**CALSCIENCE****WORK ORDER NUMBER: 13-11-1792***The difference is service*

AIR | SOIL | WATER | MARINE CHEMISTRY

**Analytical Report For****Client:** San Diego Bay Environmental Restoration Fund South**Client Project Name:** South Shipyard Post Dredge**Attention:** Mike Palmer  
C/O de maximis, Inc.  
1322 Scott Street, Suite 104  
San Diego, CA 92106-2727

Approved for release on 11/26/2013 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.



Client Project Name: South Shipyard Post Dredge  
Work Order Number: 13-11-1792

1	Work Order Narrative. . . . .	3
2	Sample Summary. . . . .	4
3	Client Sample Data. . . . .	5
	3.1 SM 2540 B (M) Total Solids (Solid). . . . .	5
	3.2 EPA 6020 ICP/MS Metals (Solid). . . . .	6
	3.3 EPA 7471A Mercury (Solid). . . . .	7
	3.4 EPA 8270C SIM PAHs (Solid). . . . .	8
	3.5 EPA 8270C SIM PCB Congeners (Solid). . . . .	12
	3.6 Krone et al. Organotins (Solid). . . . .	20
4	Quality Control Sample Data. . . . .	21
	4.1 MS/MSD. . . . .	21
	4.2 PDS/PDSD. . . . .	26
	4.3 Sample Duplicate. . . . .	27
	4.4 LCS/LCSD. . . . .	28
5	Glossary of Terms and Qualifiers. . . . .	33
6	Chain of Custody/Sample Receipt Form. . . . .	34

**Work Order Narrative**

Work Order: 13-11-1792

Page 1 of 1

**Condition Upon Receipt:**

Samples were received under Chain of Custody (COC) on 11/21/13. They were assigned to Work Order 13-11-1792.

Unless otherwise noted on the Sample Receiving forms all samples were received in good condition and within the recommended EPA temperature criteria for the methods noted on the COC. The COC and Sample Receiving Documents are integral elements of the analytical report and are presented at the back of the report.

**Holding Times:**

All samples were analyzed within prescribed holding times (HT) and/or in accordance with the Calscience Sample Acceptance Policy unless otherwise noted in the analytical report and/or comprehensive case narrative, if required.

Any parameter identified in 40CFR Part 136.3 Table II that is designated as "analyze immediately" with a holding time of  $\leq 15$  minutes (40CFR-136.3 Table II, footnote 4), is considered a "field" test and the reported results will be qualified as being received outside of the stated holding time unless received at the laboratory within 15 minutes of the collection time.

**Quality Control:**

All quality control parameters (QC) were within established control limits except where noted in the QC summary forms or described further within this report.

**Additional Comments:**

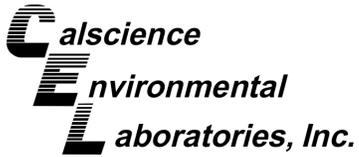
Air - Sorbent-extracted air methods (EPA TO-4A, EPA TO-10, EPA TO-13A, EPA TO-17): Analytical results are converted from mass/sample basis to mass/volume basis using client-supplied air volumes.

New York NELAP air certification does not certify for all reported methods and analytes, reference the accredited items here: [http://www.calscience.com/PDF/New\\_York.pdf](http://www.calscience.com/PDF/New_York.pdf)

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

**Subcontractor Information:**

Unless otherwise noted below (or on the subcontract form), no samples were subcontracted.



## Sample Summary

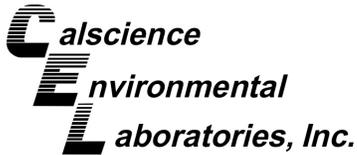
---

Client: San Diego Bay Environmental Restoration Fund	Work Order:	13-11-1792
South	Project Name:	South Shipyard Post Dredge
C/O de maximis, Inc., 1322 Scott Street, Suite	PO Number:	
104	Date/Time	11/21/13 19:45
San Diego, CA 92106-2727	Received:	
	Number of	6
	Containers:	

Attn: Mike Palmer

---

Sample Identification	Lab Number	Collection Date and Time	Number of Containers	Matrix
SD-S-C-SMU3A-D-0535	13-11-1792-1	11/21/13 12:10	2	Sediment
SD-S-C-SMU3B/C-C-0535	13-11-1792-2	11/21/13 14:30	2	Sediment
SD-S-C-SMU3D-D-0535	13-11-1792-3	11/21/13 14:55	2	Sediment



## Analytical Report

San Diego Bay Environmental Restoration Fund South  
 C/O de maximis, Inc., 1322 Scott Street, Suite 104  
 San Diego, CA 92106-2727

Date Received: 11/21/13  
 Work Order: 13-11-1792  
 Preparation: N/A  
 Method: SM 2540 B (M)  
 Units: %

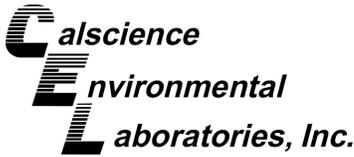
Project: South Shipyard Post Dredge

Page 1 of 1

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
<b>SD-S-C-SMU3A-D-0535</b>	<b>13-11-1792-1-A</b>	<b>11/21/13 12:10</b>	<b>Sediment</b>	<b>N/A</b>	<b>11/21/13</b>	<b>11/22/13 12:05</b>	<b>D1122TSB1</b>
<u>Parameter</u>		<u>Result</u>	<u>RL</u>		<u>DF</u>		<u>Qualifiers</u>
Solids, Total		59.5	0.100		1		
<b>SD-S-C-SMU3B/C-C-0535</b>	<b>13-11-1792-2-A</b>	<b>11/21/13 14:30</b>	<b>Sediment</b>	<b>N/A</b>	<b>11/21/13</b>	<b>11/22/13 12:05</b>	<b>D1122TSB1</b>
<u>Parameter</u>		<u>Result</u>	<u>RL</u>		<u>DF</u>		<u>Qualifiers</u>
Solids, Total		68.3	0.100		1		
<b>SD-S-C-SMU3D-D-0535</b>	<b>13-11-1792-3-A</b>	<b>11/21/13 14:55</b>	<b>Sediment</b>	<b>N/A</b>	<b>11/21/13</b>	<b>11/22/13 12:05</b>	<b>D1122TSB1</b>
<u>Parameter</u>		<u>Result</u>	<u>RL</u>		<u>DF</u>		<u>Qualifiers</u>
Solids, Total		79.4	0.100		1		
<b>Method Blank</b>	<b>099-05-019-2412</b>	<b>N/A</b>	<b>Solid</b>	<b>N/A</b>	<b>11/21/13</b>	<b>11/22/13 12:05</b>	<b>D1122TSB1</b>
<u>Parameter</u>		<u>Result</u>	<u>RL</u>		<u>DF</u>		<u>Qualifiers</u>
Solids, Total		ND	0.100		1		

Return to Contents

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.



## Analytical Report

San Diego Bay Environmental Restoration Fund South  
C/O de maximis, Inc., 1322 Scott Street, Suite 104  
San Diego, CA 92106-2727

Date Received: 11/21/13  
Work Order: 13-11-1792  
Preparation: EPA 3050B  
Method: EPA 6020  
Units: mg/kg

Project: South Shipyard Post Dredge

Page 1 of 1

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SD-S-C-SMU3A-D-0535	13-11-1792-1-A	11/21/13 12:10	Sediment	ICP/MS 03	11/22/13	11/22/13 17:21	131122L01E

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

Parameter	Result	RL	MDL	DF	Qualifiers
Copper	128	0.168	0.0704	1	
Nickel	11.2	0.168	0.0851	1	
Silver	0.900	0.168	0.0526	1	
Zinc	189	1.68	1.34	1	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SD-S-C-SMU3B/C-C-0535	13-11-1792-2-A	11/21/13 14:30	Sediment	ICP/MS 03	11/22/13	11/22/13 17:31	131122L01E

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

Parameter	Result	RL	MDL	DF	Qualifiers
Copper	49.2	0.146	0.0614	1	
Nickel	7.92	0.146	0.0741	1	
Silver	0.847	0.146	0.0458	1	
Zinc	107	1.46	1.16	1	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SD-S-C-SMU3D-D-0535	13-11-1792-3-A	11/21/13 14:55	Sediment	ICP/MS 03	11/22/13	11/22/13 17:34	131122L01E

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

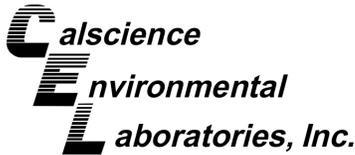
Parameter	Result	RL	MDL	DF	Qualifiers
Copper	56.3	0.126	0.0528	1	
Nickel	3.69	0.126	0.0638	1	
Silver	0.234	0.126	0.0394	1	
Zinc	118	1.26	1.00	1	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	099-15-254-165	N/A	Solid	ICP/MS 03	11/22/13	11/22/13 16:56	131122L01E

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

Parameter	Result	RL	MDL	DF	Qualifiers
Copper	ND	0.100	0.0419	1	
Nickel	ND	0.100	0.0506	1	
Silver	ND	0.100	0.0313	1	
Zinc	ND	1.00	0.795	1	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.



## Analytical Report

San Diego Bay Environmental Restoration Fund South  
C/O de maximis, Inc., 1322 Scott Street, Suite 104  
San Diego, CA 92106-2727

Date Received: 11/21/13  
Work Order: 13-11-1792  
Preparation: EPA 7471A Total  
Method: EPA 7471A  
Units: mg/kg

Project: South Shipyard Post Dredge

Page 1 of 1

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SD-S-C-SMU3A-D-0535	13-11-1792-1-A	11/21/13 12:10	Sediment	Mercury	11/22/13	11/22/13 13:15	131122L03E

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

Parameter	Result	RL	MDL	DF	Qualifiers
Mercury	0.478	0.0337	0.00989	1	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SD-S-C-SMU3B/C-C-0535	13-11-1792-2-A	11/21/13 14:30	Sediment	Mercury	11/22/13	11/22/13 13:21	131122L03E

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

Parameter	Result	RL	MDL	DF	Qualifiers
Mercury	0.636	0.0293	0.00861	1	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SD-S-C-SMU3D-D-0535	13-11-1792-3-A	11/21/13 14:55	Sediment	Mercury	11/22/13	11/22/13 13:23	131122L03E

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

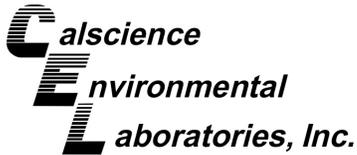
Parameter	Result	RL	MDL	DF	Qualifiers
Mercury	0.0808	0.0252	0.00741	1	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	099-12-452-426	N/A	Solid	Mercury	11/22/13	11/22/13 13:10	131122L03E

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

Parameter	Result	RL	MDL	DF	Qualifiers
Mercury	ND	0.0200	0.00588	1	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.



## Analytical Report

San Diego Bay Environmental Restoration Fund South  
 C/O de maximis, Inc., 1322 Scott Street, Suite 104  
 San Diego, CA 92106-2727

Date Received: 11/21/13  
 Work Order: 13-11-1792  
 Preparation: EPA 3545  
 Method: EPA 8270C SIM PAHs  
 Units: ug/kg

Project: South Shipyard Post Dredge

Page 1 of 4

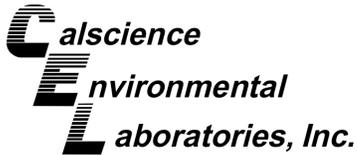
Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SD-S-C-SMU3A-D-0535	13-11-1792-1-A	11/21/13 12:10	Sediment	GC/MS AAA	11/21/13	11/22/13 15:41	131121L22

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

Parameter	Result	RL	DF	Qualifiers
Benzo (a) Anthracene	25	17	1	
Benzo (a) Pyrene	74	17	1	
Benzo (b) Fluoranthene	71	17	1	
Benzo (g,h,i) Perylene	57	17	1	
Benzo (k) Fluoranthene	54	17	1	
Chrysene	32	17	1	
Dibenz (a,h) Anthracene	ND	17	1	
Fluoranthene	33	17	1	
Indeno (1,2,3-c,d) Pyrene	59	17	1	
Perylene	ND	17	1	
Pyrene	75	17	1	
Surrogate	Rec. (%)	Control Limits	Qualifiers	
2-Fluorobiphenyl	101	14-146		
Nitrobenzene-d5	109	18-162		
p-Terphenyl-d14	120	34-148		

Return to Contents

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.



## Analytical Report

San Diego Bay Environmental Restoration Fund South  
 C/O de maximis, Inc., 1322 Scott Street, Suite 104  
 San Diego, CA 92106-2727

Date Received: 11/21/13  
 Work Order: 13-11-1792  
 Preparation: EPA 3545  
 Method: EPA 8270C SIM PAHs  
 Units: ug/kg

Project: South Shipyard Post Dredge

Page 2 of 4

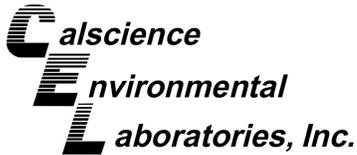
Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SD-S-C-SMU3B/C-C-0535	13-11-1792-2-A	11/21/13 14:30	Sediment	GC/MS AAA	11/21/13	11/22/13 16:04	131121L22

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

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qualifiers</u>
Benzo (a) Anthracene	20	15	1	
Benzo (a) Pyrene	88	15	1	
Benzo (b) Fluoranthene	67	15	1	
Benzo (g,h,i) Perylene	60	15	1	
Benzo (k) Fluoranthene	59	15	1	
Chrysene	21	15	1	
Dibenz (a,h) Anthracene	ND	15	1	
Fluoranthene	26	15	1	
Indeno (1,2,3-c,d) Pyrene	60	15	1	
Perylene	ND	15	1	
Pyrene	160	15	1	
<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>	
2-Fluorobiphenyl	109	14-146		
Nitrobenzene-d5	115	18-162		
p-Terphenyl-d14	124	34-148		

Return to Contents

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.



## Analytical Report

San Diego Bay Environmental Restoration Fund South  
 C/O de maximis, Inc., 1322 Scott Street, Suite 104  
 San Diego, CA 92106-2727

Date Received: 11/21/13  
 Work Order: 13-11-1792  
 Preparation: EPA 3545  
 Method: EPA 8270C SIM PAHs  
 Units: ug/kg

Project: South Shipyard Post Dredge

Page 3 of 4

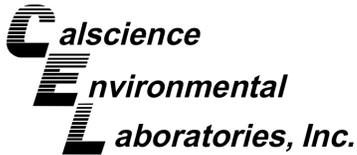
Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SD-S-C-SMU3D-D-0535	13-11-1792-3-A	11/21/13 14:55	Sediment	GC/MS AAA	11/21/13	11/22/13 16:28	131121L22

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

Parameter	Result	RL	DF	Qualifiers
Benzo (a) Anthracene	ND	13	1	
Benzo (a) Pyrene	20	13	1	
Benzo (b) Fluoranthene	18	13	1	
Benzo (g,h,i) Perylene	14	13	1	
Benzo (k) Fluoranthene	14	13	1	
Chrysene	ND	13	1	
Dibenz (a,h) Anthracene	ND	13	1	
Fluoranthene	ND	13	1	
Indeno (1,2,3-c,d) Pyrene	14	13	1	
Perylene	ND	13	1	
Pyrene	14	13	1	
Surrogate	Rec. (%)	Control Limits	Qualifiers	
2-Fluorobiphenyl	113	14-146		
Nitrobenzene-d5	115	18-162		
p-Terphenyl-d14	124	34-148		

Return to Contents

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.



## Analytical Report

San Diego Bay Environmental Restoration Fund South  
 C/O de maximis, Inc., 1322 Scott Street, Suite 104  
 San Diego, CA 92106-2727

Date Received: 11/21/13  
 Work Order: 13-11-1792  
 Preparation: EPA 3545  
 Method: EPA 8270C SIM PAHs  
 Units: ug/kg

Project: South Shipyard Post Dredge

Page 4 of 4

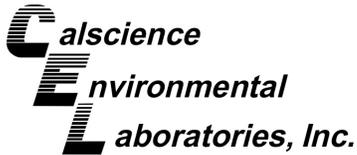
Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
<b>Method Blank</b>	<b>099-14-097-108</b>	<b>N/A</b>	<b>Solid</b>	<b>GC/MS AAA</b>	<b>11/21/13</b>	<b>11/22/13 15:18</b>	<b>131121L22</b>

Parameter	Result	RL	DF	Qualifiers
Benzo (a) Anthracene	ND	10	1	
Benzo (a) Pyrene	ND	10	1	
Benzo (b) Fluoranthene	ND	10	1	
Benzo (g,h,i) Perylene	ND	10	1	
Benzo (k) Fluoranthene	ND	10	1	
Chrysene	ND	10	1	
Dibenz (a,h) Anthracene	ND	10	1	
Fluoranthene	ND	10	1	
Indeno (1,2,3-c,d) Pyrene	ND	10	1	
Perylene	ND	10	1	
Pyrene	ND	10	1	

Surrogate	Rec. (%)	Control Limits	Qualifiers
2-Fluorobiphenyl	70	14-146	
Nitrobenzene-d5	67	18-162	
p-Terphenyl-d14	81	34-148	

Return to Contents

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.



## Analytical Report

San Diego Bay Environmental Restoration Fund South  
 C/O de maximis, Inc., 1322 Scott Street, Suite 104  
 San Diego, CA 92106-2727

Date Received: 11/21/13  
 Work Order: 13-11-1792  
 Preparation: EPA 3545  
 Method: EPA 8270C SIM PCB Congeners  
 Units: ug/kg

Project: South Shipyard Post Dredge

Page 1 of 8

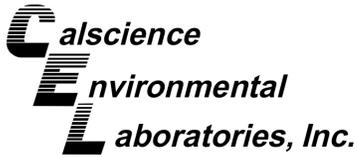
Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SD-S-C-SMU3A-D-0535	13-11-1792-1-A	11/21/13 12:10	Sediment	GC/MS HHH	11/21/13	11/23/13 15:38	131121L21

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

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

Parameter	Result	RL	MDL	DF	Qualifiers
PCB018	1.2	0.84	0.26	1	
PCB028	1.4	0.84	0.17	1	
PCB037	ND	0.84	0.22	1	
PCB044	2.7	0.84	0.22	1	
PCB049	2.7	0.84	0.20	1	
PCB052	4.5	0.84	0.16	1	
PCB066	2.5	0.84	0.15	1	
PCB070	2.9	0.84	0.14	1	
PCB074	1.2	0.84	0.16	1	
PCB077	ND	0.84	0.16	1	
PCB081	ND	0.84	0.21	1	
PCB087	2.0	0.84	0.17	1	
PCB099	2.3	0.84	0.14	1	
PCB101	5.7	0.84	0.14	1	
PCB105	2.1	0.84	0.18	1	
PCB110	4.7	0.84	0.17	1	
PCB114	ND	0.84	0.17	1	
PCB118	4.9	0.84	0.22	1	
PCB119	0.16	0.84	0.15	1	J
PCB123	ND	0.84	0.15	1	
PCB126	ND	0.84	0.23	1	
PCB128	0.99	0.84	0.17	1	
PCB138/158	5.1	1.7	0.34	1	
PCB149	3.1	0.84	0.15	1	
PCB151	0.84	0.84	0.17	1	J
PCB153	5.2	0.84	0.17	1	
PCB156	0.54	0.84	0.16	1	J
PCB157	0.40	0.84	0.16	1	J
PCB167	0.18	0.84	0.17	1	J
PCB168	ND	0.84	0.14	1	
PCB169	ND	0.84	0.14	1	
PCB170	1.4	0.84	0.16	1	
PCB177	0.56	0.84	0.21	1	J

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.



## Analytical Report

San Diego Bay Environmental Restoration Fund South  
 C/O de maximis, Inc., 1322 Scott Street, Suite 104  
 San Diego, CA 92106-2727

Date Received: 11/21/13  
 Work Order: 13-11-1792  
 Preparation: EPA 3545  
 Method: EPA 8270C SIM PCB Congeners  
 Units: ug/kg

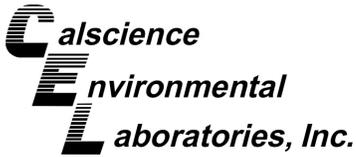
Project: South Shipyard Post Dredge

Page 2 of 8

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>MDL</u>	<u>DF</u>	<u>Qualifiers</u>
PCB180	2.2	0.84	0.10	1	
PCB183	0.58	0.84	0.19	1	J
PCB187	1.4	0.84	0.18	1	
PCB189	ND	0.84	0.14	1	
PCB194	0.52	0.84	0.16	1	J
PCB201	ND	0.84	0.096	1	
PCB206	0.52	0.84	0.14	1	J
<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>		
2-Fluorobiphenyl	90	50-125			
p-Terphenyl-d14	106	50-125			

Return to Contents

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.



## Analytical Report

San Diego Bay Environmental Restoration Fund South  
 C/O de maximis, Inc., 1322 Scott Street, Suite 104  
 San Diego, CA 92106-2727

Date Received: 11/21/13  
 Work Order: 13-11-1792  
 Preparation: EPA 3545  
 Method: EPA 8270C SIM PCB Congeners  
 Units: ug/kg

Project: South Shipyard Post Dredge

Page 3 of 8

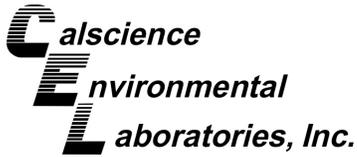
Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SD-S-C-SMU3B/C-C-0535	13-11-1792-2-A	11/21/13 14:30	Sediment	GC/MS HHH	11/21/13	11/23/13 18:27	131121L21

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

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

Parameter	Result	RL	MDL	DF	Qualifiers
PCB018	1.9	0.73	0.23	1	
PCB028	1.7	0.73	0.15	1	
PCB037	ND	0.73	0.19	1	
PCB044	5.2	0.73	0.19	1	
PCB049	4.0	0.73	0.17	1	
PCB052	11	0.73	0.14	1	
PCB066	3.1	0.73	0.13	1	
PCB070	7.3	0.73	0.12	1	
PCB074	2.2	0.73	0.14	1	
PCB077	0.87	0.73	0.14	1	
PCB081	ND	0.73	0.18	1	
PCB087	6.5	0.73	0.15	1	
PCB099	5.9	0.73	0.12	1	
PCB101	16	0.73	0.12	1	
PCB105	5.6	0.73	0.15	1	
PCB110	14	0.73	0.15	1	
PCB114	ND	0.73	0.15	1	
PCB118	14	0.73	0.19	1	
PCB119	ND	0.73	0.13	1	
PCB123	ND	0.73	0.13	1	
PCB126	ND	0.73	0.20	1	
PCB128	2.9	0.73	0.15	1	
PCB138/158	15	1.5	0.30	1	
PCB149	8.6	0.73	0.13	1	
PCB151	2.2	0.73	0.15	1	
PCB153	13	0.73	0.15	1	
PCB156	2.0	0.73	0.14	1	
PCB157	0.96	0.73	0.14	1	
PCB167	0.61	0.73	0.15	1	J
PCB168	ND	0.73	0.13	1	
PCB169	0.57	0.73	0.12	1	J
PCB170	3.3	0.73	0.14	1	
PCB177	1.1	0.73	0.18	1	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.



## Analytical Report

San Diego Bay Environmental Restoration Fund South  
 C/O de maximis, Inc., 1322 Scott Street, Suite 104  
 San Diego, CA 92106-2727

Date Received: 11/21/13  
 Work Order: 13-11-1792  
 Preparation: EPA 3545  
 Method: EPA 8270C SIM PCB Congeners  
 Units: ug/kg

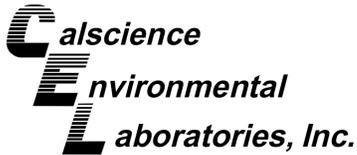
Project: South Shipyard Post Dredge

Page 4 of 8

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>MDL</u>	<u>DF</u>	<u>Qualifiers</u>
PCB180	5.2	0.73	0.090	1	
PCB183	1.4	0.73	0.16	1	
PCB187	2.7	0.73	0.15	1	
PCB189	0.15	0.73	0.13	1	J
PCB194	1.1	0.73	0.14	1	
PCB201	0.17	0.73	0.083	1	J
PCB206	0.58	0.73	0.12	1	J
<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>		
2-Fluorobiphenyl	84	50-125			
p-Terphenyl-d14	160	50-125	1,2,7		

Return to Contents

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.



## Analytical Report

San Diego Bay Environmental Restoration Fund South  
 C/O de maximis, Inc., 1322 Scott Street, Suite 104  
 San Diego, CA 92106-2727

Date Received: 11/21/13  
 Work Order: 13-11-1792  
 Preparation: EPA 3545  
 Method: EPA 8270C SIM PCB Congeners  
 Units: ug/kg

Project: South Shipyard Post Dredge

Page 5 of 8

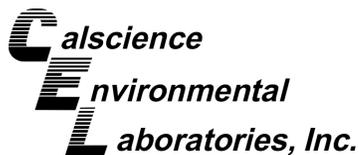
Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SD-S-C-SMU3D-D-0535	13-11-1792-3-A	11/21/13 14:55	Sediment	GC/MS HHH	11/21/13	11/23/13 18:00	131121L21

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

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

Parameter	Result	RL	MDL	DF	Qualifiers
PCB018	0.41	0.63	0.20	1	J
PCB028	0.60	0.63	0.13	1	J
PCB037	ND	0.63	0.16	1	
PCB044	0.99	0.63	0.17	1	
PCB049	1.1	0.63	0.15	1	
PCB052	2.3	0.63	0.12	1	
PCB066	0.92	0.63	0.12	1	
PCB070	1.2	0.63	0.10	1	
PCB074	0.52	0.63	0.12	1	J
PCB077	ND	0.63	0.12	1	
PCB081	ND	0.63	0.15	1	
PCB087	0.92	0.63	0.13	1	
PCB099	1.2	0.63	0.11	1	
PCB101	2.7	0.63	0.10	1	
PCB105	0.93	0.63	0.13	1	
PCB110	2.1	0.63	0.13	1	
PCB114	ND	0.63	0.13	1	
PCB118	2.2	0.63	0.17	1	
PCB119	ND	0.63	0.11	1	
PCB123	ND	0.63	0.11	1	
PCB126	ND	0.63	0.17	1	
PCB128	0.54	0.63	0.13	1	J
PCB138/158	2.3	1.3	0.26	1	
PCB149	1.3	0.63	0.11	1	
PCB151	0.34	0.63	0.13	1	J
PCB153	2.3	0.63	0.13	1	
PCB156	0.29	0.63	0.12	1	J
PCB157	0.25	0.63	0.12	1	J
PCB167	ND	0.63	0.13	1	
PCB168	ND	0.63	0.11	1	
PCB169	ND	0.63	0.10	1	
PCB170	0.59	0.63	0.12	1	J
PCB177	0.16	0.63	0.16	1	J

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.



## Analytical Report

San Diego Bay Environmental Restoration Fund South  
 C/O de maximis, Inc., 1322 Scott Street, Suite 104  
 San Diego, CA 92106-2727

Date Received: 11/21/13  
 Work Order: 13-11-1792  
 Preparation: EPA 3545  
 Method: EPA 8270C SIM PCB Congeners  
 Units: ug/kg

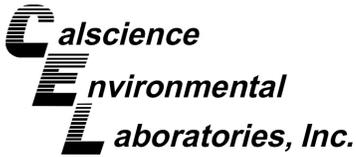
Project: South Shipyard Post Dredge

Page 6 of 8

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>MDL</u>	<u>DF</u>	<u>Qualifiers</u>
PCB180	0.89	0.63	0.077	1	
PCB183	0.20	0.63	0.14	1	J
PCB187	0.48	0.63	0.13	1	J
PCB189	ND	0.63	0.11	1	
PCB194	ND	0.63	0.12	1	
PCB201	ND	0.63	0.072	1	
PCB206	ND	0.63	0.10	1	
<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>		
2-Fluorobiphenyl	72	50-125			
p-Terphenyl-d14	94	50-125			

Return to Contents

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.



## Analytical Report

San Diego Bay Environmental Restoration Fund South  
 C/O de maximis, Inc., 1322 Scott Street, Suite 104  
 San Diego, CA 92106-2727

Date Received: 11/21/13  
 Work Order: 13-11-1792  
 Preparation: EPA 3545  
 Method: EPA 8270C SIM PCB Congeners  
 Units: ug/kg

Project: South Shipyard Post Dredge

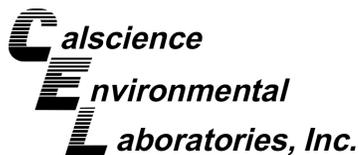
Page 7 of 8

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	099-14-341-135	N/A	Solid	GC/MS HHH	11/21/13	11/23/13 15:10	131121L21

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

Parameter	Result	RL	MDL	DF	Qualifiers
PCB018	ND	0.50	0.16	1	
PCB028	ND	0.50	0.099	1	
PCB037	ND	0.50	0.13	1	
PCB044	ND	0.50	0.13	1	
PCB049	ND	0.50	0.12	1	
PCB052	ND	0.50	0.097	1	
PCB066	ND	0.50	0.091	1	
PCB070	ND	0.50	0.082	1	
PCB074	ND	0.50	0.094	1	
PCB077	ND	0.50	0.097	1	
PCB081	ND	0.50	0.12	1	
PCB087	ND	0.50	0.10	1	
PCB099	ND	0.50	0.085	1	
PCB101	ND	0.50	0.081	1	
PCB105	ND	0.50	0.10	1	
PCB110	ND	0.50	0.10	1	
PCB114	ND	0.50	0.10	1	
PCB118	ND	0.50	0.13	1	
PCB119	ND	0.50	0.087	1	
PCB123	ND	0.50	0.087	1	
PCB126	ND	0.50	0.14	1	
PCB128	ND	0.50	0.10	1	
PCB138/158	ND	1.0	0.20	1	
PCB149	ND	0.50	0.089	1	
PCB151	ND	0.50	0.10	1	
PCB153	ND	0.50	0.10	1	
PCB156	ND	0.50	0.098	1	
PCB157	ND	0.50	0.096	1	
PCB167	ND	0.50	0.10	1	
PCB168	ND	0.50	0.086	1	
PCB169	ND	0.50	0.082	1	
PCB170	ND	0.50	0.093	1	
PCB177	ND	0.50	0.12	1	
PCB180	ND	0.50	0.061	1	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.



## Analytical Report

San Diego Bay Environmental Restoration Fund South  
 C/O de maximis, Inc., 1322 Scott Street, Suite 104  
 San Diego, CA 92106-2727

Date Received: 11/21/13  
 Work Order: 13-11-1792  
 Preparation: EPA 3545  
 Method: EPA 8270C SIM PCB Congeners  
 Units: ug/kg

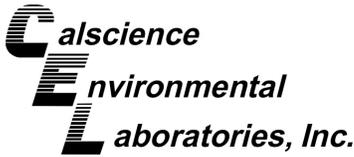
Project: South Shipyard Post Dredge

Page 8 of 8

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>MDL</u>	<u>DF</u>	<u>Qualifiers</u>
PCB183	ND	0.50	0.11	1	
PCB187	ND	0.50	0.10	1	
PCB189	ND	0.50	0.086	1	
PCB194	ND	0.50	0.096	1	
PCB201	ND	0.50	0.057	1	
PCB206	ND	0.50	0.083	1	
<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>		
2-Fluorobiphenyl	70	50-125			
p-Terphenyl-d14	84	50-125			

Return to Contents

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.



## Analytical Report

San Diego Bay Environmental Restoration Fund South  
C/O de maximis, Inc., 1322 Scott Street, Suite 104  
San Diego, CA 92106-2727

Date Received: 11/21/13  
Work Order: 13-11-1792  
Preparation: EPA 3550B (M)  
Method: Organotins by Krone et al.  
Units: ug/kg

Project: South Shipyard Post Dredge

Page 1 of 1

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SD-S-C-SMU3A-D-0535	13-11-1792-1-A	11/21/13 12:10	Sediment	GC/MS JJJ	11/22/13	11/23/13 12:52	131122L13

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

Parameter	Result	RL	MDL	DF	Qualifiers
Tributyltin	25	5.0	0.97	1	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Tripentyltin	123	48-126	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SD-S-C-SMU3B/C-C-0535	13-11-1792-2-A	11/21/13 14:30	Sediment	GC/MS JJJ	11/22/13	11/23/13 13:20	131122L13

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

Parameter	Result	RL	MDL	DF	Qualifiers
Tributyltin	ND	4.4	0.84	1	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Tripentyltin	113	48-126	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SD-S-C-SMU3D-D-0535	13-11-1792-3-A	11/21/13 14:55	Sediment	GC/MS JJJ	11/22/13	11/23/13 13:49	131122L13

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

Parameter	Result	RL	MDL	DF	Qualifiers
Tributyltin	26	3.8	0.73	1	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Tripentyltin	120	48-126	

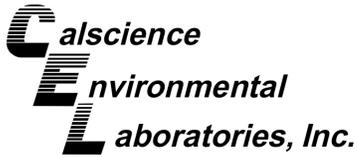
Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	099-07-016-1101	N/A	Solid	GC/MS JJJ	11/22/13	11/23/13 11:31	131122L13

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

Parameter	Result	RL	MDL	DF	Qualifiers
Tributyltin	ND	3.0	0.58	1	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Tripentyltin	71	48-126	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.



## Quality Control - Spike/Spike Duplicate

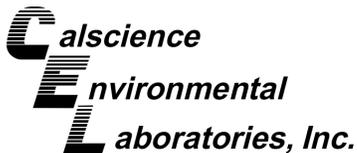
San Diego Bay Environmental Restoration Fund South  
 C/O de maximis, Inc., 1322 Scott Street, Suite 104  
 San Diego, CA 92106-2727

Date Received: 11/21/13  
 Work Order: 13-11-1792  
 Preparation: EPA 3050B  
 Method: EPA 6020

Project: South Shipyard Post Dredge

Page 1 of 5

Quality Control Sample ID	Matrix		Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number				
<b>SD-S-C-SMU3A-D-0535</b>	<b>Sediment</b>		<b>ICP/MS 03</b>	<b>11/22/13</b>	<b>11/22/13 17:05</b>	<b>131122S01</b>				
Parameter	Sample Conc.	Spike Added	MS Conc.	MS %Rec.	MSD Conc.	MSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
Copper	76.35	25.00	102.5	105	101.3	100	80-120	1	0-20	
Nickel	6.638	25.00	30.39	95	30.91	97	80-120	2	0-20	
Silver	0.5353	12.50	13.85	107	13.86	107	80-120	0	0-20	
Zinc	112.4	25.00	139.1	4X	135.4	4X	80-120	4X	0-20	Q



**Quality Control - Spike/Spike Duplicate**

San Diego Bay Environmental Restoration Fund South  
 C/O de maximis, Inc., 1322 Scott Street, Suite 104  
 San Diego, CA 92106-2727

Date Received: 11/21/13  
 Work Order: 13-11-1792  
 Preparation: EPA 7471A Total  
 Method: EPA 7471A

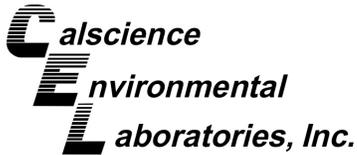
Project: South Shipyard Post Dredge

Page 2 of 5

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number					
<b>SD-S-C-SMU3A-D-0535</b>	<b>Sediment</b>	<b>Mercury</b>	<b>11/22/13</b>	<b>11/22/13 13:17</b>	<b>131122S03</b>					
<u>Parameter</u>	<u>Sample Conc.</u>	<u>Spike Added</u>	<u>MS Conc.</u>	<u>MS %Rec.</u>	<u>MSD Conc.</u>	<u>MSD %Rec.</u>	<u>%Rec. CL</u>	<u>RPD</u>	<u>RPD CL</u>	<u>Qualifiers</u>
Mercury	0.2843	0.8350	1.004	86	0.9096	75	76-136	10	0-16	3

Return to Contents 

RPD: Relative Percent Difference. CL: Control Limits



## Quality Control - Spike/Spike Duplicate

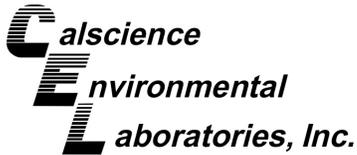
San Diego Bay Environmental Restoration Fund South  
 C/O de maximis, Inc., 1322 Scott Street, Suite 104  
 San Diego, CA 92106-2727

Date Received: 11/21/13  
 Work Order: 13-11-1792  
 Preparation: EPA 3545  
 Method: EPA 8270C SIM PAHs

Project: South Shipyard Post Dredge

Page 3 of 5

Quality Control Sample ID	Matrix		Instrument		Date Prepared	Date Analyzed	MS/MSD Batch Number			
<b>SD-S-C-SMU3B/C-C-0535</b>	<b>Sediment</b>		<b>GC/MS AAA</b>		<b>11/21/13</b>	<b>11/22/13 16:51</b>	<b>131121S22</b>			
Parameter	Sample Conc.	Spike Added	MS Conc.	MS %Rec.	MSD Conc.	MSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
Benzo (a) Anthracene	13.60	100.0	99.76	86	98.19	85	40-160	2	0-20	
Benzo (a) Pyrene	60.06	100.0	156.4	96	149.3	89	40-160	5	0-20	
Benzo (b) Fluoranthene	45.84	100.0	139.9	94	138.4	93	40-160	1	0-20	
Benzo (g,h,i) Perylene	40.78	100.0	112.7	72	106.2	65	40-160	6	0-20	
Benzo (k) Fluoranthene	39.97	100.0	117.0	77	119.9	80	40-160	2	0-20	
Chrysene	14.16	100.0	94.01	80	90.64	76	40-160	4	0-20	
Dibenz (a,h) Anthracene	ND	100.0	87.12	87	88.95	89	40-160	2	0-20	
Fluoranthene	17.72	100.0	103.1	85	103.5	86	40-160	0	0-20	
Indeno (1,2,3-c,d) Pyrene	40.96	100.0	143.7	103	142.0	101	40-160	1	0-20	
Pyrene	111.6	100.0	192.9	81	190.8	79	40-160	1	0-46	



## Quality Control - Spike/Spike Duplicate

San Diego Bay Environmental Restoration Fund South  
 C/O de maximis, Inc., 1322 Scott Street, Suite 104  
 San Diego, CA 92106-2727

Date Received: 11/21/13  
 Work Order: 13-11-1792  
 Preparation: EPA 3545  
 Method: EPA 8270C SIM PCB Congeners

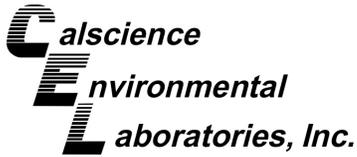
Project: South Shipyard Post Dredge

Page 4 of 5

Quality Control Sample ID	Matrix		Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number				
<b>SD-S-C-SMU3B/C-C-0535</b>	<b>Sediment</b>		<b>GC/MS HHH</b>	<b>11/21/13</b>	<b>11/23/13 17:04</b>	<b>131121S21</b>				
Parameter	Sample Conc.	Spike Added	MS Conc.	MS %Rec.	MSD Conc.	MSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
PCB018	1.269	25.00	22.44	85	24.38	92	50-125	8	0-30	
PCB028	1.136	25.00	23.80	91	22.43	85	50-125	6	0-30	
PCB044	3.559	25.00	21.34	71	20.04	66	50-125	6	0-30	
PCB052	7.294	25.00	24.48	69	22.49	61	50-125	8	0-30	
PCB066	2.113	25.00	21.23	76	20.15	72	50-125	5	0-30	
PCB077	0.5919	25.00	21.06	82	19.64	76	50-125	7	0-30	
PCB101	10.90	25.00	23.64	51	22.14	45	50-125	7	0-30	3
PCB105	3.825	25.00	21.38	70	19.73	64	50-125	8	0-30	
PCB118	9.540	25.00	26.61	68	24.70	61	50-125	7	0-30	
PCB126	ND	25.00	20.14	81	19.03	76	50-125	6	0-30	
PCB128	2.002	25.00	20.62	74	19.94	72	50-125	3	0-30	
PCB153	8.988	25.00	33.88	100	31.85	91	50-125	6	0-30	
PCB170	2.251	25.00	25.75	94	24.19	88	50-125	6	0-30	
PCB180	3.518	25.00	35.51	128	34.71	125	50-125	2	0-30	3
PCB187	1.836	25.00	25.72	96	24.89	92	50-125	3	0-30	
PCB206	ND	25.00	23.09	92	21.94	88	50-125	5	0-30	

Return to Contents

RPD: Relative Percent Difference. CL: Control Limits



## Quality Control - Spike/Spike Duplicate

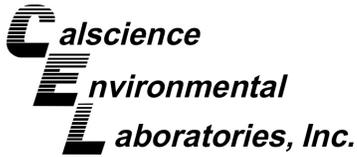
San Diego Bay Environmental Restoration Fund South  
 C/O de maximis, Inc., 1322 Scott Street, Suite 104  
 San Diego, CA 92106-2727

Date Received: 11/21/13  
 Work Order: 13-11-1792  
 Preparation: EPA 3550B (M)  
 Method: Organotins by Krone et al.

Project: South Shipyard Post Dredge

Page 5 of 5

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number					
<b>SD-S-C-SMU3B/C-C-0535</b>	<b>Sediment</b>	<b>GC/MS JJJ</b>	<b>11/22/13</b>	<b>11/23/13 14:16</b>	<b>131122S13</b>					
Parameter	Sample Conc.	Spike Added	MS Conc.	MS %Rec.	MSD Conc.	MSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
Tributyltin	ND	100.0	113.9	114	112.7	113	69-135	1	0-29	



## Quality Control - PDS/PDSD

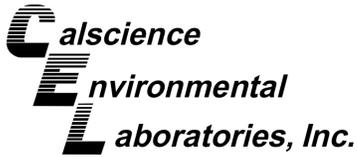
San Diego Bay Environmental Restoration Fund South  
 C/O de maximis, Inc., 1322 Scott Street, Suite 104  
 San Diego, CA 92106-2727

Date Received: 11/21/13  
 Work Order: 13-11-1792  
 Preparation: EPA 3050B  
 Method: EPA 6020

Project: South Shipyard Post Dredge

Page 1 of 1

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	PDS/PDSD Batch Number	
<b>SD-S-C-SMU3A-D-0535</b>	<b>Sediment</b>	<b>ICP/MS 03</b>	<b>11/22/13 00:00</b>	<b>11/22/13 17:11</b>	<b>131122S01</b>	
<u>Parameter</u>	<u>Sample Conc.</u>	<u>Spike Added</u>	<u>PDS Conc.</u>	<u>PDS %Rec.</u>	<u>%Rec. CL</u>	<u>Qualifiers</u>
Copper	76.35	25.00	102.4	104	75-125	
Nickel	6.638	25.00	32.22	102	75-125	
Silver	0.5353	12.50	12.23	94	75-125	
Zinc	112.4	25.00	138.1	4X	75-125	Q



## Quality Control - Sample Duplicate

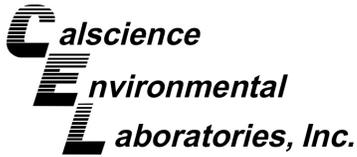
San Diego Bay Environmental Restoration Fund South  
 C/O de maximis, Inc., 1322 Scott Street, Suite 104  
 San Diego, CA 92106-2727

Date Received: 11/21/13  
 Work Order: 13-11-1792  
 Preparation: N/A  
 Method: SM 2540 B (M)

Project: South Shipyard Post Dredge

Page 1 of 1

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	Duplicate Batch Number
<b>SD-S-C-SMU3A-D-0535</b>	<b>Sediment</b>	<b>N/A</b>	<b>11/21/13 00:00</b>	<b>11/22/13 12:05</b>	<b>D1122TSD1</b>
<u>Parameter</u>	<u>Sample Conc.</u>	<u>DUP Conc.</u>	<u>RPD</u>	<u>RPD CL</u>	<u>Qualifiers</u>
Solids, Total	59.50	58.80	1	0-10	



## Quality Control - LCS

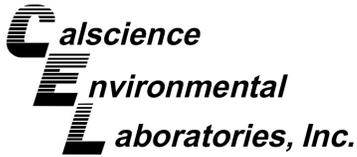
San Diego Bay Environmental Restoration Fund South  
 C/O de maximis, Inc., 1322 Scott Street, Suite 104  
 San Diego, CA 92106-2727

Date Received: 11/21/13  
 Work Order: 13-11-1792  
 Preparation: EPA 3050B  
 Method: EPA 6020

Project: South Shipyard Post Dredge

Page 1 of 5

Quality Control Sample ID	Matrix	Instrument	Date Analyzed	LCS Batch Number	
<b>099-15-254-165</b>	<b>Solid</b>	<b>ICP/MS 03</b>	<b>11/22/13 17:50</b>	<b>131122L01E</b>	
<u>Parameter</u>	<u>Spike Added</u>	<u>Conc. Recovered</u>	<u>LCS %Rec.</u>	<u>%Rec. CL</u>	<u>Qualifiers</u>
Copper	25.00	29.01	116	80-120	
Nickel	25.00	27.00	108	80-120	
Silver	12.50	11.53	92	80-120	
Zinc	25.00	28.82	115	80-120	



## Quality Control - LCS

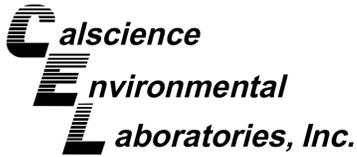
San Diego Bay Environmental Restoration Fund South  
 C/O de maximis, Inc., 1322 Scott Street, Suite 104  
 San Diego, CA 92106-2727

Date Received: 11/21/13  
 Work Order: 13-11-1792  
 Preparation: EPA 7471A Total  
 Method: EPA 7471A

Project: South Shipyard Post Dredge

Page 2 of 5

Quality Control Sample ID	Matrix	Instrument	Date Analyzed	LCS Batch Number	
<b>099-12-452-426</b>	<b>Solid</b>	<b>Mercury</b>	<b>11/22/13 13:12</b>	<b>131122L03E</b>	
<u>Parameter</u>	<u>Spike Added</u>	<u>Conc. Recovered</u>	<u>LCS %Rec.</u>	<u>%Rec. CL</u>	<u>Qualifiers</u>
Mercury	0.8350	0.7885	94	82-124	



## Quality Control - LCS

San Diego Bay Environmental Restoration Fund South  
 C/O de maximis, Inc., 1322 Scott Street, Suite 104  
 San Diego, CA 92106-2727

Date Received: 11/21/13  
 Work Order: 13-11-1792  
 Preparation: EPA 3545  
 Method: EPA 8270C SIM PAHs

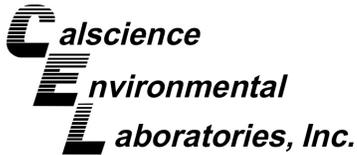
Project: South Shipyard Post Dredge

Page 3 of 5

Quality Control Sample ID	Matrix	Instrument	Date Analyzed	LCS Batch Number	
<b>099-14-097-108</b>	<b>Solid</b>	<b>GC/MS AAA</b>	<b>11/22/13 18:01</b>	<b>131121L22</b>	
<u>Parameter</u>	<u>Spike Added</u>	<u>Conc. Recovered</u>	<u>LCS %Rec.</u>	<u>%Rec. CL</u>	<u>Qualifiers</u>
Benzo (a) Anthracene	100.0	76.06	76	40-160	
Benzo (a) Pyrene	100.0	84.00	84	40-160	
Benzo (b) Fluoranthene	100.0	72.66	73	40-160	
Benzo (g,h,i) Perylene	100.0	63.01	63	40-160	
Benzo (k) Fluoranthene	100.0	81.21	81	40-160	
Chrysene	100.0	69.66	70	40-160	
Dibenz (a,h) Anthracene	100.0	71.82	72	40-160	
Fluoranthene	100.0	81.60	82	40-160	
Indeno (1,2,3-c,d) Pyrene	100.0	92.58	93	40-160	
Pyrene	100.0	73.42	73	40-160	

Return to Contents

RPD: Relative Percent Difference. CL: Control Limits



## Quality Control - LCS

San Diego Bay Environmental Restoration Fund South  
 C/O de maximis, Inc., 1322 Scott Street, Suite 104  
 San Diego, CA 92106-2727

Date Received: 11/21/13  
 Work Order: 13-11-1792  
 Preparation: EPA 3545  
 Method: EPA 8270C SIM PCB Congeners

Project: South Shipyard Post Dredge

Page 4 of 5

Quality Control Sample ID	Matrix	Instrument	Date Analyzed	LCS Batch Number		
<b>099-14-341-135</b>	<b>Solid</b>	<b>GC/MS HHH</b>	<b>11/23/13 14:41</b>	<b>131121L21</b>		
<u>Parameter</u>	<u>Spike Added</u>	<u>Conc. Recovered</u>	<u>LCS %Rec.</u>	<u>%Rec. CL</u>	<u>ME CL</u>	<u>Qualifiers</u>
PCB018	25.00	17.81	71	50-125	38-138	
PCB028	25.00	18.42	74	50-125	38-138	
PCB044	25.00	18.78	75	50-125	38-138	
PCB052	25.00	17.93	72	50-125	38-138	
PCB066	25.00	18.95	76	50-125	38-138	
PCB077	25.00	19.74	79	50-125	38-138	
PCB101	25.00	18.77	75	50-125	38-138	
PCB105	25.00	19.08	76	50-125	38-138	
PCB118	25.00	21.46	86	50-125	38-138	
PCB126	25.00	19.08	76	50-125	38-138	
PCB128	25.00	18.22	73	50-125	38-138	
PCB153	25.00	18.66	75	50-125	38-138	
PCB170	25.00	17.82	71	50-125	38-138	
PCB180	25.00	19.04	76	50-125	38-138	
PCB187	25.00	18.75	75	50-125	38-138	
PCB206	25.00	20.06	80	50-125	38-138	

Total number of LCS compounds: 16

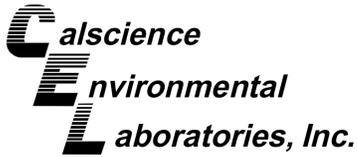
Total number of ME compounds: 0

Total number of ME compounds allowed: 1

LCS ME CL validation result: Pass

Return to Contents

RPD: Relative Percent Difference. CL: Control Limits



## Quality Control - LCS

San Diego Bay Environmental Restoration Fund South  
 C/O de maximis, Inc., 1322 Scott Street, Suite 104  
 San Diego, CA 92106-2727

Date Received: 11/21/13  
 Work Order: 13-11-1792  
 Preparation: EPA 3550B (M)  
 Method: Organotins by Krone et al.

Project: South Shipyard Post Dredge

Page 5 of 5

Quality Control Sample ID	Matrix	Instrument	Date Analyzed	LCS Batch Number	
<b>099-07-016-1101</b>	<b>Solid</b>	<b>GC/MS JJJ</b>	<b>11/23/13 11:58</b>	<b>131122L13</b>	
<u>Parameter</u>	<u>Spike Added</u>	<u>Conc. Recovered</u>	<u>LCS %Rec.</u>	<u>%Rec. CL</u>	<u>Qualifiers</u>
Tributyltin	100.0	110.2	110	51-129	

## Glossary of Terms and Qualifiers

Work Order: 13-11-1792

Page 1 of 1

<u>Qualifiers</u>	<u>Definition</u>
*	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 suspected matrix interference. The associated LCS recovery was in control.
4	The MS/MSD RPD was out of control due to suspected matrix interference.
5	The PDS/PDSO or PES/PESO associated with this batch of samples was out of control due to suspected matrix interference.
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.
BV	Sample received 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.
JA	Analyte positively identified but quantitation is an estimate.
ME	LCS Recovery Percentage is within Marginal Exceedance (ME) Control Limit range (+/- 4 SD from the mean).
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.

Any parameter identified in 40CFR Part 136.3 Table II that is designated as "analyze immediately" with a holding time of  $\leq 15$  minutes (40CFR-136.3 Table II, footnote 4), is considered a "field" test and the reported results will be qualified as being received outside of the stated holding time unless received at the laboratory within 15 minutes of the collection time.

A calculated total result (Example: Total Pesticides) is the summation of each component concentration and/or, if "J" flags are reported, estimated concentration. Component concentrations showing not detected (ND) are summed into the calculated total result as zero concentrations.

# CHAIN OF CUSTODY RECORD

DATE: 11/21/13

PAGE: 1 OF 1

7440 LINCOLN WAY  
GARDEN GROVE, CA 92841-1427  
TEL: (714) 895-5494 . FAX: (714) 894-7501

**Calscience**  
**Environmental**  
**Laboratories, Inc.**

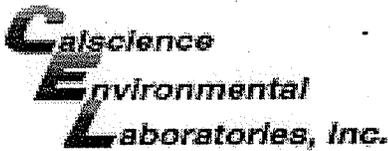
LABORATORY CLIENT: San Diego Bay Environmental Restoration Fund South  
 ADDRESS: C/O de maximis, Inc. 1322 Scott Street, Suite 104  
 CITY: San Diego STATE: CA ZIP: 92106-2727  
 TEL: 619-546-8377 FAX: E-MAIL: mpalmer@demaximis.com, agate@anchorage.com  
 CLIENT PROJECT NAME / NUMBER: SOUTH STIPURED P.O. NO.: 13151008000004103  
 PROJECT CONTACT: Mike Palmer and Adam Gale LAB CONTACT OR QUOTE NO.:  
 SAMPLER(S), (SIGNATURE): [Signature] LAB USE ONLY: 13-11-1792

## REQUESTED ANALYSIS

LAB USE ONLY	SAMPLE ID	LOCATION / DESCRIPTION	SAMPLING		MATRIX	NO. OF CONT.	SM 2540B Total Solids	EPA 6020 /7471A Cu, Hg, Ni, Ag, Zn	EPA 8270C SIM PCB Congeners	EPA 8270C SIM PAHs (target list)	Organotins by Krone et al. (Tributyltin only)
			DATE	TIME							
1	SD-S-C-SMUD-D-0536	S.SHP	11/21/13	1210	SED	1	X	X	X	X	X
2	SD-S-C-SMUBIC-0535	S.SHP	11/21/13	1430	SED	1	X	X	X	X	X
3	SD-S-C-SMUD-D-0535	S.SHP	11/21/13	1435	SED	1	X	X	X	X	X
					SED						
					SED						
					SED						
					SED						
					SED						
					SED						
					SED						
					SED						
					SED						
					SED						
					SED						

SPECIAL REQUIREMENTS (ADDITIONAL COSTS MAY APPLY)  
 SAME DAY  24 HR  48 HR  72 HR  5 DAYS  10 DAYS  
 RWQCB REPORTING  ARCHIVE SAMPLES UNTIL / /  
 SPECIAL INSTRUCTIONS:  
 Low level sediment detection limits

Relinquished by (Signature): [Signature] Date: 11/21/13 Time: 1615  
 Relinquished by (Signature): [Signature] Date: 11/21/13 Time: 16:30  
 Relinquished by (Signature): [Signature] Date: 11/21/13 Time: 1945



WORK ORDER #: 13-11-1792

SAMPLE RECEIPT FORM

Cooler 1 of 1

CLIENT: SAN DIEGO BAY

DATE: 11/21/13

TEMPERATURE: Thermometer ID: SC2 (Criteria: 0.0 °C - 6.0 °C, not frozen except sediment/tissue)
Temperature 1.7 °C - 0.2 °C (CF) = 1.6 °C
Checked by: 671

CUSTODY SEALS INTACT:
Checked by: 671
Checked by: 802

SAMPLE CONDITION:
Chain-Of-Custody (COC) document(s) received with samples...
COC document(s) received complete...
Checked by: 802

Return to Contents



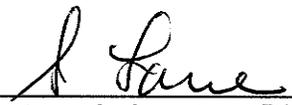


**CERTIFICATION**

All analyses were conducted at a laboratory certified for such analyses by the California Department of Public Health in accordance with applicable USEPA and NELAP accreditation procedures.

I certify under penalty of law that the data generated for Calscience Work Order No. 13-11-1440 were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. The Project Manager or designee who signed the Calscience Work Order has been specifically authorized and approved to do so.

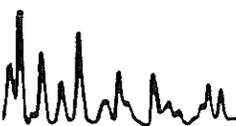
The information submitted is, to the best of my knowledge and belief, true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of a fine and imprisonment for knowing violations.

  
\_\_\_\_\_  
Signature, Laboratory Director

May 20, 2014  
Date

Name of Laboratory: **Calscience Environmental Laboratories**  
Address of Laboratory: **7440 Lincoln Way**  
**Garden Grove, CA 92841-1432**

This Certification signed by: **Steve Lane**





# CALSCIENCE

**WORK ORDER NUMBER: 13-11-1440**

*The difference is service*



AIR | SOIL | WATER | MARINE CHEMISTRY

## Analytical Report For

**Client:** San Diego Bay Environmental Restoration Fund South

**Client Project Name:** South Shipyard Post Dredge

**Attention:** Mike Palmer  
C/O de maximis, Inc.  
1322 Scott Street, Suite 104  
San Diego, CA 92106-2727

Approved for release on 11/21/2013 by:  
Danielle Gonsman  
Project Manager

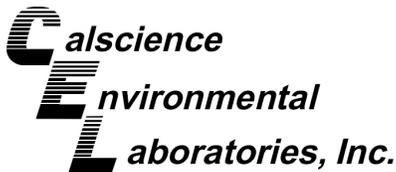
ResultLink ▶

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.





# Contents

Client Project Name: South Shipyard Post Dredge  
Work Order Number: 13-11-1440

1	Work Order Narrative. . . . .	3
2	Sample Summary. . . . .	4
3	Client Sample Data. . . . .	5
	3.1 SM 2540 B (M) Total Solids (Solid). . . . .	5
	3.2 EPA 6020 ICP/MS Metals (Solid). . . . .	6
	3.3 EPA 7471A Mercury (Solid). . . . .	7
	3.4 EPA 8270C SIM PAHs (Solid). . . . .	8
	3.5 EPA 8270C SIM PCB Congeners (Solid). . . . .	10
	3.6 Krone et al. Organotins (Solid). . . . .	14
4	Quality Control Sample Data. . . . .	15
	4.1 MS/MSD. . . . .	15
	4.2 PDS/PDSD. . . . .	20
	4.3 Sample Duplicate. . . . .	21
	4.4 LCS/LCSD. . . . .	22
5	Glossary of Terms and Qualifiers. . . . .	27
6	Chain of Custody/Sample Receipt Form. . . . .	28

**Condition Upon Receipt:**

Samples were received under Chain of Custody (COC) on 11/18/13. They were assigned to Work Order 13-11-1440.

Unless otherwise noted on the Sample Receiving forms all samples were received in good condition and within the recommended EPA temperature criteria for the methods noted on the COC. The COC and Sample Receiving Documents are integral elements of the analytical report and are presented at the back of the report.

**Holding Times:**

All samples were analyzed within prescribed holding times (HT) and/or in accordance with the Calscience Sample Acceptance Policy unless otherwise noted in the analytical report and/or comprehensive case narrative, if required.

Any parameter identified in 40CFR Part 136.3 Table II that is designated as "analyze immediately" with a holding time of  $\leq 15$  minutes (40CFR-136.3 Table II, footnote 4), is considered a "field" test and the reported results will be qualified as being received outside of the stated holding time unless received at the laboratory within 15 minutes of the collection time.

**Quality Control:**

All quality control parameters (QC) were within established control limits except where noted in the QC summary forms or described further within this report.

**Additional Comments:**

Air - Sorbent-extracted air methods (EPA TO-4A, EPA TO-10, EPA TO-13A, EPA TO-17): Analytical results are converted from mass/sample basis to mass/volume basis using client-supplied air volumes.

New York NELAP air certification does not certify for all reported methods and analytes, reference the accredited items here: [http://www.calscience.com/PDF/New\\_York.pdf](http://www.calscience.com/PDF/New_York.pdf)

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

**Subcontractor Information:**

Unless otherwise noted below (or on the subcontract form), no samples were subcontracted.



## Sample Summary

---

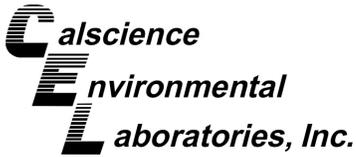
Client: San Diego Bay Environmental Restoration Fund	Work Order:	13-11-1440
South	Project Name:	South Shipyard Post Dredge
C/O de maximis, Inc., 1322 Scott Street, Suite	PO Number:	
104	Date/Time	11/18/13 17:48
San Diego, CA 92106-2727	Received:	
	Number of	1
	Containers:	

Attn: Mike Palmer

---

Sample Identification	Lab Number	Collection Date and Time	Number of Containers	Matrix
SD-S-C-SMU4B-D-0535	13-11-1440-1	11/18/13 08:35	1	Sediment

Return to Contents 



## Analytical Report

San Diego Bay Environmental Restoration Fund South  
 C/O de maximis, Inc., 1322 Scott Street, Suite 104  
 San Diego, CA 92106-2727

Date Received: 11/18/13  
 Work Order: 13-11-1440  
 Preparation: N/A  
 Method: SM 2540 B (M)  
 Units: %

Project: South Shipyard Post Dredge

Page 1 of 1

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SD-S-C-SMU4B-D-0535	13-11-1440-1-A	11/18/13 08:35	Sediment	N/A	11/19/13	11/19/13 15:20	D1119TSB1

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

Parameter	Result	RL	MDL	DF	Qualifiers
Solids, Total	68.8	0.100	0.100	1	

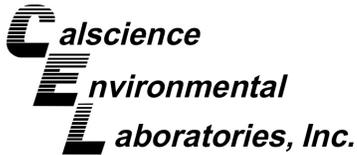
Method Blank	099-05-019-2405	N/A	Solid	N/A	11/19/13	11/19/13 15:20	D1119TSB1
--------------	-----------------	-----	-------	-----	----------	-------------------	-----------

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

Parameter	Result	RL	MDL	DF	Qualifiers
Solids, Total	ND	0.100	0.100	1	

Return to Contents

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.



## Analytical Report

San Diego Bay Environmental Restoration Fund South  
 C/O de maximis, Inc., 1322 Scott Street, Suite 104  
 San Diego, CA 92106-2727

Date Received: 11/18/13  
 Work Order: 13-11-1440  
 Preparation: EPA 3050B  
 Method: EPA 6020  
 Units: mg/kg

Project: South Shipyard Post Dredge

Page 1 of 1

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SD-S-C-SMU4B-D-0535	13-11-1440-1-A	11/18/13 08:35	Sediment	ICP/MS 03	11/19/13	11/19/13 16:47	131119L03E

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

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

Parameter	Result	RL	MDL	DF	Qualifiers
Copper	40.4	0.145	0.0609	1	
Nickel	10.1	0.145	0.0736	1	
Silver	0.883	0.145	0.0455	1	
Zinc	114	1.45	1.16	1	

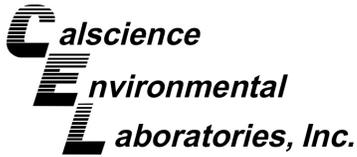
Method Blank	099-15-254-163	N/A	Solid	ICP/MS 03	11/19/13	11/19/13 16:02	131119L03E
--------------	----------------	-----	-------	-----------	----------	-------------------	------------

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

Parameter	Result	RL	MDL	DF	Qualifiers
Copper	ND	0.100	0.0419	1	
Nickel	ND	0.100	0.0506	1	
Silver	ND	0.100	0.0313	1	
Zinc	ND	1.00	0.795	1	

Return to Contents

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.



## Analytical Report

San Diego Bay Environmental Restoration Fund South  
 C/O de maximis, Inc., 1322 Scott Street, Suite 104  
 San Diego, CA 92106-2727

Date Received: 11/18/13  
 Work Order: 13-11-1440  
 Preparation: EPA 7471A Total  
 Method: EPA 7471A  
 Units: mg/kg

Project: South Shipyard Post Dredge

Page 1 of 1

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SD-S-C-SMU4B-D-0535	13-11-1440-1-A	11/18/13 08:35	Sediment	Mercury	11/19/13	11/19/13 13:51	131119L04E

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

Parameter	Result	RL	MDL	DF	Qualifiers
Mercury	0.724	0.0291	0.00855	1	

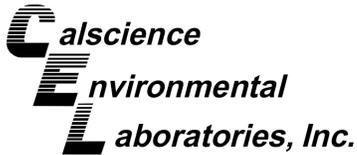
Method Blank	099-12-452-425	N/A	Solid	Mercury	11/19/13	11/19/13 13:44	131119L04E

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

Parameter	Result	RL	MDL	DF	Qualifiers
Mercury	ND	0.0200	0.00588	1	

Return to Contents

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.



## Analytical Report

San Diego Bay Environmental Restoration Fund South  
 C/O de maximis, Inc., 1322 Scott Street, Suite 104  
 San Diego, CA 92106-2727

Date Received: 11/18/13  
 Work Order: 13-11-1440  
 Preparation: EPA 3545  
 Method: EPA 8270C SIM PAHs  
 Units: ug/kg

Project: South Shipyard Post Dredge

Page 1 of 2

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SD-S-C-SMU4B-D-0535	13-11-1440-1-B	11/18/13 08:35	Sediment	GC/MS AAA	11/19/13	11/19/13 20:03	131119L03

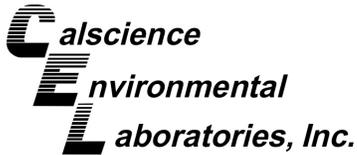
Comment(s): - Results are reported on a dry weight basis.

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

Parameter	Result	RL	MDL	DF	Qualifiers
Benzo (a) Anthracene	33	15	2.3	1	
Benzo (a) Pyrene	150	15	1.5	1	
Benzo (b) Fluoranthene	100	15	1.5	1	
Benzo (g,h,i) Perylene	120	15	1.4	1	
Benzo (k) Fluoranthene	89	15	2.0	1	
Chrysene	36	15	1.7	1	
Dibenz (a,h) Anthracene	16	15	1.5	1	
Fluoranthene	62	15	1.4	1	
Indeno (1,2,3-c,d) Pyrene	110	15	1.5	1	
Perylene	25	15	1.4	1	
Pyrene	130	15	1.4	1	
Surrogate	Rec. (%)	Control Limits	Qualifiers		
2-Fluorobiphenyl	70	14-146			
Nitrobenzene-d5	67	18-162			
p-Terphenyl-d14	77	34-148			

Return to Contents

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.



## Analytical Report

San Diego Bay Environmental Restoration Fund South  
 C/O de maximis, Inc., 1322 Scott Street, Suite 104  
 San Diego, CA 92106-2727

Date Received: 11/18/13  
 Work Order: 13-11-1440  
 Preparation: EPA 3545  
 Method: EPA 8270C SIM PAHs  
 Units: ug/kg

Project: South Shipyard Post Dredge

Page 2 of 2

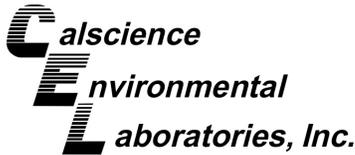
Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	099-14-097-107	N/A	Solid	GC/MS AAA	11/19/13	11/20/13 12:16	131119L03

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

Parameter	Result	RL	MDL	DF	Qualifiers
Benzo (a) Anthracene	ND	10	1.6	1	
Benzo (a) Pyrene	ND	10	1.0	1	
Benzo (b) Fluoranthene	ND	10	1.0	1	
Benzo (g,h,i) Perylene	ND	10	0.94	1	
Benzo (k) Fluoranthene	ND	10	1.4	1	
Chrysene	ND	10	1.2	1	
Dibenz (a,h) Anthracene	ND	10	1.0	1	
Fluoranthene	ND	10	0.98	1	
Indeno (1,2,3-c,d) Pyrene	ND	10	1.1	1	
Perylene	ND	10	9.8	1	
Pyrene	ND	10	0.99	1	
Surrogate	Rec. (%)	Control Limits	Qualifiers		
2-Fluorobiphenyl	87	14-146			
Nitrobenzene-d5	87	18-162			
p-Terphenyl-d14	104	34-148			

Return to Contents

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.



## Analytical Report

San Diego Bay Environmental Restoration Fund South  
 C/O de maximis, Inc., 1322 Scott Street, Suite 104  
 San Diego, CA 92106-2727

Date Received: 11/18/13  
 Work Order: 13-11-1440  
 Preparation: EPA 3545  
 Method: EPA 8270C SIM PCB Congeners  
 Units: ug/kg

Project: South Shipyard Post Dredge

Page 1 of 4

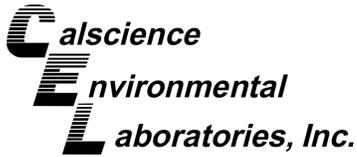
Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SD-S-C-SMU4B-D-0535	13-11-1440-1-B	11/18/13 08:35	Sediment	GC/MS HHH	11/19/13	11/20/13 14:21	131119L04

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

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

Parameter	Result	RL	MDL	DF	Qualifiers
PCB018	1.8	0.73	0.23	1	
PCB028	5.0	0.73	0.14	1	
PCB037	ND	0.73	0.19	1	
PCB044	2.1	0.73	0.19	1	
PCB049	6.4	0.73	0.17	1	
PCB052	2.4	0.73	0.14	1	
PCB066	1.3	0.73	0.13	1	
PCB070	1.4	0.73	0.12	1	
PCB074	0.92	0.73	0.14	1	
PCB077	ND	0.73	0.14	1	
PCB081	ND	0.73	0.18	1	
PCB087	ND	0.73	0.15	1	
PCB099	1.2	0.73	0.12	1	
PCB101	3.1	0.73	0.12	1	
PCB105	ND	0.73	0.15	1	
PCB110	2.1	0.73	0.15	1	
PCB114	0.48	0.73	0.14	1	J
PCB118	2.8	0.73	0.19	1	
PCB119	ND	0.73	0.13	1	
PCB123	ND	0.73	0.13	1	
PCB126	ND	0.73	0.20	1	
PCB128	0.46	0.73	0.15	1	J
PCB138/158	3.7	1.5	0.30	1	
PCB149	2.4	0.73	0.13	1	
PCB151	0.68	0.73	0.15	1	J
PCB153	3.6	0.73	0.15	1	
PCB156	ND	0.73	0.14	1	
PCB157	2.3	0.73	0.14	1	
PCB167	ND	0.73	0.15	1	
PCB168	ND	0.73	0.13	1	
PCB169	0.71	0.73	0.12	1	J
PCB170	1.2	0.73	0.13	1	
PCB177	0.48	0.73	0.18	1	J

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.



## Analytical Report

San Diego Bay Environmental Restoration Fund South  
 C/O de maximis, Inc., 1322 Scott Street, Suite 104  
 San Diego, CA 92106-2727

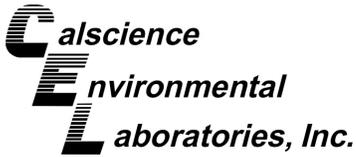
Date Received: 11/18/13  
 Work Order: 13-11-1440  
 Preparation: EPA 3545  
 Method: EPA 8270C SIM PCB Congeners  
 Units: ug/kg

Project: South Shipyard Post Dredge

Page 2 of 4

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>MDL</u>	<u>DF</u>	<u>Qualifiers</u>
PCB180	2.4	0.73	0.089	1	
PCB183	0.53	0.73	0.16	1	J
PCB187	1.5	0.73	0.15	1	
PCB189	ND	0.73	0.12	1	
PCB194	ND	0.73	0.14	1	
PCB201	ND	0.73	0.083	1	
PCB206	1.1	0.73	0.12	1	
<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>		
2-Fluorobiphenyl	59	50-125			
p-Terphenyl-d14	108	50-125			

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.



## Analytical Report

San Diego Bay Environmental Restoration Fund South  
 C/O de maximis, Inc., 1322 Scott Street, Suite 104  
 San Diego, CA 92106-2727

Date Received: 11/18/13  
 Work Order: 13-11-1440  
 Preparation: EPA 3545  
 Method: EPA 8270C SIM PCB Congeners  
 Units: ug/kg

Project: South Shipyard Post Dredge

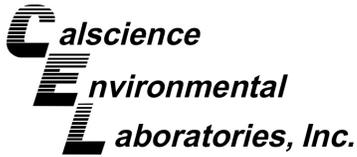
Page 3 of 4

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	099-14-341-133	N/A	Solid	GC/MS HHH	11/19/13	11/20/13 13:23	131119L04

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

Parameter	Result	RL	MDL	DF	Qualifiers
PCB018	ND	0.50	0.16	1	
PCB028	ND	0.50	0.099	1	
PCB037	ND	0.50	0.13	1	
PCB044	ND	0.50	0.13	1	
PCB049	ND	0.50	0.12	1	
PCB052	ND	0.50	0.097	1	
PCB066	ND	0.50	0.091	1	
PCB070	ND	0.50	0.082	1	
PCB074	ND	0.50	0.094	1	
PCB077	ND	0.50	0.097	1	
PCB081	ND	0.50	0.12	1	
PCB087	ND	0.50	0.10	1	
PCB099	ND	0.50	0.085	1	
PCB101	ND	0.50	0.081	1	
PCB105	ND	0.50	0.10	1	
PCB110	ND	0.50	0.10	1	
PCB114	ND	0.50	0.10	1	
PCB118	ND	0.50	0.13	1	
PCB119	ND	0.50	0.087	1	
PCB123	ND	0.50	0.087	1	
PCB126	ND	0.50	0.14	1	
PCB128	ND	0.50	0.10	1	
PCB138/158	ND	1.0	0.20	1	
PCB149	ND	0.50	0.089	1	
PCB151	ND	0.50	0.10	1	
PCB153	ND	0.50	0.10	1	
PCB156	ND	0.50	0.098	1	
PCB157	ND	0.50	0.096	1	
PCB167	ND	0.50	0.10	1	
PCB168	ND	0.50	0.086	1	
PCB169	ND	0.50	0.082	1	
PCB170	ND	0.50	0.093	1	
PCB177	ND	0.50	0.12	1	
PCB180	ND	0.50	0.061	1	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.



## Analytical Report

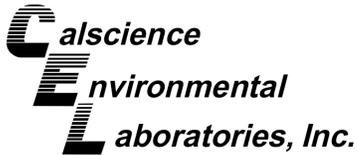
San Diego Bay Environmental Restoration Fund South  
 C/O de maximis, Inc., 1322 Scott Street, Suite 104  
 San Diego, CA 92106-2727

Date Received: 11/18/13  
 Work Order: 13-11-1440  
 Preparation: EPA 3545  
 Method: EPA 8270C SIM PCB Congeners  
 Units: ug/kg

Project: South Shipyard Post Dredge

Page 4 of 4

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>MDL</u>	<u>DF</u>	<u>Qualifiers</u>
PCB183	ND	0.50	0.11	1	
PCB187	ND	0.50	0.10	1	
PCB189	ND	0.50	0.086	1	
PCB194	ND	0.50	0.096	1	
PCB201	ND	0.50	0.057	1	
PCB206	ND	0.50	0.083	1	
<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>		
2-Fluorobiphenyl	66	50-125			
p-Terphenyl-d14	93	50-125			



## Analytical Report

San Diego Bay Environmental Restoration Fund South  
 C/O de maximis, Inc., 1322 Scott Street, Suite 104  
 San Diego, CA 92106-2727

Date Received: 11/18/13  
 Work Order: 13-11-1440  
 Preparation: EPA 3550B (M)  
 Method: Organotins by Krone et al.  
 Units: ug/kg

Project: South Shipyard Post Dredge

Page 1 of 1

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SD-S-C-SMU4B-D-0535	13-11-1440-1-B	11/18/13 08:35	Sediment	GC/MS JJJ	11/19/13	11/20/13 12:32	131119L14

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

Parameter	Result	RL	MDL	DF	Qualifiers
Tributyltin	ND	4.4	0.84	1	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Tripentyltin	84	48-126	

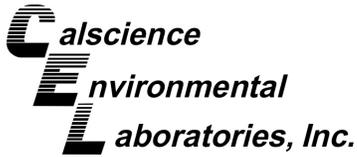
Method Blank	099-07-016-1097	N/A	Solid	GC/MS JJJ	11/19/13	11/20/13 11:01	131119L14
--------------	-----------------	-----	-------	-----------	----------	-------------------	-----------

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

Parameter	Result	RL	MDL	DF	Qualifiers
Tributyltin	ND	3.0	0.58	1	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Tripentyltin	98	48-126	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.



## Quality Control - Spike/Spike Duplicate

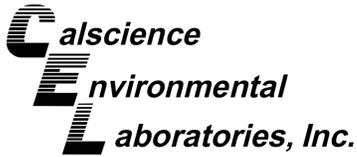
San Diego Bay Environmental Restoration Fund South  
 C/O de maximis, Inc., 1322 Scott Street, Suite 104  
 San Diego, CA 92106-2727

Date Received: 11/18/13  
 Work Order: 13-11-1440  
 Preparation: EPA 3050B  
 Method: EPA 6020

Project: South Shipyard Post Dredge

Page 1 of 5

Quality Control Sample ID	Matrix		Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number				
<b>SD-S-C-SMU4B-D-0535</b>	<b>Sediment</b>		<b>ICP/MS 03</b>	<b>11/19/13</b>	<b>11/19/13 16:17</b>	<b>131119S03</b>				
Parameter	Sample Conc.	Spike Added	MS Conc.	MS %Rec.	MSD Conc.	MSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
Copper	27.82	25.00	54.67	107	55.27	110	80-120	1	0-20	
Nickel	6.963	25.00	30.89	96	30.29	93	80-120	2	0-20	
Silver	0.6074	12.50	14.33	110	14.28	109	80-120	0	0-20	
Zinc	78.41	25.00	104.2	103	100.6	89	80-120	4	0-20	



## Quality Control - Spike/Spike Duplicate

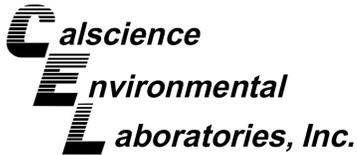
San Diego Bay Environmental Restoration Fund South  
 C/O de maximis, Inc., 1322 Scott Street, Suite 104  
 San Diego, CA 92106-2727

Date Received: 11/18/13  
 Work Order: 13-11-1440  
 Preparation: EPA 7471A Total  
 Method: EPA 7471A

Project: South Shipyard Post Dredge

Page 2 of 5

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number					
<b>SD-S-C-SMU4B-D-0535</b>	<b>Sediment</b>	<b>Mercury</b>	<b>11/19/13</b>	<b>11/19/13 13:53</b>	<b>131119S04</b>					
<u>Parameter</u>	<u>Sample Conc.</u>	<u>Spike Added</u>	<u>MS Conc.</u>	<u>MS %Rec.</u>	<u>MSD Conc.</u>	<u>MSD %Rec.</u>	<u>%Rec. CL</u>	<u>RPD</u>	<u>RPD CL</u>	<u>Qualifiers</u>
Mercury	0.4980	0.8350	1.290	95	1.326	99	76-136	3	0-16	



## Quality Control - Spike/Spike Duplicate

San Diego Bay Environmental Restoration Fund South  
 C/O de maximis, Inc., 1322 Scott Street, Suite 104  
 San Diego, CA 92106-2727

Date Received: 11/18/13  
 Work Order: 13-11-1440  
 Preparation: EPA 3545  
 Method: EPA 8270C SIM PAHS

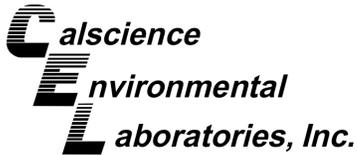
Project: South Shipyard Post Dredge

Page 3 of 5

Quality Control Sample ID	Matrix		Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number				
<b>SD-S-C-SMU4B-D-0535</b>	<b>Sediment</b>		<b>GC/MS AAA</b>	<b>11/19/13</b>	<b>11/19/13 20:26</b>	<b>131119S03</b>				
Parameter	Sample Conc.	Spike Added	MS Conc.	MS %Rec.	MSD Conc.	MSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
Benzo (a) Anthracene	22.46	100.0	75.57	53	75.34	53	40-160	0	0-20	
Benzo (a) Pyrene	106.5	100.0	155.2	49	133.2	27	40-160	15	0-20	3
Benzo (b) Fluoranthene	71.64	100.0	120.8	49	112.6	41	40-160	7	0-20	
Benzo (g,h,i) Perylene	83.75	100.0	119.0	35	100.6	17	40-160	17	0-20	3
Benzo (k) Fluoranthene	61.20	100.0	108.8	48	90.81	30	40-160	18	0-20	3
Chrysene	24.57	100.0	73.25	49	71.38	47	40-160	3	0-20	
Dibenz (a,h) Anthracene	10.93	100.0	55.74	45	52.73	42	40-160	6	0-20	
Fluoranthene	42.52	100.0	99.77	57	101.1	59	40-160	1	0-20	
Indeno (1,2,3-c,d) Pyrene	78.87	100.0	133.4	55	116.2	37	40-160	14	0-20	3
Pyrene	86.26	100.0	132.5	46	120.6	34	40-160	9	0-46	3

Return to Contents

RPD: Relative Percent Difference. CL: Control Limits



## Quality Control - Spike/Spike Duplicate

San Diego Bay Environmental Restoration Fund South  
 C/O de maximis, Inc., 1322 Scott Street, Suite 104  
 San Diego, CA 92106-2727

Date Received: 11/18/13  
 Work Order: 13-11-1440  
 Preparation: EPA 3545  
 Method: EPA 8270C SIM PCB Congeners

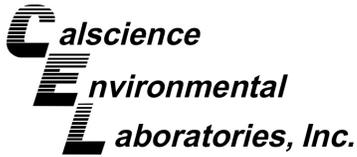
Project: South Shipyard Post Dredge

Page 4 of 5

Quality Control Sample ID	Matrix		Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number				
<b>SD-S-C-SMU4B-D-0535</b>	<b>Sediment</b>		<b>GC/MS HHH</b>	<b>11/19/13</b>	<b>11/20/13 14:49</b>	<b>131119S04</b>				
Parameter	Sample Conc.	Spike Added	MS Conc.	MS %Rec.	MSD Conc.	MSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
PCB018	1.224	25.00	29.38	113	22.65	86	50-125	26	0-30	
PCB028	3.428	25.00	26.37	92	26.94	94	50-125	2	0-30	
PCB044	1.432	25.00	25.90	98	25.66	97	50-125	1	0-30	
PCB052	1.619	25.00	28.23	106	28.14	106	50-125	0	0-30	
PCB066	0.8807	25.00	27.52	107	27.42	106	50-125	0	0-30	
PCB077	ND	25.00	29.26	117	28.98	116	50-125	1	0-30	
PCB101	2.124	25.00	28.73	106	28.67	106	50-125	0	0-30	
PCB105	ND	25.00	29.64	119	29.02	116	50-125	2	0-30	
PCB118	1.924	25.00	33.79	127	33.00	124	50-125	2	0-30	3
PCB126	ND	25.00	29.44	118	29.26	117	50-125	1	0-30	
PCB128	ND	25.00	27.36	109	27.14	109	50-125	1	0-30	
PCB153	2.451	25.00	29.40	108	29.56	108	50-125	1	0-30	
PCB170	0.7961	25.00	23.14	89	23.15	89	50-125	0	0-30	
PCB180	1.661	25.00	30.03	113	29.70	112	50-125	1	0-30	
PCB187	1.013	25.00	28.56	110	28.29	109	50-125	1	0-30	
PCB206	0.7293	25.00	22.89	89	22.62	88	50-125	1	0-30	

Return to Contents

RPD: Relative Percent Difference. CL: Control Limits



## Quality Control - Spike/Spike Duplicate

San Diego Bay Environmental Restoration Fund South  
 C/O de maximis, Inc., 1322 Scott Street, Suite 104  
 San Diego, CA 92106-2727

Date Received: 11/18/13  
 Work Order: 13-11-1440  
 Preparation: EPA 3550B (M)  
 Method: Organotins by Krone et al.

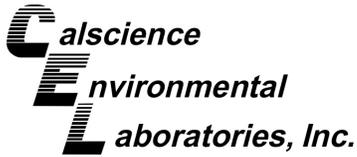
Project: South Shipyard Post Dredge

Page 5 of 5

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number					
<b>SD-S-C-SMU4B-D-0535</b>	<b>Sediment</b>	<b>GC/MS JJJ</b>	<b>11/19/13</b>	<b>11/20/13 13:32</b>	<b>131119S14</b>					
Parameter	Sample Conc.	Spike Added	MS Conc.	MS %Rec.	MSD Conc.	MSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
Tributyltin	ND	100.0	82.45	82	118.3	118	69-135	36	0-29	4

Return to Contents

RPD: Relative Percent Difference. CL: Control Limits



## Quality Control - PDS/PDSD

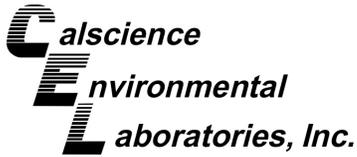
San Diego Bay Environmental Restoration Fund South  
 C/O de maximis, Inc., 1322 Scott Street, Suite 104  
 San Diego, CA 92106-2727

Date Received: 11/18/13  
 Work Order: 13-11-1440  
 Preparation: EPA 3050B  
 Method: EPA 6020

Project: South Shipyard Post Dredge

Page 1 of 1

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	PDS/PDSD Batch Number	
<b>SD-S-C-SMU4B-D-0535</b>	<b>Sediment</b>	<b>ICP/MS 03</b>	<b>11/19/13 00:00</b>	<b>11/19/13 16:38</b>	<b>131119S03</b>	
<u>Parameter</u>	<u>Sample Conc.</u>	<u>Spike Added</u>	<u>PDS Conc.</u>	<u>PDS %Rec.</u>	<u>%Rec. CL</u>	<u>Qualifiers</u>
Copper	27.82	25.00	56.35	114	75-125	
Nickel	6.963	25.00	31.68	99	75-125	
Silver	0.6074	12.50	12.42	94	75-125	
Zinc	78.41	25.00	104.4	104	75-125	



## Quality Control - Sample Duplicate

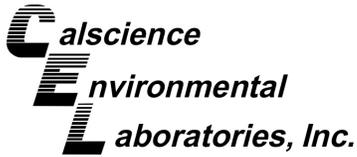
San Diego Bay Environmental Restoration Fund South  
 C/O de maximis, Inc., 1322 Scott Street, Suite 104  
 San Diego, CA 92106-2727

Date Received: 11/18/13  
 Work Order: 13-11-1440  
 Preparation: N/A  
 Method: SM 2540 B (M)

Project: South Shipyard Post Dredge

Page 1 of 1

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	Duplicate Batch Number
<b>SD-S-C-SMU4B-D-0535</b>	<b>Sediment</b>	<b>N/A</b>	<b>11/19/13 00:00</b>	<b>11/19/13 15:20</b>	<b>D1119TSD1</b>
<u>Parameter</u>	<u>Sample Conc.</u>	<u>DUP Conc.</u>	<u>RPD</u>	<u>RPD CL</u>	<u>Qualifiers</u>
Solids, Total	68.80	68.50	0	0-10	



## Quality Control - LCS

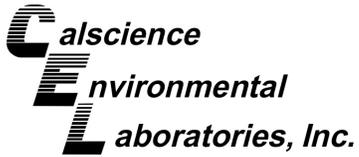
San Diego Bay Environmental Restoration Fund South  
 C/O de maximis, Inc., 1322 Scott Street, Suite 104  
 San Diego, CA 92106-2727

Date Received: 11/18/13  
 Work Order: 13-11-1440  
 Preparation: EPA 3050B  
 Method: EPA 6020

Project: South Shipyard Post Dredge

Page 1 of 5

Quality Control Sample ID	Matrix	Instrument	Date Analyzed	LCS Batch Number	
<b>099-15-254-163</b>	<b>Solid</b>	<b>ICP/MS 03</b>	<b>11/19/13 16:08</b>	<b>131119L03E</b>	
<u>Parameter</u>	<u>Spike Added</u>	<u>Conc. Recovered</u>	<u>LCS %Rec.</u>	<u>%Rec. CL</u>	<u>Qualifiers</u>
Copper	25.00	29.41	118	80-120	
Nickel	25.00	27.26	109	80-120	
Silver	12.50	12.00	96	80-120	
Zinc	25.00	28.97	116	80-120	



## Quality Control - LCS

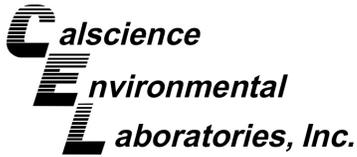
San Diego Bay Environmental Restoration Fund South  
 C/O de maximis, Inc., 1322 Scott Street, Suite 104  
 San Diego, CA 92106-2727

Date Received: 11/18/13  
 Work Order: 13-11-1440  
 Preparation: EPA 7471A Total  
 Method: EPA 7471A

Project: South Shipyard Post Dredge

Page 2 of 5

Quality Control Sample ID	Matrix	Instrument	Date Analyzed	LCS Batch Number	
<b>099-12-452-425</b>	<b>Solid</b>	<b>Mercury</b>	<b>11/19/13 13:47</b>	<b>131119L04E</b>	
<u>Parameter</u>	<u>Spike Added</u>	<u>Conc. Recovered</u>	<u>LCS %Rec.</u>	<u>%Rec. CL</u>	<u>Qualifiers</u>
Mercury	0.8350	0.9543	114	82-124	



## Quality Control - LCS

San Diego Bay Environmental Restoration Fund South  
 C/O de maximis, Inc., 1322 Scott Street, Suite 104  
 San Diego, CA 92106-2727

Date Received: 11/18/13  
 Work Order: 13-11-1440  
 Preparation: EPA 3545  
 Method: EPA 8270C SIM PAHs

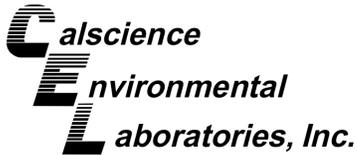
Project: South Shipyard Post Dredge

Page 3 of 5

Quality Control Sample ID	Matrix	Instrument	Date Analyzed	LCS Batch Number	
<b>099-14-097-107</b>	<b>Solid</b>	<b>GC/MS AAA</b>	<b>11/19/13 19:39</b>	<b>131119L03</b>	
<u>Parameter</u>	<u>Spike Added</u>	<u>Conc. Recovered</u>	<u>LCS %Rec.</u>	<u>%Rec. CL</u>	<u>Qualifiers</u>
Benzo (a) Anthracene	100.0	74.25	74	40-160	
Benzo (a) Pyrene	100.0	81.83	82	40-160	
Benzo (b) Fluoranthene	100.0	67.89	68	40-160	
Benzo (g,h,i) Perylene	100.0	54.44	54	40-160	
Benzo (k) Fluoranthene	100.0	78.82	79	40-160	
Chrysene	100.0	67.15	67	40-160	
Dibenz (a,h) Anthracene	100.0	57.54	58	40-160	
Fluoranthene	100.0	80.86	81	40-160	
Indeno (1,2,3-c,d) Pyrene	100.0	69.78	70	40-160	
Pyrene	100.0	72.43	72	40-160	

Return to Contents

RPD: Relative Percent Difference. CL: Control Limits



## Quality Control - LCS

San Diego Bay Environmental Restoration Fund South  
 C/O de maximis, Inc., 1322 Scott Street, Suite 104  
 San Diego, CA 92106-2727

Date Received: 11/18/13  
 Work Order: 13-11-1440  
 Preparation: EPA 3545  
 Method: EPA 8270C SIM PCB Congeners

Project: South Shipyard Post Dredge

Page 4 of 5

Quality Control Sample ID	Matrix	Instrument	Date Analyzed	LCS Batch Number		
<b>099-14-341-133</b>	<b>Solid</b>	<b>GC/MS HHH</b>	<b>11/20/13 12:53</b>	<b>131119L04</b>		
Parameter	Spike Added	Conc. Recovered	LCS %Rec.	%Rec. CL	ME CL	Qualifiers
PCB018	25.00	17.91	72	50-125	38-138	
PCB028	25.00	18.73	75	50-125	38-138	
PCB044	25.00	18.76	75	50-125	38-138	
PCB052	25.00	18.53	74	50-125	38-138	
PCB066	25.00	19.30	77	50-125	38-138	
PCB077	25.00	20.20	81	50-125	38-138	
PCB101	25.00	18.68	75	50-125	38-138	
PCB105	25.00	18.72	75	50-125	38-138	
PCB118	25.00	21.12	84	50-125	38-138	
PCB126	25.00	18.66	75	50-125	38-138	
PCB128	25.00	17.28	69	50-125	38-138	
PCB153	25.00	18.32	73	50-125	38-138	
PCB170	25.00	15.94	64	50-125	38-138	
PCB180	25.00	18.38	74	50-125	38-138	
PCB187	25.00	18.09	72	50-125	38-138	
PCB206	25.00	17.83	71	50-125	38-138	

Total number of LCS compounds: 16

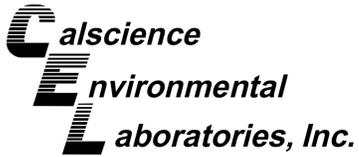
Total number of ME compounds: 0

Total number of ME compounds allowed: 1

LCS ME CL validation result: Pass

Return to Contents

RPD: Relative Percent Difference. CL: Control Limits



## Quality Control - LCS

San Diego Bay Environmental Restoration Fund South  
 C/O de maximis, Inc., 1322 Scott Street, Suite 104  
 San Diego, CA 92106-2727

Date Received: 11/18/13  
 Work Order: 13-11-1440  
 Preparation: EPA 3550B (M)  
 Method: Organotins by Krone et al.

Project: South Shipyard Post Dredge

Page 5 of 5

Quality Control Sample ID	Matrix	Instrument	Date Analyzed	LCS Batch Number	
<b>099-07-016-1097</b>	<b>Solid</b>	<b>GC/MS JJJ</b>	<b>11/20/13 12:02</b>	<b>131119L14</b>	
<u>Parameter</u>	<u>Spike Added</u>	<u>Conc. Recovered</u>	<u>LCS %Rec.</u>	<u>%Rec. CL</u>	<u>Qualifiers</u>
Tributyltin	100.0	89.75	90	51-129	

## Glossary of Terms and Qualifiers

Work Order: 13-11-1440

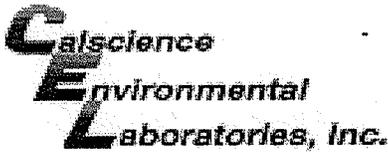
Page 1 of 1

<u>Qualifiers</u>	<u>Definition</u>
*	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 suspected matrix interference. The associated LCS recovery was in control.
4	The MS/MSD RPD was out of control due to suspected matrix interference.
5	The PDS/PDSO or PES/PESO associated with this batch of samples was out of control due to suspected matrix interference.
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.
BV	Sample received 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.
JA	Analyte positively identified but quantitation is an estimate.
ME	LCS Recovery Percentage is within Marginal Exceedance (ME) Control Limit range (+/- 4 SD from the mean).
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.

Any parameter identified in 40CFR Part 136.3 Table II that is designated as "analyze immediately" with a holding time of  $\leq 15$  minutes (40CFR-136.3 Table II, footnote 4), is considered a "field" test and the reported results will be qualified as being received outside of the stated holding time unless received at the laboratory within 15 minutes of the collection time.

A calculated total result (Example: Total Pesticides) is the summation of each component concentration and/or, if "J" flags are reported, estimated concentration. Component concentrations showing not detected (ND) are summed into the calculated total result as zero concentrations.





WORK ORDER #: 13-11-0440

**SAMPLE RECEIPT FORM**

Cooler 1 of 1

CLIENT: de maximis, Inc.

DATE: 11/18/13

**TEMPERATURE:** Thermometer ID: SC2 (Criteria: 0.0 °C – 6.0 °C, not frozen except sediment/tissue)

Temperature 1.9 °C - 0.2 °C (CF) = 1.7 °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

Checked by: 671

**CUSTODY SEALS INTACT:**

Cooler  \_\_\_\_\_  No (Not Intact)  Not Present  N/A

Sample  \_\_\_\_\_  No (Not Intact)  Not Present

Checked by: 671  
Checked by: 895

**SAMPLE CONDITION:**

	Yes	No	N/A
Chain-Of-Custody (COC) document(s) received with samples.....	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
COC document(s) received complete.....	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> Collection date/time, matrix, and/or # of containers logged in based on sample labels.			
<input type="checkbox"/> No analysis requested. <input type="checkbox"/> Not relinquished. <input type="checkbox"/> No date/time relinquished.			
Sampler's name indicated on COC.....	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Sample container label(s) consistent with COC.....	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Sample container(s) intact and good condition.....	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Proper containers and sufficient volume for analyses requested.....	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Analyses received within holding time.....	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Aqueous samples received within 15-minute holding time			
<input type="checkbox"/> pH <input type="checkbox"/> Residual Chlorine <input type="checkbox"/> Dissolved Sulfides <input type="checkbox"/> Dissolved Oxygen.....			
Proper preservation noted on COC or sample container.....	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/> Unpreserved vials received for Volatiles analysis			
Volatile analysis container(s) free of headspace.....	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Tedlar bag(s) free of condensation.....	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTAINER TYPE:**

Solid:  4ozCGJ  8ozCGJ  16ozCGJ  Sleeve (\_\_\_\_)  EnCores®  TerraCores®  \_\_\_\_\_

Aqueous:  VOA  VOAh  VOAna<sub>2</sub>  125AGB  125AGBh  125AGBp  1AGB  1AGBna<sub>2</sub>  1AGBs

500AGB  500AGJ  500AGJs  250AGB  250CGB  250CGBs  1PB  1PBna  500PB

250PB  250PBn  125PB  125PBzanna  100PJ  100PJna<sub>2</sub>  \_\_\_\_\_  \_\_\_\_\_  \_\_\_\_\_

Air:  Tedlar®  Canister Other:  \_\_\_\_\_ Trip Blank Lot#: \_\_\_\_\_ Labeled/Checked by: 895

Container: C: Clear A: Amber P: Plastic G: Glass J: Jar B: Bottle Z: Ziploc/Resealable Bag E: Envelope Reviewed by: 671

Preservative: h: HCL n: HNO<sub>3</sub> na<sub>2</sub>:Na<sub>2</sub>S<sub>2</sub>O<sub>3</sub> na: NaOH p: H<sub>3</sub>PO<sub>4</sub> s: H<sub>2</sub>SO<sub>4</sub> u: Ultra-pure zna: ZnAc<sub>2</sub>+NaOH f: Filtered Scanned by: 671

Return to Contents

APPENDIX D  
SAND COVER GRADATION AND  
ANALYTICAL INFORMATION

---

**VULCAN MATERIALS COMPANY - West Region**

Contractor: **RE Staite Engineering Inc.**

January 20, 2014

Project: **NASSCO South SD Shipyard Bay Remediation**

Plant: **Vulcan Materials / Chula Vista**

Material: **Washed Concrete Sand (WCS) as "Sand Cover Material"**

This is to certify that Vulcan Materials Company, West Region, Chula Vista, will supply Washed Concrete Sand (WCS) to the above listed project and that this product will conform to the gradation limits outlined for "Sand Cover Material" in section 352026 Part 2.02 - E. of the project specification Amendment 5, except where indicated.

Sieve Size	Section 35026 Part 2.02-E	Percent Passing	
9.5 mm (3/8")	100	100	
4.75 mm (No. 4)	95 - 100	97	
2.36 mm (No. 8)	80 - 95	85	
1.18 mm (No. 16)	40 - 70	67	
600 um (No. 30)	-----	43	
300 um (No. 50)	3 - 20	* 21	* indicates out of specification
150 um (No. 100)	-----	7	
75 um (No. 200)	0 - 5	2.6	

Average Total Moisture      3.2%

Submitted by:



Jeff Pollard

Technical Services Supervisor

**If you should have any questions regarding this submittal please contact the San Diego Regional Laboratory at (858) 547-4981**

\* Please Note: \*\* NOT VALID IF ALTERED \*\*

**VULCAN MATERIALS COMPANY - West Region**

Contractor: **RE Staite Engineering Inc.**

January 20, 2014

Project: **NASSCO South SD Shipyard Bay Remediation**

Plant: **Vulcan Materials / Chula Vista**

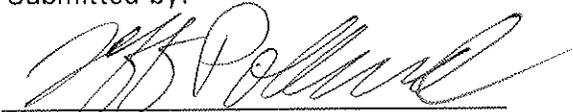
Material: **Gravel Cover Material**

This is to certify that Vulcan Materials Company, West Region, **Chula Vista**, will supply Gravel Cover Material to the above listed project and that this product will conform to the gradation limits outlined for "Gravel Cover Material" in section 352026 Part 2.03 C., of the project specification on page 352026-8, dated July 2013, at the **Chula Vista** production facility only.

Sieve Size	Section 352026 Part 2.03 C.	Percent Passing
100 mm (4")	100	100
19 mm (3/4")	50 - 75	71
4.75 mm (No. 4)	35 - 55	36
2.36 mm (No. 8)	-----	28
2 mm (No. 10)	25 - 45	25
425 um (No. 40)	10 - 25	14
150 um (No. 100)	-----	3
75 um (No. 200)	0 - 5	1.1

Average Total Moisture      2.0%

Submitted by:



Jeff Pollard  
Technical Services Supervisor

**If you should have any questions regarding this submittal please contact the San Diego Regional Laboratory at (858) 547-4981**

\* Please Note: \*\* NOT VALID IF ALTERED \*\*

EnviroMatrix



Analytical, Inc.

21 January 2014

Vulcan Materials Co. Foothill  
Attn: Jeff Pollard  
16009 Foothill Blvd.  
Irwindale CA, CA 91706

**EMA Log #: 14A0265**

**Project Name: Chula Vista-WCS**

Enclosed are the results of analyses for samples received by the laboratory on 01/09/14 16:50. Samples were analyzed pursuant to client request utilizing EPA or other ELAP approved methodologies. I certify that this data is in compliance both technically and for completeness.

A handwritten signature in black ink, appearing to read 'Dan Verdon', is written over a light gray circular stamp.

**Dan Verdon**  
**Laboratory Director**

CA ELAP Certification #: 2564

4340 Viewridge Avenue, Suite A - San Diego, California 92123 - (858) 560-7717 - Fax (858) 560-7763  
**Analytical Chemistry Laboratory**

Client Name: Vulcan Materials Co. Foothill  
Project Name: Chula Vista-WCS

EMA Log #: 14A0265

**ANALYTICAL REPORT FOR SAMPLES**

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
Chula Vista-WCS	14A0265-01	Soil	01/09/14 10:00	01/09/14 16:50

*The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.*

EnviroMatrix Analytical, Inc.



Client Name: Vulcan Materials Co. Foothill  
 Project Name: Chula Vista-WCS

EMA Log #: 14A0265

**Total Metals by EPA 6000/7000 Series Methods**

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>Chula Vista-WCS (14A0265-01) Soil    Sampled: 01/09/14 10:00    Received: 01/09/14 16:50</b>										
Silver	ND	0.10	0.50	mg/kg	1	4011005	01/10/14	01/10/14	EPA 6010	
Arsenic	ND	0.43	1.00	"	"	"	"	01/10/14	"	
Cadmium	ND	0.08	1.00	"	"	"	"	"	"	
<b>Chromium</b>	<b>3.90</b>	0.40	1.00	"	"	"	"	"	"	
<b>Copper</b>	<b>15.4</b>	0.09	1.00	"	"	"	"	01/10/14	"	
Mercury	ND	0.02	0.05	"	"	4011006	01/10/14	01/10/14	EPA 7471	
<b>Nickel</b>	<b>1.35</b>	0.31	1.00	"	"	4011005	01/10/14	01/10/14	EPA 6010	
<b>Lead</b>	<b>0.94</b>	0.79	1.00	"	"	"	"	"	"	J
<b>Zinc</b>	<b>13.5</b>	0.04	1.00	"	"	"	"	"	"	

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Client Name: Vulcan Materials Co. Foothill  
 Project Name: Chula Vista-WCS

EMA Log #: 14A0265

**Polychlorinated Biphenyls by EPA Method 8082**

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>Chula Vista-WCS (14A0265-01) Soil    Sampled: 01/09/14 10:00    Received: 01/09/14 16:50</b>										
Aroclor 1016	ND	4.60	20.0	ug/kg	1	4011024	01/10/14	01/13/14	EPA 8082	
Aroclor 1221	ND	4.60	20.0	"	"	"	"	"	"	
Aroclor 1232	ND	4.60	20.0	"	"	"	"	"	"	
Aroclor 1242	ND	4.60	20.0	"	"	"	"	"	"	
Aroclor 1248	ND	4.60	20.0	"	"	"	"	"	"	
Aroclor 1254	ND	4.60	20.0	"	"	"	"	"	"	
Aroclor 1260	ND	4.60	20.0	"	"	"	"	"	"	
<i>Surrogate: TCMX</i>		97 %	26-146			"	"	"	"	

*The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.*

Client Name: Vulcan Materials Co. Foothill  
 Project Name: Chula Vista-WCS

EMA Log #: 14A0265

**Semivolatile Organic Compounds by EPA Method 8270C**

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>Chula Vista-WCS (14A0265-01) Soil    Sampled: 01/09/14 10:00    Received: 01/09/14 16:50</b>										
Benzoic acid	ND	50.0	100	ug/kg	1	4010915	01/09/14	01/12/14	EPA 8270C	
Acenaphthene	ND	5.12	20.0	"	"	"	"	"	"	
Acenaphthylene	ND	5.37	20.0	"	"	"	"	"	"	
Anthracene	ND	2.82	20.0	"	"	"	"	"	"	
Benzidine	ND	150	150	"	"	"	"	"	"	
Benzo (a) anthracene	ND	3.09	20.0	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	3.09	20.0	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	3.68	20.0	"	"	"	"	"	"	
Benzo (g,h,i) perylene	ND	4.63	40.0	"	"	"	"	"	"	
Benzo (a) pyrene	ND	3.07	20.0	"	"	"	"	"	"	
Benzyl alcohol	ND	1.44	75.0	"	"	"	"	"	"	
Bis(2-chloroethoxy)methane	ND	7.26	20.0	"	"	"	"	"	"	
Bis(2-chloroethyl)ether	ND	7.96	25.0	"	"	"	"	"	"	
Bis(2-chloroisopropyl)ether	ND	8.81	25.0	"	"	"	"	"	"	
<b>Bis(2-ethylhexyl)phthalate</b>	<b>8.23</b>	5.72	45.0	"	"	"	"	"	"	J
4-Bromophenyl phenyl ether	ND	3.71	20.0	"	"	"	"	"	"	
Butyl benzyl phthalate	ND	4.11	40.0	"	"	"	"	"	"	
Carbazole	ND	4.94	60.0	"	"	"	"	"	"	
4-Chloroaniline	ND	4.42	100	"	"	"	"	"	"	
4-Chloro-3-methylphenol	ND	8.34	20.0	"	"	"	"	"	"	
2-Chloronaphthalene	ND	6.11	20.0	"	"	"	"	"	"	
2-Chlorophenol	ND	6.48	20.0	"	"	"	"	"	"	
4-Chlorophenyl phenyl ether	ND	4.90	20.0	"	"	"	"	"	"	
Chrysene	ND	2.87	20.0	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	5.00	40.0	"	"	"	"	"	"	
Dibenzofuran	ND	5.42	20.0	"	"	"	"	"	"	
<b>Di-n-butyl phthalate</b>	<b>11.7</b>	3.87	40.0	"	"	"	"	"	"	J
1,2-Dichlorobenzene	ND	9.07	20.0	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	8.51	20.0	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	8.55	20.0	"	"	"	"	"	"	
3,3'-Dichlorobenzidine	ND	5.26	150	"	"	"	"	"	"	
2,4-Dichlorophenol	ND	5.32	20.0	"	"	"	"	"	"	
<b>Diethyl phthalate</b>	<b>43.4</b>	1.61	20.0	"	"	"	"	"	"	
2,4-Dimethylphenol	ND	2.40	80.0	"	"	"	"	"	"	
Dimethyl phthalate	ND	3.36	20.0	"	"	"	"	"	"	
4,6-Dinitro-2-methylphenol	ND	5.50	50.0	"	"	"	"	"	"	
2,4-Dinitrophenol	ND	10.9	100	"	"	"	"	"	"	
2,4-Dinitrotoluene	ND	4.08	20.0	"	"	"	"	"	"	
2,6-Dinitrotoluene	ND	6.02	20.0	"	"	"	"	"	"	
Di-n-octyl phthalate	ND	4.61	40.0	"	"	"	"	"	"	

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Client Name: Vulcan Materials Co. Foothill  
 Project Name: Chula Vista-WCS

EMA Log #: 14A0265

**Semivolatile Organic Compounds by EPA Method 8270C**

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>Chula Vista-WCS (14A0265-01) Soil    Sampled: 01/09/14 10:00    Received: 01/09/14 16:50</b>										
Fluoranthene	ND	3.43	20.0	ug/kg	1	4010915	01/09/14	01/12/14	EPA 8270C	
Fluorene	ND	4.50	20.0	"	"	"	"	"	"	
Hexachlorobenzene	ND	3.10	20.0	"	"	"	"	"	"	
Hexachlorobutadiene	ND	7.09	20.0	"	"	"	"	"	"	
Hexachlorocyclopentadiene	ND	6.98	50.0	"	"	"	"	"	"	
Hexachloroethane	ND	8.88	20.0	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	4.33	30.0	"	"	"	"	"	"	
Isophorone	ND	7.56	20.0	"	"	"	"	"	"	
2-Methylnaphthalene	ND	7.62	20.0	"	"	"	"	"	"	
2-Methylphenol	ND	6.56	20.0	"	"	"	"	"	"	
4-Methylphenol (3-Methylphenol)	ND	6.24	40.0	"	"	"	"	"	"	
Naphthalene	ND	7.25	20.0	"	"	"	"	"	"	
2-Nitroaniline	ND	3.91	50.0	"	"	"	"	"	"	
3-Nitroaniline	ND	6.54	100	"	"	"	"	"	"	
4-Nitroaniline	ND	5.49	70.0	"	"	"	"	"	"	
Nitrobenzene	ND	8.04	20.0	"	"	"	"	"	"	
2-Nitrophenol	ND	7.56	20.0	"	"	"	"	"	"	
4-Nitrophenol	ND	2.85	70.0	"	"	"	"	"	"	
N-Nitrosodimethylamine	ND	8.02	20.0	"	"	"	"	"	"	
N-Nitrosodiphenylamine	ND	8.02	35.0	"	"	"	"	"	"	
N-Nitrosodi-n-propylamine	ND	7.90	30.0	"	"	"	"	"	"	
Pentachlorophenol	ND	6.02	40.0	"	"	"	"	"	"	
Phenanthrene	ND	1.95	20.0	"	"	"	"	"	"	
Phenol	ND	8.81	30.0	"	"	"	"	"	"	
Pyrene	ND	2.88	20.0	"	"	"	"	"	"	
Pyridine	ND	8.85	100	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	7.08	20.0	"	"	"	"	"	"	
2,4,5-Trichlorophenol	ND	7.66	30.0	"	"	"	"	"	"	
2,4,6-Trichlorophenol	ND	5.55	30.0	"	"	"	"	"	"	
<i>Surrogate: 2-Fluorophenol</i>		48 %	25-121			"	"	"	"	
<i>Surrogate: Phenol-d6</i>		49 %	24-113			"	"	"	"	
<i>Surrogate: Nitrobenzene-d5</i>		53 %	23-120			"	"	"	"	
<i>Surrogate: 2-Fluorobiphenyl</i>		62 %	30-115			"	"	"	"	
<i>Surrogate: 2,4,6-Tribromophenol</i>		42 %	19-122			"	"	"	"	
<i>Surrogate: Terphenyl-d14</i>		53 %	18-137			"	"	"	"	

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Client Name: Vulcan Materials Co. Foothill  
 Project Name: Chula Vista-WCS

EMA Log #: 14A0265

**Total Metals by EPA 6000/7000 Series Methods - Quality Control**

Analyte	Result	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
---------	--------	-----	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	-------

**Batch 4011005**

**Blank (4011005-BLK1)**

Prepared & Analyzed: 01/10/14

Copper	0.62	0.09	1.00	mg/kg							J, QB-01
Silver	ND	0.10	0.50	"							
Nickel	ND	0.31	1.00	"							
Chromium	ND	0.40	1.00	"							
Cadmium	ND	0.08	1.00	"							
Zinc	0.64	0.04	1.00	"							J, QB-01
Lead	ND	0.79	1.00	"							
Arsenic	ND	0.43	1.00	"							

**LCS (4011005-BS1)**

Prepared & Analyzed: 01/10/14

Nickel	97.6	0.31	1.00	mg/kg	100		98	75-125			
Zinc	98.2	0.04	1.00	"	100		98	75-125			
Lead	99.3	0.79	1.00	"	100		99	75-125			
Chromium	98.6	0.40	1.00	"	100		99	75-125			
Cadmium	95.5	0.08	1.00	"	100		96	75-125			
Silver	52.1	0.10	0.50	"	50.0		104	75-125			
Copper	106	0.09	1.00	"	100		106	75-125			
Arsenic	96.3	0.43	1.00	"	100		96	75-125			

**LCS Dup (4011005-BSD1)**

Prepared & Analyzed: 01/10/14

Cadmium	94.2	0.08	1.00	mg/kg	100		94	75-125	1	20	
Silver	52.8	0.10	0.50	"	50.0		106	75-125	1	20	
Lead	98.1	0.79	1.00	"	100		98	75-125	1	20	
Nickel	96.4	0.31	1.00	"	100		96	75-125	1	20	
Zinc	96.1	0.04	1.00	"	100		96	75-125	2	20	
Copper	105	0.09	1.00	"	100		105	75-125	0.8	20	
Chromium	97.5	0.40	1.00	"	100		98	75-125	1	20	
Arsenic	93.3	0.43	1.00	"	100		93	75-125	3	20	

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

EnviroMatrix Analytical, Inc.



Client Name: Vulcan Materials Co. Foothill  
 Project Name: Chula Vista-WCS

EMA Log #: 14A0265

**Total Metals by EPA 6000/7000 Series Methods - Quality Control**

Analyte	Result	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
---------	--------	-----	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	-------

**Batch 4011005**

<b>Duplicate (4011005-DUP1)</b>		<b>Source: 14A0206-01</b>			<b>Prepared &amp; Analyzed: 01/10/14</b>						
Nickel	9.38	0.31	1.00	mg/kg		7.87			18	20	
Copper	120	0.09	1.00	"		104			14	20	
Chromium	16.5	0.40	1.00	"		8.79			61	20	QR-02
Cadmium	0.28	0.08	1.00	"		0.14			64	20	J, QR-04
Silver	0.24	0.10	0.50	"		0.22			6	20	J
Zinc	136	0.04	1.00	"		158			15	20	
Lead	8.76	0.79	1.00	"		7.71			13	20	
Arsenic	0.71	0.43	1.00	"		0.79			11	20	J

<b>Matrix Spike (4011005-MS1)</b>		<b>Source: 14A0206-01</b>			<b>Prepared &amp; Analyzed: 01/10/14</b>						
Nickel	88.4	0.31	1.00	mg/kg	86.2	7.87	93	75-125			
Chromium	91.7	0.40	1.00	"	86.2	8.79	96	75-125			
Silver	43.4	0.10	0.50	"	43.1	0.22	100	75-125			
Copper	374	0.09	1.00	"	86.2	104	314	75-125			QM-06
Cadmium	78.7	0.08	1.00	"	86.2	0.14	91	75-125			
Zinc	208	0.04	1.00	"	86.2	158	58	75-125			QM-06
Lead	88.4	0.79	1.00	"	86.2	7.71	94	75-125			
Arsenic	81.3	0.43	1.00	"	86.2	0.79	93	75-125			

<b>Matrix Spike Dup (4011005-MSD1)</b>		<b>Source: 14A0206-01</b>			<b>Prepared &amp; Analyzed: 01/10/14</b>						
Chromium	96.9	0.40	1.00	mg/kg	90.9	8.79	97	75-125	5	20	
Lead	92.1	0.79	1.00	"	90.9	7.71	93	75-125	4	20	
Zinc	232	0.04	1.00	"	90.9	158	81	75-125	11	20	
Nickel	93.1	0.31	1.00	"	90.9	7.87	94	75-125	5	20	
Cadmium	82.8	0.08	1.00	"	90.9	0.14	91	75-125	5	20	
Silver	46.1	0.10	0.50	"	45.5	0.22	101	75-125	6	20	
Copper	202	0.09	1.00	"	90.9	104	109	75-125	60	20	QM-06
Arsenic	86.1	0.43	1.00	"	90.9	0.79	94	75-125	6	20	

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Client Name: Vulcan Materials Co. Foothill  
 Project Name: Chula Vista-WCS

EMA Log #: 14A0265

**Total Metals by EPA 6000/7000 Series Methods - Quality Control**

Analyte	Result	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch 4011006</b>											
<b>Blank (4011006-BLK1)</b>					Prepared & Analyzed: 01/10/14						
Mercury	ND	0.02	0.05	mg/kg							
<b>LCS (4011006-BS1)</b>					Prepared & Analyzed: 01/10/14						
Mercury	0.17	0.02	0.05	mg/kg	0.167		100	75-125			
<b>LCS Dup (4011006-BSD1)</b>					Prepared & Analyzed: 01/10/14						
Mercury	0.17	0.02	0.05	mg/kg	0.167		101	75-125	2	20	
<b>Duplicate (4011006-DUP1)</b>					Source: 14A0188-01 Prepared & Analyzed: 01/10/14						
Mercury	ND	0.02	0.05	mg/kg		ND				20	
<b>Matrix Spike (4011006-MS1)</b>					Source: 14A0188-01 Prepared & Analyzed: 01/10/14						
Mercury	0.34	0.02	0.05	mg/kg	0.357	ND	96	75-125			
<b>Matrix Spike Dup (4011006-MSD1)</b>					Source: 14A0188-01 Prepared & Analyzed: 01/10/14						
Mercury	0.34	0.02	0.05	mg/kg	0.400	ND	86	75-125	0.6	20	

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Client Name: Vulcan Materials Co. Foothill  
 Project Name: Chula Vista-WCS

EMA Log #: 14A0265

**Polychlorinated Biphenyls by EPA Method 8082 - Quality Control**

Analyte	Result	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch 4011024</b>											
<b>Blank (4011024-BLK1)</b>					Prepared: 01/10/14 Analyzed: 01/13/14						
Aroclor 1016	ND	4.60	20.0	ug/kg							
Aroclor 1221	ND	4.60	20.0	"							
Aroclor 1232	ND	4.60	20.0	"							
Aroclor 1242	ND	4.60	20.0	"							
Aroclor 1248	ND	4.60	20.0	"							
Aroclor 1254	ND	4.60	20.0	"							
Aroclor 1260	ND	4.60	20.0	"							
Surrogate: TCMX	13.9			"	16.7		83	26-146			
<b>LCS (4011024-BS1)</b>					Prepared: 01/10/14 Analyzed: 01/13/14						
Aroclor 1260	144	4.60	20.0	ug/kg	167		87	8-127			
Surrogate: TCMX	13.7			"	16.7		82	26-146			
<b>LCS Dup (4011024-BSD1)</b>					Prepared: 01/10/14 Analyzed: 01/13/14						
Aroclor 1260	157	4.60	20.0	ug/kg	167		94	8-127	8	30	
Surrogate: TCMX	13.1			"	16.7		79	26-146			
<b>Duplicate (4011024-DUP1)</b>					Source: 14A0265-01 Prepared: 01/10/14 Analyzed: 01/13/14						
Aroclor 1016	ND	4.60	20.0	ug/kg		ND				30	
Aroclor 1221	ND	4.60	20.0	"		ND				30	
Aroclor 1232	ND	4.60	20.0	"		ND				30	
Aroclor 1242	ND	4.60	20.0	"		ND				30	
Aroclor 1248	ND	4.60	20.0	"		ND				30	
Aroclor 1254	ND	4.60	20.0	"		ND				30	
Aroclor 1260	ND	4.60	20.0	"		ND				30	
Surrogate: TCMX	16.3			"	16.7		98	26-146			
<b>Matrix Spike (4011024-MS1)</b>					Source: 14A0265-01 Prepared: 01/10/14 Analyzed: 01/13/14						
Aroclor 1260	131	4.60	20.0	ug/kg	167	ND	79	8-127			
Surrogate: TCMX	14.7			"	16.7		88	26-146			

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Client Name: Vulcan Materials Co. Foothill  
Project Name: Chula Vista-WCS

EMA Log #: 14A0265

**Polychlorinated Biphenyls by EPA Method 8082 - Quality Control**

Analyte	Result	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
---------	--------	-----	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	-------

**Batch 4011024**

<b>Matrix Spike Dup (4011024-MSD1)</b>	<b>Source: 14A0265-01</b>		Prepared: 01/10/14		Analyzed: 01/13/14					
Aroclor 1260	132	4.60	20.0	ug/kg	167	ND	79	8-127	0.8	30
Surrogate: TCMX	13.8			"	16.7		83	26-146		

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

EnviroMatrix Analytical, Inc.



Client Name: Vulcan Materials Co. Foothill  
 Project Name: Chula Vista-WCS

EMA Log #: 14A0265

**Semivolatile Organic Compounds by EPA Method 8270C - Quality Control**

Analyte	Result	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
---------	--------	-----	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	-------

**Batch 4010915**

**Blank (4010915-BLK1)**

Prepared & Analyzed: 01/09/14

Benzoic acid	ND	50.0	100	ug/kg
Acenaphthene	ND	5.12	20.0	"
Acenaphthylene	ND	5.37	20.0	"
Anthracene	ND	2.82	20.0	"
Benzidine	ND	150	150	"
Benzo (a) anthracene	ND	3.09	20.0	"
Benzo (b) fluoranthene	ND	3.09	20.0	"
Benzo (k) fluoranthene	ND	3.68	20.0	"
Benzo (g,h,i) perylene	ND	4.63	40.0	"
Benzo (a) pyrene	ND	3.07	20.0	"
Benzyl alcohol	ND	1.44	75.0	"
Bis(2-chloroethoxy)methane	ND	7.26	20.0	"
Bis(2-chloroethyl)ether	ND	7.96	25.0	"
Bis(2-chloroisopropyl)ether	ND	8.81	25.0	"
Bis(2-ethylhexyl)phthalate	ND	5.72	45.0	"
4-Bromophenyl phenyl ether	ND	3.71	20.0	"
Butyl benzyl phthalate	ND	4.11	40.0	"
Carbazole	ND	4.94	60.0	"
4-Chloroaniline	ND	4.42	100	"
4-Chloro-3-methylphenol	ND	8.34	20.0	"
2-Chloronaphthalene	ND	6.11	20.0	"
2-Chlorophenol	ND	6.48	20.0	"
4-Chlorophenyl phenyl ether	ND	4.90	20.0	"
Chrysene	ND	2.87	20.0	"
Dibenz (a,h) anthracene	ND	5.00	40.0	"
Dibenzofuran	ND	5.42	20.0	"
Di-n-butyl phthalate	ND	3.87	40.0	"
1,2-Dichlorobenzene	ND	9.07	20.0	"
1,3-Dichlorobenzene	ND	8.51	20.0	"
1,4-Dichlorobenzene	ND	8.55	20.0	"
3,3'-Dichlorobenzidine	ND	5.26	150	"
2,4-Dichlorophenol	ND	5.32	20.0	"
Diethyl phthalate	ND	1.61	20.0	"
2,4-Dimethylphenol	ND	2.40	80.0	"
Dimethyl phthalate	ND	3.36	20.0	"
4,6-Dinitro-2-methylphenol	ND	5.50	50.0	"
2,4-Dinitrophenol	ND	10.9	100	"
2,4-Dinitrotoluene	ND	4.08	20.0	"

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Client Name: Vulcan Materials Co. Foothill  
 Project Name: Chula Vista-WCS

EMA Log #: 14A0265

**Semivolatile Organic Compounds by EPA Method 8270C - Quality Control**

Analyte	Result	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
---------	--------	-----	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	-------

**Batch 4010915**

**Blank (4010915-BLK1)**

Prepared & Analyzed: 01/09/14

2,6-Dinitrotoluene	ND	6.02	20.0	ug/kg							
Di-n-octyl phthalate	ND	4.61	40.0	"							
Fluoranthene	ND	3.43	20.0	"							
Fluorene	ND	4.50	20.0	"							
Hexachlorobenzene	ND	3.10	20.0	"							
Hexachlorobutadiene	ND	7.09	20.0	"							
Hexachlorocyclopentadiene	ND	6.98	50.0	"							
Hexachloroethane	ND	8.88	20.0	"							
Indeno (1,2,3-cd) pyrene	ND	4.33	30.0	"							
Isophorone	ND	7.56	20.0	"							
2-Methylnaphthalene	ND	7.62	20.0	"							
2-Methylphenol	ND	6.56	20.0	"							
4-Methylphenol (3-Methylphenol)	ND	6.24	40.0	"							
Naphthalene	ND	7.25	20.0	"							
2-Nitroaniline	ND	3.91	50.0	"							
3-Nitroaniline	ND	6.54	100	"							
4-Nitroaniline	ND	5.49	70.0	"							
Nitrobenzene	ND	8.04	20.0	"							
2-Nitrophenol	ND	7.56	20.0	"							
4-Nitrophenol	ND	2.85	70.0	"							
N-Nitrosodimethylamine	ND	8.02	20.0	"							
N-Nitrosodiphenylamine	ND	8.02	35.0	"							
N-Nitrosodi-n-propylamine	ND	7.90	30.0	"							
Pentachlorophenol	ND	6.02	40.0	"							
Phenanthrene	ND	1.95	20.0	"							
Phenol	ND	8.81	30.0	"							
Pyrene	ND	2.88	20.0	"							
Pyridine	ND	8.85	100	"							
1,2,4-Trichlorobenzene	ND	7.08	20.0	"							
2,4,5-Trichlorophenol	ND	7.66	30.0	"							
2,4,6-Trichlorophenol	ND	5.55	30.0	"							
Surrogate: 2-Fluorophenol	523			"	568		92	25-121			
Surrogate: Phenol-d6	516			"	568		91	24-113			
Surrogate: Nitrobenzene-d5	496			"	568		87	23-120			
Surrogate: 2-Fluorobiphenyl	547			"	568		96	30-115			
Surrogate: 2,4,6-Tribromophenol	333			"	568		59	19-122			
Surrogate: Terphenyl-d14	510			"	568		90	18-137			

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Client Name: Vulcan Materials Co. Foothill  
 Project Name: Chula Vista-WCS

EMA Log #: 14A0265

**Semivolatile Organic Compounds by EPA Method 8270C - Quality Control**

Analyte	Result	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
---------	--------	-----	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	-------

**Batch 4010915**

**LCS (4010915-BS1)**

Prepared & Analyzed: 01/09/14

Acenaphthene	581	5.12	20.0	ug/kg	568		102	50-135			
4-Chloro-3-methylphenol	537	8.34	20.0	"	568		95	34-142			
2-Chlorophenol	597	6.48	20.0	"	568		105	38-125			
Di-n-butyl phthalate	621	3.87	40.0	"	568		109	44-152			
1,4-Dichlorobenzene	500	8.55	20.0	"	568		88	48-125			
2,4-Dinitrotoluene	506	4.08	20.0	"	568		89	41-144			
4-Nitrophenol	382	2.85	70.0	"	568		67	10-155			
N-Nitrosodi-n-propylamine	684	7.90	30.0	"	568		120	28-156			
Pentachlorophenol	288	6.02	40.0	"	568		51	21-133			
Phenol	565	8.81	30.0	"	568		99	35-120			
Pyrene	616	2.88	20.0	"	568		108	40-152			
1,2,4-Trichlorobenzene	554	7.08	20.0	"	568		98	47-125			
<i>Surrogate: 2-Fluorophenol</i>	522			"	568		92	25-121			
<i>Surrogate: Phenol-d6</i>	490			"	568		86	24-113			
<i>Surrogate: Nitrobenzene-d5</i>	483			"	568		85	23-120			
<i>Surrogate: 2-Fluorobiphenyl</i>	515			"	568		91	30-115			
<i>Surrogate: 2,4,6-Tribromophenol</i>	380			"	568		67	19-122			
<i>Surrogate: Terphenyl-d14</i>	503			"	568		89	18-137			

**LCS Dup (4010915-BSD1)**

Prepared & Analyzed: 01/09/14

Acenaphthene	574	5.12	20.0	ug/kg	568		101	50-135	1	30	
4-Chloro-3-methylphenol	513	8.34	20.0	"	568		90	34-142	5	30	
2-Chlorophenol	587	6.48	20.0	"	568		103	38-125	2	30	
Di-n-butyl phthalate	630	3.87	40.0	"	568		111	44-152	1	30	
1,4-Dichlorobenzene	485	8.55	20.0	"	568		85	48-125	3	30	
2,4-Dinitrotoluene	491	4.08	20.0	"	568		86	41-144	3	30	
4-Nitrophenol	411	2.85	70.0	"	568		72	10-155	7	30	
N-Nitrosodi-n-propylamine	676	7.90	30.0	"	568		119	28-156	1	30	
Pentachlorophenol	277	6.02	40.0	"	568		49	21-133	4	30	
Phenol	542	8.81	30.0	"	568		95	35-120	4	30	
Pyrene	588	2.88	20.0	"	568		104	40-152	5	30	
1,2,4-Trichlorobenzene	554	7.08	20.0	"	568		97	47-125	0.1	30	
<i>Surrogate: 2-Fluorophenol</i>	517			"	568		91	25-121			
<i>Surrogate: Phenol-d6</i>	476			"	568		84	24-113			
<i>Surrogate: Nitrobenzene-d5</i>	462			"	568		81	23-120			
<i>Surrogate: 2-Fluorobiphenyl</i>	500			"	568		88	30-115			
<i>Surrogate: 2,4,6-Tribromophenol</i>	383			"	568		67	19-122			
<i>Surrogate: Terphenyl-d14</i>	480			"	568		84	18-137			

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Client Name: Vulcan Materials Co. Foothill  
 Project Name: Chula Vista-WCS

EMA Log #: 14A0265

### Semivolatile Organic Compounds by EPA Method 8270C - Quality Control

Analyte	Result	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
---------	--------	-----	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	-------

**Batch 4010915**

Duplicate (4010915-DUP1)	Source: 14A0206-01				Prepared & Analyzed: 01/09/14						
Benzoic acid	ND	100	200	ug/kg		ND				30	
Acenaphthene	ND	10.2	40.0	"		ND				30	
Acenaphthylene	ND	10.7	40.0	"		ND				30	
Anthracene	ND	5.64	40.0	"		ND				30	
Benzidine	ND	300	300	"		ND				30	
Benzo (a) anthracene	ND	6.18	40.0	"		17.1				30	
Benzo (b) fluoranthene	ND	6.18	40.0	"		ND				30	
Benzo (k) fluoranthene	ND	7.36	40.0	"		ND				30	
Benzo (g,h,i) perylene	ND	9.26	80.0	"		ND				30	
Benzo (a) pyrene	ND	6.14	40.0	"		ND				30	
Benzyl alcohol	ND	2.88	150	"		ND				30	
Bis(2-chloroethoxy)methane	ND	14.5	40.0	"		ND				30	
Bis(2-chloroethyl)ether	ND	15.9	50.0	"		ND				30	
Bis(2-chloroisopropyl)ether	ND	17.6	50.0	"		ND				30	
Bis(2-ethylhexyl)phthalate	1320	11.4	90.0	"		3350			87	30	QR-02
4-Bromophenyl phenyl ether	ND	7.42	40.0	"		ND				30	
Butyl benzyl phthalate	ND	8.22	80.0	"		ND				30	
Carbazole	ND	9.88	120	"		ND				30	
4-Chloroaniline	ND	8.84	200	"		ND				30	
4-Chloro-3-methylphenol	ND	16.7	40.0	"		ND				30	
2-Chloronaphthalene	ND	12.2	40.0	"		ND				30	
2-Chlorophenol	ND	13.0	40.0	"		ND				30	
4-Chlorophenyl phenyl ether	ND	9.80	40.0	"		ND				30	
Chrysene	ND	5.74	40.0	"		15.5				30	
Dibenz (a,h) anthracene	ND	10.0	80.0	"		ND				30	
Dibenzofuran	ND	10.8	40.0	"		ND				30	
Di-n-butyl phthalate	ND	7.74	80.0	"		153				30	
1,2-Dichlorobenzene	ND	18.1	40.0	"		ND				30	
1,3-Dichlorobenzene	ND	17.0	40.0	"		ND				30	
1,4-Dichlorobenzene	ND	17.1	40.0	"		ND				30	
3,3'-Dichlorobenzidine	ND	10.5	300	"		ND				30	
2,4-Dichlorophenol	ND	10.6	40.0	"		ND				30	
Diethyl phthalate	ND	3.22	40.0	"		ND				30	
2,4-Dimethylphenol	ND	4.80	160	"		ND				30	
Dimethyl phthalate	ND	6.72	40.0	"		ND				30	
4,6-Dinitro-2-methylphenol	ND	11.0	100	"		ND				30	
2,4-Dinitrophenol	ND	21.9	200	"		ND				30	
2,4-Dinitrotoluene	6190	8.16	40.0	"		24700			120	30	QR-02

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Client Name: Vulcan Materials Co. Foothill  
 Project Name: Chula Vista-WCS

EMA Log #: 14A0265

**Semivolatile Organic Compounds by EPA Method 8270C - Quality Control**

Analyte	Result	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
---------	--------	-----	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	-------

**Batch 4010915**

<b>Duplicate (4010915-DUP1)</b>	<b>Source: 14A0206-01</b>			<b>Prepared &amp; Analyzed: 01/09/14</b>							
2,6-Dinitrotoluene	ND	12.0	40.0	ug/kg		2140				30	
Di-n-octyl phthalate	ND	9.22	80.0	"		ND				30	
Fluoranthene	30.8	6.86	40.0	"		ND				30	J
Fluorene	ND	9.00	40.0	"		ND				30	
Hexachlorobenzene	ND	6.20	40.0	"		ND				30	
Hexachlorobutadiene	ND	14.2	40.0	"		ND				30	
Hexachlorocyclopentadiene	ND	14.0	100	"		ND				30	
Hexachloroethane	ND	17.8	40.0	"		ND				30	
Indeno (1,2,3-cd) pyrene	ND	8.66	60.0	"		ND				30	
Isophorone	ND	15.1	40.0	"		ND				30	
2-Methylnaphthalene	ND	15.2	40.0	"		ND				30	
2-Methylphenol	ND	13.1	40.0	"		ND				30	
4-Methylphenol (3-Methylphenol)	81.7	12.5	80.0	"		21.4			117	30	QR-02
Naphthalene	ND	14.5	40.0	"		ND				30	
2-Nitroaniline	ND	7.82	100	"		ND				30	
3-Nitroaniline	ND	13.1	200	"		ND				30	
4-Nitroaniline	ND	11.0	140	"		ND				30	
Nitrobenzene	ND	16.1	40.0	"		ND				30	
2-Nitrophenol	ND	15.1	40.0	"		ND				30	
4-Nitrophenol	ND	5.70	140	"		ND				30	
N-Nitrosodimethylamine	ND	16.0	40.0	"		ND				30	
N-Nitrosodiphenylamine	ND	16.0	70.0	"		ND				30	
N-Nitrosodi-n-propylamine	ND	15.8	60.0	"		ND				30	
Pentachlorophenol	ND	12.0	80.0	"		ND				30	
Phenanthrene	ND	3.90	40.0	"		ND				30	
Phenol	ND	17.6	60.0	"		ND				30	
Pyrene	ND	5.76	40.0	"		ND				30	
Pyridine	ND	17.7	200	"		ND				30	
1,2,4-Trichlorobenzene	ND	14.2	40.0	"		ND				30	
2,4,5-Trichlorophenol	ND	15.3	60.0	"		ND				30	
2,4,6-Trichlorophenol	ND	11.1	60.0	"		ND				30	
<i>Surrogate: 2-Fluorophenol</i>	<i>869</i>			<i>"</i>	<i>1140</i>		<i>76</i>	<i>25-121</i>			
<i>Surrogate: Phenol-d6</i>	<i>861</i>			<i>"</i>	<i>1140</i>		<i>76</i>	<i>24-113</i>			
<i>Surrogate: Nitrobenzene-d5</i>	<i>771</i>			<i>"</i>	<i>1140</i>		<i>68</i>	<i>23-120</i>			
<i>Surrogate: 2-Fluorobiphenyl</i>	<i>918</i>			<i>"</i>	<i>1140</i>		<i>81</i>	<i>30-115</i>			
<i>Surrogate: 2,4,6-Tribromophenol</i>	<i>826</i>			<i>"</i>	<i>1140</i>		<i>73</i>	<i>19-122</i>			
<i>Surrogate: Terphenyl-d14</i>	<i>775</i>			<i>"</i>	<i>1140</i>		<i>68</i>	<i>18-137</i>			

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Client Name: Vulcan Materials Co. Foothill  
 Project Name: Chula Vista-WCS

EMA Log #: 14A0265

**Semivolatile Organic Compounds by EPA Method 8270C - Quality Control**

Analyte	Result	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
---------	--------	-----	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	-------

**Batch 4010915**

<b>Matrix Spike (4010915-MS1)</b>	<b>Source: 14A0206-01</b>			<b>Prepared &amp; Analyzed: 01/09/14</b>							
Acenaphthene	1930	20.5	80.0	ug/kg	2270	ND	85	46-140			
4-Chloro-3-methylphenol	1940	33.4	80.0	"	2270	ND	85	42-139			
2-Chlorophenol	1900	25.9	80.0	"	2270	ND	83	30-135			
Di-n-butyl phthalate	1860	15.5	160	"	2270	153	75	24-152			
1,4-Dichlorobenzene	1610	34.2	80.0	"	2270	ND	71	36-137			
2,4-Dinitrotoluene	48300	16.3	80.0	"	2270	24700	NR	28-145			QM-08
4-Nitrophenol	1210	11.4	280	"	2270	ND	53	23-150			
N-Nitrosodi-n-propylamine	2260	31.6	120	"	2270	ND	100	31-161			
Pentachlorophenol	1540	24.1	160	"	2270	ND	68	3-159			
Phenol	1730	35.2	120	"	2270	ND	76	31-138			
Pyrene	1650	11.5	80.0	"	2270	ND	73	30-152			
1,2,4-Trichlorobenzene	1810	28.3	80.0	"	2270	ND	80	39-134			
<i>Surrogate: 2-Fluorophenol</i>	<i>1610</i>			<i>"</i>	<i>2270</i>		<i>71</i>	<i>25-121</i>			
<i>Surrogate: Phenol-d6</i>	<i>1540</i>			<i>"</i>	<i>2270</i>		<i>68</i>	<i>24-113</i>			
<i>Surrogate: Nitrobenzene-d5</i>	<i>1560</i>			<i>"</i>	<i>2270</i>		<i>69</i>	<i>23-120</i>			
<i>Surrogate: 2-Fluorobiphenyl</i>	<i>1770</i>			<i>"</i>	<i>2270</i>		<i>78</i>	<i>30-115</i>			
<i>Surrogate: 2,4,6-Tribromophenol</i>	<i>1600</i>			<i>"</i>	<i>2270</i>		<i>70</i>	<i>19-122</i>			
<i>Surrogate: Terphenyl-dl4</i>	<i>1560</i>			<i>"</i>	<i>2270</i>		<i>69</i>	<i>18-137</i>			

<b>Matrix Spike Dup (4010915-MSD1)</b>	<b>Source: 14A0206-01</b>			<b>Prepared &amp; Analyzed: 01/09/14</b>							
Acenaphthene	2030	20.5	80.0	ug/kg	2270	ND	89	46-140	5	30	
4-Chloro-3-methylphenol	2060	33.4	80.0	"	2270	ND	91	42-139	6	30	
2-Chlorophenol	2060	25.9	80.0	"	2270	ND	91	30-135	8	30	
Di-n-butyl phthalate	1920	15.5	160	"	2270	153	78	24-152	3	30	
1,4-Dichlorobenzene	1760	34.2	80.0	"	2270	ND	78	36-137	9	30	
2,4-Dinitrotoluene	30300	16.3	80.0	"	2270	24700	247	28-145	46	30	QM-08
4-Nitrophenol	1350	11.4	280	"	2270	ND	60	23-150	11	30	
N-Nitrosodi-n-propylamine	2430	31.6	120	"	2270	ND	107	31-161	7	30	
Pentachlorophenol	1780	24.1	160	"	2270	ND	78	3-159	14	30	
Phenol	2200	35.2	120	"	2270	ND	97	31-138	24	30	
Pyrene	1270	11.5	80.0	"	2270	ND	56	30-152	26	30	
1,2,4-Trichlorobenzene	1930	28.3	80.0	"	2270	ND	85	39-134	6	30	
<i>Surrogate: 2-Fluorophenol</i>	<i>1780</i>			<i>"</i>	<i>2270</i>		<i>78</i>	<i>25-121</i>			
<i>Surrogate: Phenol-d6</i>	<i>1600</i>			<i>"</i>	<i>2270</i>		<i>70</i>	<i>24-113</i>			
<i>Surrogate: Nitrobenzene-d5</i>	<i>1570</i>			<i>"</i>	<i>2270</i>		<i>69</i>	<i>23-120</i>			
<i>Surrogate: 2-Fluorobiphenyl</i>	<i>1910</i>			<i>"</i>	<i>2270</i>		<i>84</i>	<i>30-115</i>			
<i>Surrogate: 2,4,6-Tribromophenol</i>	<i>1760</i>			<i>"</i>	<i>2270</i>		<i>77</i>	<i>19-122</i>			
<i>Surrogate: Terphenyl-dl4</i>	<i>1660</i>			<i>"</i>	<i>2270</i>		<i>73</i>	<i>18-137</i>			

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

### Notes and Definitions

- QR-04 The RPD between the sample and sample duplicate is not valid since both results are below the reporting limit for this analyte.
- QR-02 The RPD result exceeded the QC limits due to non-homogeneity of sample.
- QM-08 The spike recovery was outside of the QC limits due to noted non-homogeneity of the QC sample matrix.
- QM-06 Due to noted non-homogeneity of the QC sample matrix, the MS/MSD did not provide reliable results for accuracy and precision. Sample results for the QC batch were accepted based on LCS/LCSD percent recoveries and RPD values.
- QB-01 The method blank contains analyte at a concentration above the MRL; however, concentration is less than 10% of the sample result, which is negligible according to method criteria.
- J Detected but below the Reporting Limit; therefore, result is an estimated concentration (CLP J-Flag).
- ND Analyte NOT DETECTED at or above the reporting limit (or method detection limit when specified)
- NR Not Reported
- dry Sample results reported on a dry weight basis (if indicated in units column)
- RPD Relative Percent Difference
- MDL Method detection limit (indicated per client's request)

*The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.*





EnviroMatrix



Analytical, Inc.

22 January 2014

Vulcan Materials Co. Foothill  
Attn: Jeff Pollard  
16009 Foothill Blvd.  
Irwindale CA, CA 91706

**EMA Log #: 14A0455**

**Project Name: NASSCO Cover Material**

Enclosed are the results of analyses for samples received by the laboratory on 01/17/14 11:15. Samples were analyzed pursuant to client request utilizing EPA or other ELAP approved methodologies. I certify that this data is in compliance both technically and for completeness.

A handwritten signature in black ink, appearing to read 'Dan Verdon', is written over a light gray circular stamp.

**Dan Verdon**  
**Laboratory Director**

CA ELAP Certification #: 2564

4340 Viewridge Avenue, Suite A - San Diego, California 92123 - (858) 560-7717 - Fax (858) 560-7763  
**Analytical Chemistry Laboratory**

Client Name: Vulcan Materials Co. Foothill  
Project Name: NASSCO Cover Material

EMA Log #: 14A0455

**ANALYTICAL REPORT FOR SAMPLES**

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
NASSCO Cover Material	14A0455-01	Soil	01/17/14 11:10	01/17/14 11:15

*The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.*

EnviroMatrix Analytical, Inc.



Client Name: Vulcan Materials Co. Foothill  
 Project Name: NASSCO Cover Material

EMA Log #: 14A0455

**Total Metals by EPA 6000/7000 Series Methods**

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>NASSCO Cover Material (14A0455-01) Soil    Sampled: 01/17/14 11:10    Received: 01/17/14 11:15</b>										
Silver	ND	0.10	0.50	mg/kg	1	4012022	01/20/14	01/21/14	EPA 6010	
Arsenic	ND	0.43	1.00	"	"	"	"	01/20/14	"	
Cadmium	ND	0.08	1.00	"	"	"	"	"	"	
<b>Chromium</b>	<b>4.35</b>	0.40	1.00	"	"	"	"	"	"	
<b>Copper</b>	<b>3.29</b>	0.09	1.00	"	"	"	"	"	"	
Mercury	ND	0.02	0.05	"	"	4012036	01/20/14	01/20/14	EPA 7471	
<b>Nickel</b>	<b>1.46</b>	0.31	1.00	"	"	4012022	01/20/14	01/20/14	EPA 6010	
<b>Lead</b>	<b>0.79</b>	0.79	1.00	"	"	"	"	"	"	J
<b>Zinc</b>	<b>22.0</b>	0.56	1.00	"	"	"	"	"	"	

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Client Name: Vulcan Materials Co. Foothill  
 Project Name: NASSCO Cover Material

EMA Log #: 14A0455

**Polychlorinated Biphenyls by EPA Method 8082**

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>NASSCO Cover Material (14A0455-01) Soil    Sampled: 01/17/14 11:10    Received: 01/17/14 11:15</b>										
Aroclor 1016	ND	4.60	20.0	ug/kg	1	4011717	01/20/14	01/21/14	EPA 8082	
Aroclor 1221	ND	4.60	20.0	"	"	"	"	"	"	
Aroclor 1232	ND	4.60	20.0	"	"	"	"	"	"	
Aroclor 1242	ND	4.60	20.0	"	"	"	"	"	"	
Aroclor 1248	ND	4.60	20.0	"	"	"	"	"	"	
Aroclor 1254	ND	4.60	20.0	"	"	"	"	"	"	
Aroclor 1260	ND	4.60	20.0	"	"	"	"	"	"	
<i>Surrogate: TCMX</i>		<i>108 %</i>	<i>26-146</i>			<i>"</i>	<i>"</i>	<i>"</i>	<i>"</i>	

*The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.*

Client Name: Vulcan Materials Co. Foothill  
 Project Name: NASSCO Cover Material

EMA Log #: 14A0455

**Semivolatile Organic Compounds by EPA Method 8270C**

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>NASSCO Cover Material (14A0455-01) Soil    Sampled: 01/17/14 11:10    Received: 01/17/14 11:15</b>										
Benzoic acid	ND	50.0	100	ug/kg	1	4011714	01/17/14	01/21/14	EPA 8270C	
Acenaphthene	ND	5.12	20.0	"	"	"	"	"	"	
Acenaphthylene	ND	5.37	20.0	"	"	"	"	"	"	
Anthracene	ND	2.82	20.0	"	"	"	"	"	"	
Benzidine	ND	150	150	"	"	"	"	"	"	
Benzo (a) anthracene	ND	3.09	20.0	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	3.09	20.0	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	3.68	20.0	"	"	"	"	"	"	
Benzo (g,h,i) perylene	ND	4.63	40.0	"	"	"	"	"	"	
Benzo (a) pyrene	ND	3.07	20.0	"	"	"	"	"	"	
Benzyl alcohol	ND	1.44	75.0	"	"	"	"	"	"	
Bis(2-chloroethoxy)methane	ND	7.26	20.0	"	"	"	"	"	"	
Bis(2-chloroethyl)ether	ND	7.96	25.0	"	"	"	"	"	"	
Bis(2-chloroisopropyl)ether	ND	8.81	25.0	"	"	"	"	"	"	
<b>Bis(2-ethylhexyl)phthalate</b>	<b>9.49</b>	5.72	45.0	"	"	"	"	"	"	J
4-Bromophenyl phenyl ether	ND	3.71	20.0	"	"	"	"	"	"	
<b>Butyl benzyl phthalate</b>	<b>5.80</b>	4.11	40.0	"	"	"	"	"	"	J
Carbazole	ND	4.94	60.0	"	"	"	"	"	"	
4-Chloroaniline	ND	4.42	100	"	"	"	"	"	"	
4-Chloro-3-methylphenol	ND	8.34	20.0	"	"	"	"	"	"	
2-Chloronaphthalene	ND	6.11	20.0	"	"	"	"	"	"	
2-Chlorophenol	ND	6.48	20.0	"	"	"	"	"	"	
4-Chlorophenyl phenyl ether	ND	4.90	20.0	"	"	"	"	"	"	
Chrysene	ND	2.87	20.0	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	5.00	40.0	"	"	"	"	"	"	
Dibenzofuran	ND	5.42	20.0	"	"	"	"	"	"	
<b>Di-n-butyl phthalate</b>	<b>17.4</b>	3.87	40.0	"	"	"	"	"	"	J
1,2-Dichlorobenzene	ND	9.07	20.0	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	8.51	20.0	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	8.55	20.0	"	"	"	"	"	"	
3,3'-Dichlorobenzidine	ND	5.26	150	"	"	"	"	"	"	
2,4-Dichlorophenol	ND	5.32	20.0	"	"	"	"	"	"	
Diethyl phthalate	ND	1.61	20.0	"	"	"	"	"	"	
2,4-Dimethylphenol	ND	2.40	80.0	"	"	"	"	"	"	
<b>Dimethyl phthalate</b>	<b>42.3</b>	3.36	20.0	"	"	"	"	"	"	
4,6-Dinitro-2-methylphenol	ND	5.50	50.0	"	"	"	"	"	"	
2,4-Dinitrophenol	ND	10.9	100	"	"	"	"	"	"	
2,4-Dinitrotoluene	ND	4.08	20.0	"	"	"	"	"	"	
2,6-Dinitrotoluene	ND	6.02	20.0	"	"	"	"	"	"	
Di-n-octyl phthalate	ND	4.61	40.0	"	"	"	"	"	"	

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Client Name: Vulcan Materials Co. Foothill  
 Project Name: NASSCO Cover Material

EMA Log #: 14A0455

**Semivolatile Organic Compounds by EPA Method 8270C**

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>NASSCO Cover Material (14A0455-01) Soil    Sampled: 01/17/14 11:10    Received: 01/17/14 11:15</b>										
Fluoranthene	ND	3.43	20.0	ug/kg	1	4011714	01/17/14	01/21/14	EPA 8270C	
Fluorene	ND	4.50	20.0	"	"	"	"	"	"	
Hexachlorobenzene	ND	3.10	20.0	"	"	"	"	"	"	
Hexachlorobutadiene	ND	7.09	20.0	"	"	"	"	"	"	
Hexachlorocyclopentadiene	ND	6.98	50.0	"	"	"	"	"	"	
Hexachloroethane	ND	8.88	20.0	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	4.33	30.0	"	"	"	"	"	"	
Isophorone	ND	7.56	20.0	"	"	"	"	"	"	
2-Methylnaphthalene	ND	7.62	20.0	"	"	"	"	"	"	
2-Methylphenol	ND	6.56	20.0	"	"	"	"	"	"	
4-Methylphenol (3-Methylphenol)	ND	6.24	40.0	"	"	"	"	"	"	
Naphthalene	ND	7.25	20.0	"	"	"	"	"	"	
2-Nitroaniline	ND	3.91	50.0	"	"	"	"	"	"	
3-Nitroaniline	ND	6.54	100	"	"	"	"	"	"	
4-Nitroaniline	ND	5.49	70.0	"	"	"	"	"	"	
Nitrobenzene	ND	8.04	20.0	"	"	"	"	"	"	
2-Nitrophenol	ND	7.56	20.0	"	"	"	"	"	"	
4-Nitrophenol	ND	2.85	70.0	"	"	"	"	"	"	
N-Nitrosodimethylamine	ND	8.02	20.0	"	"	"	"	"	"	
N-Nitrosodiphenylamine	ND	8.02	35.0	"	"	"	"	"	"	
N-Nitrosodi-n-propylamine	ND	7.90	30.0	"	"	"	"	"	"	
Pentachlorophenol	ND	6.02	40.0	"	"	"	"	"	"	
Phenanthrene	ND	1.95	20.0	"	"	"	"	"	"	
Phenol	ND	8.81	30.0	"	"	"	"	"	"	
Pyrene	ND	2.88	20.0	"	"	"	"	"	"	
Pyridine	ND	8.85	100	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	7.08	20.0	"	"	"	"	"	"	
2,4,5-Trichlorophenol	ND	7.66	30.0	"	"	"	"	"	"	
2,4,6-Trichlorophenol	ND	5.55	30.0	"	"	"	"	"	"	
<i>Surrogate: 2-Fluorophenol</i>		72 %	25-121			"	"	"	"	
<i>Surrogate: Phenol-d6</i>		69 %	24-113			"	"	"	"	
<i>Surrogate: Nitrobenzene-d5</i>		69 %	23-120			"	"	"	"	
<i>Surrogate: 2-Fluorobiphenyl</i>		75 %	30-115			"	"	"	"	
<i>Surrogate: 2,4,6-Tribromophenol</i>		56 %	19-122			"	"	"	"	
<i>Surrogate: Terphenyl-d14</i>		66 %	18-137			"	"	"	"	

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Client Name: Vulcan Materials Co. Foothill  
 Project Name: NASSCO Cover Material

EMA Log #: 14A0455

**Total Metals by EPA 6000/7000 Series Methods - Quality Control**

Analyte	Result	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
---------	--------	-----	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	-------

**Batch 4012022**

**Blank (4012022-BLK1)**

Prepared & Analyzed: 01/20/14

Copper	ND	0.09	1.00	mg/kg							
Silver	0.14	0.10	0.50	"							QB-02, J
Cadmium	ND	0.08	1.00	"							
Chromium	ND	0.40	1.00	"							
Lead	ND	0.79	1.00	"							
Zinc	ND	0.56	1.00	"							
Nickel	ND	0.31	1.00	"							
Arsenic	ND	0.43	1.00	"							

**LCS (4012022-BS1)**

Prepared: 01/20/14 Analyzed: 01/21/14

Silver	47.9	0.10	0.50	mg/kg	50.0		96	75-125			
Cadmium	99.5	0.08	1.00	"	100		99	75-125			
Copper	105	0.09	1.00	"	100		105	75-125			
Zinc	102	0.56	1.00	"	100		102	75-125			
Chromium	102	0.40	1.00	"	100		102	75-125			
Lead	103	0.79	1.00	"	100		103	75-125			
Nickel	102	0.31	1.00	"	100		102	75-125			
Arsenic	98.4	0.43	1.00	"	100		98	75-125			

**LCS Dup (4012022-BSD1)**

Prepared & Analyzed: 01/20/14

Cadmium	98.9	0.08	1.00	mg/kg	100		99	75-125	0.5	20	
Silver	49.5	0.10	0.50	"	50.0		99	75-125	3	20	
Zinc	102	0.56	1.00	"	100		102	75-125	1	20	
Lead	102	0.79	1.00	"	100		102	75-125	0.6	20	
Copper	105	0.09	1.00	"	100		105	75-125	0.1	20	
Nickel	101	0.31	1.00	"	100		101	75-125	0.7	20	
Chromium	102	0.40	1.00	"	100		102	75-125	0.4	20	
Arsenic	97.6	0.43	1.00	"	100		98	75-125	0.8	20	

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

EnviroMatrix Analytical, Inc.



Client Name: Vulcan Materials Co. Foothill  
 Project Name: NASSCO Cover Material

EMA Log #: 14A0455

**Total Metals by EPA 6000/7000 Series Methods - Quality Control**

Analyte	Result	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
---------	--------	-----	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	-------

**Batch 4012022**

**Duplicate (4012022-DUP1)**

Source: 14A0296-01

Prepared: 01/20/14 Analyzed: 01/21/14

Silver	ND	0.10	0.50	mg/kg		ND				20	
Lead	3.35	0.79	1.00	"		3.56			6	20	
Zinc	38.0	0.56	1.00	"		38.6			2	20	
Chromium	63.4	0.40	1.00	"		59.6			6	20	
Cadmium	ND	0.08	1.00	"		ND				20	
Copper	35.1	0.09	1.00	"		35.0			0.2	20	
Nickel	19.5	0.31	1.00	"		19.1			2	20	
Arsenic	ND	0.43	1.00	"		ND				20	

**Matrix Spike (4012022-MS1)**

Source: 14A0296-01

Prepared & Analyzed: 01/20/14

Zinc	127	0.56	1.00	mg/kg	94.3	38.6	93	75-125			
Chromium	151	0.40	1.00	"	94.3	59.6	97	75-125			
Silver	40.0	0.10	0.50	"	47.2	ND	85	75-125			
Lead	88.9	0.79	1.00	"	94.3	3.56	90	75-125			
Nickel	103	0.31	1.00	"	94.3	19.1	89	75-125			
Copper	139	0.09	1.00	"	94.3	35.0	110	75-125			
Cadmium	86.2	0.08	1.00	"	94.3	ND	91	75-125			
Arsenic	87.9	0.43	1.00	"	94.3	ND	93	75-125			

**Matrix Spike Dup (4012022-MSD1)**

Source: 14A0296-01

Prepared & Analyzed: 01/20/14

Zinc	121	0.56	1.00	mg/kg	92.6	38.6	89	75-125	5	20	
Cadmium	84.1	0.08	1.00	"	92.6	ND	91	75-125	2	20	
Copper	129	0.09	1.00	"	92.6	35.0	102	75-125	7	20	
Nickel	98.8	0.31	1.00	"	92.6	19.1	86	75-125	4	20	
Silver	39.0	0.10	0.50	"	46.3	ND	84	75-125	3	20	
Lead	85.9	0.79	1.00	"	92.6	3.56	89	75-125	3	20	
Chromium	147	0.40	1.00	"	92.6	59.6	94	75-125	3	20	
Arsenic	84.8	0.43	1.00	"	92.6	ND	92	75-125	4	20	

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



Client Name: Vulcan Materials Co. Foothill  
 Project Name: NASSCO Cover Material

EMA Log #: 14A0455

**Total Metals by EPA 6000/7000 Series Methods - Quality Control**

Analyte	Result	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch 4012036</b>											
<b>Blank (4012036-BLK1)</b>					Prepared & Analyzed: 01/20/14						
Mercury	ND	0.02	0.05	mg/kg							
<b>LCS (4012036-BS1)</b>					Prepared & Analyzed: 01/20/14						
Mercury	0.17	0.02	0.05	mg/kg	0.167		100	75-125			
<b>LCS Dup (4012036-BSD1)</b>					Prepared & Analyzed: 01/20/14						
Mercury	0.17	0.02	0.05	mg/kg	0.167		102	75-125	2	20	
<b>Duplicate (4012036-DUP1)</b>					Source: 14A0455-01 Prepared & Analyzed: 01/20/14						
Mercury	ND	0.02	0.05	mg/kg		ND				20	
<b>Matrix Spike (4012036-MS1)</b>					Source: 14A0455-01 Prepared & Analyzed: 01/20/14						
Mercury	0.40	0.02	0.05	mg/kg	0.385	ND	103	75-125			
<b>Matrix Spike Dup (4012036-MSD1)</b>					Source: 14A0455-01 Prepared & Analyzed: 01/20/14						
Mercury	0.34	0.02	0.05	mg/kg	0.333	ND	103	75-125	14	20	

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Client Name: Vulcan Materials Co. Foothill  
 Project Name: NASSCO Cover Material

EMA Log #: 14A0455

**Polychlorinated Biphenyls by EPA Method 8082 - Quality Control**

Analyte	Result	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch 4011717</b>											
<b>Blank (4011717-BLK1)</b>						Prepared: 01/20/14 Analyzed: 01/21/14					
Aroclor 1016	ND	4.60	20.0	ug/kg							
Aroclor 1221	ND	4.60	20.0	"							
Aroclor 1232	ND	4.60	20.0	"							
Aroclor 1242	ND	4.60	20.0	"							
Aroclor 1248	ND	4.60	20.0	"							
Aroclor 1254	ND	4.60	20.0	"							
Aroclor 1260	ND	4.60	20.0	"							
Surrogate: TCMX	18.7			"	16.7		112	26-146			
<b>LCS (4011717-BS2)</b>						Prepared: 01/20/14 Analyzed: 01/21/14					
Aroclor 1260	93.1	4.60	20.0	ug/kg	167		56	8-127			
Surrogate: TCMX	8.42			"	16.7		50	26-146			
<b>LCS Dup (4011717-BSD2)</b>						Prepared: 01/20/14 Analyzed: 01/21/14					
Aroclor 1260	68.9	4.60	20.0	ug/kg	167		41	8-127	30	30	
Surrogate: TCMX	6.45			"	16.7		39	26-146			
<b>Duplicate (4011717-DUP1)</b>						Source: 14A0455-01 Prepared: 01/20/14 Analyzed: 01/21/14					
Aroclor 1016	ND	4.60	20.0	ug/kg		ND				30	
Aroclor 1221	ND	4.60	20.0	"		ND				30	
Aroclor 1232	ND	4.60	20.0	"		ND				30	
Aroclor 1242	ND	4.60	20.0	"		ND				30	
Aroclor 1248	ND	4.60	20.0	"		ND				30	
Aroclor 1254	ND	4.60	20.0	"		ND				30	
Aroclor 1260	ND	4.60	20.0	"		ND				30	
Surrogate: TCMX	19.4			"	16.7		116	26-146			
<b>Matrix Spike (4011717-MS2)</b>						Source: 14A0455-01 Prepared: 01/20/14 Analyzed: 01/21/14					
Aroclor 1260	184	4.60	20.0	ug/kg	167	ND	111	8-127			
Surrogate: TCMX	20.1			"	16.7		120	26-146			

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Client Name: Vulcan Materials Co. Foothill  
Project Name: NASSCO Cover Material

EMA Log #: 14A0455

**Polychlorinated Biphenyls by EPA Method 8082 - Quality Control**

Analyte	Result	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
---------	--------	-----	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	-------

**Batch 4011717**

**Matrix Spike Dup (4011717-MSD2)**

Source: 14A0455-01

Prepared: 01/20/14

Analyzed: 01/21/14

Aroclor 1260	180	4.60	20.0	ug/kg	167	ND	108	8-127	2	30	
Surrogate: TCMX	18.6			"	16.7		112	26-146			

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

EnviroMatrix



Analytical, Inc.

Client Name: Vulcan Materials Co. Foothill  
 Project Name: NASSCO Cover Material

EMA Log #: 14A0455

**Semivolatile Organic Compounds by EPA Method 8270C - Quality Control**

Analyte	Result	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
---------	--------	-----	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	-------

**Batch 4011714**

**Blank (4011714-BLK1)**

Prepared: 01/17/14 Analyzed: 01/21/14

Benzoic acid	ND	50.0	100	ug/kg
Acenaphthene	ND	5.12	20.0	"
Acenaphthylene	ND	5.37	20.0	"
Anthracene	ND	2.82	20.0	"
Benzidine	ND	150	150	"
Benzo (a) anthracene	ND	3.09	20.0	"
Benzo (b) fluoranthene	ND	3.09	20.0	"
Benzo (k) fluoranthene	ND	3.68	20.0	"
Benzo (g,h,i) perylene	ND	4.63	40.0	"
Benzo (a) pyrene	ND	3.07	20.0	"
Benzyl alcohol	ND	1.44	75.0	"
Bis(2-chloroethoxy)methane	ND	7.26	20.0	"
Bis(2-chloroethyl)ether	ND	7.96	25.0	"
Bis(2-chloroisopropyl)ether	ND	8.81	25.0	"
Bis(2-ethylhexyl)phthalate	ND	5.72	45.0	"
4-Bromophenyl phenyl ether	ND	3.71	20.0	"
Butyl benzyl phthalate	ND	4.11	40.0	"
Carbazole	ND	4.94	60.0	"
4-Chloroaniline	ND	4.42	100	"
4-Chloro-3-methylphenol	ND	8.34	20.0	"
2-Chloronaphthalene	ND	6.11	20.0	"
2-Chlorophenol	ND	6.48	20.0	"
4-Chlorophenyl phenyl ether	ND	4.90	20.0	"
Chrysene	ND	2.87	20.0	"
Dibenz (a,h) anthracene	ND	5.00	40.0	"
Dibenzofuran	ND	5.42	20.0	"
Di-n-butyl phthalate	ND	3.87	40.0	"
1,2-Dichlorobenzene	ND	9.07	20.0	"
1,3-Dichlorobenzene	ND	8.51	20.0	"
1,4-Dichlorobenzene	ND	8.55	20.0	"
3,3'-Dichlorobenzidine	ND	5.26	150	"
2,4-Dichlorophenol	ND	5.32	20.0	"
Diethyl phthalate	ND	1.61	20.0	"
2,4-Dimethylphenol	ND	2.40	80.0	"
Dimethyl phthalate	ND	3.36	20.0	"
4,6-Dinitro-2-methylphenol	ND	5.50	50.0	"
2,4-Dinitrophenol	ND	10.9	100	"
2,4-Dinitrotoluene	ND	4.08	20.0	"

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Client Name: Vulcan Materials Co. Foothill  
 Project Name: NASSCO Cover Material

EMA Log #: 14A0455

**Semivolatile Organic Compounds by EPA Method 8270C - Quality Control**

Analyte	Result	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
---------	--------	-----	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	-------

**Batch 4011714**

**Blank (4011714-BLK1)**

Prepared: 01/17/14 Analyzed: 01/21/14

2,6-Dinitrotoluene	ND	6.02	20.0	ug/kg							
Di-n-octyl phthalate	ND	4.61	40.0	"							
Fluoranthene	ND	3.43	20.0	"							
Fluorene	ND	4.50	20.0	"							
Hexachlorobenzene	ND	3.10	20.0	"							
Hexachlorobutadiene	ND	7.09	20.0	"							
Hexachlorocyclopentadiene	ND	6.98	50.0	"							
Hexachloroethane	ND	8.88	20.0	"							
Indeno (1,2,3-cd) pyrene	ND	4.33	30.0	"							
Isophorone	ND	7.56	20.0	"							
2-Methylnaphthalene	ND	7.62	20.0	"							
2-Methylphenol	ND	6.56	20.0	"							
4-Methylphenol (3-Methylphenol)	ND	6.24	40.0	"							
Naphthalene	ND	7.25	20.0	"							
2-Nitroaniline	ND	3.91	50.0	"							
3-Nitroaniline	ND	6.54	100	"							
4-Nitroaniline	ND	5.49	70.0	"							
Nitrobenzene	ND	8.04	20.0	"							
2-Nitrophenol	ND	7.56	20.0	"							
4-Nitrophenol	ND	2.85	70.0	"							
N-Nitrosodimethylamine	ND	8.02	20.0	"							
N-Nitrosodiphenylamine	ND	8.02	35.0	"							
N-Nitrosodi-n-propylamine	ND	7.90	30.0	"							
Pentachlorophenol	ND	6.02	40.0	"							
Phenanthrene	ND	1.95	20.0	"							
Phenol	ND	8.81	30.0	"							
Pyrene	ND	2.88	20.0	"							
Pyridine	ND	8.85	100	"							
1,2,4-Trichlorobenzene	ND	7.08	20.0	"							
2,4,5-Trichlorophenol	ND	7.66	30.0	"							
2,4,6-Trichlorophenol	ND	5.55	30.0	"							
Surrogate: 2-Fluorophenol	536			"	568		94	25-121			
Surrogate: Phenol-d6	515			"	568		91	24-113			
Surrogate: Nitrobenzene-d5	483			"	568		85	23-120			
Surrogate: 2-Fluorobiphenyl	537			"	568		94	30-115			
Surrogate: 2,4,6-Tribromophenol	292			"	568		51	19-122			
Surrogate: Terphenyl-d14	483			"	568		85	18-137			

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Client Name: Vulcan Materials Co. Foothill  
 Project Name: NASSCO Cover Material

EMA Log #: 14A0455

**Semivolatile Organic Compounds by EPA Method 8270C - Quality Control**

Analyte	Result	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
---------	--------	-----	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	-------

**Batch 4011714**

**LCS (4011714-BS1)**

Prepared: 01/17/14 Analyzed: 01/21/14

Acenaphthene	580	5.12	20.0	ug/kg	568		102	50-135			
4-Chloro-3-methylphenol	564	8.34	20.0	"	568		99	34-142			
2-Chlorophenol	590	6.48	20.0	"	568		104	38-125			
Di-n-butyl phthalate	593	3.87	40.0	"	568		104	44-152			
1,4-Dichlorobenzene	493	8.55	20.0	"	568		87	48-125			
2,4-Dinitrotoluene	553	4.08	20.0	"	568		97	41-144			
4-Nitrophenol	530	2.85	70.0	"	568		93	10-155			
N-Nitrosodi-n-propylamine	679	7.90	30.0	"	568		120	28-156			
Pentachlorophenol	190	6.02	40.0	"	568		33	21-133			
Phenol	539	8.81	30.0	"	568		95	35-120			
Pyrene	508	2.88	20.0	"	568		89	40-152			
1,2,4-Trichlorobenzene	558	7.08	20.0	"	568		98	47-125			
<i>Surrogate: 2-Fluorophenol</i>	<i>503</i>			<i>"</i>	<i>568</i>		<i>89</i>	<i>25-121</i>			
<i>Surrogate: Phenol-d6</i>	<i>474</i>			<i>"</i>	<i>568</i>		<i>83</i>	<i>24-113</i>			
<i>Surrogate: Nitrobenzene-d5</i>	<i>479</i>			<i>"</i>	<i>568</i>		<i>84</i>	<i>23-120</i>			
<i>Surrogate: 2-Fluorobiphenyl</i>	<i>503</i>			<i>"</i>	<i>568</i>		<i>88</i>	<i>30-115</i>			
<i>Surrogate: 2,4,6-Tribromophenol</i>	<i>408</i>			<i>"</i>	<i>568</i>		<i>72</i>	<i>19-122</i>			
<i>Surrogate: Terphenyl-d14</i>	<i>460</i>			<i>"</i>	<i>568</i>		<i>81</i>	<i>18-137</i>			

**LCS Dup (4011714-BSD1)**

Prepared: 01/17/14 Analyzed: 01/21/14

Acenaphthene	571	5.12	20.0	ug/kg	568		101	50-135	1	30	
4-Chloro-3-methylphenol	506	8.34	20.0	"	568		89	34-142	11	30	
2-Chlorophenol	565	6.48	20.0	"	568		99	38-125	4	30	
Di-n-butyl phthalate	581	3.87	40.0	"	568		102	44-152	2	30	
1,4-Dichlorobenzene	489	8.55	20.0	"	568		86	48-125	0.9	30	
2,4-Dinitrotoluene	532	4.08	20.0	"	568		94	41-144	4	30	
4-Nitrophenol	464	2.85	70.0	"	568		82	10-155	13	30	
N-Nitrosodi-n-propylamine	662	7.90	30.0	"	568		117	28-156	3	30	
Pentachlorophenol	217	6.02	40.0	"	568		38	21-133	13	30	
Phenol	527	8.81	30.0	"	568		93	35-120	2	30	
Pyrene	495	2.88	20.0	"	568		87	40-152	3	30	
1,2,4-Trichlorobenzene	551	7.08	20.0	"	568		97	47-125	1	30	
<i>Surrogate: 2-Fluorophenol</i>	<i>492</i>			<i>"</i>	<i>568</i>		<i>87</i>	<i>25-121</i>			
<i>Surrogate: Phenol-d6</i>	<i>466</i>			<i>"</i>	<i>568</i>		<i>82</i>	<i>24-113</i>			
<i>Surrogate: Nitrobenzene-d5</i>	<i>473</i>			<i>"</i>	<i>568</i>		<i>83</i>	<i>23-120</i>			
<i>Surrogate: 2-Fluorobiphenyl</i>	<i>504</i>			<i>"</i>	<i>568</i>		<i>89</i>	<i>30-115</i>			
<i>Surrogate: 2,4,6-Tribromophenol</i>	<i>365</i>			<i>"</i>	<i>568</i>		<i>64</i>	<i>19-122</i>			
<i>Surrogate: Terphenyl-d14</i>	<i>450</i>			<i>"</i>	<i>568</i>		<i>79</i>	<i>18-137</i>			

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Client Name: Vulcan Materials Co. Foothill  
 Project Name: NASSCO Cover Material

EMA Log #: 14A0455

**Semivolatile Organic Compounds by EPA Method 8270C - Quality Control**

Analyte	Result	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch 4011714</b>											
<b>Duplicate (4011714-DUP1)</b>			<b>Source: 14A0455-01</b>		Prepared: 01/17/14		Analyzed: 01/21/14				
Benzoic acid	ND	50.0	100	ug/kg		ND				30	
Acenaphthene	ND	5.12	20.0	"		ND				30	
Acenaphthylene	ND	5.37	20.0	"		ND				30	
Anthracene	ND	2.82	20.0	"		ND				30	
Benzidine	ND	150	150	"		ND				30	
Benzo (a) anthracene	ND	3.09	20.0	"		ND				30	
Benzo (b) fluoranthene	ND	3.09	20.0	"		ND				30	
Benzo (k) fluoranthene	ND	3.68	20.0	"		ND				30	
Benzo (g,h,i) perylene	ND	4.63	40.0	"		ND				30	
Benzo (a) pyrene	ND	3.07	20.0	"		ND				30	
Benzyl alcohol	ND	1.44	75.0	"		ND				30	
Bis(2-chloroethoxy)methane	ND	7.26	20.0	"		ND				30	
Bis(2-chloroethyl)ether	ND	7.96	25.0	"		ND				30	
Bis(2-chloroisopropyl)ether	ND	8.81	25.0	"		ND				30	
Bis(2-ethylhexyl)phthalate	15.3	5.72	45.0	"		9.49			47	30	QR-04, J
4-Bromophenyl phenyl ether	ND	3.71	20.0	"		ND				30	
Butyl benzyl phthalate	14.5	4.11	40.0	"		5.80			86	30	QR-04, J
Carbazole	ND	4.94	60.0	"		ND				30	
4-Chloroaniline	ND	4.42	100	"		ND				30	
4-Chloro-3-methylphenol	ND	8.34	20.0	"		ND				30	
2-Chloronaphthalene	ND	6.11	20.0	"		ND				30	
2-Chlorophenol	ND	6.48	20.0	"		ND				30	
4-Chlorophenyl phenyl ether	ND	4.90	20.0	"		ND				30	
Chrysene	ND	2.87	20.0	"		ND				30	
Dibenz (a,h) anthracene	ND	5.00	40.0	"		ND				30	
Dibenzofuran	ND	5.42	20.0	"		ND				30	
Di-n-butyl phthalate	11.5	3.87	40.0	"		17.4			41	30	QR-04, J
1,2-Dichlorobenzene	ND	9.07	20.0	"		ND				30	
1,3-Dichlorobenzene	ND	8.51	20.0	"		ND				30	
1,4-Dichlorobenzene	ND	8.55	20.0	"		ND				30	
3,3'-Dichlorobenzidine	ND	5.26	150	"		ND				30	
2,4-Dichlorophenol	ND	5.32	20.0	"		ND				30	
Diethyl phthalate	ND	1.61	20.0	"		ND				30	
2,4-Dimethylphenol	ND	2.40	80.0	"		ND				30	
Dimethyl phthalate	39.8	3.36	20.0	"		42.3			6	30	
4,6-Dinitro-2-methylphenol	ND	5.50	50.0	"		ND				30	
2,4-Dinitrophenol	ND	10.9	100	"		ND				30	
2,4-Dinitrotoluene	ND	4.08	20.0	"		ND				30	

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Client Name: Vulcan Materials Co. Foothill  
 Project Name: NASSCO Cover Material

EMA Log #: 14A0455

**Semivolatile Organic Compounds by EPA Method 8270C - Quality Control**

Analyte	Result	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
---------	--------	-----	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	-------

**Batch 4011714**

<b>Duplicate (4011714-DUP1)</b>	<b>Source: 14A0455-01</b>			Prepared: 01/17/14 Analyzed: 01/21/14		
2,6-Dinitrotoluene	ND	6.02	20.0	ug/kg	ND	30
Di-n-octyl phthalate	ND	4.61	40.0	"	ND	30
Fluoranthene	ND	3.43	20.0	"	ND	30
Fluorene	ND	4.50	20.0	"	ND	30
Hexachlorobenzene	ND	3.10	20.0	"	ND	30
Hexachlorobutadiene	ND	7.09	20.0	"	ND	30
Hexachlorocyclopentadiene	ND	6.98	50.0	"	ND	30
Hexachloroethane	ND	8.88	20.0	"	ND	30
Indeno (1,2,3-cd) pyrene	ND	4.33	30.0	"	ND	30
Isophorone	ND	7.56	20.0	"	ND	30
2-Methylnaphthalene	ND	7.62	20.0	"	ND	30
2-Methylphenol	ND	6.56	20.0	"	ND	30
4-Methylphenol (3-Methylphenol)	ND	6.24	40.0	"	ND	30
Naphthalene	ND	7.25	20.0	"	ND	30
2-Nitroaniline	ND	3.91	50.0	"	ND	30
3-Nitroaniline	ND	6.54	100	"	ND	30
4-Nitroaniline	ND	5.49	70.0	"	ND	30
Nitrobenzene	ND	8.04	20.0	"	ND	30
2-Nitrophenol	ND	7.56	20.0	"	ND	30
4-Nitrophenol	ND	2.85	70.0	"	ND	30
N-Nitrosodimethylamine	ND	8.02	20.0	"	ND	30
N-Nitrosodiphenylamine	ND	8.02	35.0	"	ND	30
N-Nitrosodi-n-propylamine	ND	7.90	30.0	"	ND	30
Pentachlorophenol	ND	6.02	40.0	"	ND	30
Phenanthrene	ND	1.95	20.0	"	ND	30
Phenol	ND	8.81	30.0	"	ND	30
Pyrene	ND	2.88	20.0	"	ND	30
Pyridine	ND	8.85	100	"	ND	30
1,2,4-Trichlorobenzene	ND	7.08	20.0	"	ND	30
2,4,5-Trichlorophenol	ND	7.66	30.0	"	ND	30
2,4,6-Trichlorophenol	ND	5.55	30.0	"	ND	30
Surrogate: 2-Fluorophenol	469			"	568	83 25-121
Surrogate: Phenol-d6	459			"	568	81 24-113
Surrogate: Nitrobenzene-d5	436			"	568	77 23-120
Surrogate: 2-Fluorobiphenyl	475			"	568	84 30-115
Surrogate: 2,4,6-Tribromophenol	381			"	568	67 19-122
Surrogate: Terphenyl-d14	397			"	568	70 18-137

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Client Name: Vulcan Materials Co. Foothill  
 Project Name: NASSCO Cover Material

EMA Log #: 14A0455

**Semivolatile Organic Compounds by EPA Method 8270C - Quality Control**

Analyte	Result	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
---------	--------	-----	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	-------

**Batch 4011714**

<b>Matrix Spike (4011714-MS1)</b>	<b>Source: 14A0455-01</b>			<b>Prepared: 01/17/14</b>		<b>Analyzed: 01/21/14</b>					
Acenaphthene	475	5.12	20.0	ug/kg	568	ND	84	46-140			
4-Chloro-3-methylphenol	438	8.34	20.0	"	568	ND	77	42-139			
2-Chlorophenol	469	6.48	20.0	"	568	ND	83	30-135			
Di-n-butyl phthalate	507	3.87	40.0	"	568	17.4	86	24-152			
1,4-Dichlorobenzene	396	8.55	20.0	"	568	ND	70	36-137			
2,4-Dinitrotoluene	426	4.08	20.0	"	568	ND	75	28-145			
4-Nitrophenol	310	2.85	70.0	"	568	ND	55	23-150			
N-Nitrosodi-n-propylamine	534	7.90	30.0	"	568	ND	94	31-161			
Pentachlorophenol	189	6.02	40.0	"	568	ND	33	3-159			
Phenol	417	8.81	30.0	"	568	ND	73	31-138			
Pyrene	413	2.88	20.0	"	568	ND	73	30-152			
1,2,4-Trichlorobenzene	445	7.08	20.0	"	568	ND	78	39-134			
<i>Surrogate: 2-Fluorophenol</i>	395			"	568		69	25-121			
<i>Surrogate: Phenol-d6</i>	369			"	568		65	24-113			
<i>Surrogate: Nitrobenzene-d5</i>	379			"	568		67	23-120			
<i>Surrogate: 2-Fluorobiphenyl</i>	410			"	568		72	30-115			
<i>Surrogate: 2,4,6-Tribromophenol</i>	340			"	568		60	19-122			
<i>Surrogate: Terphenyl-d14</i>	344			"	568		61	18-137			

<b>Matrix Spike Dup (4011714-MSD1)</b>	<b>Source: 14A0455-01</b>			<b>Prepared: 01/17/14</b>		<b>Analyzed: 01/21/14</b>					
Acenaphthene	514	5.12	20.0	ug/kg	568	ND	91	46-140	8	30	
4-Chloro-3-methylphenol	486	8.34	20.0	"	568	ND	86	42-139	10	30	
2-Chlorophenol	516	6.48	20.0	"	568	ND	91	30-135	9	30	
Di-n-butyl phthalate	541	3.87	40.0	"	568	17.4	92	24-152	6	30	
1,4-Dichlorobenzene	425	8.55	20.0	"	568	ND	75	36-137	7	30	
2,4-Dinitrotoluene	470	4.08	20.0	"	568	ND	83	28-145	10	30	
4-Nitrophenol	389	2.85	70.0	"	568	ND	68	23-150	23	30	
N-Nitrosodi-n-propylamine	588	7.90	30.0	"	568	ND	103	31-161	10	30	
Pentachlorophenol	235	6.02	40.0	"	568	ND	41	3-159	21	30	
Phenol	480	8.81	30.0	"	568	ND	84	31-138	14	30	
Pyrene	454	2.88	20.0	"	568	ND	80	30-152	9	30	
1,2,4-Trichlorobenzene	481	7.08	20.0	"	568	ND	85	39-134	8	30	
<i>Surrogate: 2-Fluorophenol</i>	433			"	568		76	25-121			
<i>Surrogate: Phenol-d6</i>	418			"	568		74	24-113			
<i>Surrogate: Nitrobenzene-d5</i>	419			"	568		74	23-120			
<i>Surrogate: 2-Fluorobiphenyl</i>	442			"	568		78	30-115			
<i>Surrogate: 2,4,6-Tribromophenol</i>	387			"	568		68	19-122			
<i>Surrogate: Terphenyl-d14</i>	384			"	568		68	18-137			

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Client Name: Vulcan Materials Co. Foothill  
Project Name: NASSCO Cover Material

EMA Log #: 14A0455

### Notes and Definitions

- QR-04 The RPD between the sample and sample duplicate is not valid since both results are below the reporting limit for this analyte.
- QB-02 Analyte detected in associated method blank, however all samples in batch are non-detect for this analyte.
- J Detected but below the Reporting Limit; therefore, result is an estimated concentration (CLP J-Flag).
- ND Analyte NOT DETECTED at or above the reporting limit (or method detection limit when specified)
- NR Not Reported
- dry Sample results reported on a dry weight basis (if indicated in units column)
- RPD Relative Percent Difference
- MDL Method detection limit (indicated per client's request)

*The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.*

EnviroMatrix Analytical, Inc.



14A0455

EnviroMatrix Analytical, Inc.

4340 Viewridge Ave., Ste. A - San Diego, CA 92123 - Phone (858) 560-7717 - Fax (858) 560-7763

CHAIN-OF-CUSTODY RECORD

EMA LOG #:

Client: Yudger Materials
Attn: Jeff Pollard
Samplers(s): Marco Estudillo
Address: 10051 Blic Mtn Rd
Phone: 626-926-5789
Email: pollard@vmcmail.com
Billing Address: Same

Project ID:
Project #:
PO #:

Table with columns: ID #, Client Sample ID, Sample Date, Sample Time, Sample Matrix # / Type, Container # / Type. Row 1: 1, Vasco Cover Material, 1/17/11, 11:10, 5, 1/6

Matrix Codes: A = Air, DW = Drinking Water, GW = Groundwater, SW = Storm Water
WW = Wastewater, S = Soil, SED = Sediment, SD = Solid, T = Tissue, O = Oil, L = Liquid
Shipped By: Courier, UPS, FedEx, USPS, Client Drop Off, Other
Turn-Around-Time: Same Day, 24 hr, 48 hr, 3 day, 4 day, 5 day, STD (7 day)
Reporting Requirements: Fax, PDF, Excel, Geotracker/EDF, Hard Copy, EDT
Sample Disposal: By Laboratory, Return to Client: P/U or Delivery, Archive
Sample Integrity: Containers Properly Preserved, Yes No N/A
Temp @ Receipt: 200C, NOICE
COC/Labels Agree: Yes No N/A
Sampled By: Client, EMA Autosampler

Project/Sample Comments: Also Report Benzene Acid

Requested Analysis table with columns: RELINQUISHED BY, DATE/TIME, RECEIVED BY. Rows for various tests like Oil & Grease, 8015B (TPH), 624/8260 (VOC), etc.

Additional costs may apply, consult a project manager for details.
EMA reserves the right to return any samples that do not match our waste profile.
NOTE: By relinquishing samples to EMA, inc., client agrees to pay for the services requested on this COC form and any additional analyses performed on this project. Payment for services is due within 30 days from date of invoice. Samples will be disposed of 7 days after report has been finalized unless otherwise noted. All work is subject to EMA's terms and conditions.

APPENDIX E  
SUMMARY OF MANUAL WATER  
QUALITY RESULTS

---

**Table E-1  
Baseline Water Quality Monitoring Results**

Date	Time	Station Type	Station ID	Latitude <sup>1</sup>	Longitude <sup>1</sup>	Water Quality Measurements			Visual Observations		
						DO (mg/L)	pH	Turbidity (NTU)	Odor	Presence of Surface Pollution	Discoloration or Turbidity
9/27/2013	11:47:32	Reference	PRE-BG-130927	32.69161	-117.15031	7.1	8.1	2.4	No	No	No
9/27/2013	12:07:39	Shipyards Site	PRE-BL1-130927	32.68947	-117.14301	6.4	8.0	1.5	No	No	No
9/27/2013	12:13:45	Shipyards Site	PRE-BL2-130927	32.68840	-117.14374	6.6	8.1	1.5	No	No	No
9/27/2013	12:32:24	Shipyards Site	PRE-BL3-130927	32.68904	-117.14241	6.5	8.0	1.5	No	No	No
9/27/2013	12:37:11	Shipyards Site	PRE-BL4-130927	32.68950	-117.14132	6.7	8.1	1.7	No	No	No
9/27/2013	12:42:15	Shipyards Site	PRE-BL5-130927	32.68968	-117.14043	6.7	8.1	1.5	No	No	No
9/27/2013	12:53:44	Shipyards Site	PRE-BL6-130927	32.68961	-117.13924	6.9	8.1	1.0	No	No	No
9/27/2013	13:04:45	Shipyards Site	PRE-BL7-130927	32.68816	-117.14041	6.9	8.1	1.9	No	No	No
9/27/2013	12:58:21	Shipyards Site	PRE-BL8-130927	32.68848	-117.13888	6.9	8.1	1.1	No	No	No
9/27/2013	13:15:13	Shipyards Site	PRE-BL9-130927	32.68754	-117.14115	6.9	8.1	2.6	No	No	No
9/27/2013	13:40:15	Shipyards Site	PRE-BL10-130927	32.68742	-117.13991	7.2	8.1	1.8	No	No	No

Notes:

DO = dissolved oxygen

mg/L = milligrams per liter

NTU = Nephelometric Turbidity Units

<sup>1</sup> California State Plane, Zone 6, North American Datum 1983 (NAD83)

**Table E-2  
Water Quality Monitoring Results During Dredging - September 2013**

Date	Time	Station Type	Station ID	Latitude <sup>1</sup>	Longitude <sup>1</sup>	Water Quality Measurements			Visual Observations		
						DO (mg/L)	pH	Turbidity (NTU)	Odor	Presence of Surface Pollution	Discoloration or Turbidity
9/30/2013	12:36:34	Reference	D-BG-130930	32.69167	-117.15029	7.0	7.9	1.1	No	No	No
9/30/2013	13:06:56	Early Warning	D-EWS-130930	32.68655	-117.13959	7.1	8.0	1.4	No	No	No
9/30/2013	13:21:45	Early Warning	D-EWN-130930	32.68833	-117.13960	6.7	7.9	1.0	No	No	No
9/30/2013	13:29:03	Compliance	D-CNN-130930	32.68911	-117.13921	6.6	7.9	0.6	No	No	No
9/30/2013	13:48:56	Compliance	D-CON-130930	32.68884	-117.14059	7.2	8.0	1.7 <sup>2</sup>	No	No	No
9/30/2013	14:14:50	Reference	D-BG-130930	32.69161	-117.15027	7.1	8.0	1.1 <sup>3</sup>	No	No	No
9/30/2013	14:30:50	Compliance	D-CON-130930	32.68883	-117.14065	7.2	8.0	0.9 <sup>3</sup>	No	No	No
9/30/2013	14:42:29	Compliance	D-COS-130930	32.68769	-117.14112	7.5	8.0	1.5 <sup>2</sup>	No	No	No
9/30/2013	14:50:48	Compliance	D-COS-130930	32.68766	-117.14120	7.4	8.0	1.2 <sup>3</sup>	No	No	No
9/30/2013	15:04:26	Compliance	D-CNS-130930	32.68592	-117.14018	7.4	8.0	1.3	No	No	No

Notes:

Receiving water limitation compliance criteria: DO shall not be depressed more than 10 percent from the reference (BG); pH shall not be changed more than

0.2 unit from reference (BG); pH shall not be depressed below 7.0 nor raised above 9.0; turbidity must not exceed 20 percent of reference (BG; if natural

DO = dissolved oxygen

mg/L = milligrams per liter

NTU = Nephelometric Turbidity Units

1 California State Plane, Zone 6, North American Datum 1983 (NAD83)

2 Compliance station potentially exceeds receiving water limitation compliance criteria. Upon further investigation, potential exceedances were not confirmed.

3 Measurements were re-taken at the reference station and compliance stations to confirm the exceedance. Turbidity concentrations were within 20 percent of the reference; therefore, compliance criteria were met.

**Table E-3  
Water Quality Monitoring Results During Dredging - October 2013**

Date	Time	Station Type	Station ID	Latitude <sup>1</sup>	Longitude <sup>1</sup>	Water Quality Measurements			Visual Observations		
						DO (mg/L)	pH	Turbidity (NTU)	Odor	Presence of Surface Pollution	Discoloration or Turbidity
10/1/2013	12:51:58	Reference	D-BG-131001	32.69169	-117.15039	7.0	8.0	1.7	No	No	No
10/1/2013	13:17:52	Early Warning	D-EWS-131001	32.68691	-117.14014	7.1	8.0	1.6	No	No	No
10/1/2013	13:30:36	Early Warning	D-EWN-1001	32.68851	-117.13930	6.7	8.0	0.8	No	No	No
10/1/2013	13:39:06	Compliance	D-CNN-131001	32.68904	-117.13918	6.7	8.0	0.7	No	No	No
10/1/2013	13:55:42	Compliance	D-CON-131001	32.68914	-117.14016	7.0	8.0	1.7	No	No	No
10/1/2013	14:04:53	Compliance	D-COS-131001	32.68786	-117.14087	7.1	8.0	1.6	No	No	No
10/1/2013	14:34:48	Compliance	D-CNS-131001	32.68595	-117.14001	7.2	8.0	2.6 <sup>2</sup>	No	No	No
10/1/2013	14:54:39	Reference	D-BG-131001	32.69180	-117.15039	7.0	8.0	2.8 <sup>3</sup>	No	No	No
10/1/2013	15:06:42	Compliance	D-CNS-131001	32.68596	-117.13991	7.3	8.0	2.8 <sup>3</sup>	No	No	No
10/15/2013	15:00:28	Reference	D-BG-131015	32.69156	-117.15026	6.9	8.1	1.9	No	No	No
10/15/2013	17:25:31	Early Warning	D-EWS-131015	32.68692	-117.14028	6.9	8.0	1.3	No	No	No
10/15/2013	17:31:03	Early Warning	D-EWN-131015	32.68849	-117.13926	7.3	8.1	1.4	No	No	No
10/15/2013	17:35:53	Compliance	D-CNN-131015	32.68957	-117.13942	7.4	8.1	1.6	No	No	No
10/15/2013	17:42:26	Compliance	D-CON-131015	32.68905	-117.14065	7.1	8.1	1.7	No	No	No
10/15/2013	17:52:25	Compliance	D-CNS-131015	32.68616	-117.13916	7.1	8.1	1.9	No	No	No
10/15/2013	17:59:48	Compliance	D-COS-131015	32.68600	-117.13963	7.1	8.1	1.9	No	No	No
10/17/2013	13:16:17	Reference	D-BG-131017	32.69153	-117.15047	7.0	7.9	1.9	No	No	No
10/17/2013	13:32:26	Early Warning	D-EWS-131017	32.68678	-117.13983	6.7	7.9	1.1	No	No	No
10/17/2013	13:39:03	Early Warning	D-EWN-131017	32.68867	-117.13938	6.8	7.9	1.7	No	No	No
10/17/2013	13:43:08	Compliance	D-CNN-131017	32.68938	-117.13917	6.7	7.9	1.7	No	No	No
10/17/2013	13:47:53	Compliance	D-CON-131017	32.68830	-117.14065	6.6	7.9	2.0	No	No	No
10/17/2013	13:55:29	Compliance	D-CNS-131017	32.68615	-117.13910	7.0	7.9	1.9	No	No	No
10/17/2013	14:03:35	Compliance	D-COS-131017	32.68600	-117.14000	7.0	7.9	1.7	No	No	No
10/24/2013	13:58:17	Reference	D-BG-131024	32.69167	-117.15015	6.6	7.9	1.7	No	No	No
10/24/2013	14:19:43	Early Warning	D-EWS-131024	32.68655	-117.13952	6.4	7.9	1.9	No	No	No
10/24/2013	14:26:08	Early Warning	D-EWN-131024	32.68878	-117.13927	6.4	7.9	1.2	No	No	No
10/24/2013	14:29:13	Compliance	D-CNN-131024	32.68950	-117.13918	6.3	7.9	1.9	No	No	No
10/24/2013	14:34:02	Compliance	D-CON-131024	32.68795	-117.14072	6.3	7.9	1.1	No	No	No
10/24/2013	14:37:51	Compliance	D-CNS-131024	32.68593	-117.13892	6.5	7.9	1.4	No	No	No
10/24/2013	14:45:18	Compliance	D-COS-131024	32.68605	-117.14017	6.5	7.9	1.5	No	No	No

**Table E-3  
Water Quality Monitoring Results During Dredging - October 2013**

Date	Time	Station Type	Station ID	Latitude <sup>1</sup>	Longitude <sup>1</sup>	Water Quality Measurements			Visual Observations		
						(mg/L)	pH	(NTU)	Odor	Surface Pollution	Turbidity
10/31/2013	12:40:12	Reference	D-BG-131031	32.69172	-117.15057	7.1	7.9	2.9	No	No	No
10/31/2013	13:06:55	Early Warning	D-EWN-131031	32.68978	-117.13920	6.8	7.9	1.1	No	No	No
10/31/2013	13:17:31	Early Warning	D-EWS-131031	32.68740	-117.13937	6.6	7.9	2.0	No	No	No
10/31/2013	13:22:12	Compliance	D-CNN-131031	32.68964	-117.14029	6.7	7.9	1.9	No	No	No
10/31/2013	13:26:12	Compliance	D-CON-131031	32.68779	-117.14066	6.7	7.9	1.9	No	No	No
10/31/2013	13:30:36	Compliance	D-CNS-131031	32.68643	-117.13951	6.7	8.0	1.9	No	No	No
10/31/2013	13:39:40	Compliance	D-COS-131031	32.68663	-117.14044	7.0	8.0	1.8	No	No	No

Notes:

Receiving water limitation compliance criteria: DO shall not be depressed more than 10 percent from the reference (BG); pH shall not be changed more than 0.2 unit from reference (BG); pH shall not be depressed below 7.0 nor raised above 9.0; turbidity must not exceed 20 percent of reference (BG; if natural turbidity from 0 to 50 NTU).

DO = dissolved oxygen

mg/L = milligrams per liter

NTU = Nephelometric Turbidity Units

1 Latitude and longitude coordinates in decimal degrees, North American Datum 1983 (NAD83)

2 Compliance station potentially exceeds receiving water limitation compliance criteria. Upon further investigation, potential exceedances were not confirmed.

3 Measurements were re-taken at the reference station and compliance stations to confirm the exceedance. Turbidity concentrations were within 20 percent of the reference; therefore, compliance criteria were met.

**Table E-4  
Water Quality Monitoring Results During Dredging - November 2013**

Date	Time	Station Type	Station ID	Latitude <sup>1</sup>	Longitude <sup>1</sup>	Water Quality Measurements			Visual Observations		
						DO (mg/L)	pH	Turbidity (NTU)	Odor	Surface Pollution	Discoloration or Turbidity
11/5/2013	13:14:16	Reference	D-BG-131105	32.69167	-117.15066	7.1	8.0	1.3	No	No	No
11/5/2013	13:36:51	Early Warning	D-EWS-131105	32.68739	-117.13921	6.8	8.0	1.4	No	No	No
11/5/2013	13:44:44	Early Warning	D-EWN-131105	32.68807	-117.13970	6.8	8.0	1.3	No	No	No
11/5/2013	13:50:10	Compliance	D-CNN-131105	32.68953	-117.14055	6.7	8.0	1.4	No	No	No
11/5/2013	13:56:37	Compliance	D-CON-131105	32.68755	-117.14017	6.8	8.0	1.3	No	No	No
11/5/2013	14:09:03	Compliance	D-COS-131105	32.68705	-117.13996	6.8	8.0	1.3	No	No	No
11/5/2013	14:16:57	Compliance	D-CNS-131105	32.68637	-117.13931	6.9	8.0	1.4	No	No	No
11/12/2013	12:58:09	Reference	D-BG-131112	32.69136	-117.15026	7.4	8.0	1.7	No	No	No
11/12/2013	13:23:34	Early Warning	D-EWN-131112	32.68805	-117.13966	7.2	8.0	1.6	No	No	No
11/12/2013	13:33:24	Early Warning	D-EWS-131112	32.68714	-117.13969	7.5	8.0	1.7	No	No	No
11/12/2013	13:44:11	Compliance	D-CNN-131112	32.68936	-117.14075	7.3	8.0	1.6	No	No	No
11/12/2013	13:51:19	Compliance	D-CON-131112	32.68849	-117.14093	7.2	8.0	0.9	No	No	No
11/12/2013	14:01:27	Compliance	D-COS-131112	32.68755	-117.14056	7.3	8.0	1.1	No	No	No
11/12/2013	14:07:02	Compliance	D-CNS-131112	32.68664	-117.13990	7.3	8.0	1.5	No	No	No
11/20/2013	15:08:31	Reference	D-BG-131120	32.69157	-117.15053	6.6	7.9	4.1	No	No	No
11/20/2013	15:30:41	Early Warning	D-EWN-131120	32.68917	-117.14334	7.2	8.0	3.0	No	No	No
11/20/2013	15:38:11	Early Warning	D-EWS-131120	32.68882	-117.14205	6.0	8.0	2.6	No	No	No
11/20/2013	15:41:06	Compliance	D-CNS-131120	32.68884	-117.14106	6.2	8.0	1.8	No	No	No
11/20/2013	15:44:44	Compliance	D-COS-131120	32.68816	-117.14169	8.8	8.0	2.5	No	No	No
11/20/2013	16:17:24	Compliance	D-CNN-131120	32.68854	-117.14369	8.9	8.0	2.9	No	No	No
11/20/2013	16:22:29	Compliance	D-CON-131120	32.68821	-117.14330	6.2	8.0	2.9	No	No	No
11/26/2013	12:00:52	Reference	D-BG-131126	32.69133	-117.15017	6.6	8.0	2.1	No	No	No
11/26/2013	12:33:57	Early Warning	D-EWN-131126	32.68919	-117.14313	9.2	8.0	1.5	No	No	No
11/26/2013	13:09:29	Early Warning	D-EWS-131126	32.68868	-117.14182	6.0	8.0	5.0 <sup>2</sup>	No	No	No
11/26/2013	13:22:10	Reference	D-BG-131126	32.69130	-117.15028	7.0 <sup>4</sup>	8.0	1.9 <sup>3</sup>	No	No	No
11/26/2013	13:39:25	Early Warning	D-EWS-131126	32.68874	-117.14190	7.2	8.0	5.0 <sup>3</sup>	No	No	No
11/26/2013	13:46:34	Compliance	D-CNS-131126	32.68941	-117.14022	8.3	8.0	1.8	No	No	No
11/26/2013	13:53:37	Compliance	D-COS-131126	32.68826	-117.14156	6.5	8.0	1.2	No	No	No
11/26/2013	13:57:22	Compliance	D-CON-131126	32.68829	-117.14229	8.0	8.0	1.5	No	No	No

**Table E-4  
Water Quality Monitoring Results During Dredging - November 2013**

Date	Time	Station Type	Station ID	Latitude <sup>1</sup>	Longitude <sup>1</sup>	Water Quality Measurements			Visual Observations		
						DO (mg/L)	pH	Turbidity (NTU)	Odor	Surface Pollution	Discoloration or Turbidity
11/26/2013	14:00:26	Compliance	D-CNN-131126	32.68852	-117.14286	8.5	8.0	1.4	No	No	No
11/26/2013	14:37:06	Early Warning	D-EWS-131126	32.68886	-117.14199	6.0 <sup>4</sup>	8.0	2.5 <sup>3</sup>	No	No	No

Notes:

Receiving water limitation compliance criteria: DO shall not be depressed more than 10 percent from the reference (BG); pH shall not be changed more than 0.2 unit from reference (BG); pH shall not be depressed below 7.0 nor raised above 9.0; turbidity must not exceed 20 percent of reference (BG; if natural turbidity from 0 to 50 NTU).

DO = dissolved oxygen

mg/L = milligrams per liter

NTU = Nephelometric Turbidity Units

1 Latitude and longitude coordinates in decimal degrees, North American Datum 1983 (NAD83)

2 Early warning station results were potentially greater than the receiving water limitation. These results were used as an early indicator of a potential water quality issue. Dredging best management practices (BMPs) were evaluated and were found to be working properly. Results at the compliance stations met criteria; therefore, compliance criteria were not exceeded.

3 Measurements were re-taken at the reference station and early warning station to confirm the initial results. Turbidity concentrations were greater than 20 percent of the second reference measurement; therefore, the initial results were confirmed. Dredging BMPs were evaluated and found to be working properly and results at the compliance stations met criteria; therefore, compliance criteria were not exceeded.

4 Measurements were re-taken at the reference station and early warning station to confirm the initial results. DO concentrations were depressed by more than 10 percent of the second reference measurement. Dredging BMPs were evaluated and found to be working properly and results at the compliance stations met criteria; therefore, compliance criteria were not exceeded.

**Table E-5  
Water Quality Monitoring Results During Dredging - December 2013**

Date	Time	Station Type	Station ID	Latitude <sup>1</sup>	Longitude <sup>1</sup>	Water Quality Measurements			Visual Observations		
						DO (mg/L)	pH	Turbidity (NTU)	Odor	Surface Pollution	Discoloration or Turbidity
12/10/2013	12:04:54	Reference	D-BG-131210	32.69130	-117.15044	7.4	8.4	0.6	No	No	No
12/10/2013	12:35:43	Early Warning	D-EWN-131210	32.68844	-117.14237	7.4	8.3	0.9 <sup>2</sup>	No	No	No
12/10/2013	12:42:56	Early Warning	D-EWS-131210	32.68877	-117.14114	7.4	8.3	2.0 <sup>2</sup>	No	No	No
12/10/2013	12:55:22	Compliance	D-CNS-131210	32.68902	-117.13932	7.4	8.3	0.2	No	No	No
12/10/2013	12:59:53	Compliance	D-COS-131210	32.68749	-117.13982	7.4	8.3	0.4	No	No	No
12/10/2013	13:05:34	Compliance	D-CON-131210	32.68765	-117.14167	7.4	8.4	0.7	No	No	No
12/10/2013	13:15:42	Compliance	D-CNN-131210	32.68804	-117.14367	7.5	8.3	0.1	No	No	No
12/19/2013	13:13:09	Reference	D-BG-131219	32.69163	-117.15065	7.8	8.0	1.0	No	No	No
12/19/2013	13:48:29	Early Warning	D-EWS-131219	32.68882	-117.13875	7.8	8.1	0.1	No	No	No
12/19/2013	13:54:48	Early Warning	D-EWN-131219	32.68864	-117.13950	7.7	8.1	0.6	No	No	No
12/19/2013	14:00:19	Compliance	D-CNS-131219	32.68804	-117.13820	7.8	8.1	0.2	No	No	No
12/19/2013	14:06:10	Compliance	D-CNN-131219	32.68896	-117.14038	7.7	8.1	0.2	No	No	No
12/19/2013	14:12:14	Compliance	D-CON-131219	32.68795	-117.13968	7.7	8.1	1.1	No	No	No
12/19/2013	14:16:09	Compliance	D-COS-131219	32.68745	-117.13914	7.7	8.1	0.3	No	No	No
12/23/2013	14:37:56	Reference	D-BG-131223	32.69126	-117.15035	8.1	7.7	0.2	No	No	No
12/23/2013	15:06:04	Early Warning	D-EWS-131223	32.68852	-117.13850	8.0	8.0	0.1	No	No	No
12/23/2013	15:11:13	Compliance	D-CNS-131223	32.68777	-117.13777	8.0	8.0	0.1	No	No	No
12/23/2013	15:14:52	Compliance	D-COS-131223	32.68735	-117.13909	8.0	8.0	0.2	No	No	No
12/23/2013	15:17:38	Early Warning	D-EWN-131223	32.68833	-117.13972	7.8	8.0	0.0	No	No	No
12/23/2013	15:22:30	Compliance	D-CON-131223	32.68786	-117.14072	7.7	8.0	0.1	No	No	No
12/23/2013	15:27:01	Compliance	D-CNN-131223	32.68943	-117.14022	7.9	8.0	0.1	No	No	No
12/31/2013	12:35:22	Reference	D-BG-131231	32.69150	-117.15055	8.4	7.9	1.4	No	No	No
12/31/2013	12:57:35	Early Warning	D-EWN-131231	32.68888	-117.13924	8.1	8.0	0.5	No	No	No
12/31/2013	13:04:15	Early Warning	D-EWS-131231	32.68867	-117.13896	8.2	8.0	0.6	No	No	No

**Table E-5  
Water Quality Monitoring Results During Dredging - December 2013**

Date	Time	Station Type	Station ID	Latitude <sup>1</sup>	Longitude <sup>1</sup>	Water Quality Measurements			Visual Observations		
						DO (mg/L)	pH	Turbidity (NTU)	Odor	Surface Pollution	Discoloration or Turbidity
12/31/2013	13:09:50	Compliance	D-CNS-131231	32.68804	-117.13850	8.2	8.0	0.8	No	No	No
12/31/2013	13:13:35	Compliance	D-COS-131231	32.68794	-117.13873	8.2	8.0	0.8	No	No	No
12/31/2013	13:21:19	Compliance	D-CON-131231	32.68784	-117.13991	8.2	8.0	0.3	No	No	No
12/31/2013	13:23:48	Compliance	D-CNN-131231	32.68830	-117.14046	8.0	8.0	0.6	No	No	No

Notes:

Receiving water limitation compliance criteria: DO shall not be depressed more than 10 percent from the reference (BG); pH shall not be changed more than 0.2 unit from reference (BG); pH shall not be depressed below 7.0 nor raised above 9.0; turbidity must not exceed 20 percent of reference (BG; if natural turbidity from 0 to 50 NTU).

DO = dissolved oxygen

mg/L = milligrams per liter

NTU = Nephelometric Turbidity Units

1 Latitude and longitude coordinates in decimal degrees, North American Datum 1983 (NAD83)

2 Early warning station results were greater than the receiving water limitation. These results were used as an early indicator of a potential water quality issue.

Dredging best management practices were evaluated and found to be working properly and results at the compliance stations met criteria; therefore, compliance criteria were not exceeded.

**Table E-6  
Water Quality Monitoring Results During Dredging - January 2014**

Date	Time	Station Type	Station ID	Latitude <sup>1</sup>	Longitude <sup>1</sup>	Water Quality Measurements			Visual Observations		
						DO (mg/L)	pH	Turbidity (NTU)	Odor	Surface Pollution	Discoloration or Turbidity
1/14/2014	13:58:17	Reference	D-BG-140114	32.69165	-117.15057	7.2	8.1	1.1	No	No	No
1/14/2014	14:19:43	Early Warning	D-EWN-140114	32.68962	-117.14042	8.6	8.1	0.2	No	No	No
1/14/2014	14:26:08	Compliance	D-CNN-140114	32.68958	-117.14133	7.5	8.1	0.8	No	No	No
1/14/2014	14:29:13	Compliance	D-CON-140114	32.68852	-117.14097	7.3	8.1	0.8	No	No	No
1/14/2014	14:34:02	Early Warning	D-EWS-140114	32.68922	-117.13918	7.3	8.1	0.6	No	No	No
1/14/2014	14:37:51	Compliance	D-CNS-140114	32.68860	-117.13850	6.9	8.1	0.8	No	No	No
1/14/2014	14:45:18	Compliance	D-COS-140114	32.68775	-117.13958	7.4	8.1	1	No	No	No
1/21/2014	12:03:16	Reference	D-BG-140121	32.69115	-117.15028	8.1	7.8	0.7	No	No	No
1/21/2014	13:10:52	Early Warning	D-EWS-140121	32.68909	-117.13916	8.0	7.9	0.9 <sup>2</sup>	No	No	No
1/21/2014	12:38:09	Early Warning	D-EWN-140121	32.68914	-117.14044	7.8	7.9	0.5	No	No	No
1/21/2014	12:43:30	Compliance	D-CNN-140121	32.68949	-117.14137	7.7	7.9	0.2	No	No	No
1/21/2014	13:03:43	Compliance	D-CON-140121	32.68796	-117.14080	7.7	7.9	0.8	No	No	No
1/21/2014	13:21:36	Compliance	D-COS-140121	32.68736	-117.13961	7.9	7.9	0.9 <sup>2</sup>	No	No	No
1/21/2014	13:15:45	Compliance	D-CNS-140121	32.68807	-117.13816	7.9	7.9	0.8	No	No	No

Notes:

Receiving water limitation compliance criteria: DO shall not be depressed more than 10 percent from the reference (BG); pH shall not be changed more than 0.2 unit from reference (BG); pH shall not be depressed below 7.0 nor raised above 9.0; turbidity must not exceed 20 percent of reference (BG; if natural turbidity from 0 to 50 NTU)

DO = dissolved oxygen

mg/L = milligrams per liter

NTU = Nephelometric Turbidity Units

1 Latitude and longitude coordinates in decimal degrees, North American Datum 1983 (NAD83)

2 Compliance station potentially exceeds receiving water limitation compliance criteria. Upon further investigation, potential exceedances were attributed to natural variability, which was increased due to very low turbidity concentrations and not dredging operations.

**Table E-7**  
**Water Quality Monitoring Results During Material Placement - February 2014**

Date	Time	Station Type	Station ID	Latitude <sup>1</sup>	Longitude <sup>1</sup>	Water Quality Measurements			Visual Observations		
						DO (mg/L)	pH	Turbidity (NTU)	Odor	Surface Pollution	Discoloration or Turbidity
2/10/2014	15:15:58	Reference	P-BG-140210	32.69110	-117.15015	8.0	8.0	1.0	No	No	No
2/10/2014	15:45:42	Early Warning	P-EWN-140210	32.68756	-117.14026	8.3	8.1	0.2	No	No	No
2/10/2014	15:50:50	Compliance	P-CNN-140210	32.68915	-117.14019	8.2	8.1	0.9	No	No	No
2/10/2014	15:56:24	Compliance	P-CON-140210	32.68755	-117.14120	8.2	8.1	0.7	No	No	No
2/10/2014	16:02:49	Early Warning	P-EWS-140210	32.68682	-117.13981	8.2	8.1	1.0	No	No	No
2/10/2014	16:16:10	Compliance	P-CNS-140210	32.68638	-117.13772	7.8	8.1	5.0 <sup>2</sup>	No	No	No
2/10/2014	16:28:51	Reference	P-BG-140210	32.69121	-117.15018	8.1	8.1	0.9	No	No	No
2/10/2014	16:45:18	Compliance	P-CNS-140210	32.68641	-117.13783	8.0	8.1	4.2 <sup>2</sup>	No	No	No
2/10/2014	16:59:45	Compliance	P-COS-140210	32.68651	-117.14025	8.1	8.1	1.4 <sup>3</sup>	No	No	No
2/10/2014	17:07:09	Reference	P-BG-140210	32.69126	-117.15037	8.0	8.1	1.5	No	No	No
2/10/2014	17:13:49	Compliance	P-COS-1402103	32.68668	-117.14078	8.0	8.1	1.4	No	No	No
2/11/2014	12:29:43	Reference	P-BG-140211	32.69161	-117.15054	8.0	8.0	1.5	No	No	No
2/11/2014	12:46:53	Compliance	P-CON-140211	32.68700	-117.14193	8.0	8.0	0.4	No	No	No
2/11/2014	12:55:34	Compliance	P-COS-140211	32.68598	-117.14035	8.0	8.0	0.7	No	No	No
2/11/2014	13:13:55	Early Warning	P-EWN-140211	32.68734	-117.14062	7.9	8.0	1.3	No	No	No
2/11/2014	13:25:52	Compliance	P-CNN-140211	32.68892	-117.14074	7.7	8.0	2.4 <sup>3</sup>	No	No	No
2/11/2014	13:40:42	Reference	P-BG-140211	32.69125	-117.15032	8.1	8.0	2.3	No	No	No
2/11/2014	13:55:18	Compliance	P-CNN-140211	32.68897	-117.14081	7.6	8.0	2.5	No	No	No
2/11/2014	14:01:13	Early Warning	P-EWS-140211	32.68645	-117.13947	7.8	8.0	2.8 <sup>4</sup>	No	No	No
2/11/2014	14:05:38	Compliance	P-CNS-140211	32.68647	-117.13755	7.8	8.0	1.1	No	No	No
2/12/2014	13:17:54	Reference	P-BG-140212	32.69137	-117.15037	7.9	8.0	0.7	No	No	No
2/12/2014	13:34:17	Compliance	P-CON-140212	32.68669	-117.14164	7.8	8.1	0.8	No	No	No
2/12/2014	14:00:01	Early Warning	P-EWN-140212	32.68758	-117.14074	7.6	8.0	8.4 <sup>4</sup>	No	No	No
2/12/2014	14:05:05	Compliance	P-CNN-140212	32.68900	-117.14095	7.6	8.0	0.5	No	No	No
2/12/2014	14:13:43	Early Warning	P-EWS-140212	32.68684	-117.13956	7.7	8.0	1.0 <sup>4</sup>	No	No	No
2/12/2014	14:18:26	Compliance	P-CNS-140212	32.68646	-117.13772	7.7	8.0	0.8	No	No	No
2/12/2014	14:27:10	Compliance	P-COS-140212	32.68584	-117.13925	7.8	8.0	0.8	No	No	No
2/17/2014	13:43:28	Reference	P-BG-140217	32.69153	-117.15070	8.1	7.9	0.9	No	No	No
2/17/2014	14:07:05	Early Warning	P-EWN-140217	32.68759	-117.14047	7.9	7.9	0.3	No	No	No
2/17/2014	14:19:46	Compliance	P-CNN-140217	32.68956	-117.14041	7.9	7.9	1.0	No	No	No
2/17/2014	14:27:48	Compliance	P-CON-140217	32.68764	-117.14120	7.8	8.0	1.0	No	No	No

**Table E-7  
Water Quality Monitoring Results During Material Placement - February 2014**

Date	Time	Station Type	Station ID	Latitude <sup>1</sup>	Longitude <sup>1</sup>	Water Quality Measurements			Visual Observations		
						DO (mg/L)	pH	Turbidity (NTU)	Odor	Surface Pollution	Discoloration or Turbidity
2/17/2014	14:32:35	Early Warning	P-EWS-140217	32.68682	-117.13987	7.9	8.0	0.6	No	No	No
2/17/2014	14:36:11	Compliance	P-COS-140217	32.68602	-117.13933	7.9	8.0	0.7	No	No	No
2/17/2014	14:40:24	Compliance	P-CNS-140217	32.68635	-117.13776	8.0	8.0	0.2	No	No	No
2/25/2014	11:47:58	Reference	P-BG-140225	32.69178	-117.15048	8.0	7.9	0.9	No	No	No
2/25/2014	12:11:17	Early Warning	P-EWS-140225	32.68876	-117.13881	8.0	7.9	1.0	No	No	No
2/25/2014	12:15:17	Compliance	P-CNS-140225	32.68817	-117.13842	8.0	8.0	0.5	No	No	No
2/25/2014	12:19:04	Compliance	P-COS-140225	32.68804	-117.13910	8.0	8.0	0.7	No	No	No
2/25/2014	12:23:03	Compliance	P-CON-140225	32.68852	-117.14045	7.7	7.9	0.9	No	No	No
2/25/2014	12:25:41	Compliance	P-CNN-140225	32.68966	-117.14046	7.8	7.9	0.7	No	No	No
2/25/2014	12:31:05	Early Warning	P-EWN-140225	32.68865	-117.13932	7.9	8.0	1.0	No	No	No

Notes:

Receiving water limitation compliance criteria: DO shall not be depressed more than 10 percent from the reference (BG); pH shall not be changed more than 0.2 unit from reference (BG); pH shall not be depressed below 7.0 nor raised above 9.0; turbidity must not exceed 20 percent of reference (BG; if natural turbidity from 0 to 50 NTU).

DO = dissolved oxygen

mg/L = milligrams per liter

NTU = Nephelometric Turbidity Units

1 Latitude and longitude coordinates in decimal degrees, North American Datum 1983 (NAD83)

2 Compliance station potentially exceeded receiving water limitation compliance criterion for turbidity. Measurements were re-taken at the reference station and compliance

station to confirm the exceedance. The turbidity concentration was greater than 20 percent of the second reference measurement; therefore, the initial result was confirmed. Visual observations indicated a tightly defined turbidity plume well contained within the silt curtain (and no silt curtain breach) and concentrations at both

3 Compliance station potentially exceeded receiving water limitation compliance criterion for turbidity. Measurements were re-taken at the reference and compliance stations to confirm the exceedance. Turbidity concentrations were within 20 percent of the reference; therefore, compliance criteria were not exceeded.

4 Early warning station results exceeded the receiving water limitation criterion for turbidity. These results were used as an early indicator of a potential water quality issue. Results at the compliance stations met the criterion; therefore, compliance criteria were not exceeded.

**Table E-8**  
**Water Quality Monitoring Results During Material Placement - March 2014**

Date	Time	Station Type	Station ID	Latitude <sup>1</sup>	Longitude <sup>1</sup>	Water Quality Measurements			Visual Observations		
						DO (mg/L)	pH	Turbidity (NTU)	Odor	Surface Pollution	Discoloration or Turbidity
3/6/2014	12:31:01	Reference	P-BG-140306	32.69135	-117.15027	7.4	8.0	1.3	No	No	No
3/6/2014	12:53:15	Early Warning	P-EWN-140306	32.68740	-117.14025	7.3	8.0	0.3	No	No	No
3/6/2014	12:59:07	Compliance	P-CNN-140306	32.68892	-117.14085	7.1	8.0	0.8	No	No	No
3/6/2014	13:03:59	Early Warning	P-EWS-140306	32.68658	-117.13970	7.4	8.0	0.7	No	No	No
3/6/2014	13:07:59	Compliance	P-CNS-140306	32.68627	-117.13790	7.2	8.0	0.2	No	No	No
3/6/2014	13:12:53	Compliance	P-CON-140306	32.68680	-117.14106	7.5	8.0	0.2	No	No	No
3/6/2014	13:17:15	Compliance	P-COS-140306	32.68552	-117.13964	7.5	8.0	0.4	No	No	No
3/11/2014	14:19:57	Reference	P-BG-140311	32.69145	-117.15023	6.9	8.4	0.4	No	No	No
3/11/2014	14:49:48	Early Warning	P-EWN-140311	32.68759	-117.13986	6.5	8.4	0.0 <sup>4</sup>	No	No	No
3/11/2014	14:52:30	Early Warning	P-EWS-140311	32.68710	-117.13972	7.6	8.4	0.0 <sup>4</sup>	No	No	No
3/11/2014	14:57:53	Compliance	P-CNN-140311	32.68892	-117.14060	6.7	8.4	0.0 <sup>4</sup>	No	No	No
3/11/2014	15:07:12	Compliance	P-CON-140311	32.68782	-117.14122	7.8	8.4	0.0 <sup>4</sup>	No	No	No
3/11/2014	15:13:07	Compliance	P-COS-140311	32.68628	-117.13980	6.8	8.4	0.0 <sup>4</sup>	No	No	No
3/11/2014	15:16:08	Compliance	P-CNS-140311	32.68626	-117.13808	6.6	8.4	0.0 <sup>4</sup>	No	No	No
3/17/2014	12:32:00	Reference	P-BG-140317	32.69163	-117.15029	8.5	9.1 <sup>2</sup>	1.5	No	No	No
3/17/2014	12:56:10	Early Warning	P-EWN-140317	32.68924	-117.14058	7.9	9.1 <sup>2</sup>	1.1	No	No	No
3/17/2014	13:03:16	Compliance	P-CNN-140317	32.68938	-117.14191	8.1	9.1 <sup>2</sup>	1.5	No	No	No
3/17/2014	13:08:09	Compliance	P-CON-140317	32.68829	-117.14146	8.0	9.1 <sup>2</sup>	1.7	No	No	No
3/17/2014	13:13:43	Early Warning	P-EWS-140317	32.68859	-117.13919	9.4	9.2 <sup>2</sup>	2.5 <sup>3</sup>	No	No	No
3/17/2014	13:17:17	Compliance	P-CNS-140317	32.68790	-117.13855	8.3	9.1 <sup>2</sup>	0.0 <sup>4</sup>	No	No	No
3/17/2014	13:22:39	Compliance	P-COS-140317	32.68775	-117.13960	8.1	9.1 <sup>2</sup>	1.6	No	No	No
3/24/2014	13:41:00	Reference	P-BG-140324	32.69118	-117.15033	7.6	8.0	0.0 <sup>4</sup>	No	No	No
3/24/2014	14:04:00	Early Warning	P-EWS-140324	32.68923	-117.14207	7.6	8.0	0.0 <sup>4</sup>	No	No	No
3/24/2014	14:08:00	Compliance	P-CNS-140324	32.68960	-117.14147	8.6	8.0	0.0 <sup>4</sup>	No	No	No
3/24/2014	14:12:00	Compliance	P-COS-140324	32.68852	-117.14153	8.3	8.0	0.0 <sup>4</sup>	No	No	No
3/24/2014	14:17:00	Early Warning	P-EWN-140324	32.68900	-117.14277	7.6	8.0	0.0 <sup>4</sup>	No	No	No
3/24/2014	14:22:00	Compliance	P-CNN-140324	32.68845	-117.14368	8.0	8.0	0.0 <sup>4</sup>	No	No	No
3/24/2014	14:25:00	Compliance	P-CON-140324	32.68777	-117.14282	7.9	8.0	0.0 <sup>4</sup>	No	No	No

**Table E-8**  
**Water Quality Monitoring Results During Material Placement - March 2014**

Notes:

Receiving water limitation compliance criteria: DO shall not be depressed more than 10 percent from the reference (BG); pH shall not be changed more than 0.2 unit from reference (BG); pH shall not be depressed below 7.0 nor raised above 9.0; turbidity must not exceed 20 percent of reference (BG; if natural turbidity from 0 to 50 NTU).

DO = dissolved oxygen

mg/L = milligrams per liter

NTU = Nephelometric Turbidity Units

1 Latitude/Longitude coordinates in decimal degrees, North American Datum 1983 (NAD83)

2 Early warning, compliance, and reference stations all exceeded receiving water limitation compliance criteria for pH. Concentrations were consistent with the reference station and therefore not attributed to sand placement operations.

3 Early warning station results exceeded receiving water limitation compliance criteria for turbidity. These results were used as an early indicator of a potential water quality issue. The compliance stations met criteria, therefore, compliance criteria were not exceeded.

4 The resolution for turbidity values using the Horiba U52 is 0.1 NTU

APPENDIX F  
DISCHARGE MONITORING  
LABORATORY RESULTS

---

**INDUSTRY SELF MONITORING FORM**  
 City of San Diego Public Utilities  
 Industrial Wastewater Control Program  
 9192 Topaz Way San Diego, CA 92123-1119  
 Tel (858) 654-4100 Fax (858) 654-4110

*Note: If Monthly Average Limits apply, these self-monitoring results will be averaged with all other VAL/D analyses for samples collected in the same calendar year including IWCP monitoring data, to determine compliance.*

Michael Palmer  
 San Diego Bay Environmental Restoration Fund –  
 South Trust  
 c/o NASSCO MS 22A  
 2798 Harbor Drive  
 San Diego, CA 92113

\*\*\*\*\*  
 \* RETURN REPORT \*  
 \* by \*  
 \* 15-NOV-2013 \*  
 \* \*\*\*\*\*

IU# Pmt#: 11-0563 01-A Conn: 100 ISMF#: 152127<sup>1</sup>

Site Address: Harbor Drive, San Diego Permitted IW Flow: 288000

Sample Point: Final 21,000 gallon tank of treatment system, just before water meter

Laboratory Name: Calscience Environmental Laboratories, Inc. \*COPY OF ANALYSIS REQUIRED\*

Sample#: 0152127-01 Date: 10/26/2013 Time(s): 10:02

**Grab** Please note: Grab samples were taken from the tank prior to initial discharge to Conn 100. No discharge had occurred at this time. Discharge was initiated following receipt of analytical results on 10/29/2013 and composite sampling of discharging water will soon occur and will be reported in November's Industry Self-Monitoring Form.

Sampler: C. Douglas Description: clear water

<u>Parameter</u>	<u>Units</u>	<u>Daily Max</u>	<u>Result</u>
Chemical Oxygen Demand	mg/L		330
Solids, Total Suspended	mg/L		10
Copper, Total	mg/L		0.0251
Lead, Total	mg/L		0.0141
Nickel, Total	mg/L		0.0158
Zinc, Total	mg/L		0.0418
Arsenic, Total	mg/L	5	0.0150
Mercury, Total	mg/L	0.2	<0.0002 ND

Sample#: 0152127-02 Date: 10/31/13 Time(s): 16:30

**Evaluation only {no sample}**

Sampler: A. Meeks Description: clear water

Beginning Meter Read and Date	gals	10,900	10/01/2013
Ending Meter Read and Date	gals	96,500	10/31/2013
Average Flow/calendar day thru Connection	gpd	2,761	
Imported Flow During Period	gals	85,600	
Maximum Flow/calendar day thru Connection	gpd	50,500	
Maximum gals/min thru meter	gpm	250	250
Minimum gals/min thru meter when discharging	gpm	50	110

<sup>1</sup> Please see sample number D-ID-131026 in the attached laboratory report.

**INDUSTRY SELF MONITORING FORM**  
 City of San Diego Public Utilities  
 Industrial Wastewater Control Program  
 9192 Topaz Way San Diego, CA 92123-1119  
 Tel (858) 654-4100 Fax (858) 654-4110

*Note: If Monthly Average Limits apply, these self-monitoring results will be averaged with all other VAL/D analyses for samples collected in the same calendar year including IWCP monitoring data, to determine compliance.*

Michael Palmer  
 San Diego Bay Environmental Restoration Fund –  
 South Trust  
 c/o NASSCO MS 22A  
 2798 Harbor Drive  
 San Diego, CA 92113

\*\*\*\*\*  
 \* RETURN REPORT \*  
 \* by \*  
 \* 15-NOV-2013 \*  
 \*\*\*\*\*

IU# Pmt#: 11-0563 01-A Conn: 100 ISMF#: 152127<sup>1</sup>

Site Address: Harbor Drive, San Diego Permitted IW Flow: 288000  
 Sample Point: Final 21,000 gallon tank of treatment system, just before water meter  
 Laboratory Name: Calscience Environmental Laboratories, Inc.\*COPY OF ANALYSIS REQUIRED\*  
 Sample#: 0152127-03 Date: 10/26/2013 Time(s): 1000  
**Pesticide and PCB** grab  
 Sampler: C. Douglas Description: clear water

<i>Parameter</i>	<i>Units</i>	<i>Daily Max</i>	<i>Result</i>
<i>PCBs, Total</i>	<i>µg/L</i>	<i>3</i>	<i>&lt;1.0 µg/L</i>

1 Please see sample number D-ID-131026 in the attached laboratory report.



**CERTIFICATION**

All analyses were conducted at a laboratory certified for such analyses by the California Department of Public Health in accordance with applicable USEPA and NELAP accreditation procedures.

I certify under penalty of law that the data generated for Calscience Work Order No. 13-10-2012 were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. The Project Manager or designee who signed the Calscience Work Order has been specifically authorized and approved to do so.

The information submitted is, to the best of my knowledge and belief, true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of a fine and imprisonment for knowing violations.

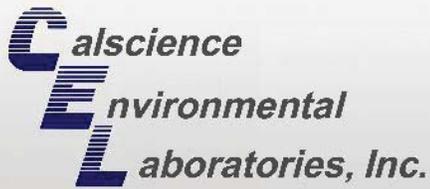
  
\_\_\_\_\_  
Signature, Laboratory Director

May 20, 2014  
Date

Name of Laboratory: **Calscience Environmental Laboratories**  
Address of Laboratory: **7440 Lincoln Way**  
**Garden Grove, CA 92841-1432**

This Certification signed by: **Steve Lane**





# CALSCIENCE

## WORK ORDER NUMBER: 13-10-2012

*The difference is service*



AIR | SOIL | WATER | MARINE CHEMISTRY

### Analytical Report For

**Client:** San Diego Bay Environmental Restoration Fund South

**Client Project Name:** SD Shipyard Wastewater Discharge

**Attention:** Mike Palmer  
C/O de maximis, Inc.  
1322 Scott Street, Suite 104  
San Diego, CA 92106-2727

Approved for release on 10/29/2013 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.



Client Project Name: SD Shipyard Wastewater Discharge  
Work Order Number: 13-10-2012

1	Work Order Narrative. . . . .	3
2	Sample Summary. . . . .	4
3	Client Sample Data. . . . .	5
	3.1 SM 2540 D Total Suspended Solids (Aqueous). . . . .	5
	3.2 SM 5220 C Chemical Oxygen Demand (Aqueous). . . . .	6
	3.3 EPA 200.8 ICP/MS Metals (Aqueous). . . . .	7
	3.4 EPA 245.1 Mercury (Aqueous). . . . .	8
	3.5 EPA 8081A Organochlorine Pesticides (Aqueous). . . . .	9
	3.6 EPA 8082 PCB Aroclors (Aqueous). . . . .	11
4	Quality Control Sample Data. . . . .	12
	4.1 MS/MSD. . . . .	12
	4.2 Sample Duplicate. . . . .	14
	4.3 LCS/LCSD. . . . .	16
5	Glossary of Terms and Qualifiers. . . . .	21
6	Chain of Custody/Sample Receipt Form. . . . .	22



## Work Order Narrative

---

Work Order: 13-10-2012

Page 1 of 1

---

### **Condition Upon Receipt:**

Samples were received under Chain of Custody (COC) on 10/26/13. They were assigned to Work Order 13-10-2012.

Unless otherwise noted on the Sample Receiving forms all samples were received in good condition and within the recommended EPA temperature criteria for the methods noted on the COC. The COC and Sample Receiving Documents are integral elements of the analytical report and are presented at the back of the report.

### **Holding Times:**

All samples were analyzed within prescribed holding times (HT) and/or in accordance with the Calscience Sample Acceptance Policy unless otherwise noted in the analytical report and/or comprehensive case narrative, if required.

Any parameter identified in 40CFR Part 136.3 Table II that is designated as "analyze immediately" with a holding time of  $\leq 15$  minutes (40CFR-136.3 Table II, footnote 4), is considered a "field" test and the reported results will be qualified as being received outside of the stated holding time unless received at the laboratory within 15 minutes of the collection time.

### **Quality Control:**

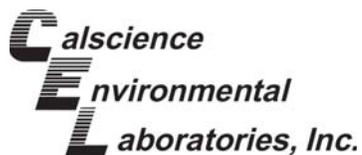
All quality control parameters (QC) were within established control limits except where noted in the QC summary forms or described further within this report.

### **Additional Comments:**

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

### **Subcontractor Information:**

Unless otherwise noted below (or on the subcontract form), no samples were subcontracted.



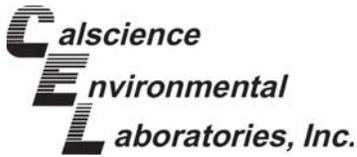
## Sample Summary

Client: San Diego Bay Environmental Restoration Fund	Work Order:	13-10-2012
South	Project Name:	SD Shipyard Wastewater Discharge
C/O de maximis, Inc., 1322 Scott Street, Suite	PO Number:	
104	Date/Time	10/26/13 13:02
San Diego, CA 92106-2727	Received:	
	Number of	5
	Containers:	

Attn: Mike Palmer

Sample Identification	Lab Number	Collection Date and Time	Number of Containers	Matrix
D-ID-131026	13-10-2012-1	10/26/13 10:02	1	Aqueous
D-ID-131026	13-10-2012-2	10/26/13 10:00	1	Aqueous
D-ID-131026	13-10-2012-3	10/26/13 10:04	1	Aqueous
D-ID-131026	13-10-2012-4	10/26/13 10:03	1	Aqueous
D-ID-131026	13-10-2012-5	10/26/13 10:05	1	Aqueous

Return to Contents



## Analytical Report

San Diego Bay Environmental Restoration Fund South  
 C/O de maximis, Inc., 1322 Scott Street, Suite 104  
 San Diego, CA 92106-2727

Date Received: 10/26/13  
 Work Order: 13-10-2012  
 Preparation: N/A  
 Method: SM 2540 D  
 Units: mg/L

Project: SD Shipyard Wastewater Discharge

Page 1 of 1

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
D-ID-131026	13-10-2012-3-A	10/26/13 10:04	Aqueous	N/A	10/26/13	10/26/13 15:20	D1026TSSL1

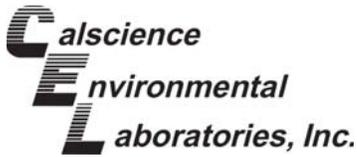
Parameter	Result	RL	DF	Qualifiers
Solids, Total Suspended	10	1.0	1	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	099-09-010-6452	N/A	Aqueous	N/A	10/26/13	10/26/13 15:20	D1026TSSL1

Parameter	Result	RL	DF	Qualifiers
Solids, Total Suspended	ND	1.0	1	

Return to Contents

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.



## Analytical Report

San Diego Bay Environmental Restoration Fund South  
 C/O de maximis, Inc., 1322 Scott Street, Suite 104  
 San Diego, CA 92106-2727

Date Received: 10/26/13  
 Work Order: 13-10-2012  
 Preparation: N/A  
 Method: SM 5220 C  
 Units: mg/L

Project: SD Shipyard Wastewater Discharge

Page 1 of 1

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
D-ID-131026	13-10-2012-4-A	10/26/13 10:03	Aqueous	BUR06	10/28/13	10/28/13 17:00	D1028ODB1

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

Parameter	Result	RL	MDL	DF	Qualifiers
Chemical Oxygen Demand	330	5.0	4.8	1	

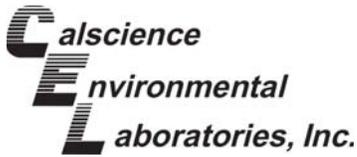
Method Blank	099-05-114-103	N/A	Aqueous	BUR06	10/28/13	10/28/13 17:00	D1028ODB1
--------------	----------------	-----	---------	-------	----------	-------------------	-----------

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

Parameter	Result	RL	MDL	DF	Qualifiers
Chemical Oxygen Demand	ND	5.0	4.8	1	

Return to Contents

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.



## Analytical Report

San Diego Bay Environmental Restoration Fund South  
 C/O de maximis, Inc., 1322 Scott Street, Suite 104  
 San Diego, CA 92106-2727

Date Received: 10/26/13  
 Work Order: 13-10-2012  
 Preparation: N/A  
 Method: EPA 200.8  
 Units: ug/L

Project: SD Shipyard Wastewater Discharge

Page 1 of 1

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
D-ID-131026	13-10-2012-1-A	10/26/13 10:02	Aqueous	ICP/MS 03	10/28/13	10/28/13 19:08	131028L03

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

Parameter	Result	RL	MDL	DF	Qualifiers
Arsenic	15.0	25.0	9.66	25	J
Copper	25.1	25.0	3.49	25	
Lead	14.1	25.0	2.24	25	J
Nickel	15.8	25.0	3.29	25	J
Zinc	41.8	125	12.0	25	J

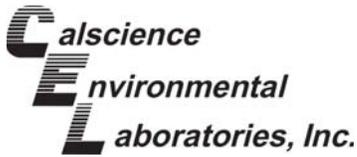
Method Blank	099-16-094-53	N/A	Aqueous	ICP/MS 03	10/28/13	10/28/13 17:48	131028L03
--------------	---------------	-----	---------	-----------	----------	-------------------	-----------

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

Parameter	Result	RL	MDL	DF	Qualifiers
Arsenic	ND	1.00	0.386	1	
Copper	ND	1.00	0.140	1	
Lead	ND	1.00	0.0898	1	
Nickel	ND	1.00	0.132	1	
Zinc	ND	5.00	0.479	1	

Return to Contents

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.



## Analytical Report

San Diego Bay Environmental Restoration Fund South  
 C/O de maximis, Inc., 1322 Scott Street, Suite 104  
 San Diego, CA 92106-2727

Date Received: 10/26/13  
 Work Order: 13-10-2012  
 Preparation: EPA 245.1 Total  
 Method: EPA 245.1  
 Units: ug/L

Project: SD Shipyard Wastewater Discharge

Page 1 of 1

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
D-ID-131026	13-10-2012-1-A	10/26/13 10:02	Aqueous	Mercury	10/28/13	10/28/13 16:31	131028L08

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

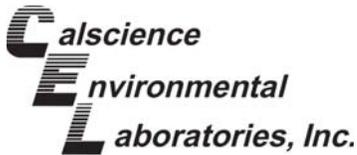
Parameter	Result	RL	MDL	DF	Qualifiers
Mercury	ND	0.200	0.0453	1	

Method Blank	099-04-008-6697	N/A	Aqueous	Mercury	10/28/13	10/28/13 16:26	131028L08
--------------	-----------------	-----	---------	---------	----------	-------------------	-----------

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

Parameter	Result	RL	MDL	DF	Qualifiers
Mercury	ND	0.200	0.0453	1	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.



## Analytical Report

San Diego Bay Environmental Restoration Fund South  
 C/O de maximis, Inc., 1322 Scott Street, Suite 104  
 San Diego, CA 92106-2727

Date Received: 10/26/13  
 Work Order: 13-10-2012  
 Preparation: EPA 3510C  
 Method: EPA 8081A  
 Units: ug/L

Project: SD Shipyard Wastewater Discharge

Page 1 of 2

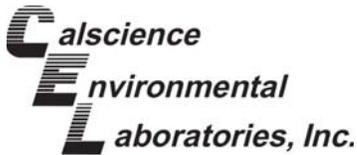
Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
D-ID-131026	13-10-2012-5-A	10/26/13 10:05	Aqueous	GC 51	10/28/13	10/28/13 19:59	131028L02

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

Parameter	Result	RL	MDL	DF	Qualifiers
Alpha-BHC	ND	0.10	0.028	1	
Gamma-BHC	ND	0.10	0.030	1	
Beta-BHC	ND	0.10	0.030	1	
Heptachlor	ND	0.10	0.026	1	
Delta-BHC	ND	0.10	0.029	1	
Aldrin	ND	0.10	0.027	1	
Heptachlor Epoxide	ND	0.10	0.025	1	
Endosulfan I	0.034	0.10	0.028	1	J
Dieldrin	ND	0.10	0.029	1	
4,4'-DDE	ND	0.10	0.027	1	
Endrin	ND	0.10	0.031	1	
Endrin Aldehyde	ND	0.10	0.026	1	
4,4'-DDD	ND	0.10	0.027	1	
Endosulfan II	ND	0.10	0.027	1	
4,4'-DDT	ND	0.10	0.027	1	
Endosulfan Sulfate	ND	0.10	0.029	1	
Methoxychlor	ND	0.10	0.025	1	
Chlordane	ND	1.0	0.33	1	
Toxaphene	ND	2.0	0.59	1	
Endrin Ketone	ND	0.10	0.024	1	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Decachlorobiphenyl	77	50-135	
2,4,5,6-Tetrachloro-m-Xylene	77	50-135	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.



## Analytical Report

San Diego Bay Environmental Restoration Fund South  
 C/O de maximis, Inc., 1322 Scott Street, Suite 104  
 San Diego, CA 92106-2727

Date Received: 10/26/13  
 Work Order: 13-10-2012  
 Preparation: EPA 3510C  
 Method: EPA 8081A  
 Units: ug/L

Project: SD Shipyard Wastewater Discharge

Page 2 of 2

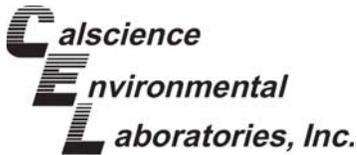
Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	099-12-529-655	N/A	Aqueous	GC 51	10/28/13	10/28/13 19:16	131028L02

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

Parameter	Result	RL	MDL	DF	Qualifiers
Alpha-BHC	ND	0.10	0.028	1	
Gamma-BHC	ND	0.10	0.030	1	
Beta-BHC	ND	0.10	0.030	1	
Heptachlor	ND	0.10	0.026	1	
Delta-BHC	ND	0.10	0.029	1	
Aldrin	ND	0.10	0.027	1	
Heptachlor Epoxide	ND	0.10	0.025	1	
Endosulfan I	ND	0.10	0.028	1	
Dieldrin	ND	0.10	0.029	1	
4,4'-DDE	ND	0.10	0.027	1	
Endrin	ND	0.10	0.031	1	
Endrin Aldehyde	ND	0.10	0.026	1	
4,4'-DDD	ND	0.10	0.027	1	
Endosulfan II	ND	0.10	0.027	1	
4,4'-DDT	ND	0.10	0.027	1	
Endosulfan Sulfate	ND	0.10	0.029	1	
Methoxychlor	ND	0.10	0.025	1	
Chlordane	ND	1.0	0.33	1	
Toxaphene	ND	2.0	0.59	1	
Endrin Ketone	ND	0.10	0.024	1	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Decachlorobiphenyl	83	50-135	
2,4,5,6-Tetrachloro-m-Xylene	78	50-135	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.



## Analytical Report

San Diego Bay Environmental Restoration Fund South  
 C/O de maximis, Inc., 1322 Scott Street, Suite 104  
 San Diego, CA 92106-2727

Date Received: 10/26/13  
 Work Order: 13-10-2012  
 Preparation: EPA 3510C  
 Method: EPA 8082  
 Units: ug/L

Project: SD Shipyard Wastewater Discharge

Page 1 of 1

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
D-ID-131026	13-10-2012-2-A	10/26/13 10:00	Aqueous	GC 31	10/28/13	10/28/13 18:37	131028L03

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

Parameter	Result	RL	MDL	DF	Qualifiers
Aroclor-1016	ND	1.0	0.29	1	
Aroclor-1221	ND	1.0	0.28	1	
Aroclor-1232	ND	1.0	0.25	1	
Aroclor-1242	ND	1.0	0.18	1	
Aroclor-1248	ND	1.0	0.20	1	
Aroclor-1254	ND	1.0	0.23	1	
Aroclor-1260	ND	1.0	0.26	1	
Aroclor-1262	ND	1.0	0.26	1	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Decachlorobiphenyl	91	50-135	
2,4,5,6-Tetrachloro-m-Xylene	84	50-135	

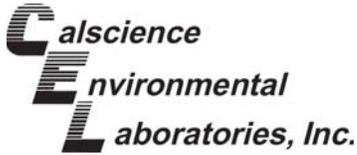
Method Blank	099-12-533-851	N/A	Aqueous	GC 31	10/28/13	10/28/13 18:18	131028L03
--------------	----------------	-----	---------	-------	----------	-------------------	-----------

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

Parameter	Result	RL	MDL	DF	Qualifiers
Aroclor-1016	ND	1.0	0.29	1	
Aroclor-1221	ND	1.0	0.28	1	
Aroclor-1232	ND	1.0	0.25	1	
Aroclor-1242	ND	1.0	0.18	1	
Aroclor-1248	ND	1.0	0.20	1	
Aroclor-1254	ND	1.0	0.23	1	
Aroclor-1260	ND	1.0	0.26	1	
Aroclor-1262	ND	1.0	0.26	1	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Decachlorobiphenyl	100	50-135	
2,4,5,6-Tetrachloro-m-Xylene	74	50-135	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.



## Quality Control - Spike/Spike Duplicate

San Diego Bay Environmental Restoration Fund South  
 C/O de maximis, Inc., 1322 Scott Street, Suite 104  
 San Diego, CA 92106-2727

Date Received: 10/26/13  
 Work Order: 13-10-2012  
 Preparation: N/A  
 Method: EPA 200.8

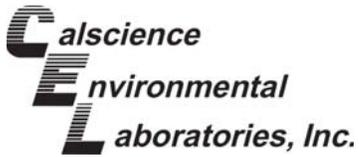
Project: SD Shipyard Wastewater Discharge

Page 1 of 2

Quality Control Sample ID	Matrix		Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number				
<b>13-10-2032-1</b>	<b>Aqueous</b>		<b>ICP/MS 03</b>	<b>10/28/13</b>	<b>10/28/13 16:44</b>	<b>131028S03</b>				
Parameter	Sample Conc.	Spike Added	MS Conc.	MS %Rec.	MSD Conc.	MSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
Arsenic	11.56	100.0	120.1	109	120.4	109	80-120	0	0-20	
Copper	ND	100.0	112.8	113	111.3	111	80-120	1	0-20	
Lead	ND	100.0	111.6	112	110.2	110	80-120	1	0-20	
Nickel	6.942	100.0	106.8	100	104.4	97	80-120	2	0-20	
Zinc	238.4	100.0	318.5	80	337.6	99	80-120	6	0-20	

Return to Contents

RPD: Relative Percent Difference. CL: Control Limits



## Quality Control - Spike/Spike Duplicate

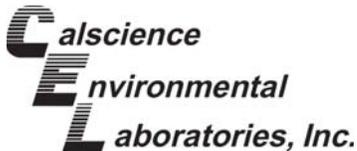
San Diego Bay Environmental Restoration Fund South  
 C/O de maximis, Inc., 1322 Scott Street, Suite 104  
 San Diego, CA 92106-2727

Date Received: 10/26/13  
 Work Order: 13-10-2012  
 Preparation: EPA 245.1 Total  
 Method: EPA 245.1

Project: SD Shipyard Wastewater Discharge

Page 2 of 2

Quality Control Sample ID	Matrix		Instrument		Date Prepared	Date Analyzed	MS/MSD Batch Number			
<b>D-ID-131026</b>	<b>Aqueous</b>		<b>Mercury</b>		<b>10/28/13</b>	<b>10/28/13 16:33</b>	<b>131028S08</b>			
<u>Parameter</u>	<u>Sample Conc.</u>	<u>Spike Added</u>	<u>MS Conc.</u>	<u>MS %Rec.</u>	<u>MSD Conc.</u>	<u>MSD %Rec.</u>	<u>%Rec. CL</u>	<u>RPD</u>	<u>RPD CL</u>	<u>Qualifiers</u>
Mercury	ND	10.00	9.711	97	9.758	98	57-141	0	0-10	



Quality Control - Sample Duplicate

San Diego Bay Environmental Restoration Fund South  
 C/O de maximis, Inc., 1322 Scott Street, Suite 104  
 San Diego, CA 92106-2727

Date Received: 10/26/13  
 Work Order: 13-10-2012  
 Preparation: N/A  
 Method: SM 2540 D

Project: SD Shipyard Wastewater Discharge

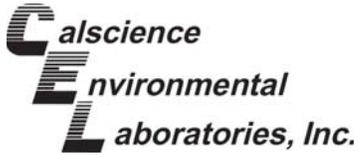
Page 1 of 2

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	Duplicate Batch Number
<b>13-10-1882-1</b>	<b>Aqueous</b>	<b>N/A</b>	<b>10/26/13 00:00</b>	<b>10/26/13 15:20</b>	<b>D1026TSSD2</b>

<u>Parameter</u>	<u>Sample Conc.</u>	<u>DUP Conc.</u>	<u>RPD</u>	<u>RPD CL</u>	<u>Qualifiers</u>
Solids, Total Suspended	658.0	680.0	3	0-20	

Return to Contents 

RPD: Relative Percent Difference. CL: Control Limits



## Quality Control - Sample Duplicate

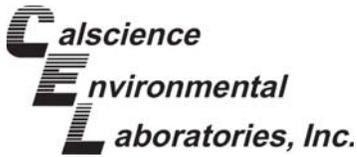
San Diego Bay Environmental Restoration Fund South  
 C/O de maximis, Inc., 1322 Scott Street, Suite 104  
 San Diego, CA 92106-2727

Date Received: 10/26/13  
 Work Order: 13-10-2012  
 Preparation: N/A  
 Method: SM 5220 C

Project: SD Shipyard Wastewater Discharge

Page 2 of 2

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	Duplicate Batch Number
<b>D-ID-131026</b>	<b>Aqueous</b>	<b>BUR06</b>	<b>10/28/13 00:00</b>	<b>10/28/13 17:00</b>	<b>D1028ODD1</b>
<u>Parameter</u>	<u>Sample Conc.</u>	<u>DUP Conc.</u>	<u>RPD</u>	<u>RPD CL</u>	<u>Qualifiers</u>
Chemical Oxygen Demand	330.2	332.2	1	0-25	



## Quality Control - LCS/LCSD

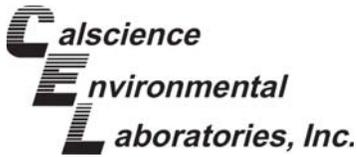
San Diego Bay Environmental Restoration Fund South  
 C/O de maximis, Inc., 1322 Scott Street, Suite 104  
 San Diego, CA 92106-2727

Date Received: 10/26/13  
 Work Order: 13-10-2012  
 Preparation: N/A  
 Method: SM 2540 D

Project: SD Shipyard Wastewater Discharge

Page 1 of 5

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number				
<b>099-09-010-6452</b>	<b>Aqueous</b>	<b>N/A</b>	<b>10/26/13</b>	<b>10/26/13 15:20</b>	<b>D1026TSSL1</b>				
<u>Parameter</u>	<u>Spike Added</u>	<u>LCS Conc.</u>	<u>LCS %Rec.</u>	<u>LCSD Conc.</u>	<u>LCSD %Rec.</u>	<u>%Rec. CL</u>	<u>RPD</u>	<u>RPD CL</u>	<u>Qualifiers</u>
Solids, Total Suspended	100.0	96.00	96	101.0	101	80-120	5	0-20	



## Quality Control - LCS/LCSD

San Diego Bay Environmental Restoration Fund South  
 C/O de maximis, Inc., 1322 Scott Street, Suite 104  
 San Diego, CA 92106-2727

Date Received: 10/26/13  
 Work Order: 13-10-2012  
 Preparation: N/A  
 Method: EPA 200.8

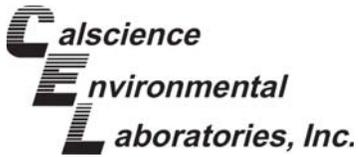
Project: SD Shipyard Wastewater Discharge

Page 2 of 5

Quality Control Sample ID		Matrix		Instrument		Date Prepared	Date Analyzed	LCS/LCSD Batch Number	
<b>099-16-094-53</b>		<b>Aqueous</b>		<b>ICP/MS 03</b>		<b>10/28/13</b>	<b>10/28/13 17:51</b>	<b>131028L03</b>	
<u>Parameter</u>	<u>Spike Added</u>	<u>LCS Conc.</u>	<u>LCS %Rec.</u>	<u>LCSD Conc.</u>	<u>LCSD %Rec.</u>	<u>%Rec. CL</u>	<u>RPD</u>	<u>RPD CL</u>	<u>Qualifiers</u>
Arsenic	100.0	96.54	97	98.11	98	80-120	2	0-20	
Copper	100.0	107.8	108	107.1	107	80-120	1	0-20	
Lead	100.0	96.60	97	98.22	98	80-120	2	0-20	
Nickel	100.0	99.41	99	98.43	98	80-120	1	0-20	
Zinc	100.0	104.5	104	103.6	104	80-120	1	0-20	

Return to Contents 

RPD: Relative Percent Difference. CL: Control Limits



## Quality Control - LCS/LCSD

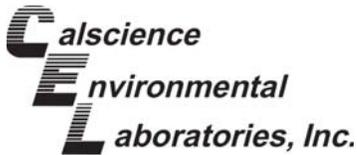
San Diego Bay Environmental Restoration Fund South  
 C/O de maximis, Inc., 1322 Scott Street, Suite 104  
 San Diego, CA 92106-2727

Date Received: 10/26/13  
 Work Order: 13-10-2012  
 Preparation: EPA 245.1 Total  
 Method: EPA 245.1

Project: SD Shipyard Wastewater Discharge

Page 3 of 5

Quality Control Sample ID		Matrix		Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number		
<b>099-04-008-6697</b>		<b>Aqueous</b>		<b>Mercury</b>	<b>10/28/13</b>	<b>10/28/13 16:28</b>	<b>131028L08</b>		
<u>Parameter</u>	<u>Spike Added</u>	<u>LCS Conc.</u>	<u>LCS %Rec.</u>	<u>LCSD Conc.</u>	<u>LCSD %Rec.</u>	<u>%Rec. CL</u>	<u>RPD</u>	<u>RPD CL</u>	<u>Qualifiers</u>
Mercury	10.00	10.06	101	10.52	105	85-121	4	0-10	



## Quality Control - LCS/LCSD

San Diego Bay Environmental Restoration Fund South  
 C/O de maximis, Inc., 1322 Scott Street, Suite 104  
 San Diego, CA 92106-2727

Date Received: 10/26/13  
 Work Order: 13-10-2012  
 Preparation: EPA 3510C  
 Method: EPA 8081A

Project: SD Shipyard Wastewater Discharge

Page 4 of 5

Quality Control Sample ID	Matrix			Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number			
<b>099-12-529-655</b>	<b>Aqueous</b>			<b>GC 51</b>	<b>10/28/13</b>	<b>10/28/13 19:30</b>	<b>131028L02</b>			
Parameter	Spike Added	LCS Conc.	LCS %Rec.	LCSD Conc.	LCSD %Rec.	%Rec. CL	ME CL	RPD	RPD CL	Qualifiers
Alpha-BHC	0.5000	0.4216	84	0.3783	76	50-135	36-149	11	0-25	
Gamma-BHC	0.5000	0.4198	84	0.3738	75	50-135	36-149	12	0-25	
Beta-BHC	0.5000	0.4084	82	0.3467	69	50-135	36-149	16	0-25	
Heptachlor	0.5000	0.4199	84	0.3974	79	50-135	36-149	6	0-25	
Delta-BHC	0.5000	0.4297	86	0.4134	83	50-135	36-149	4	0-25	
Aldrin	0.5000	0.4233	85	0.4209	84	50-135	36-149	1	0-25	
Heptachlor Epoxide	0.5000	0.4398	88	0.4366	87	50-135	36-149	1	0-25	
Endosulfan I	0.5000	0.4564	91	0.4540	91	50-135	36-149	1	0-25	
Dieldrin	0.5000	0.4394	88	0.4352	87	50-135	36-149	1	0-25	
4,4'-DDE	0.5000	0.4412	88	0.4388	88	50-135	36-149	1	0-25	
Endrin	0.5000	0.3951	79	0.3143	63	50-135	36-149	23	0-25	
Endrin Aldehyde	0.5000	0.3719	74	0.3868	77	50-135	36-149	4	0-25	
4,4'-DDD	0.5000	0.4316	86	0.4444	89	50-135	36-149	3	0-25	
Endosulfan II	0.5000	0.4368	87	0.4350	87	50-135	36-149	0	0-25	
4,4'-DDT	0.5000	0.4227	85	0.3636	73	50-135	36-149	15	0-25	
Endosulfan Sulfate	0.5000	0.4149	83	0.4000	80	50-135	36-149	4	0-25	
Methoxychlor	0.5000	0.4240	85	0.3777	76	50-135	36-149	12	0-25	

Total number of LCS compounds: 17

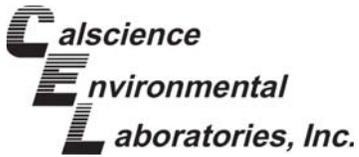
Total number of ME compounds: 0

Total number of ME compounds allowed: 1

LCS ME CL validation result: Pass

Return to Contents

RPD: Relative Percent Difference. CL: Control Limits



## Quality Control - LCS/LCSD

San Diego Bay Environmental Restoration Fund South  
 C/O de maximis, Inc., 1322 Scott Street, Suite 104  
 San Diego, CA 92106-2727

Date Received: 10/26/13  
 Work Order: 13-10-2012  
 Preparation: EPA 3510C  
 Method: EPA 8082

Project: SD Shipyard Wastewater Discharge

Page 5 of 5

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number				
<b>099-12-533-851</b>	<b>Aqueous</b>	<b>GC 31</b>	<b>10/28/13</b>	<b>10/28/13 17:40</b>	<b>131028L03</b>				
<u>Parameter</u>	<u>Spike Added</u>	<u>LCS Conc.</u>	<u>LCS %Rec.</u>	<u>LCSD Conc.</u>	<u>LCSD %Rec.</u>	<u>%Rec. CL</u>	<u>RPD</u>	<u>RPD CL</u>	<u>Qualifiers</u>
Aroclor-1016	2.000	1.690	84	1.762	88	50-135	4	0-25	
Aroclor-1260	2.000	1.580	79	1.684	84	50-135	6	0-25	

## Glossary of Terms and Qualifiers

Work Order: 13-10-2012

Page 1 of 1

<u>Qualifiers</u>	<u>Definition</u>
*	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 suspected matrix interference. The associated LCS recovery was in control.
4	The MS/MSD RPD was out of control due to suspected matrix interference.
5	The PDS/PDS or PES/PESD associated with this batch of samples was out of control due to suspected matrix interference.
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.
BV	Sample received 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.
JA	Analyte positively identified but quantitation is an estimate.
ME	LCS Recovery Percentage is within Marginal Exceedance (ME) Control Limit range (+/- 4 SD from the mean).
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.

Any parameter identified in 40CFR Part 136.3 Table II that is designated as "analyze immediately" with a holding time of  $\leq 15$  minutes (40CFR-136.3 Table II, footnote 4), is considered a "field" test and the reported results will be qualified as being received outside of the stated holding time unless received at the laboratory within 15 minutes of the collection time.

A calculated total result (Example: Total Pesticides) is the summation of each component concentration and/or, if "J" flags are reported, estimated concentration. Component concentrations showing not detected (ND) are summed into the calculated total result as zero concentrations.



**SAMPLE RECEIPT FORM**

Cooler 1 of 1

CLIENT: Anchor QEA

DATE: 10/26/13

**TEMPERATURE:** Thermometer ID: SC2 (Criteria: 0.0 °C – 6.0 °C, not frozen except sediment/tissue)

Temperature 2.4 °C - 0.2 °C (CF) = 2.2 °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 Checked by: 820

**CUSTODY SEALS INTACT:**

Cooler  \_\_\_\_\_  No (Not Intact)  Not Present  N/A Checked by: 820

Sample  \_\_\_\_\_  No (Not Intact)  Not Present Checked by: 681

**SAMPLE CONDITION:**

	Yes	No	N/A
Chain-Of-Custody (COC) document(s) received with samples.....	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
COC document(s) received complete.....	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> Collection date/time, matrix, and/or # of containers logged in based on sample labels.			
<input type="checkbox"/> No analysis requested. <input type="checkbox"/> Not relinquished. <input type="checkbox"/> No date/time relinquished.			
Sampler's name indicated on COC.....	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Sample container label(s) consistent with COC.....	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Sample container(s) intact and good condition.....	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Proper containers and sufficient volume for analyses requested.....	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Analyses received within holding time.....	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Aqueous samples received within 15-minute holding time			
<input type="checkbox"/> pH <input type="checkbox"/> Residual Chlorine <input type="checkbox"/> Dissolved Sulfides <input type="checkbox"/> Dissolved Oxygen.....	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Proper preservation noted on COC or sample container.....	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> Unpreserved vials received for Volatiles analysis			
Volatile analysis container(s) free of headspace.....	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Tedlar bag(s) free of condensation.....	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTAINER TYPE:**

**Solid:**  4ozCGJ  8ozCGJ  16ozCGJ  Sleeve (\_\_\_\_)  EnCores®  TerraCores®  \_\_\_\_\_

**Aqueous:**  VOA  VOA<sub>h</sub>  VOA<sub>na2</sub>  125AGB  125AGB<sub>h</sub>  125AGB<sub>p</sub>  1AGB  1AGB<sub>na2</sub>  1AGB<sub>s</sub>

500AGB  500AGJ  500AGJ<sub>s</sub>  250AGB  250CGB  250CGB<sub>s</sub>  1PB  1PB<sub>na</sub>  500PB

250PB  250PB<sub>nv</sub>  125PB  125PB<sub>z<sub>na</sub></sub>  100PJ  100PJ<sub>na2</sub>  \_\_\_\_\_  \_\_\_\_\_  \_\_\_\_\_

**Air:**  Tedlar®  Canister **Other:**  \_\_\_\_\_ **Trip Blank Lot#:** \_\_\_\_\_ **Labeled/Checked by:** 681

**Container:** C: Clear A: Amber P: Plastic G: Glass J: Jar B: Bottle Z: Ziploc/Resealable Bag E: Envelope **Reviewed by:** 854

**Preservative:** h: HCL n: HNO<sub>3</sub> na<sub>2</sub>: Na<sub>2</sub>S<sub>2</sub>O<sub>3</sub> na: NaOH p: H<sub>3</sub>PO<sub>4</sub> s: H<sub>2</sub>SO<sub>4</sub> u: Ultra-pure z<sub>na</sub>: ZnAc<sub>2</sub>+NaOH f: Filtered **Scanned by:** 854

Return to Contents

**INDUSTRY SELF MONITORING FORM**

City of San Diego Public Utilities  
 Industrial Wastewater Control Program  
 9192 Topaz Wy San Diego, CA 92123-1119  
 Tel (858) 654-4100 Fax (858) 654-4110

*Note: If Monthly Average Limits apply, these self-monitoring results will be averaged with all other VALID analyses for samples collected in the same calendar year including IWCP monitoring data, to determine compliance.*

Michael Palmer  
 San Diego Bay Enviro Restoration Fund South Trust  
 c/o NASSCO MS 22A  
 2798 Harbor Dr  
 San Diego, CA 92113

\*\*\*\*\*  
 \* RETURN REPORT \*  
 \* by \*  
 \* 15-DEC-2013 \*  
 \*\*\*\*\*

IU# Pmt#: 11-0563 01-A Conn: 100 ISMF#: 152668

Site Address: Harbor Dr, San Diego Permitted IW Flow: 288000  
 Sample Point: Final 21,000 gallon tank of treatment system, just before water meter.

Laboratory Name: Calscience Environmental Laboratories, Inc. \* COPY OF ANALYSIS REQUIRED \*

Sample#: 0152668-01 Date: 11/17/2013 Time (s): 6:40, 7:10, 7:40, 8:10

**24 hour composite**

Sampler: K. Christensen Description: clear water

<u>Parameter</u>	<u>Units</u>	<u>Daily Max</u>	<u>Result</u>
<u>Chemical Oxygen Demand</u>	<u>mg/L</u>		<u>260</u>
<u>Solids, Total Suspended</u>	<u>mg/L</u>		<u>21</u>

Sample#: 0152668-02 Date: 11/30/2013 Time (s): 7:00

**Evaluation only (no sample)**

Sampler: K. Christensen Description: clear water

<u>Beginning Meter Read and Date</u>	<u>gals</u>	<u>11/01/2013</u>	<u>96,500</u>
<u>Ending Meter Read and Date</u>	<u>gals</u>	<u>11/30/2013</u>	<u>485,000</u>
<u>Average Flow/calendar day thru Connection</u>	<u>gpd</u>		<u>12,950</u>
<u>Imported Flow During Period</u>	<u>gals</u>		<u>388,500</u>
<u>Maximum Flow/calendar day thru Connection</u>	<u>gpd</u>		<u>83,500</u>
<u>Maximum gals/min thru meter</u>	<u>gpm</u>	<u>250</u>	<u>250</u>
<u>Minimum gals/min thru meter when discharging</u>	<u>gpm</u>	<u>50-</u>	<u>50</u>

Please note that the typical discharge period on site ranges from 1 to 4 hours, depending on the volume to be discharged. On November 17, discharge spanned approximately 2 hours; therefore, the "24 hour composite sample" described in the permit was collected over a 2-hour discharge period representative of typical site operations. No additional discharge occurred within 24 hours of the sampling event on November 17.

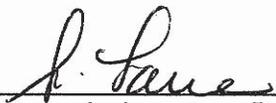


**CERTIFICATION**

All analyses were conducted at a laboratory certified for such analyses by the California Department of Public Health in accordance with applicable USEPA and NELAP accreditation procedures.

I certify under penalty of law that the data generated for Calscience Work Order No. 13-11-1371 were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. The Project Manager or designee who signed the Calscience Work Order has been specifically authorized and approved to do so.

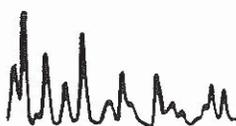
The information submitted is, to the best of my knowledge and belief, true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of a fine and imprisonment for knowing violations.

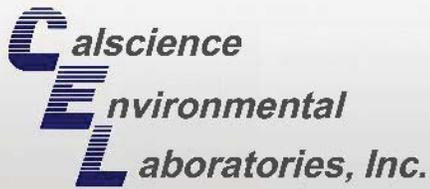
  
\_\_\_\_\_  
Signature, Laboratory Director

May 20, 2014  
Date

Name of Laboratory: **Calscience Environmental Laboratories**  
Address of Laboratory: **7440 Lincoln Way**  
**Garden Grove, CA 92841-1432**

This Certification signed by: **Steve Lane**





# CALSCIENCE

## WORK ORDER NUMBER: 13-11-1371

*The difference is service*



AIR | SOIL | WATER | MARINE CHEMISTRY

### Analytical Report For

**Client:** ANCHOR QEA, LLC

**Client Project Name:** SD Shipyard Wastewater Discharge

**Attention:** Adam Gale  
27201 Puerta Real, Suite 350  
Mission Viejo, CA 92691-8306

Approved for release on 11/26/2013 by:  
Danielle Gonsman  
Project Manager

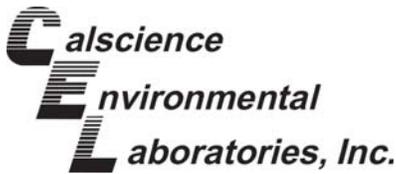
ResultLink ▶

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.





# Contents

Client Project Name: SD Shipyard Wastewater Discharge  
Work Order Number: 13-11-1371

1	Work Order Narrative. . . . .	3
2	Sample Summary. . . . .	4
3	Client Sample Data. . . . .	5
	3.1 SM 2540 D Total Suspended Solids (Aqueous). . . . .	5
	3.2 SM 5220 C Chemical Oxygen Demand (Aqueous). . . . .	6
	3.3 EPA 200.8 ICP/MS Metals (Aqueous). . . . .	7
	3.4 EPA 245.1 Mercury (Aqueous). . . . .	8
	3.5 EPA 8081A Organochlorine Pesticides (Aqueous). . . . .	9
	3.6 EPA 8082 PCB Aroclors (Aqueous). . . . .	11
4	Quality Control Sample Data. . . . .	12
	4.1 MS/MSD. . . . .	12
	4.2 PDS/PDSD. . . . .	14
	4.3 Sample Duplicate. . . . .	15
	4.4 LCS/LCSD. . . . .	17
5	Glossary of Terms and Qualifiers. . . . .	22
6	Chain of Custody/Sample Receipt Form. . . . .	23

**Work Order Narrative**

Work Order: 13-11-1371

Page 1 of 1

**Condition Upon Receipt:**

Samples were received under Chain of Custody (COC) on 11/16/13. They were assigned to Work Order 13-11-1371.

Unless otherwise noted on the Sample Receiving forms all samples were received in good condition and within the recommended EPA temperature criteria for the methods noted on the COC. The COC and Sample Receiving Documents are integral elements of the analytical report and are presented at the back of the report.

**Holding Times:**

All samples were analyzed within prescribed holding times (HT) and/or in accordance with the Calscience Sample Acceptance Policy unless otherwise noted in the analytical report and/or comprehensive case narrative, if required.

Any parameter identified in 40CFR Part 136.3 Table II that is designated as "analyze immediately" with a holding time of  $\leq 15$  minutes (40CFR-136.3 Table II, footnote 4), is considered a "field" test and the reported results will be qualified as being received outside of the stated holding time unless received at the laboratory within 15 minutes of the collection time.

**Quality Control:**

All quality control parameters (QC) were within established control limits except where noted in the QC summary forms or described further within this report.

**Additional Comments:**

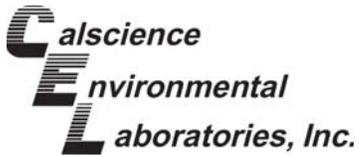
Air - Sorbent-extracted air methods (EPA TO-4A, EPA TO-10, EPA TO-13A, EPA TO-17): Analytical results are converted from mass/sample basis to mass/volume basis using client-supplied air volumes.

New York NELAP air certification does not certify for all reported methods and analytes, reference the accredited items here: [http://www.calscience.com/PDF/New\\_York.pdf](http://www.calscience.com/PDF/New_York.pdf)

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

**Subcontractor Information:**

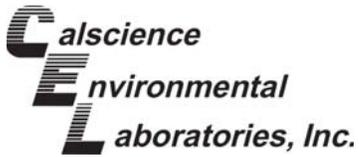
Unless otherwise noted below (or on the subcontract form), no samples were subcontracted.



## Sample Summary

Client: ANCHOR QEA, LLC	Work Order: 13-11-1371
27201 Puerta Real, Suite 350	Project Name: SD Shipyard Wastewater Discharge
Mission Viejo, CA 92691-8306	PO Number:
	Date/Time Received: 11/16/13 17:10
	Number of Containers: 5
Attn: Adam Gale	

Sample Identification	Lab Number	Collection Date and Time	Number of Containers	Matrix
D-1D-131116	13-11-1371-1	11/16/13 06:40	5	Aqueous



## Analytical Report

ANCHOR QEA, LLC  
 27201 Puerta Real, Suite 350  
 Mission Viejo, CA 92691-8306

Date Received: 11/16/13  
 Work Order: 13-11-1371  
 Preparation: N/A  
 Method: SM 2540 D  
 Units: mg/L

Project: SD Shipyard Wastewater Discharge

Page 1 of 1

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
D-1D-131116	13-11-1371-1-E	11/16/13 06:40	Aqueous	N/A	11/19/13	11/19/13 13:30	D1119TSSL1

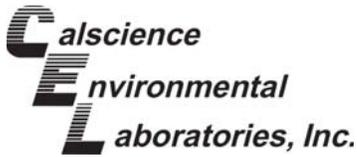
Parameter	Result	RL	DF	Qualifiers
Solids, Total Suspended	21	1.0	1	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	099-09-010-6484	N/A	Aqueous	N/A	11/19/13	11/19/13 13:30	D1119TSSL1

Parameter	Result	RL	DF	Qualifiers
Solids, Total Suspended	ND	1.0	1	

Return to Contents

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.



## Analytical Report

ANCHOR QEA, LLC  
 27201 Puerta Real, Suite 350  
 Mission Viejo, CA 92691-8306

Date Received: 11/16/13  
 Work Order: 13-11-1371  
 Preparation: N/A  
 Method: SM 5220 C  
 Units: mg/L

Project: SD Shipyard Wastewater Discharge

Page 1 of 1

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
D-1D-131116	13-11-1371-1-A	11/16/13 06:40	Aqueous	BUR06	11/20/13	11/20/13 14:00	D1120ODB3

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

Parameter	Result	RL	MDL	DF	Qualifiers
Chemical Oxygen Demand	260	5.0	4.8	1	

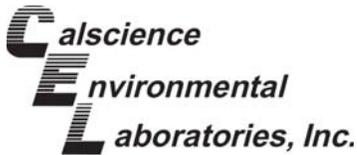
Method Blank	099-05-114-105	N/A	Aqueous	BUR06	11/20/13	11/20/13 14:00	D1120ODB3
--------------	----------------	-----	---------	-------	----------	-------------------	-----------

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

Parameter	Result	RL	MDL	DF	Qualifiers
Chemical Oxygen Demand	ND	5.0	4.8	1	

Return to Contents

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.



## Analytical Report

ANCHOR QEA, LLC  
 27201 Puerta Real, Suite 350  
 Mission Viejo, CA 92691-8306

Date Received: 11/16/13  
 Work Order: 13-11-1371  
 Preparation: N/A  
 Method: EPA 200.8  
 Units: mg/L

Project: SD Shipyard Wastewater Discharge

Page 1 of 1

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
D-1D-131116	13-11-1371-1-B	11/16/13 06:40	Aqueous	ICP/MS 04	11/18/13	11/18/13 15:54	131118L01

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

Parameter	Result	RL	MDL	DF	Qualifiers
Arsenic	0.0146	0.0100	0.00386	10	
Copper	0.0373	0.0100	0.00140	10	
Lead	0.00712	0.0100	0.000898	10	J
Nickel	0.0189	0.0100	0.00132	10	
Zinc	0.0287	0.0500	0.00479	10	J

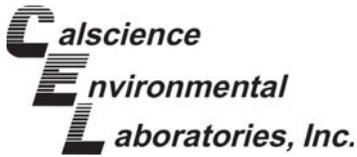
Method Blank	099-16-094-82	N/A	Aqueous	ICP/MS 04	11/18/13	11/18/13 15:20	131118L01
--------------	---------------	-----	---------	-----------	----------	-------------------	-----------

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

Parameter	Result	RL	MDL	DF	Qualifiers
Arsenic	ND	0.00100	0.000386	1	
Copper	ND	0.00100	0.000140	1	
Lead	ND	0.00100	0.0000898	1	
Nickel	ND	0.00100	0.000132	1	
Zinc	ND	0.00500	0.000479	1	

Return to Contents

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.



## Analytical Report

ANCHOR QEA, LLC  
 27201 Puerta Real, Suite 350  
 Mission Viejo, CA 92691-8306

Date Received: 11/16/13  
 Work Order: 13-11-1371  
 Preparation: EPA 245.1 Total  
 Method: EPA 245.1  
 Units: mg/L

Project: SD Shipyard Wastewater Discharge

Page 1 of 1

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
D-1D-131116	13-11-1371-1-B	11/16/13 06:40	Aqueous	Mercury	11/25/13	11/26/13 12:24	131125L06

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

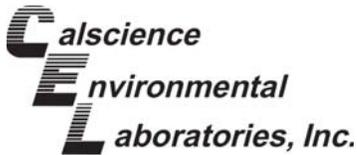
Parameter	Result	RL	MDL	DF	Qualifiers
Mercury	ND	0.000200	0.0000453	1	

Method Blank	099-04-008-6739	N/A	Aqueous	Mercury	11/25/13	11/26/13 12:43	131125L06
--------------	-----------------	-----	---------	---------	----------	-------------------	-----------

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

Parameter	Result	RL	MDL	DF	Qualifiers
Mercury	ND	0.000200	0.0000453	1	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.



## Analytical Report

ANCHOR QEA, LLC  
27201 Puerta Real, Suite 350  
Mission Viejo, CA 92691-8306

Date Received: 11/16/13  
Work Order: 13-11-1371  
Preparation: EPA 3510C  
Method: EPA 8081A  
Units: ug/L

Project: SD Shipyard Wastewater Discharge

Page 1 of 2

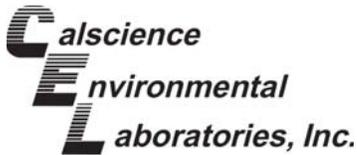
Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
D-1D-131116	13-11-1371-1-C	11/16/13 06:40	Aqueous	GC 51	11/18/13	11/21/13 16:36	131118L07

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

Parameter	Result	RL	MDL	DF	Qualifiers
Alpha-BHC	ND	0.10	0.028	1	
Gamma-BHC	ND	0.10	0.030	1	
Beta-BHC	ND	0.10	0.030	1	
Heptachlor	ND	0.10	0.026	1	
Delta-BHC	ND	0.10	0.029	1	
Aldrin	ND	0.10	0.027	1	
Heptachlor Epoxide	ND	0.10	0.025	1	
Endosulfan I	ND	0.10	0.028	1	
Dieldrin	ND	0.10	0.029	1	
4,4'-DDE	ND	0.10	0.027	1	
Endrin	ND	0.10	0.031	1	
Endrin Aldehyde	ND	0.10	0.026	1	
4,4'-DDD	ND	0.10	0.027	1	
Endosulfan II	ND	0.10	0.027	1	
4,4'-DDT	ND	0.10	0.027	1	
Endosulfan Sulfate	ND	0.10	0.029	1	
Methoxychlor	ND	0.10	0.025	1	
Chlordane	ND	1.0	0.33	1	
Toxaphene	ND	2.0	0.59	1	
Endrin Ketone	ND	0.10	0.024	1	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Decachlorobiphenyl	83	50-135	
2,4,5,6-Tetrachloro-m-Xylene	84	50-135	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.



## Analytical Report

ANCHOR QEA, LLC  
27201 Puerta Real, Suite 350  
Mission Viejo, CA 92691-8306

Date Received: 11/16/13  
Work Order: 13-11-1371  
Preparation: EPA 3510C  
Method: EPA 8081A  
Units: ug/L

Project: SD Shipyard Wastewater Discharge

Page 2 of 2

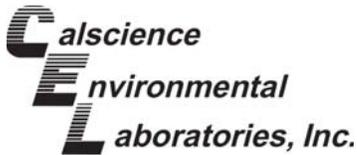
Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	099-12-529-663	N/A	Aqueous	GC 51	11/18/13	11/21/13 15:53	131118L07

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

Parameter	Result	RL	MDL	DF	Qualifiers
Alpha-BHC	ND	0.10	0.028	1	
Gamma-BHC	ND	0.10	0.030	1	
Beta-BHC	ND	0.10	0.030	1	
Heptachlor	ND	0.10	0.026	1	
Delta-BHC	ND	0.10	0.029	1	
Aldrin	ND	0.10	0.027	1	
Heptachlor Epoxide	ND	0.10	0.025	1	
Endosulfan I	ND	0.10	0.028	1	
Dieldrin	ND	0.10	0.029	1	
4,4'-DDE	ND	0.10	0.027	1	
Endrin	ND	0.10	0.031	1	
Endrin Aldehyde	ND	0.10	0.026	1	
4,4'-DDD	ND	0.10	0.027	1	
Endosulfan II	ND	0.10	0.027	1	
4,4'-DDT	ND	0.10	0.027	1	
Endosulfan Sulfate	ND	0.10	0.029	1	
Methoxychlor	ND	0.10	0.025	1	
Chlordane	ND	1.0	0.33	1	
Toxaphene	ND	2.0	0.59	1	
Endrin Ketone	ND	0.10	0.024	1	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Decachlorobiphenyl	76	50-135	
2,4,5,6-Tetrachloro-m-Xylene	77	50-135	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.



## Analytical Report

ANCHOR QEA, LLC  
27201 Puerta Real, Suite 350  
Mission Viejo, CA 92691-8306

Date Received: 11/16/13  
Work Order: 13-11-1371  
Preparation: EPA 3510C  
Method: EPA 8082  
Units: ug/L

Project: SD Shipyard Wastewater Discharge

Page 1 of 1

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
D-1D-131116	13-11-1371-1-C	11/16/13 06:40	Aqueous	GC 58	11/18/13	11/22/13 14:34	131118L08

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

Parameter	Result	RL	MDL	DF	Qualifiers
Aroclor-1016	ND	1.0	0.29	1	
Aroclor-1221	ND	1.0	0.28	1	
Aroclor-1232	ND	1.0	0.25	1	
Aroclor-1242	ND	1.0	0.18	1	
Aroclor-1248	ND	1.0	0.20	1	
Aroclor-1254	ND	1.0	0.23	1	
Aroclor-1260	ND	1.0	0.26	1	
Aroclor-1262	ND	1.0	0.26	1	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Decachlorobiphenyl	109	50-135	
2,4,5,6-Tetrachloro-m-Xylene	96	50-135	

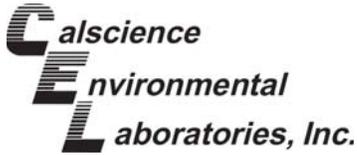
Method Blank	099-12-533-864	N/A	Aqueous	GC 58	11/18/13	11/22/13 14:16	131118L08
--------------	----------------	-----	---------	-------	----------	-------------------	-----------

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

Parameter	Result	RL	MDL	DF	Qualifiers
Aroclor-1016	ND	1.0	0.29	1	
Aroclor-1221	ND	1.0	0.28	1	
Aroclor-1232	ND	1.0	0.25	1	
Aroclor-1242	ND	1.0	0.18	1	
Aroclor-1248	ND	1.0	0.20	1	
Aroclor-1254	ND	1.0	0.23	1	
Aroclor-1260	ND	1.0	0.26	1	
Aroclor-1262	ND	1.0	0.26	1	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Decachlorobiphenyl	102	50-135	
2,4,5,6-Tetrachloro-m-Xylene	90	50-135	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.



## Quality Control - Spike/Spike Duplicate

ANCHOR QEA, LLC  
 27201 Puerta Real, Suite 350  
 Mission Viejo, CA 92691-8306

Date Received: 11/16/13  
 Work Order: 13-11-1371  
 Preparation: N/A  
 Method: EPA 200.8

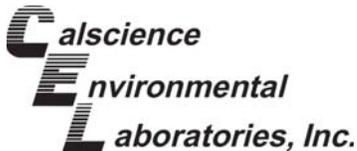
Project: SD Shipyard Wastewater Discharge

Page 1 of 2

Quality Control Sample ID	Matrix		Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number				
<b>D-1D-131116</b>	<b>Aqueous</b>		<b>ICP/MS 04</b>	<b>11/18/13</b>	<b>11/18/13 15:30</b>	<b>131118S01</b>				
Parameter	Sample Conc.	Spike Added	MS Conc.	MS %Rec.	MSD Conc.	MSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
Arsenic	0.01456	0.1000	0.1158	101	0.1143	100	80-120	1	0-20	
Copper	0.03731	0.1000	0.1337	96	0.1372	100	80-120	3	0-20	
Lead	ND	0.1000	0.1214	121	0.1229	123	80-120	1	0-20	3
Nickel	0.01893	0.1000	0.1087	90	0.1166	98	80-120	7	0-20	
Zinc	ND	0.1000	0.1157	116	0.1160	116	80-120	0	0-20	

Return to Contents

RPD: Relative Percent Difference. CL: Control Limits



Quality Control - Spike/Spike Duplicate

ANCHOR QEA, LLC  
 27201 Puerta Real, Suite 350  
 Mission Viejo, CA 92691-8306

Date Received: 11/16/13  
 Work Order: 13-11-1371  
 Preparation: EPA 245.1 Total  
 Method: EPA 245.1

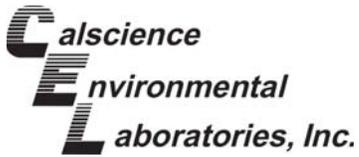
Project: SD Shipyard Wastewater Discharge

Page 2 of 2

Quality Control Sample ID	Matrix		Instrument		Date Prepared	Date Analyzed	MS/MSD Batch Number			
<b>13-11-1889-1</b>	<b>Aqueous</b>		<b>Mercury</b>		<b>11/25/13</b>	<b>11/25/13 19:14</b>	<b>131125S06</b>			
<u>Parameter</u>	<u>Sample Conc.</u>	<u>Spike Added</u>	<u>MS Conc.</u>	<u>MS %Rec.</u>	<u>MSD Conc.</u>	<u>MSD %Rec.</u>	<u>%Rec. CL</u>	<u>RPD</u>	<u>RPD CL</u>	<u>Qualifiers</u>
Mercury	0.0002539	0.01000	0.008689	84	0.009824	96	57-141	12	0-10	4

Return to Contents

RPD: Relative Percent Difference. CL: Control Limits



## Quality Control - PDS/PDSD

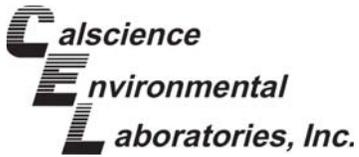
ANCHOR QEA, LLC  
 27201 Puerta Real, Suite 350  
 Mission Viejo, CA 92691-8306

Date Received: 11/16/13  
 Work Order: 13-11-1371  
 Preparation: N/A  
 Method: EPA 200.8

Project: SD Shipyard Wastewater Discharge

Page 1 of 1

Quality Control Sample ID	Matrix			Instrument	Date Prepared	Date Analyzed	PDS/PDSD Batch Number			
<b>D-1D-131116</b>	<b>Aqueous</b>			<b>ICP/MS 04</b>	<b>11/18/13 00:00</b>	<b>11/18/13 15:37</b>	<b>131118S01</b>			
<u>Parameter</u>	<u>Sample Conc.</u>	<u>Spike Added</u>	<u>PDS Conc.</u>	<u>PDS %Rec.</u>	<u>PDSD Conc.</u>	<u>PDSD %Rec.</u>	<u>%Rec. CL</u>	<u>RPD</u>	<u>RPD CL</u>	<u>Qualifiers</u>
Arsenic	0.01456	1.000	0.9287	91	0.9283	91	75-125	0	0-20	
Copper	0.03731	1.000	0.9714	93	0.9726	94	75-125	0	0-20	
Lead	ND	1.000	1.112	111	1.100	110	75-125	1	0-20	
Nickel	0.01893	1.000	0.9360	92	0.9245	91	75-125	1	0-20	
Zinc	ND	1.000	0.8412	84	0.8462	85	75-125	1	0-20	



## Quality Control - Sample Duplicate

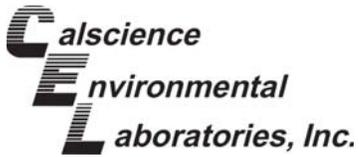
ANCHOR QEA, LLC  
 27201 Puerta Real, Suite 350  
 Mission Viejo, CA 92691-8306

Date Received: 11/16/13  
 Work Order: 13-11-1371  
 Preparation: N/A  
 Method: SM 2540 D

Project: SD Shipyard Wastewater Discharge

Page 1 of 2

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	Duplicate Batch Number
13-11-1406-1	Sea Water	N/A	11/19/13 00:00	11/19/13 13:30	D1119TSSD1
<u>Parameter</u>	<u>Sample Conc.</u>	<u>DUP Conc.</u>	<u>RPD</u>	<u>RPD CL</u>	<u>Qualifiers</u>
Solids, Total Suspended	2.400	2.300	4	0-20	



## Quality Control - Sample Duplicate

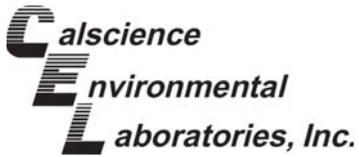
ANCHOR QEA, LLC  
 27201 Puerta Real, Suite 350  
 Mission Viejo, CA 92691-8306

Date Received: 11/16/13  
 Work Order: 13-11-1371  
 Preparation: N/A  
 Method: SM 5220 C

Project: SD Shipyard Wastewater Discharge

Page 2 of 2

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	Duplicate Batch Number
<b>D-1D-131116</b>	<b>Aqueous</b>	<b>BUR06</b>	<b>11/20/13 00:00</b>	<b>11/20/13 14:00</b>	<b>D1120ODD3</b>
<u>Parameter</u>	<u>Sample Conc.</u>	<u>DUP Conc.</u>	<u>RPD</u>	<u>RPD CL</u>	<u>Qualifiers</u>
Chemical Oxygen Demand	261.1	263.0	1	0-25	



## Quality Control - LCS/LCSD

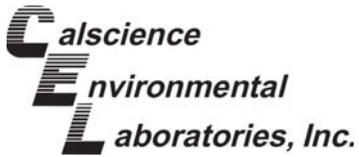
ANCHOR QEA, LLC  
 27201 Puerta Real, Suite 350  
 Mission Viejo, CA 92691-8306

Date Received: 11/16/13  
 Work Order: 13-11-1371  
 Preparation: N/A  
 Method: SM 2540 D

Project: SD Shipyard Wastewater Discharge

Page 1 of 5

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number				
<b>099-09-010-6484</b>	<b>Aqueous</b>	<b>N/A</b>	<b>11/19/13</b>	<b>11/19/13 13:30</b>	<b>D1119TSSL1</b>				
<u>Parameter</u>	<u>Spike Added</u>	<u>LCS Conc.</u>	<u>LCS %Rec.</u>	<u>LCSD Conc.</u>	<u>LCSD %Rec.</u>	<u>%Rec. CL</u>	<u>RPD</u>	<u>RPD CL</u>	<u>Qualifiers</u>
Solids, Total Suspended	100.0	94.00	94	93.00	93	80-120	1	0-20	



## Quality Control - LCS/LCSD

ANCHOR QEA, LLC  
 27201 Puerta Real, Suite 350  
 Mission Viejo, CA 92691-8306

Date Received: 11/16/13  
 Work Order: 13-11-1371  
 Preparation: N/A  
 Method: EPA 200.8

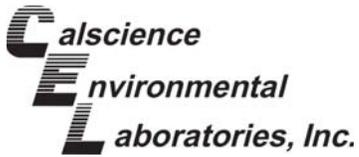
Project: SD Shipyard Wastewater Discharge

Page 2 of 5

Quality Control Sample ID		Matrix		Instrument		Date Prepared	Date Analyzed	LCS/LCSD Batch Number	
<b>099-16-094-82</b>		<b>Aqueous</b>		<b>ICP/MS 04</b>		<b>11/18/13</b>	<b>11/18/13 15:24</b>	<b>131118L01</b>	
<u>Parameter</u>	<u>Spike Added</u>	<u>LCS Conc.</u>	<u>LCS %Rec.</u>	<u>LCSD Conc.</u>	<u>LCSD %Rec.</u>	<u>%Rec. CL</u>	<u>RPD</u>	<u>RPD CL</u>	<u>Qualifiers</u>
Arsenic	0.1000	0.09968	100	0.1021	102	80-120	2	0-20	
Copper	0.1000	0.1086	109	0.1113	111	80-120	2	0-20	
Lead	0.1000	0.09709	97	0.1016	102	80-120	5	0-20	
Nickel	0.1000	0.1025	103	0.1049	105	80-120	2	0-20	
Zinc	0.1000	0.1057	106	0.1086	109	80-120	3	0-20	

Return to Contents 

RPD: Relative Percent Difference. CL: Control Limits



## Quality Control - LCS/LCSD

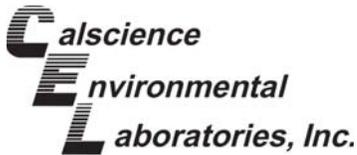
ANCHOR QEA, LLC  
 27201 Puerta Real, Suite 350  
 Mission Viejo, CA 92691-8306

Date Received: 11/16/13  
 Work Order: 13-11-1371  
 Preparation: EPA 245.1 Total  
 Method: EPA 245.1

Project: SD Shipyard Wastewater Discharge

Page 3 of 5

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number				
<b>099-04-008-6739</b>	<b>Aqueous</b>	<b>Mercury</b>	<b>11/25/13</b>	<b>11/25/13 19:09</b>	<b>131125L06</b>				
<u>Parameter</u>	<u>Spike Added</u>	<u>LCS Conc.</u>	<u>LCS %Rec.</u>	<u>LCSD Conc.</u>	<u>LCSD %Rec.</u>	<u>%Rec. CL</u>	<u>RPD</u>	<u>RPD CL</u>	<u>Qualifiers</u>
Mercury	0.01000	0.01014	101	0.009444	94	85-121	7	0-10	



## Quality Control - LCS/LCSD

ANCHOR QEA, LLC  
27201 Puerta Real, Suite 350  
Mission Viejo, CA 92691-8306

Date Received: 11/16/13  
Work Order: 13-11-1371  
Preparation: EPA 3510C  
Method: EPA 8081A

Project: SD Shipyard Wastewater Discharge

Page 4 of 5

Quality Control Sample ID	Matrix			Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number			
<b>099-12-529-663</b>	<b>Aqueous</b>			<b>GC 51</b>	<b>11/18/13</b>	<b>11/21/13 16:07</b>	<b>131118L07</b>			
Parameter	Spike Added	LCS Conc.	LCS %Rec.	LCSD Conc.	LCSD %Rec.	%Rec. CL	ME CL	RPD	RPD CL	Qualifiers
Alpha-BHC	0.5000	0.3976	80	0.4089	82	50-135	36-149	3	0-25	
Gamma-BHC	0.5000	0.3890	78	0.4033	81	50-135	36-149	4	0-25	
Beta-BHC	0.5000	0.3298	66	0.3490	70	50-135	36-149	6	0-25	
Heptachlor	0.5000	0.4165	83	0.4278	86	50-135	36-149	3	0-25	
Delta-BHC	0.5000	0.3930	79	0.4048	81	50-135	36-149	3	0-25	
Aldrin	0.5000	0.4066	81	0.4005	80	50-135	36-149	2	0-25	
Heptachlor Epoxide	0.5000	0.4043	81	0.4121	82	50-135	36-149	2	0-25	
Endosulfan I	0.5000	0.4498	90	0.4530	91	50-135	36-149	1	0-25	
Dieldrin	0.5000	0.4194	84	0.4272	85	50-135	36-149	2	0-25	
4,4'-DDE	0.5000	0.3637	73	0.3868	77	50-135	36-149	6	0-25	
Endrin	0.5000	0.3608	72	0.3850	77	50-135	36-149	6	0-25	
Endrin Aldehyde	0.5000	0.4348	87	0.3748	75	50-135	36-149	15	0-25	
4,4'-DDD	0.5000	0.3691	74	0.3954	79	50-135	36-149	7	0-25	
Endosulfan II	0.5000	0.4088	82	0.4201	84	50-135	36-149	3	0-25	
4,4'-DDT	0.5000	0.3900	78	0.4116	82	50-135	36-149	5	0-25	
Endosulfan Sulfate	0.5000	0.3842	77	0.3940	79	50-135	36-149	3	0-25	
Methoxychlor	0.5000	0.3850	77	0.4023	80	50-135	36-149	4	0-25	

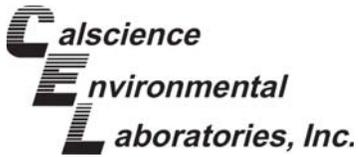
Total number of LCS compounds: 17

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 Limits



## Quality Control - LCS/LCSD

ANCHOR QEA, LLC  
 27201 Puerta Real, Suite 350  
 Mission Viejo, CA 92691-8306

Date Received: 11/16/13  
 Work Order: 13-11-1371  
 Preparation: EPA 3510C  
 Method: EPA 8082

Project: SD Shipyard Wastewater Discharge

Page 5 of 5

Quality Control Sample ID		Matrix		Instrument		Date Prepared		Date Analyzed		LCS/LCSD Batch Number
<b>099-12-533-864</b>		<b>Aqueous</b>		<b>GC 58</b>		<b>11/18/13</b>		<b>11/22/13 13:40</b>		<b>131118L08</b>
<u>Parameter</u>	<u>Spike Added</u>	<u>LCS Conc.</u>	<u>LCS %Rec.</u>	<u>LCSD Conc.</u>	<u>LCSD %Rec.</u>	<u>%Rec. CL</u>	<u>RPD</u>	<u>RPD CL</u>	<u>Qualifiers</u>	
Aroclor-1016	2.000	2.692	135	2.210	110	50-135	20	0-25		
Aroclor-1260	2.000	2.448	122	2.122	106	50-135	14	0-25		

## Glossary of Terms and Qualifiers

Work Order: 13-11-1371

Page 1 of 1

<u>Qualifiers</u>	<u>Definition</u>
*	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 suspected matrix interference. The associated LCS recovery was in control.
4	The MS/MSD RPD was out of control due to suspected matrix interference.
5	The PDS/PDSO or PES/PESO associated with this batch of samples was out of control due to suspected matrix interference.
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.
BV	Sample received 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.
JA	Analyte positively identified but quantitation is an estimate.
ME	LCS Recovery Percentage is within Marginal Exceedance (ME) Control Limit range (+/- 4 SD from the mean).
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.

Any parameter identified in 40CFR Part 136.3 Table II that is designated as "analyze immediately" with a holding time of  $\leq 15$  minutes (40CFR-136.3 Table II, footnote 4), is considered a "field" test and the reported results will be qualified as being received outside of the stated holding time unless received at the laboratory within 15 minutes of the collection time.

A calculated total result (Example: Total Pesticides) is the summation of each component concentration and/or, if "J" flags are reported, estimated concentration. Component concentrations showing not detected (ND) are summed into the calculated total result as zero concentrations.

# Calscience Environmental Laboratories, Inc.

SoCal Laboratory  
 7440 Lincoln Way  
 Garden Grove, CA 92841-1427  
 (714) 895-5494

NorCal Service Center  
 5063 Commercial Circle, Suite H  
 Concord, CA 94520-8577  
 (925) 689-9022

# CHAIN OF CUSTODY RECORD

Date 11/16 / 16 / 2013  
 Page 1 of 1

WO # / LAB USE ONLY  
**13-11-1371**

LABORATORY CLIENT: **ANCHOR QEA**  
 ADDRESS: **27201 Puerta Real, Ste 350**  
 CITY: **MISSION Viejo** STATE: **CA** ZIP: **92691**  
 TEL: **949-334-9035** E-MAIL: **agale@anchorqea.com**  
 TURNAROUND TIME:  SAME DAY  24 HR  48 HR  72 HR  STANDARD  
 COELT EDF GLOBAL ID: **1000** LOG CODE:

CLIENT PROJECT NAME / NUMBER:  
**Wastewater Discharge**  
 PROJECT CONTACT: **Adam Gale**  
 P.O. NO.:  
 SAMPLER(S): (PRINT)  
**Kelcee Christensen**

LAB USE ONLY	SAMPLE ID	SAMPLING		MATRIX	NO. OF CONT.	LOG CODE				
		DATE	TIME			Unpreserved	Preserved	Field Filtered		
	1 D-ID-131116	11/16/13	06:40	WS	1					
	2 D-ID-131116	11/16/13	06:40	WS	1			X		
	3 D-ID-131116	11/16/13	06:40	WS	1			X		
	4 D-ID-131116	11/16/13	06:40	WS	1					
	5 D-ID-131116	11/16/13	06:40	WS	1			X		

REQUESTED ANALYSES	
X	ICP/MS Metals
	TSS
	COD
X	PCBs (8082)
	Pesticides 8081

Received by: (Signature) *[Signature]* Date: 11/16/13 Time: 15:11  
 Received by: (Signature) *[Signature]* Date: 11/16/13 Time: 17:10  
 Received by: (Signature) *[Signature]* Date: \_\_\_\_\_ Time: \_\_\_\_\_

SPECIAL INSTRUCTIONS:  
 DISTRIBUTION: White with final report, Green and Yellow to Client.  
 Please note that pages 1 and 2 of our TICs are printed on the reverse side of the Green and Yellow copies respectively.

WORK ORDER #: **13-11-**

**SAMPLE RECEIPT FORM**

Cooler 1 of 1

CLIENT: ANCHOR GEA.

DATE: 11/16/13

**TEMPERATURE:** Thermometer ID: SC2 (Criteria: 0.0°C – 6.0°C, not frozen except sediment/tissue)

Temperature 1.6 °C - 0.2°C (CF) = 1.4 °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

Checked by: 671

**CUSTODY SEALS INTACT:**

Cooler  \_\_\_\_\_  No (Not Intact)  Not Present  N/A

Sample  \_\_\_\_\_  No (Not Intact)  Not Present

Checked by: 671  
 Checked by: 739

**SAMPLE CONDITION:**

	Yes	No	N/A
Chain-Of-Custody (COC) document(s) received with samples.....	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
COC document(s) received complete.....	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> Collection date/time, matrix, and/or # of containers logged in based on sample labels.			
<input type="checkbox"/> No analysis requested. <input type="checkbox"/> Not relinquished. <input type="checkbox"/> No date/time relinquished.			
Sampler's name indicated on COC.....	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Sample container label(s) consistent with COC.....	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Sample container(s) intact and good condition.....	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Proper containers and sufficient volume for analyses requested.....	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Analyses received within holding time.....	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Aqueous samples received within 15-minute holding time			
<input type="checkbox"/> pH <input type="checkbox"/> Residual Chlorine <input type="checkbox"/> Dissolved Sulfides <input type="checkbox"/> Dissolved Oxygen.....	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Proper preservation noted on COC or sample container.....	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> Unpreserved vials received for Volatiles analysis			
Volatile analysis container(s) free of headspace.....	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Tedlar bag(s) free of condensation.....	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTAINER TYPE:**

**Solid:**  4ozCGJ  8ozCGJ  16ozCGJ  Sleeve (\_\_\_\_)  EnCores®  TerraCores®  \_\_\_\_\_

**Aqueous:**  VOA  VOAh  VOAna<sub>2</sub>  125AGB  125AGBh  125AGBp  1AGB  1AGBna<sub>2</sub>  1AGBs

500AGB  500AGJ  500AGJs  250AGB  250CGB  250CGBs  1PB  1PBna  500PB

250PB  250PBn  125PB  125PBz<sub>na</sub>  100PJ  100PJna<sub>2</sub>  \_\_\_\_\_  \_\_\_\_\_  \_\_\_\_\_

**Air:**  Tedlar®  Canister **Other:**  \_\_\_\_\_ **Trip Blank Lot#:** \_\_\_\_\_ **Labeled/Checked by:** 739

**Container:** C: Clear A: Amber P: Plastic G: Glass J: Jar B: Bottle Z: Ziploc/Resealable Bag E: Envelope **Reviewed by:** 681

**Preservative:** h: HCL n: HNO<sub>3</sub> na<sub>2</sub>:Na<sub>2</sub>S<sub>2</sub>O<sub>3</sub> na: NaOH p: H<sub>3</sub>PO<sub>4</sub> s: H<sub>2</sub>SO<sub>4</sub> u: Ultra-pure z<sub>na</sub>: ZnAc<sub>2</sub>+NaOH f: Filtered **Scanned by:** 681

Return to Contents

**INDUSTRY SELF MONITORING FORM**

City of San Diego Public Utilities  
 Industrial Wastewater Control Program  
 9192 Topaz Wy San Diego, CA 92123-1119  
 Tel (858) 654-4100 Fax (858) 654-4110

*Note: If Monthly Average Limits apply, these self-monitoring results will be averaged with all other VALID analyses for samples collected in the same calendar year including IWCP monitoring data, to determine compliance.*

Michael Palmer  
 San Diego Bay Enviro Restoration Fund South Trust  
 c/o NASSCO MS 22A  
 2798 Harbor Dr  
 San Diego, CA 92113

\*\*\*\*\*  
 \* RETURN REPORT \*  
 \* by \*  
 \* 15-JAN-2014 \*  
 \*\*\*\*\*

IU# Pmt#: 11-0563 01-A Conn: 100 ISMF#: 153094

Site Address: Harbor Dr, San Diego Permitted IW Flow: 288000  
 Sample Point: Final 21,000 gallon tank of treatment system, just before water meter.

Laboratory Name: Calscience Environmental Laboratories, Inc. \* COPY OF ANALYSIS REQUIRED \*  
 6:40, 7:10, 7:40, 8:10

Sample#: 0153094-01 Date: 11/17/2013 and 12/10/2013 Time(s): 7:08, 8:08, 9:08, 10:08, 11:08

**24 hour composite**

Sampler: K. Christensen Description: clear water

<u>Parameter</u>	<u>Units</u>	<u>Daily Max</u>	<u>Result</u>
Chemical Oxygen Demand	mg/L		300
Solids, Total Suspended	mg/L		14
Copper, Total	mg/L		0.0373
Lead, Total	mg/L		0.00712
Nickel, Total	mg/L		0.0189
Zinc, Total	mg/L		0.0287
Arsenic, Total	mg/L	5	0.0146
Mercury, Total	mg/L	.2	>0.0002

Sample#: 0153094-02 Date: 12/31/2013 Time(s): 7:00

**Evaluation only (no sample)**

Sampler: K.Christensen Description: clear water

Beginning Meter Read and Date	gals	12/2/2013	485,000
Ending Meter Read and Date	gals	12/31/2013	829,600
Average Flow/calendar day thru Connection	gpd		11,120
Imported Flow During Period	gals		344,600
Maximum Flow/calendar day thru Connection	gpd		70,000
Maximum gals/min thru meter	gpm	250	250
Minimum gals/min thru meter when discharging	gpm	50-	50

INDUSTRY SELF MONITORING FORM

City of San Diego Public Utilities  
Industrial Wastewater Control Program  
9192 Topaz Wy San Diego, CA 92123-1119  
Tel (858) 654-4100 Fax (858) 654-4110

Note: If Monthly Average Limits apply, these self-monitoring results will be averaged with all other VALID analyses for samples collected in the same calendar year including IWCP monitoring data, to determine compliance.

Michael Palmer  
San Diego Bay Enviro Restoration Fund South Trust  
c/o NASSCO MS 22A  
2798 Harbor Dr  
San Diego, CA 92113

\*\*\*\*\*  
\* RETURN REPORT \*  
\* by \*  
\* 15-JAN-2014 \*  
\*\*\*\*\*

IU# Pmt#: 11-0563 01-A Conn: 100 ISMF#: 153094

Site Address: Harbor Dr, San Diego Permitted IW Flow: 288000  
Sample Point: Final 21,000 gallon tank of treatment system, just before water meter.

Laboratory Name: Calscience Environmental Laboratories, Inc. \* COPY OF ANALYSIS REQUIRED \*

Sample#: 0153094-03 Date: 11/17/2013 Time (s): 6:40

**Pesticide and PCB grab**

Sampler: K. Christensen Description: clear water

PCB's, Total ug/L 3 >1.0

# SELF MONITORING REPORT CERTIFICATION

City of San Diego Public Utilities Dept  
Industrial Wastewater Control Program  
9192 Topaz Way, San Diego, CA 92123-1119  
Tel (858) 654-4100 Fax (858) 654-4110

Applicability: These instructions apply to any industry whose Industrial User Discharge Permit includes an Attachment B, "SELF-MONITORING AND REPORTING REQUIREMENTS".

All self monitoring reports submitted to the Industrial Wastewater Control Program must include the following certification statement and be signed as required in the permit under STANDARD CONDITIONS, Signatory Requirements

## CERTIFICATION STATEMENT

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, I certify that the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I certify that all wastewater samples analyzed and reported herein are representative of the ordinary process wastewater flow from this facility. I am aware of the potential for significant penalties for submission of false information, including the possibility of fines and imprisonment for knowing violations.

11 - 0863

facility number

1/15/14

report due date

December 2014

monitoring period

Michael Abelmer

Print Name

Project Coordinator

Title

*Michael Abelmer*

Signature

(Attach to Industry Self-Monitoring Form)

1/14/2014

Date

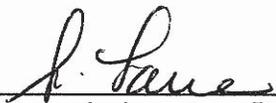


**CERTIFICATION**

All analyses were conducted at a laboratory certified for such analyses by the California Department of Public Health in accordance with applicable USEPA and NELAP accreditation procedures.

I certify under penalty of law that the data generated for Calscience Work Order No. 13-11-1371 were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. The Project Manager or designee who signed the Calscience Work Order has been specifically authorized and approved to do so.

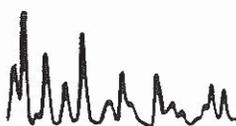
The information submitted is, to the best of my knowledge and belief, true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of a fine and imprisonment for knowing violations.

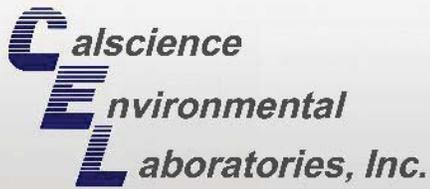
  
\_\_\_\_\_  
Signature, Laboratory Director

May 20, 2014  
Date

Name of Laboratory: **Calscience Environmental Laboratories**  
Address of Laboratory: **7440 Lincoln Way**  
**Garden Grove, CA 92841-1432**

This Certification signed by: **Steve Lane**





# CALSCIENCE

## WORK ORDER NUMBER: 13-11-1371

*The difference is service*



AIR | SOIL | WATER | MARINE CHEMISTRY

### Analytical Report For

**Client:** ANCHOR QEA, LLC

**Client Project Name:** SD Shipyard Wastewater Discharge

**Attention:** Adam Gale  
27201 Puerta Real, Suite 350  
Mission Viejo, CA 92691-8306

Approved for release on 11/26/2013 by:  
Danielle Gonsman  
Project Manager

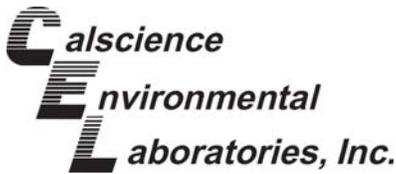


ResultLink ▶

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.





# Contents

Client Project Name: SD Shipyard Wastewater Discharge  
Work Order Number: 13-11-1371

1	Work Order Narrative. . . . .	3
2	Sample Summary. . . . .	4
3	Client Sample Data. . . . .	5
	3.1 SM 2540 D Total Suspended Solids (Aqueous). . . . .	5
	3.2 SM 5220 C Chemical Oxygen Demand (Aqueous). . . . .	6
	3.3 EPA 200.8 ICP/MS Metals (Aqueous). . . . .	7
	3.4 EPA 245.1 Mercury (Aqueous). . . . .	8
	3.5 EPA 8081A Organochlorine Pesticides (Aqueous). . . . .	9
	3.6 EPA 8082 PCB Aroclors (Aqueous). . . . .	11
4	Quality Control Sample Data. . . . .	12
	4.1 MS/MSD. . . . .	12
	4.2 PDS/PDSD. . . . .	14
	4.3 Sample Duplicate. . . . .	15
	4.4 LCS/LCSD. . . . .	17
5	Glossary of Terms and Qualifiers. . . . .	22
6	Chain of Custody/Sample Receipt Form. . . . .	23

**Work Order Narrative**

Work Order: 13-11-1371

Page 1 of 1

**Condition Upon Receipt:**

Samples were received under Chain of Custody (COC) on 11/16/13. They were assigned to Work Order 13-11-1371.

Unless otherwise noted on the Sample Receiving forms all samples were received in good condition and within the recommended EPA temperature criteria for the methods noted on the COC. The COC and Sample Receiving Documents are integral elements of the analytical report and are presented at the back of the report.

**Holding Times:**

All samples were analyzed within prescribed holding times (HT) and/or in accordance with the Calscience Sample Acceptance Policy unless otherwise noted in the analytical report and/or comprehensive case narrative, if required.

Any parameter identified in 40CFR Part 136.3 Table II that is designated as "analyze immediately" with a holding time of  $\leq 15$  minutes (40CFR-136.3 Table II, footnote 4), is considered a "field" test and the reported results will be qualified as being received outside of the stated holding time unless received at the laboratory within 15 minutes of the collection time.

**Quality Control:**

All quality control parameters (QC) were within established control limits except where noted in the QC summary forms or described further within this report.

**Additional Comments:**

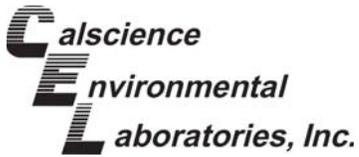
Air - Sorbent-extracted air methods (EPA TO-4A, EPA TO-10, EPA TO-13A, EPA TO-17): Analytical results are converted from mass/sample basis to mass/volume basis using client-supplied air volumes.

New York NELAP air certification does not certify for all reported methods and analytes, reference the accredited items here: [http://www.calscience.com/PDF/New\\_York.pdf](http://www.calscience.com/PDF/New_York.pdf)

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

**Subcontractor Information:**

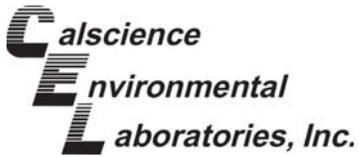
Unless otherwise noted below (or on the subcontract form), no samples were subcontracted.



## Sample Summary

Client: ANCHOR QEA, LLC	Work Order: 13-11-1371
27201 Puerta Real, Suite 350	Project Name: SD Shipyard Wastewater Discharge
Mission Viejo, CA 92691-8306	PO Number:
	Date/Time Received: 11/16/13 17:10
	Number of Containers: 5
Attn: Adam Gale	

Sample Identification	Lab Number	Collection Date and Time	Number of Containers	Matrix
D-1D-131116	13-11-1371-1	11/16/13 06:40	5	Aqueous



## Analytical Report

ANCHOR QEA, LLC  
 27201 Puerta Real, Suite 350  
 Mission Viejo, CA 92691-8306

Date Received: 11/16/13  
 Work Order: 13-11-1371  
 Preparation: N/A  
 Method: SM 2540 D  
 Units: mg/L

Project: SD Shipyard Wastewater Discharge

Page 1 of 1

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
D-1D-131116	13-11-1371-1-E	11/16/13 06:40	Aqueous	N/A	11/19/13	11/19/13 13:30	D1119TSSL1

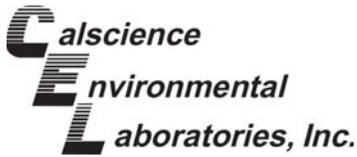
Parameter	Result	RL	DF	Qualifiers
Solids, Total Suspended	21	1.0	1	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	099-09-010-6484	N/A	Aqueous	N/A	11/19/13	11/19/13 13:30	D1119TSSL1

Parameter	Result	RL	DF	Qualifiers
Solids, Total Suspended	ND	1.0	1	

Return to Contents

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.



## Analytical Report

ANCHOR QEA, LLC  
 27201 Puerta Real, Suite 350  
 Mission Viejo, CA 92691-8306

Date Received: 11/16/13  
 Work Order: 13-11-1371  
 Preparation: N/A  
 Method: SM 5220 C  
 Units: mg/L

Project: SD Shipyard Wastewater Discharge

Page 1 of 1

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
D-1D-131116	13-11-1371-1-A	11/16/13 06:40	Aqueous	BUR06	11/20/13	11/20/13 14:00	D1120ODB3

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

Parameter	Result	RL	MDL	DF	Qualifiers
Chemical Oxygen Demand	260	5.0	4.8	1	

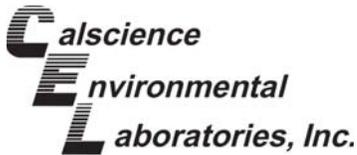
Method Blank	099-05-114-105	N/A	Aqueous	BUR06	11/20/13	11/20/13 14:00	D1120ODB3
--------------	----------------	-----	---------	-------	----------	-------------------	-----------

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

Parameter	Result	RL	MDL	DF	Qualifiers
Chemical Oxygen Demand	ND	5.0	4.8	1	

Return to Contents

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.



## Analytical Report

ANCHOR QEA, LLC  
27201 Puerta Real, Suite 350  
Mission Viejo, CA 92691-8306

Date Received: 11/16/13  
Work Order: 13-11-1371  
Preparation: N/A  
Method: EPA 200.8  
Units: mg/L

Project: SD Shipyard Wastewater Discharge

Page 1 of 1

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
D-1D-131116	13-11-1371-1-B	11/16/13 06:40	Aqueous	ICP/MS 04	11/18/13	11/18/13 15:54	131118L01

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

Parameter	Result	RL	MDL	DF	Qualifiers
Arsenic	0.0146	0.0100	0.00386	10	
Copper	0.0373	0.0100	0.00140	10	
Lead	0.00712	0.0100	0.000898	10	J
Nickel	0.0189	0.0100	0.00132	10	
Zinc	0.0287	0.0500	0.00479	10	J

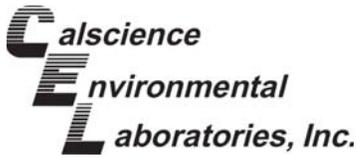
Method Blank	099-16-094-82	N/A	Aqueous	ICP/MS 04	11/18/13	11/18/13 15:20	131118L01
--------------	---------------	-----	---------	-----------	----------	-------------------	-----------

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

Parameter	Result	RL	MDL	DF	Qualifiers
Arsenic	ND	0.00100	0.000386	1	
Copper	ND	0.00100	0.000140	1	
Lead	ND	0.00100	0.0000898	1	
Nickel	ND	0.00100	0.000132	1	
Zinc	ND	0.00500	0.000479	1	

Return to Contents

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.



## Analytical Report

ANCHOR QEA, LLC  
 27201 Puerta Real, Suite 350  
 Mission Viejo, CA 92691-8306

Date Received: 11/16/13  
 Work Order: 13-11-1371  
 Preparation: EPA 245.1 Total  
 Method: EPA 245.1  
 Units: mg/L

Project: SD Shipyard Wastewater Discharge

Page 1 of 1

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
D-1D-131116	13-11-1371-1-B	11/16/13 06:40	Aqueous	Mercury	11/25/13	11/26/13 12:24	131125L06

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

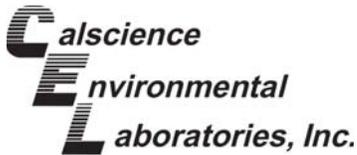
Parameter	Result	RL	MDL	DF	Qualifiers
Mercury	ND	0.000200	0.0000453	1	

Method Blank	099-04-008-6739	N/A	Aqueous	Mercury	11/25/13	11/26/13 12:43	131125L06
--------------	-----------------	-----	---------	---------	----------	-------------------	-----------

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

Parameter	Result	RL	MDL	DF	Qualifiers
Mercury	ND	0.000200	0.0000453	1	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.



## Analytical Report

ANCHOR QEA, LLC  
27201 Puerta Real, Suite 350  
Mission Viejo, CA 92691-8306

Date Received: 11/16/13  
Work Order: 13-11-1371  
Preparation: EPA 3510C  
Method: EPA 8081A  
Units: ug/L

Project: SD Shipyard Wastewater Discharge

Page 1 of 2

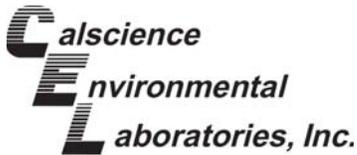
Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
D-1D-131116	13-11-1371-1-C	11/16/13 06:40	Aqueous	GC 51	11/18/13	11/21/13 16:36	131118L07

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

Parameter	Result	RL	MDL	DF	Qualifiers
Alpha-BHC	ND	0.10	0.028	1	
Gamma-BHC	ND	0.10	0.030	1	
Beta-BHC	ND	0.10	0.030	1	
Heptachlor	ND	0.10	0.026	1	
Delta-BHC	ND	0.10	0.029	1	
Aldrin	ND	0.10	0.027	1	
Heptachlor Epoxide	ND	0.10	0.025	1	
Endosulfan I	ND	0.10	0.028	1	
Dieldrin	ND	0.10	0.029	1	
4,4'-DDE	ND	0.10	0.027	1	
Endrin	ND	0.10	0.031	1	
Endrin Aldehyde	ND	0.10	0.026	1	
4,4'-DDD	ND	0.10	0.027	1	
Endosulfan II	ND	0.10	0.027	1	
4,4'-DDT	ND	0.10	0.027	1	
Endosulfan Sulfate	ND	0.10	0.029	1	
Methoxychlor	ND	0.10	0.025	1	
Chlordane	ND	1.0	0.33	1	
Toxaphene	ND	2.0	0.59	1	
Endrin Ketone	ND	0.10	0.024	1	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Decachlorobiphenyl	83	50-135	
2,4,5,6-Tetrachloro-m-Xylene	84	50-135	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.



## Analytical Report

ANCHOR QEA, LLC  
27201 Puerta Real, Suite 350  
Mission Viejo, CA 92691-8306

Date Received: 11/16/13  
Work Order: 13-11-1371  
Preparation: EPA 3510C  
Method: EPA 8081A  
Units: ug/L

Project: SD Shipyard Wastewater Discharge

Page 2 of 2

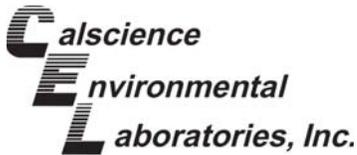
Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	099-12-529-663	N/A	Aqueous	GC 51	11/18/13	11/21/13 15:53	131118L07

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

Parameter	Result	RL	MDL	DF	Qualifiers
Alpha-BHC	ND	0.10	0.028	1	
Gamma-BHC	ND	0.10	0.030	1	
Beta-BHC	ND	0.10	0.030	1	
Heptachlor	ND	0.10	0.026	1	
Delta-BHC	ND	0.10	0.029	1	
Aldrin	ND	0.10	0.027	1	
Heptachlor Epoxide	ND	0.10	0.025	1	
Endosulfan I	ND	0.10	0.028	1	
Dieldrin	ND	0.10	0.029	1	
4,4'-DDE	ND	0.10	0.027	1	
Endrin	ND	0.10	0.031	1	
Endrin Aldehyde	ND	0.10	0.026	1	
4,4'-DDD	ND	0.10	0.027	1	
Endosulfan II	ND	0.10	0.027	1	
4,4'-DDT	ND	0.10	0.027	1	
Endosulfan Sulfate	ND	0.10	0.029	1	
Methoxychlor	ND	0.10	0.025	1	
Chlordane	ND	1.0	0.33	1	
Toxaphene	ND	2.0	0.59	1	
Endrin Ketone	ND	0.10	0.024	1	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Decachlorobiphenyl	76	50-135	
2,4,5,6-Tetrachloro-m-Xylene	77	50-135	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.



## Analytical Report

ANCHOR QEA, LLC  
27201 Puerta Real, Suite 350  
Mission Viejo, CA 92691-8306

Date Received: 11/16/13  
Work Order: 13-11-1371  
Preparation: EPA 3510C  
Method: EPA 8082  
Units: ug/L

Project: SD Shipyard Wastewater Discharge

Page 1 of 1

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
D-1D-131116	13-11-1371-1-C	11/16/13 06:40	Aqueous	GC 58	11/18/13	11/22/13 14:34	131118L08

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

Parameter	Result	RL	MDL	DF	Qualifiers
Aroclor-1016	ND	1.0	0.29	1	
Aroclor-1221	ND	1.0	0.28	1	
Aroclor-1232	ND	1.0	0.25	1	
Aroclor-1242	ND	1.0	0.18	1	
Aroclor-1248	ND	1.0	0.20	1	
Aroclor-1254	ND	1.0	0.23	1	
Aroclor-1260	ND	1.0	0.26	1	
Aroclor-1262	ND	1.0	0.26	1	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Decachlorobiphenyl	109	50-135	
2,4,5,6-Tetrachloro-m-Xylene	96	50-135	

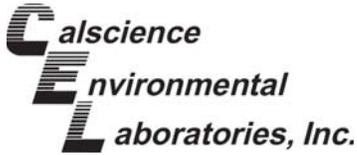
Method Blank	099-12-533-864	N/A	Aqueous	GC 58	11/18/13	11/22/13 14:16	131118L08
--------------	----------------	-----	---------	-------	----------	-------------------	-----------

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

Parameter	Result	RL	MDL	DF	Qualifiers
Aroclor-1016	ND	1.0	0.29	1	
Aroclor-1221	ND	1.0	0.28	1	
Aroclor-1232	ND	1.0	0.25	1	
Aroclor-1242	ND	1.0	0.18	1	
Aroclor-1248	ND	1.0	0.20	1	
Aroclor-1254	ND	1.0	0.23	1	
Aroclor-1260	ND	1.0	0.26	1	
Aroclor-1262	ND	1.0	0.26	1	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Decachlorobiphenyl	102	50-135	
2,4,5,6-Tetrachloro-m-Xylene	90	50-135	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.



## Quality Control - Spike/Spike Duplicate

ANCHOR QEA, LLC  
 27201 Puerta Real, Suite 350  
 Mission Viejo, CA 92691-8306

Date Received: 11/16/13  
 Work Order: 13-11-1371  
 Preparation: N/A  
 Method: EPA 200.8

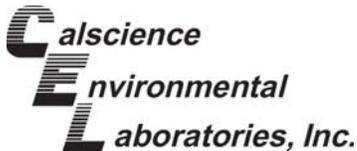
Project: SD Shipyard Wastewater Discharge

Page 1 of 2

Quality Control Sample ID	Matrix		Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number				
<b>D-1D-131116</b>	<b>Aqueous</b>		<b>ICP/MS 04</b>	<b>11/18/13</b>	<b>11/18/13 15:30</b>	<b>131118S01</b>				
Parameter	Sample Conc.	Spike Added	MS Conc.	MS %Rec.	MSD Conc.	MSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
Arsenic	0.01456	0.1000	0.1158	101	0.1143	100	80-120	1	0-20	
Copper	0.03731	0.1000	0.1337	96	0.1372	100	80-120	3	0-20	
Lead	ND	0.1000	0.1214	121	0.1229	123	80-120	1	0-20	3
Nickel	0.01893	0.1000	0.1087	90	0.1166	98	80-120	7	0-20	
Zinc	ND	0.1000	0.1157	116	0.1160	116	80-120	0	0-20	

Return to Contents

RPD: Relative Percent Difference. CL: Control Limits



**Quality Control - Spike/Spike Duplicate**

ANCHOR QEA, LLC  
 27201 Puerta Real, Suite 350  
 Mission Viejo, CA 92691-8306

Date Received: 11/16/13  
 Work Order: 13-11-1371  
 Preparation: EPA 245.1 Total  
 Method: EPA 245.1

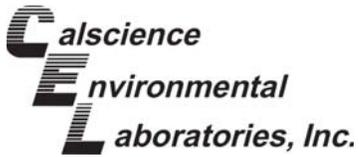
Project: SD Shipyard Wastewater Discharge

Page 2 of 2

Quality Control Sample ID	Matrix		Instrument		Date Prepared	Date Analyzed	MS/MSD Batch Number			
<b>13-11-1889-1</b>	<b>Aqueous</b>		<b>Mercury</b>		<b>11/25/13</b>	<b>11/25/13 19:14</b>	<b>131125S06</b>			
<u>Parameter</u>	<u>Sample Conc.</u>	<u>Spike Added</u>	<u>MS Conc.</u>	<u>MS %Rec.</u>	<u>MSD Conc.</u>	<u>MSD %Rec.</u>	<u>%Rec. CL</u>	<u>RPD</u>	<u>RPD CL</u>	<u>Qualifiers</u>
Mercury	0.0002539	0.01000	0.008689	84	0.009824	96	57-141	12	0-10	4

Return to Contents 

RPD: Relative Percent Difference. CL: Control Limits



## Quality Control - PDS/PDSD

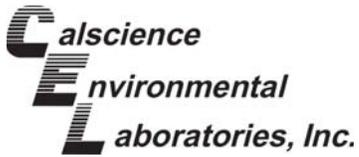
ANCHOR QEA, LLC  
 27201 Puerta Real, Suite 350  
 Mission Viejo, CA 92691-8306

Date Received: 11/16/13  
 Work Order: 13-11-1371  
 Preparation: N/A  
 Method: EPA 200.8

Project: SD Shipyard Wastewater Discharge

Page 1 of 1

Quality Control Sample ID	Matrix			Instrument	Date Prepared	Date Analyzed	PDS/PDSD Batch Number			
<b>D-1D-131116</b>	<b>Aqueous</b>			<b>ICP/MS 04</b>	<b>11/18/13 00:00</b>	<b>11/18/13 15:37</b>	<b>131118S01</b>			
Parameter	Sample Conc.	Spike Added	PDS Conc.	PDS %Rec.	PDSD Conc.	PDSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
Arsenic	0.01456	1.000	0.9287	91	0.9283	91	75-125	0	0-20	
Copper	0.03731	1.000	0.9714	93	0.9726	94	75-125	0	0-20	
Lead	ND	1.000	1.112	111	1.100	110	75-125	1	0-20	
Nickel	0.01893	1.000	0.9360	92	0.9245	91	75-125	1	0-20	
Zinc	ND	1.000	0.8412	84	0.8462	85	75-125	1	0-20	



## Quality Control - Sample Duplicate

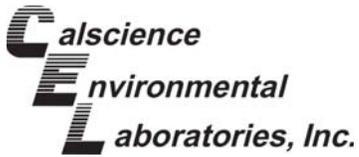
ANCHOR QEA, LLC  
 27201 Puerta Real, Suite 350  
 Mission Viejo, CA 92691-8306

Date Received: 11/16/13  
 Work Order: 13-11-1371  
 Preparation: N/A  
 Method: SM 2540 D

Project: SD Shipyard Wastewater Discharge

Page 1 of 2

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	Duplicate Batch Number
<b>13-11-1406-1</b>	<b>Sea Water</b>	<b>N/A</b>	<b>11/19/13 00:00</b>	<b>11/19/13 13:30</b>	<b>D1119TSSD1</b>
<u>Parameter</u>	<u>Sample Conc.</u>	<u>DUP Conc.</u>	<u>RPD</u>	<u>RPD CL</u>	<u>Qualifiers</u>
Solids, Total Suspended	2.400	2.300	4	0-20	



## Quality Control - Sample Duplicate

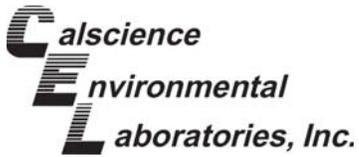
ANCHOR QEA, LLC  
 27201 Puerta Real, Suite 350  
 Mission Viejo, CA 92691-8306

Date Received: 11/16/13  
 Work Order: 13-11-1371  
 Preparation: N/A  
 Method: SM 5220 C

Project: SD Shipyard Wastewater Discharge

Page 2 of 2

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	Duplicate Batch Number
<b>D-1D-131116</b>	<b>Aqueous</b>	<b>BUR06</b>	<b>11/20/13 00:00</b>	<b>11/20/13 14:00</b>	<b>D1120ODD3</b>
<u>Parameter</u>	<u>Sample Conc.</u>	<u>DUP Conc.</u>	<u>RPD</u>	<u>RPD CL</u>	<u>Qualifiers</u>
Chemical Oxygen Demand	261.1	263.0	1	0-25	



## Quality Control - LCS/LCSD

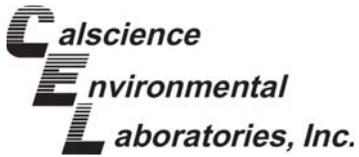
ANCHOR QEA, LLC  
 27201 Puerta Real, Suite 350  
 Mission Viejo, CA 92691-8306

Date Received: 11/16/13  
 Work Order: 13-11-1371  
 Preparation: N/A  
 Method: SM 2540 D

Project: SD Shipyard Wastewater Discharge

Page 1 of 5

Quality Control Sample ID		Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number			
<b>099-09-010-6484</b>		<b>Aqueous</b>	<b>N/A</b>	<b>11/19/13</b>	<b>11/19/13 13:30</b>	<b>D1119TSSL1</b>			
<u>Parameter</u>	<u>Spike Added</u>	<u>LCS Conc.</u>	<u>LCS %Rec.</u>	<u>LCSD Conc.</u>	<u>LCSD %Rec.</u>	<u>%Rec. CL</u>	<u>RPD</u>	<u>RPD CL</u>	<u>Qualifiers</u>
Solids, Total Suspended	100.0	94.00	94	93.00	93	80-120	1	0-20	



## Quality Control - LCS/LCSD

ANCHOR QEA, LLC  
 27201 Puerta Real, Suite 350  
 Mission Viejo, CA 92691-8306

Date Received: 11/16/13  
 Work Order: 13-11-1371  
 Preparation: N/A  
 Method: EPA 200.8

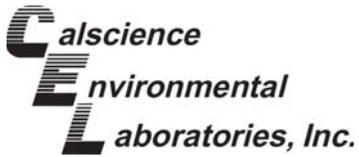
Project: SD Shipyard Wastewater Discharge

Page 2 of 5

Quality Control Sample ID		Matrix		Instrument		Date Prepared	Date Analyzed	LCS/LCSD Batch Number	
<b>099-16-094-82</b>		<b>Aqueous</b>		<b>ICP/MS 04</b>		<b>11/18/13</b>	<b>11/18/13 15:24</b>	<b>131118L01</b>	
<u>Parameter</u>	<u>Spike Added</u>	<u>LCS Conc.</u>	<u>LCS %Rec.</u>	<u>LCSD Conc.</u>	<u>LCSD %Rec.</u>	<u>%Rec. CL</u>	<u>RPD</u>	<u>RPD CL</u>	<u>Qualifiers</u>
Arsenic	0.1000	0.09968	100	0.1021	102	80-120	2	0-20	
Copper	0.1000	0.1086	109	0.1113	111	80-120	2	0-20	
Lead	0.1000	0.09709	97	0.1016	102	80-120	5	0-20	
Nickel	0.1000	0.1025	103	0.1049	105	80-120	2	0-20	
Zinc	0.1000	0.1057	106	0.1086	109	80-120	3	0-20	

  
Return to Contents

RPD: Relative Percent Difference. CL: Control Limits



## Quality Control - LCS/LCSD

ANCHOR QEA, LLC  
 27201 Puerta Real, Suite 350  
 Mission Viejo, CA 92691-8306

Date Received: 11/16/13  
 Work Order: 13-11-1371  
 Preparation: EPA 245.1 Total  
 Method: EPA 245.1

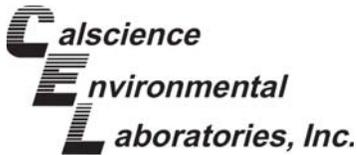
Project: SD Shipyard Wastewater Discharge

Page 3 of 5

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number				
<b>099-04-008-6739</b>	<b>Aqueous</b>	<b>Mercury</b>	<b>11/25/13</b>	<b>11/25/13 19:09</b>	<b>131125L06</b>				
<u>Parameter</u>	<u>Spike Added</u>	<u>LCS Conc.</u>	<u>LCS %Rec.</u>	<u>LCSD Conc.</u>	<u>LCSD %Rec.</u>	<u>%Rec. CL</u>	<u>RPD</u>	<u>RPD CL</u>	<u>Qualifiers</u>
Mercury	0.01000	0.01014	101	0.009444	94	85-121	7	0-10	

Return to Contents 

RPD: Relative Percent Difference. CL: Control Limits



## Quality Control - LCS/LCSD

ANCHOR QEA, LLC  
27201 Puerta Real, Suite 350  
Mission Viejo, CA 92691-8306

Date Received: 11/16/13  
Work Order: 13-11-1371  
Preparation: EPA 3510C  
Method: EPA 8081A

Project: SD Shipyard Wastewater Discharge

Page 4 of 5

Quality Control Sample ID	Matrix			Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number			
<b>099-12-529-663</b>	<b>Aqueous</b>			<b>GC 51</b>	<b>11/18/13</b>	<b>11/21/13 16:07</b>	<b>131118L07</b>			
Parameter	Spike Added	LCS Conc.	LCS %Rec.	LCSD Conc.	LCSD %Rec.	%Rec. CL	ME CL	RPD	RPD CL	Qualifiers
Alpha-BHC	0.5000	0.3976	80	0.4089	82	50-135	36-149	3	0-25	
Gamma-BHC	0.5000	0.3890	78	0.4033	81	50-135	36-149	4	0-25	
Beta-BHC	0.5000	0.3298	66	0.3490	70	50-135	36-149	6	0-25	
Heptachlor	0.5000	0.4165	83	0.4278	86	50-135	36-149	3	0-25	
Delta-BHC	0.5000	0.3930	79	0.4048	81	50-135	36-149	3	0-25	
Aldrin	0.5000	0.4066	81	0.4005	80	50-135	36-149	2	0-25	
Heptachlor Epoxide	0.5000	0.4043	81	0.4121	82	50-135	36-149	2	0-25	
Endosulfan I	0.5000	0.4498	90	0.4530	91	50-135	36-149	1	0-25	
Dieldrin	0.5000	0.4194	84	0.4272	85	50-135	36-149	2	0-25	
4,4'-DDE	0.5000	0.3637	73	0.3868	77	50-135	36-149	6	0-25	
Endrin	0.5000	0.3608	72	0.3850	77	50-135	36-149	6	0-25	
Endrin Aldehyde	0.5000	0.4348	87	0.3748	75	50-135	36-149	15	0-25	
4,4'-DDD	0.5000	0.3691	74	0.3954	79	50-135	36-149	7	0-25	
Endosulfan II	0.5000	0.4088	82	0.4201	84	50-135	36-149	3	0-25	
4,4'-DDT	0.5000	0.3900	78	0.4116	82	50-135	36-149	5	0-25	
Endosulfan Sulfate	0.5000	0.3842	77	0.3940	79	50-135	36-149	3	0-25	
Methoxychlor	0.5000	0.3850	77	0.4023	80	50-135	36-149	4	0-25	

Total number of LCS compounds: 17

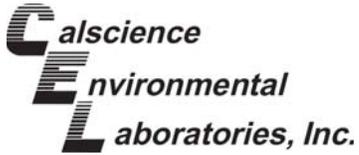
Total number of ME compounds: 0

Total number of ME compounds allowed: 1

LCS ME CL validation result: Pass

Return to Contents

RPD: Relative Percent Difference. CL: Control Limits



## Quality Control - LCS/LCSD

ANCHOR QEA, LLC  
 27201 Puerta Real, Suite 350  
 Mission Viejo, CA 92691-8306

Date Received: 11/16/13  
 Work Order: 13-11-1371  
 Preparation: EPA 3510C  
 Method: EPA 8082

Project: SD Shipyard Wastewater Discharge

Page 5 of 5

Quality Control Sample ID		Matrix		Instrument		Date Prepared		Date Analyzed		LCS/LCSD Batch Number
<b>099-12-533-864</b>		<b>Aqueous</b>		<b>GC 58</b>		<b>11/18/13</b>		<b>11/22/13 13:40</b>		<b>131118L08</b>
<u>Parameter</u>	<u>Spike Added</u>	<u>LCS Conc.</u>	<u>LCS %Rec.</u>	<u>LCSD Conc.</u>	<u>LCSD %Rec.</u>	<u>%Rec. CL</u>	<u>RPD</u>	<u>RPD CL</u>	<u>Qualifiers</u>	
Aroclor-1016	2.000	2.692	135	2.210	110	50-135	20	0-25		
Aroclor-1260	2.000	2.448	122	2.122	106	50-135	14	0-25		

Return to Contents 

RPD: Relative Percent Difference. CL: Control Limits

## Glossary of Terms and Qualifiers

Work Order: 13-11-1371

Page 1 of 1

<u>Qualifiers</u>	<u>Definition</u>
*	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 suspected matrix interference. The associated LCS recovery was in control.
4	The MS/MSD RPD was out of control due to suspected matrix interference.
5	The PDS/PDSD or PES/PESD associated with this batch of samples was out of control due to suspected matrix interference.
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.
BV	Sample received 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.
JA	Analyte positively identified but quantitation is an estimate.
ME	LCS Recovery Percentage is within Marginal Exceedance (ME) Control Limit range (+/- 4 SD from the mean).
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.

Any parameter identified in 40CFR Part 136.3 Table II that is designated as "analyze immediately" with a holding time of  $\leq 15$  minutes (40CFR-136.3 Table II, footnote 4), is considered a "field" test and the reported results will be qualified as being received outside of the stated holding time unless received at the laboratory within 15 minutes of the collection time.

A calculated total result (Example: Total Pesticides) is the summation of each component concentration and/or, if "J" flags are reported, estimated concentration. Component concentrations showing not detected (ND) are summed into the calculated total result as zero concentrations.

# Calscience Environmental Laboratories, Inc.

SoCal Laboratory  
 7440 Lincoln Way  
 Garden Grove, CA 92841-1427  
 (714) 895-5494

NorCal Service Center  
 5063 Commercial Circle, Suite H  
 Concord, CA 94520-8577  
 (925) 689-9022

# CHAIN OF CUSTODY RECORD

Date 11/16 / 16 / 2013  
 Page 1 of 1

WO # / LAB USE ONLY  
**13-11-1371**

LABORATORY CLIENT: **ANCHOR QEA**  
 ADDRESS: **27201 Puerta Real, Ste 350**  
 CITY: **MISSION Viejo** STATE: **CA** ZIP: **92691**  
 TEL: **949-334-9035** E-MAIL: **agale@anchorqea.com**  
 TURNAROUND TIME:  SAME DAY  24 HR  48 HR  72 HR  STANDARD  OTHER

CLIENT PROJECT NAME / NUMBER:  
**Wastewater Discharge**  
 PROJECT CONTACT: **Adam Gale**  
 P.O. NO.:  
 SAMPLER(S): (PRINT) **Kelcee Christensen**

LAB USE ONLY	SAMPLE ID	SAMPLING		MATRIX	NO. OF CONT.	LOG CODE		
		DATE	TIME			Unpreserved	Preserved	Field Filtered
	1 D-ID-131116	11/16/13	06:40	WS	1			
	2 D-ID-131116	11/16/13	06:40	WS	1	X		
	3 D-ID-131116	11/16/13	06:40	WS	1	X		
	4 D-ID-131116	11/16/13	06:40	WS	1			
	5 D-ID-131116	11/16/13	06:40	WS	1	X		

REQUESTED ANALYSES	Field Filtered	Preserved	Unpreserved
X ICP/MS Metals			
TSS			
COD			
PCBs (8082)			X
Pesticides 8081			X

Received by: (Signature) *[Signature]* Date: 11/16/13 Time: 15:11  
 Received by: (Signature) *[Signature]* Date: 11/16/13 Time: 17:10  
 Received by: (Signature) *[Signature]* Date: \_\_\_\_\_ Time: \_\_\_\_\_

SPECIAL INSTRUCTIONS:  
 DISTRIBUTION: White with final report, Green and Yellow to Client.  
 Please note that pages 1 and 2 of our TICs are printed on the reverse side of the Green and Yellow copies respectively.

WORK ORDER #: **13-11-**

**SAMPLE RECEIPT FORM**

Cooler 1 of 1

CLIENT: ANCHOR GEA.

DATE: 11/16/13

**TEMPERATURE:** Thermometer ID: SC2 (Criteria: 0.0°C – 6.0°C, not frozen except sediment/tissue)

Temperature 1.6 °C - 0.2°C (CF) = 1.4 °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

Checked by: 671

**CUSTODY SEALS INTACT:**

Cooler  \_\_\_\_\_  No (Not Intact)  Not Present  N/A

Sample  \_\_\_\_\_  No (Not Intact)  Not Present

Checked by: 671  
Checked by: 739

**SAMPLE CONDITION:**

	Yes	No	N/A
Chain-Of-Custody (COC) document(s) received with samples.....	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
COC document(s) received complete.....	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> Collection date/time, matrix, and/or # of containers logged in based on sample labels.			
<input type="checkbox"/> No analysis requested. <input type="checkbox"/> Not relinquished. <input type="checkbox"/> No date/time relinquished.			
Sampler's name indicated on COC.....	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Sample container label(s) consistent with COC.....	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Sample container(s) intact and good condition.....	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Proper containers and sufficient volume for analyses requested.....	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Analyses received within holding time.....	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Aqueous samples received within 15-minute holding time			
<input type="checkbox"/> pH <input type="checkbox"/> Residual Chlorine <input type="checkbox"/> Dissolved Sulfides <input type="checkbox"/> Dissolved Oxygen.....	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Proper preservation noted on COC or sample container.....	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> Unpreserved vials received for Volatiles analysis			
Volatile analysis container(s) free of headspace.....	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Tedlar bag(s) free of condensation.....	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTAINER TYPE:**

**Solid:**  4ozCGJ  8ozCGJ  16ozCGJ  Sleeve (\_\_\_\_)  EnCores®  TerraCores®  \_\_\_\_\_

**Aqueous:**  VOA  VOAh  VOAna<sub>2</sub>  125AGB  125AGBh  125AGBp  1AGB  1AGBna<sub>2</sub>  1AGBs

500AGB  500AGJ  500AGJs  250AGB  250CGB  250CGBs  1PB  1PBna  500PB

250PB  250PBn  125PB  125PBz<sub>2</sub>na  100PJ  100PJna<sub>2</sub>  \_\_\_\_\_  \_\_\_\_\_  \_\_\_\_\_

**Air:**  Tedlar®  Canister **Other:**  \_\_\_\_\_ **Trip Blank Lot#:** \_\_\_\_\_ **Labeled/Checked by:** 739

**Container:** C: Clear A: Amber P: Plastic G: Glass J: Jar B: Bottle Z: Ziploc/Resealable Bag E: Envelope **Reviewed by:** 681

**Preservative:** h: HCL n: HNO<sub>3</sub> na<sub>2</sub>:Na<sub>2</sub>S<sub>2</sub>O<sub>3</sub> na: NaOH p: H<sub>3</sub>PO<sub>4</sub> s: H<sub>2</sub>SO<sub>4</sub> u: Ultra-pure z<sub>2</sub>na: ZnAc<sub>2</sub>+NaOH f: Filtered **Scanned by:** 681

Return to Contents

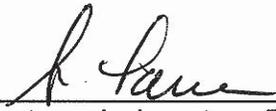


**CERTIFICATION**

All analyses were conducted at a laboratory certified for such analyses by the California Department of Public Health in accordance with applicable USEPA and NELAP accreditation procedures.

I certify under penalty of law that the data generated for Calscience Work Order No. 13-12-0790 were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. The Project Manager or designee who signed the Calscience Work Order has been specifically authorized and approved to do so.

The information submitted is, to the best of my knowledge and belief, true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of a fine and imprisonment for knowing violations.

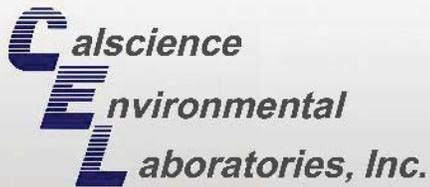
  
\_\_\_\_\_  
Signature, Laboratory Director

May 20, 2014  
Date

Name of Laboratory: **Calscience Environmental Laboratories**  
Address of Laboratory: **7440 Lincoln Way**  
**Garden Grove, CA 92841-1432**

This Certification signed by: **Steve Lane**





# CALSCIENCE

WORK ORDER NUMBER: 13-12-0790

*The difference is service*



AIR | SOIL | WATER | MARINE CHEMISTRY

## Analytical Report For

**Client:** ANCHOR QEA, LLC

**Client Project Name:** SD Shipyard Wastewater Discharge

**Attention:** Adam Gale

27201 Puerta Real, Suite 350  
Mission Viejo, CA 92691-8306

Approved for release on 12/23/2013 by:  
Danielle Gonsman  
Project Manager

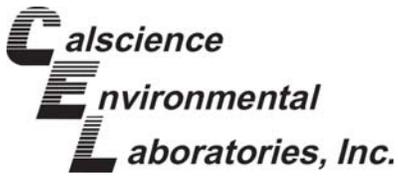
ResultLink ▶

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.





# Contents

---

Client Project Name: SD Shipyard Wastewater Discharge  
Work Order Number: 13-12-0790

1	Work Order Narrative. . . . .	3
2	Sample Summary. . . . .	4
3	Client Sample Data. . . . .	5
	3.1 SM 2540 D Total Suspended Solids (Aqueous). . . . .	5
	3.2 SM 5220 C Chemical Oxygen Demand (Aqueous). . . . .	6
4	Quality Control Sample Data. . . . .	7
	4.1 Sample Duplicate. . . . .	7
	4.2 LCS/LCSD. . . . .	9
5	Glossary of Terms and Qualifiers. . . . .	10
6	Chain of Custody/Sample Receipt Form. . . . .	11

**Work Order Narrative**

Work Order: 13-12-0790

Page 1 of 1

**Condition Upon Receipt:**

Samples were received under Chain of Custody (COC) on 12/10/13. They were assigned to Work Order 13-12-0790.

Unless otherwise noted on the Sample Receiving forms all samples were received in good condition and within the recommended EPA temperature criteria for the methods noted on the COC. The COC and Sample Receiving Documents are integral elements of the analytical report and are presented at the back of the report.

**Holding Times:**

All samples were analyzed within prescribed holding times (HT) and/or in accordance with the Calscience Sample Acceptance Policy unless otherwise noted in the analytical report and/or comprehensive case narrative, if required.

Any parameter identified in 40CFR Part 136.3 Table II that is designated as "analyze immediately" with a holding time of  $\leq 15$  minutes (40CFR-136.3 Table II, footnote 4), is considered a "field" test and the reported results will be qualified as being received outside of the stated holding time unless received at the laboratory within 15 minutes of the collection time.

**Quality Control:**

All quality control parameters (QC) were within established control limits except where noted in the QC summary forms or described further within this report.

**Additional Comments:**

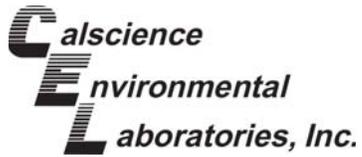
Air - Sorbent-extracted air methods (EPA TO-4A, EPA TO-10, EPA TO-13A, EPA TO-17): Analytical results are converted from mass/sample basis to mass/volume basis using client-supplied air volumes.

New York NELAP air certification does not certify for all reported methods and analytes, reference the accredited items here: [http://www.calscience.com/PDF/New\\_York.pdf](http://www.calscience.com/PDF/New_York.pdf)

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

**Subcontractor Information:**

Unless otherwise noted below (or on the subcontract form), no samples were subcontracted.



## Sample Summary

---

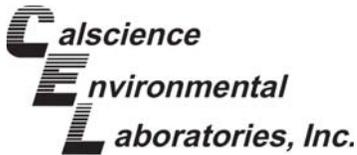
Client: ANCHOR QEA, LLC  
27201 Puerta Real, Suite 350  
Mission Viejo, CA 92691-8306

Work Order: 13-12-0790  
Project Name: SD Shipyard Wastewater Discharge  
PO Number:  
Date/Time Received: 12/10/13 18:00  
Number of Containers: 2

Attn: Adam Gale

---

Sample Identification	Lab Number	Collection Date and Time	Number of Containers	Matrix
D-ID-131210	13-12-0790-1	12/10/13 12:08	2	Aqueous



## Analytical Report

ANCHOR QEA, LLC  
 27201 Puerta Real, Suite 350  
 Mission Viejo, CA 92691-8306

Date Received: 12/10/13  
 Work Order: 13-12-0790  
 Preparation: N/A  
 Method: SM 2540 D  
 Units: mg/L

Project: SD Shipyard Wastewater Discharge

Page 1 of 1

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
D-ID-131210	13-12-0790-1-A	12/10/13 12:08	Aqueous	N/A	12/14/13	12/14/13 14:30	D1214TSSL1

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

Parameter	Result	RL	MDL	DF	Qualifiers
Solids, Total Suspended	14	1.0	0.95	1	

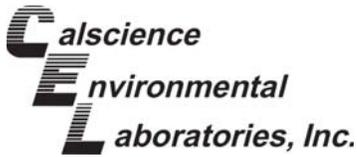
Method Blank	099-09-010-6507	N/A	Aqueous	N/A	12/14/13	12/14/13 14:30	D1214TSSL1
--------------	-----------------	-----	---------	-----	----------	-------------------	------------

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

Parameter	Result	RL	MDL	DF	Qualifiers
Solids, Total Suspended	ND	1.0	0.95	1	

Return to Contents

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.



## Analytical Report

ANCHOR QEA, LLC  
 27201 Puerta Real, Suite 350  
 Mission Viejo, CA 92691-8306

Date Received: 12/10/13  
 Work Order: 13-12-0790  
 Preparation: N/A  
 Method: SM 5220 C  
 Units: mg/L

Project: SD Shipyard Wastewater Discharge

Page 1 of 1

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
D-ID-131210	13-12-0790-1-B	12/10/13 12:08	Aqueous	BUR06	12/19/13	12/19/13 18:00	D1219ODB5

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

Parameter	Result	RL	MDL	DF	Qualifiers
Chemical Oxygen Demand	300	5.0	4.8	1	

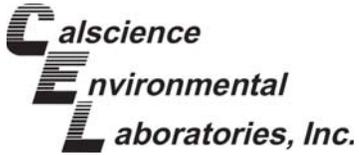
Method Blank	099-05-114-108	N/A	Aqueous	BUR06	12/19/13	12/19/13 18:00	D1219ODB5
--------------	----------------	-----	---------	-------	----------	-------------------	-----------

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

Parameter	Result	RL	MDL	DF	Qualifiers
Chemical Oxygen Demand	ND	5.0	4.8	1	

Return to Contents

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.



## Quality Control - Sample Duplicate

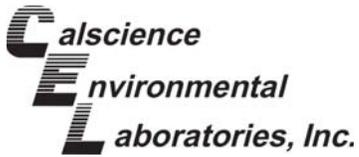
ANCHOR QEA, LLC  
 27201 Puerta Real, Suite 350  
 Mission Viejo, CA 92691-8306

Date Received: 12/10/13  
 Work Order: 13-12-0790  
 Preparation: N/A  
 Method: SM 2540 D

Project: SD Shipyard Wastewater Discharge

Page 1 of 2

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	Duplicate Batch Number
<b>13-12-0810-5</b>	<b>Aqueous</b>	<b>N/A</b>	<b>12/14/13 00:00</b>	<b>12/14/13 14:30</b>	<b>D1214TSSD1</b>
<u>Parameter</u>	<u>Sample Conc.</u>	<u>DUP Conc.</u>	<u>RPD</u>	<u>RPD CL</u>	<u>Qualifiers</u>
Solids, Total Suspended	430.0	435.0	1	0-20	



## Quality Control - Sample Duplicate

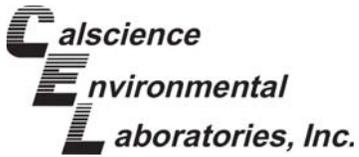
ANCHOR QEA, LLC  
 27201 Puerta Real, Suite 350  
 Mission Viejo, CA 92691-8306

Date Received: 12/10/13  
 Work Order: 13-12-0790  
 Preparation: N/A  
 Method: SM 5220 C

Project: SD Shipyard Wastewater Discharge

Page 2 of 2

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	Duplicate Batch Number
<b>D-ID-131210</b>	<b>Aqueous</b>	<b>BUR06</b>	<b>12/19/13 00:00</b>	<b>12/19/13 18:00</b>	<b>D1219ODD5</b>
<u>Parameter</u>	<u>Sample Conc.</u>	<u>DUP Conc.</u>	<u>RPD</u>	<u>RPD CL</u>	<u>Qualifiers</u>
Chemical Oxygen Demand	297.6	289.9	3	0-25	



## Quality Control - LCS/LCSD

ANCHOR QEA, LLC  
 27201 Puerta Real, Suite 350  
 Mission Viejo, CA 92691-8306

Date Received: 12/10/13  
 Work Order: 13-12-0790  
 Preparation: N/A  
 Method: SM 2540 D

Project: SD Shipyard Wastewater Discharge

Page 1 of 1

Quality Control Sample ID		Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number			
<b>099-09-010-6507</b>		<b>Aqueous</b>	<b>N/A</b>	<b>12/14/13</b>	<b>12/14/13 14:30</b>	<b>D1214TSSL1</b>			
<u>Parameter</u>	<u>Spike Added</u>	<u>LCS Conc.</u>	<u>LCS %Rec.</u>	<u>LCSD Conc.</u>	<u>LCSD %Rec.</u>	<u>%Rec. CL</u>	<u>RPD</u>	<u>RPD CL</u>	<u>Qualifiers</u>
Solids, Total Suspended	100.0	88.00	88	90.00	90	80-120	2	0-20	

## Glossary of Terms and Qualifiers

Work Order: 13-12-0790

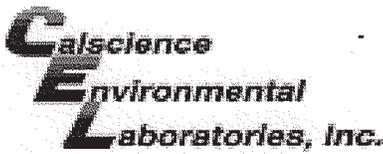
Page 1 of 1

<u>Qualifiers</u>	<u>Definition</u>
*	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 suspected matrix interference. The associated LCS recovery was in control.
4	The MS/MSD RPD was out of control due to suspected matrix interference.
5	The PDS/PDSD or PES/PESD associated with this batch of samples was out of control due to suspected matrix interference.
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.
BV	Sample received 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.
JA	Analyte positively identified but quantitation is an estimate.
ME	LCS Recovery Percentage is within Marginal Exceedance (ME) Control Limit range (+/- 4 SD from the mean).
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.

Any parameter identified in 40CFR Part 136.3 Table II that is designated as "analyze immediately" with a holding time of  $\leq 15$  minutes (40CFR-136.3 Table II, footnote 4), is considered a "field" test and the reported results will be qualified as being received outside of the stated holding time unless received at the laboratory within 15 minutes of the collection time.

A calculated total result (Example: Total Pesticides) is the summation of each component concentration and/or, if "J" flags are reported, estimated concentration. Component concentrations showing not detected (ND) are summed into the calculated total result as zero concentrations.





WORK ORDER #: 13-12-0790

SAMPLE RECEIPT FORM

Cooler 1 of 1

CLIENT: ANCHOR QEA

DATE: 12/10/13

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

Temperature 1.8 °C - 0.2 °C (CF) = 1.6 °C [X] 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

Checked by: 671

CUSTODY SEALS INTACT:

[ ] Cooler [ ] \_\_\_\_\_ [ ] No (Not Intact) [X] Not Present [ ] N/A Checked by: 671

[ ] Sample [ ] \_\_\_\_\_ [ ] No (Not Intact) [X] Not Present Checked by: 681

SAMPLE CONDITION:

Table with 4 columns: Description, Yes, No, N/A. Rows include Chain-Of-Custody (COC) document(s) received with samples, COC document(s) received complete, 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, Aqueous samples received within 15-minute holding time, Proper preservation noted on COC or sample container, Volatile analysis container(s) free of headspace, Tedlar bag(s) free of condensation.

CONTAINER TYPE:

Solid: [ ] 4ozCGJ [ ] 8ozCGJ [ ] 16ozCGJ [ ] Sleeve (\_\_\_\_) [ ] EnCores® [ ] TerraCores® [ ] \_\_\_\_\_

Aqueous: [ ] VOA [ ] VOA<sub>h</sub> [ ] VOA<sub>na2</sub> [ ] 125AGB [ ] 125AGB<sub>h</sub> [ ] 125AGB<sub>p</sub> [ ] 1AGB [ ] 1AGB<sub>na2</sub> [ ] 1AGB<sub>s</sub>

[ ] 500AGB [ ] 500AGJ [ ] 500AGJ<sub>s</sub> [ ] 250AGB [ ] 250CGB [X] 250CGB<sub>s</sub> [X] 1PB [ ] 1PB<sub>na</sub> [ ] 500PB

[ ] 250PB [ ] 250PB<sub>n</sub> [ ] 125PB [ ] 125PB<sub>z</sub> [ ] 100PJ [ ] 100PJ<sub>na2</sub> [ ] \_\_\_\_\_ [ ] \_\_\_\_\_ [ ] \_\_\_\_\_

Air: [ ] Tedlar® [ ] Canister Other: [ ] \_\_\_\_\_ Trip Blank Lot#: \_\_\_\_\_ Labeled/Checked by: 681

Container: C: Clear A: Amber P: Plastic G: Glass J: Jar B: Bottle Z: Ziploc/Resealable Bag E: Envelope Reviewed by: 854

Preservative: h: HCL n: HNO3 na2: Na2S2O3 na: NaOH p: H3PO4 s: H2SO4 u: Ultra-pure zna: ZnAc2+NaOH f: Filtered Scanned by: 854

Return to Contents

**INDUSTRY SELF MONITORING FORM**

City of San Diego Public Utilities  
 Industrial Wastewater Control Program  
 9192 Topaz Wy San Diego, CA 92123-1119  
 Tel (858) 654-4100 Fax (858) 654-4110

*Note: If Monthly Average Limits apply, these self-monitoring results will be averaged with all other VALID analyses for samples collected in the same calendar year including IWCP monitoring data, to determine compliance.*

Michael Palmer  
 San Diego Bay Enviro Restoration Fund South Trust  
 c/o NASSCO MS 22A  
 2798 Harbor Dr  
 San Diego, CA 92113

\*\*\*\*\*  
 \* RETURN REPORT \*  
 \* by \*  
 \* 15-FEB-2014 \*  
 \*\*\*\*\*

IU# Pmt#: 11-0563 01-A Conn: 100 ISMF#: 153699

Site Address: Harbor Dr, San Diego Permitted IW Flow: 288000  
 Sample Point: Immediate left after guard station. The final 21,000 gallon tank of treatment system, just before water meter. Access sample tank through top access hole/port.

Laboratory Name: Calscience Environmental Laboratories, Inc. \* COPY OF ANALYSIS REQUIRED \*

Sample#: 0153699-01 Date: 1/16/2014 Time(s): 06:20, 08:45, 09:30, 10:30, 11:30

**24 hour composite**

Sampler: K. King Description: clear water

Parameter	Units	Daily Max	Result
Chemical Oxygen Demand	mg/L		280
Solids, Total Suspended	mg/L		6.8

Sample#: 0153699-02 Date: 1/31/2014 Time(s): 7:00

**Evaluation only (no sample)**

Sampler: K. Christensen Description: clear water

Beginning Meter Read and Date	gals	1/2/2014	851,800
Ending Meter Read and Date	gals	1/31/2014	1,006,300
Average Flow/calendar day thru Connection	gpd		4,990
Imported Flow During Period	gals		154,500
Maximum Flow/calendar day thru Connection	gpd		55,600
Maximum gals/min thru meter	gpm	250	250
Minimum gals/min thru meter when discharging	gpm	50-	50

# SELF MONITORING REPORT CERTIFICATION

City of San Diego Public Utilities Dept  
Industrial Wastewater Control Program  
9192 Topaz Way, San Diego, CA 92123-1119  
Tel (858) 654-4100 Fax (858) 654-4110

Applicability: These instructions apply to any industry whose Industrial User Discharge Permit includes an Attachment B, "SELF-MONITORING AND REPORTING REQUIREMENTS".

All self monitoring reports submitted to the Industrial Wastewater Control Program must include the following certification statement and be signed as required in the permit under STANDARD CONDITIONS, Signatory Requirements.

---

## CERTIFICATION STATEMENT

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, I certify that the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I certify that all wastewater samples analyzed and reported herein are representative of the ordinary process wastewater flow from this facility. I am aware of the potential for significant penalties for submission of false information, including the possibility of fines and imprisonment for knowing violations.

		-				
--	--	---	--	--	--	--

facility number

2/15/2014

report due date

1/1 - 1/31/2014

monitoring period

\_\_\_\_\_  
Print Name

\_\_\_\_\_  
Title

\_\_\_\_\_  
Signature  
(Attach to Industry Self-Monitoring Form)

\_\_\_\_\_  
Date

## INDUSTRY SELF MONITORING FORM (ISMF) INSTRUCTIONS

Refer to the Attachment B and Appendix B of your IU Discharge Permit for the complete monitoring schedule and instructions. Questions concerning these requirements may be answered by contacting your area inspector.

- Sample collection for IU self monitoring can be conducted whenever the IWLab is not already monitoring at your facility. If the IWLab samples all the wastewater discharges in a monitoring period (this is unlikely but can occur for infrequently batch discharged wastestreams), indicate this on your ISMF to prompt the reviewer to waive your sampling, but not the reporting, requirements for the period. Otherwise representative samples must be collected at the **sampling location and for all** the required self monitoring parameters specified in the permit for at least (1) 24 hour period in the **monitoring period**; advise the Compliance Supervisor if you believe the location is inappropriate.
- IU self monitoring analyses must be conducted by an ELAP certified laboratory that has provided evidence of its current certifications to this office **or the analytical results will be considered invalid.**
- IU self monitoring analyses must be submitted on the ISMF provided or a similarly formatted data entry form. Transfer the analysis results to the ISMF (if a result is ND, enter the parameter's reporting limit preceded by "<", except flash point which is preceded by ">"), attach a copy of the laboratory analysis report including the chain of custody, and return the report to this office by the due date specified in your permit. You may email or fax the report to meet the due date; however you must also mail a signed original. Failure to use the required format with the ISMF# clearly listed, risks the loss of your data and consequently a violation for late and/or incomplete reporting.
- A **Sample Type** is specified for each parameter and is generally either a 24 hour composite or Grab (includes Grab/Field Measurement, Grab/separate analysis, TTO result (sum), VOC grab, etc.). A **Grab** is a single sample collected over a period of time not exceeding 15 minutes and is often accomplished by simply dipping a sample out of the wastestream with a bailer or the sample container. **Note: pH, temperature, flash point, and many TTO compounds require discrete grab samples and analyses.** A **24 hour composite** requires a series of samples be collected during a 24 hour period representative of normal process operations and combined into a single container for analysis. Composites must be flow or time proportioned and may be collected with automatic sampling equipment or by manually combining a **minimum of (4) grab samples**. For all manually collected samples each individual sample time must be listed on the ISMF. For autosamplers list the time sampling began and the time it ended. Example: for a 16 hour workday and flow of 8,000 gpd, samples are collected at least every 4 hours or 2,000 gals. In contrast, the **Evaluation only** and **Fixed probe with chart** sample types do not require the actual collection of samples; for flow measurements and continuous pH recording use the sampling information fields to indicate the applicable time period.
- The sample **Description** should include the appearance of the sample. Indicate the color, clarity, layering if present, etceteras. Examples: clear, colorless and cloudy, tan.
- If a **Flow** parameter is required, enter your best estimate if a metered value is not available.
- The attached Self Monitoring Report Certification must be signed and dated by a person in your firm having the authority as set forth in the permit under Standard Conditions, Signatory Requirements. This (SMR Certification) and other Supporting Documents are available at: <http://www.sandiego.gov/mwwd/environment/iwcp/index.shtml>.
- Self monitoring early in the period and more frequently than required in the permit is highly recommended. Simply make additional copies of the ISMF and replace the ISMF# with "extra". Note however, that you must submit all "representative" self monitoring results to this office. This does **not** include in-house testing at locations other than the permitted sample point or when non-EPA approved analytical methods (see 40 CFR Part 136) are utilized.
- If self monitoring **INDICATES A VIOLATION** of a daily maximum or instantaneous limit, you must 1) notify the Compliance Supervisor within 24 hours of becoming aware of the violation and 2) unless your permit requires monthly self monitoring for the pollutant(s) in violation, resample at the sample point for the parameters in violation and submit the results to this office within 30 days of becoming aware of the violation, including a properly signed Self Monitoring Report Certification. The resample requirement is in addition to your routine self monitoring and therefore the results cannot be used for your next report.



**CERTIFICATION**

All analyses were conducted at a laboratory certified for such analyses by the California Department of Public Health in accordance with applicable USEPA and NELAP accreditation procedures.

I certify under penalty of law that the data generated for Calscience Work Order No. 14-01-0932 were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. The Project Manager or designee who signed the Calscience Work Order has been specifically authorized and approved to do so.

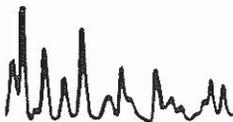
The information submitted is, to the best of my knowledge and belief, true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of a fine and imprisonment for knowing violations.

  
\_\_\_\_\_  
Signature, Laboratory Director

May 20, 2014  
Date

Name of Laboratory: **Calscience Environmental Laboratories**  
Address of Laboratory: **7440 Lincoln Way**  
**Garden Grove, CA 92841-1432**

This Certification signed by: **Steve Lane**





# CALSCIENCE

**WORK ORDER NUMBER: 14-01-0932**

*The difference is service*



AIR | SOIL | WATER | MARINE CHEMISTRY

## Analytical Report For

**Client:** ANCHOR QEA, LLC

**Client Project Name:** SD Shipyard Wastewater Discharge

**Attention:** Adam Gale

27201 Puerta Real, Suite 350  
Mission Viejo, CA 92691-8306

Approved for release on 01/24/2014 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.



Client Project Name: SD Shipyard Wastewater Discharge  
 Work Order Number: 14-01-0932

1	Work Order Narrative. . . . .	3
2	Sample Summary. . . . .	4
3	Client Sample Data. . . . .	5
	3.1 SM 2540 D Total Suspended Solids (Aqueous). . . . .	5
	3.2 SM 5220 C Chemical Oxygen Demand (Aqueous). . . . .	6
	3.3 EPA 200.8 ICP/MS Metals (Aqueous). . . . .	7
	3.4 EPA 245.1 Mercury (Aqueous). . . . .	8
	3.5 EPA 8081A Organochlorine Pesticides (Aqueous). . . . .	9
	3.6 EPA 8082 PCB Aroclors (Aqueous). . . . .	11
4	Quality Control Sample Data. . . . .	12
	4.1 MS/MSD. . . . .	12
	4.2 Sample Duplicate. . . . .	14
	4.3 LCS/LCSD. . . . .	16
5	Glossary of Terms and Qualifiers. . . . .	21
6	Chain of Custody/Sample Receipt Form. . . . .	22

**Condition Upon Receipt:**

Samples were received under Chain of Custody (COC) on 01/16/14. They were assigned to Work Order 14-01-0932.

Unless otherwise noted on the Sample Receiving forms all samples were received in good condition and within the recommended EPA temperature criteria for the methods noted on the COC. The COC and Sample Receiving Documents are integral elements of the analytical report and are presented at the back of the report.

**Holding Times:**

All samples were analyzed within prescribed holding times (HT) and/or in accordance with the Calscience Sample Acceptance Policy unless otherwise noted in the analytical report and/or comprehensive case narrative, if required.

Any parameter identified in 40CFR Part 136.3 Table II that is designated as "analyze immediately" with a holding time of  $\leq 15$  minutes (40CFR-136.3 Table II, footnote 4), is considered a "field" test and the reported results will be qualified as being received outside of the stated holding time unless received at the laboratory within 15 minutes of the collection time.

**Quality Control:**

All quality control parameters (QC) were within established control limits except where noted in the QC summary forms or described further within this report.

**Additional Comments:**

Air - Sorbent-extracted air methods (EPA TO-4A, EPA TO-10, EPA TO-13A, EPA TO-17): Analytical results are converted from mass/sample basis to mass/volume basis using client-supplied air volumes.

New York NELAP air certification does not certify for all reported methods and analytes, reference the accredited items here: [http://www.calscience.com/PDF/New\\_York.pdf](http://www.calscience.com/PDF/New_York.pdf)

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

**Subcontractor Information:**

Unless otherwise noted below (or on the subcontract form), no samples were subcontracted.

## Sample Summary

---

Client: ANCHOR QEA, LLC	Work Order: 14-01-0932
27201 Puerta Real, Suite 350	Project Name: SD Shipyard Wastewater Discharge
Mission Viejo, CA 92691-8306	PO Number:
	Date/Time Received: 01/16/14 19:30
	Number of Containers: 5

Attn: Adam Gale

---

Sample Identification	Lab Number	Collection Date and Time	Number of Containers	Matrix
D-ID-140116	14-01-0932-1	01/16/14 06:20	5	Aqueous

## Analytical Report

ANCHOR QEA, LLC  
27201 Puerta Real, Suite 350  
Mission Viejo, CA 92691-8306

Date Received: 01/16/14  
Work Order: 14-01-0932  
Preparation: N/A  
Method: SM 2540 D  
Units: mg/L

Project: SD Shipyard Wastewater Discharge

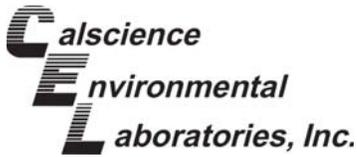
Page 1 of 1

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
D-ID-140116	14-01-0932-1-A	01/16/14 06:20	Aqueous	N/A	01/22/14	01/22/14 13:45	E0122TSSL1

Parameter	Result	RL	DF	Qualifiers
Solids, Total Suspended	6.8	1.0	1	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	099-09-010-6539	N/A	Aqueous	N/A	01/22/14	01/22/14 13:45	E0122TSSL1

Parameter	Result	RL	DF	Qualifiers
Solids, Total Suspended	ND	1.0	1	



## Analytical Report

ANCHOR QEA, LLC  
 27201 Puerta Real, Suite 350  
 Mission Viejo, CA 92691-8306

Date Received: 01/16/14  
 Work Order: 14-01-0932  
 Preparation: N/A  
 Method: SM 5220 C  
 Units: mg/L

Project: SD Shipyard Wastewater Discharge

Page 1 of 1

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
D-ID-140116	14-01-0932-1-B	01/16/14 06:20	Aqueous	BUR06	01/20/14	01/20/14 18:00	E0120ODB4

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qualifiers</u>
Chemical Oxygen Demand	280	5.0	1	

<b>Method Blank</b>	<b>099-05-114-110</b>	<b>N/A</b>	<b>Aqueous</b>	<b>BUR06</b>	<b>01/20/14</b>	<b>01/20/14 18:00</b>	<b>E0120ODB4</b>
---------------------	-----------------------	------------	----------------	--------------	-----------------	---------------------------	------------------

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qualifiers</u>
Chemical Oxygen Demand	ND	5.0	1	

Return to Contents

RL: Reporting Limit.    DF: Dilution Factor.    MDL: Method Detection Limit.

**Analytical Report**

ANCHOR QEA, LLC  
27201 Puerta Real, Suite 350  
Mission Viejo, CA 92691-8306

Date Received: 01/16/14  
Work Order: 14-01-0932  
Preparation: N/A  
Method: EPA 200.8  
Units: mg/L

Project: SD Shipyard Wastewater Discharge

Page 1 of 1

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
D-ID-140116	14-01-0932-1-C	01/16/14 06:20	Aqueous	ICP/MS 04	01/17/14	01/17/14 16:21	140117L01A

Comment(s): - The reporting limit is elevated resulting from matrix interference.  
- 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	Qualifiers
Arsenic	0.0113	0.0100	0.00386	10	
Copper	0.280	0.0100	0.00140	10	
Lead	0.0685	0.0100	0.000898	10	
Nickel	0.0145	0.0100	0.00132	10	
Zinc	0.0743	0.0500	0.00479	10	

Method Blank	099-16-094-167	N/A	Aqueous	ICP/MS 04	01/17/14	01/17/14 15:48	140117L01A
--------------	----------------	-----	---------	-----------	----------	-------------------	------------

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	Qualifiers
Arsenic	ND	0.00100	0.000386	1	
Copper	ND	0.00100	0.000140	1	
Lead	ND	0.00100	0.0000898	1	
Nickel	ND	0.00100	0.000132	1	
Zinc	ND	0.00500	0.000479	1	

Return to Contents

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

**Analytical Report**

ANCHOR QEA, LLC  
27201 Puerta Real, Suite 350  
Mission Viejo, CA 92691-8306

Date Received: 01/16/14  
Work Order: 14-01-0932  
Preparation: EPA 245.1 Total  
Method: EPA 245.1  
Units: mg/L

Project: SD Shipyard Wastewater Discharge

Page 1 of 1

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
D-ID-140116	14-01-0932-1-C	01/16/14 06:20	Aqueous	Mercury	01/17/14	01/17/14 17:27	140117L03

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

Parameter	Result	RL	MDL	DF	Qualifiers
Mercury	0.0000631	0.000200	0.0000453	1	J

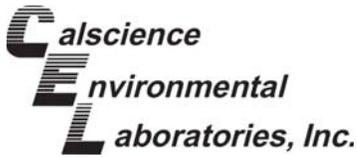
Method Blank	099-04-008-6798	N/A	Aqueous	Mercury	01/17/14	01/20/14 12:40	140117L03
--------------	-----------------	-----	---------	---------	----------	-------------------	-----------

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

Parameter	Result	RL	MDL	DF	Qualifiers
Mercury	ND	0.000200	0.0000453	1	

Return to Contents

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.



## Analytical Report

ANCHOR QEA, LLC  
 27201 Puerta Real, Suite 350  
 Mission Viejo, CA 92691-8306

Date Received: 01/16/14  
 Work Order: 14-01-0932  
 Preparation: EPA 3510C  
 Method: EPA 8081A  
 Units: ug/L

Project: SD Shipyard Wastewater Discharge

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
D-ID-140116	14-01-0932-1-E	01/16/14 06:20	Aqueous	GC 44	01/21/14	01/22/14 20:02	140121L16

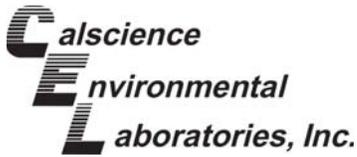
Comment(s): - Results were evaluated to the MDL (DL), concentrations  $\geq$  to the MDL (DL) but  $<$  RL (LOQ), if found, are qualified with a "J" flag.

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>MDL</u>	<u>DF</u>	<u>Qualifiers</u>
Alpha-BHC	ND	0.10	0.028	1	
Gamma-BHC	ND	0.10	0.030	1	
Beta-BHC	ND	0.10	0.030	1	
Heptachlor	ND	0.10	0.026	1	
Delta-BHC	ND	0.10	0.029	1	
Aldrin	ND	0.10	0.027	1	
Heptachlor Epoxide	ND	0.10	0.025	1	
Endosulfan I	ND	0.10	0.028	1	
Dieldrin	ND	0.10	0.029	1	
4,4'-DDE	ND	0.10	0.027	1	
Endrin	ND	0.10	0.031	1	
Endrin Aldehyde	ND	0.10	0.026	1	
4,4'-DDD	ND	0.10	0.027	1	
Endosulfan II	ND	0.10	0.027	1	
4,4'-DDT	ND	0.10	0.027	1	
Endosulfan Sulfate	ND	0.10	0.029	1	
Methoxychlor	ND	0.10	0.025	1	
Chlordane	ND	1.0	0.33	1	
Toxaphene	ND	2.0	0.59	1	
Endrin Ketone	ND	0.10	0.024	1	

<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
Decachlorobiphenyl	83	50-135	
2,4,5,6-Tetrachloro-m-Xylene	90	50-135	



RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.



## Analytical Report

ANCHOR QEA, LLC  
 27201 Puerta Real, Suite 350  
 Mission Viejo, CA 92691-8306

Date Received: 01/16/14  
 Work Order: 14-01-0932  
 Preparation: EPA 3510C  
 Method: EPA 8081A  
 Units: ug/L

Project: SD Shipyard Wastewater Discharge

Page 2 of 2

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	099-12-529-675	N/A	Aqueous	GC 44	01/21/14	01/22/14 18:46	140121L16

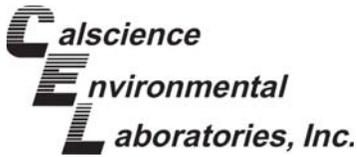
Comment(s): - Results were evaluated to the MDL (DL), concentrations  $\geq$  to the MDL (DL) but  $<$  RL (LOQ), if found, are qualified with a "J" flag.

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>MDL</u>	<u>DF</u>	<u>Qualifiers</u>
Alpha-BHC	ND	0.10	0.028	1	
Gamma-BHC	ND	0.10	0.030	1	
Beta-BHC	ND	0.10	0.030	1	
Heptachlor	ND	0.10	0.026	1	
Delta-BHC	ND	0.10	0.029	1	
Aldrin	ND	0.10	0.027	1	
Heptachlor Epoxide	ND	0.10	0.025	1	
Endosulfan I	ND	0.10	0.028	1	
Dieldrin	ND	0.10	0.029	1	
4,4'-DDE	ND	0.10	0.027	1	
Endrin	ND	0.10	0.031	1	
Endrin Aldehyde	ND	0.10	0.026	1	
4,4'-DDD	ND	0.10	0.027	1	
Endosulfan II	ND	0.10	0.027	1	
4,4'-DDT	ND	0.10	0.027	1	
Endosulfan Sulfate	ND	0.10	0.029	1	
Methoxychlor	ND	0.10	0.025	1	
Chlordane	ND	1.0	0.33	1	
Toxaphene	ND	2.0	0.59	1	
Endrin Ketone	ND	0.10	0.024	1	

<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
Decachlorobiphenyl	90	50-135	
2,4,5,6-Tetrachloro-m-Xylene	88	50-135	

Return to Contents

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.



## Analytical Report

ANCHOR QEA, LLC  
 27201 Puerta Real, Suite 350  
 Mission Viejo, CA 92691-8306

Date Received: 01/16/14  
 Work Order: 14-01-0932  
 Preparation: EPA 3510C  
 Method: EPA 8082  
 Units: ug/L

Project: SD Shipyard Wastewater Discharge

Page 1 of 1

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
D-ID-140116	14-01-0932-1-E	01/16/14 06:20	Aqueous	GC 58	01/21/14	01/23/14 14:07	140121L17

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

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>MDL</u>	<u>DF</u>	<u>Qualifiers</u>
Aroclor-1016	ND	0.98	0.29	1	
Aroclor-1221	ND	0.98	0.28	1	
Aroclor-1232	ND	0.98	0.24	1	
Aroclor-1242	ND	0.98	0.18	1	
Aroclor-1248	ND	0.98	0.20	1	
Aroclor-1254	ND	0.98	0.22	1	
Aroclor-1260	ND	0.98	0.26	1	
Aroclor-1262	ND	0.98	0.25	1	

<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
Decachlorobiphenyl	102	50-135	
2,4,5,6-Tetrachloro-m-Xylene	104	50-135	

Method Blank	099-12-533-882	N/A	Aqueous	GC 58	01/21/14	01/23/14 12:02	140121L17
--------------	----------------	-----	---------	-------	----------	-------------------	-----------

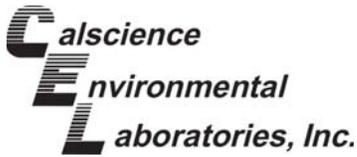
Comment(s): - Results were evaluated to the MDL (DL), concentrations  $\geq$  to the MDL (DL) but  $<$  RL (LOQ), if found, are qualified with a "J" flag.

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>MDL</u>	<u>DF</u>	<u>Qualifiers</u>
Aroclor-1016	ND	1.0	0.29	1	
Aroclor-1221	ND	1.0	0.28	1	
Aroclor-1232	ND	1.0	0.25	1	
Aroclor-1242	ND	1.0	0.18	1	
Aroclor-1248	ND	1.0	0.20	1	
Aroclor-1254	ND	1.0	0.23	1	
Aroclor-1260	ND	1.0	0.26	1	
Aroclor-1262	ND	1.0	0.26	1	

<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
Decachlorobiphenyl	103	50-135	
2,4,5,6-Tetrachloro-m-Xylene	97	50-135	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Return to Contents



## Quality Control - Spike/Spike Duplicate

ANCHOR QEA, LLC  
 27201 Puerta Real, Suite 350  
 Mission Viejo, CA 92691-8306

Date Received: 01/16/14  
 Work Order: 14-01-0932  
 Preparation: N/A  
 Method: EPA 200.8

Project: SD Shipyard Wastewater Discharge

Page 1 of 2

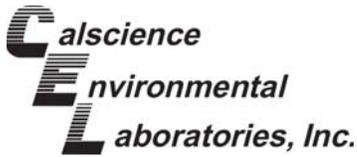
Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
14-01-0947-1	Sample	Aqueous	ICP/MS 04	01/17/14	01/17/14 16:08	140117S01
14-01-0947-1	Matrix Spike	Aqueous	ICP/MS 04	01/17/14	01/17/14 15:58	140117S01
14-01-0947-1	Matrix Spike Duplicate	Aqueous	ICP/MS 04	01/17/14	01/17/14 16:01	140117S01

<u>Parameter</u>	<u>Sample Conc.</u>	<u>Spike Added</u>	<u>MS Conc.</u>	<u>MS %Rec.</u>	<u>MSD Conc.</u>	<u>MSD %Rec.</u>	<u>%Rec. CL</u>	<u>RPD</u>	<u>RPD CL</u>	<u>Qualifiers</u>
Arsenic	0.01602	0.1000	0.1134	97	0.1230	107	80-120	8	0-20	
Copper	ND	0.1000	0.09295	93	0.1003	100	80-120	8	0-20	
Lead	ND	0.1000	0.09924	99	0.1081	108	80-120	8	0-20	
Nickel	ND	0.1000	0.09188	92	0.1009	101	80-120	9	0-20	
Zinc	0.1832	0.1000	0.2865	103	0.2861	103	80-120	0	0-20	

Return to Contents

RPD: Relative Percent Difference. CL: Control Limits



## Quality Control - Spike/Spike Duplicate

ANCHOR QEA, LLC  
 27201 Puerta Real, Suite 350  
 Mission Viejo, CA 92691-8306

Date Received: 01/16/14  
 Work Order: 14-01-0932  
 Preparation: EPA 245.1 Total  
 Method: EPA 245.1

Project: SD Shipyard Wastewater Discharge

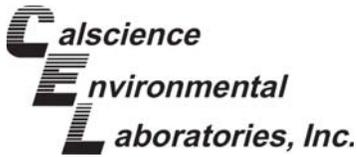
Page 2 of 2

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
14-01-0314-1	Sample	Aqueous	Mercury	01/17/14	01/20/14 12:47	140117S03
14-01-0314-1	Matrix Spike	Aqueous	Mercury	01/17/14	01/20/14 12:49	140117S03
14-01-0314-1	Matrix Spike Duplicate	Aqueous	Mercury	01/17/14	01/20/14 12:51	140117S03

Parameter	Sample Conc.	Spike Added	MS Conc.	MS %Rec.	MSD Conc.	MSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
Mercury	0.002339	0.01000	0.01175	94	0.01170	94	57-141	0	0-10	

Return to Contents

RPD: Relative Percent Difference. CL: Control Limits



## Quality Control - Sample Duplicate

ANCHOR QEA, LLC  
 27201 Puerta Real, Suite 350  
 Mission Viejo, CA 92691-8306

Date Received: 01/16/14  
 Work Order: 14-01-0932  
 Preparation: N/A  
 Method: SM 2540 D

Project: SD Shipyard Wastewater Discharge

Page 1 of 2

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	Duplicate Batch Number
14-01-0918-3	Sample	Aqueous	N/A	01/22/14 00:00	01/22/14 13:45	E0122TSSD1
14-01-0918-3	Sample Duplicate	Aqueous	N/A	01/22/14 00:00	01/22/14 13:45	E0122TSSD1

<u>Parameter</u>	<u>Sample Conc.</u>	<u>DUP Conc.</u>	<u>RPD</u>	<u>RPD CL</u>	<u>Qualifiers</u>
Solids, Total Suspended	203.0	198.0	2	0-20	

Return to Contents

RPD: Relative Percent Difference. CL: Control Limits

**Quality Control - Sample Duplicate**

ANCHOR QEA, LLC  
 27201 Puerta Real, Suite 350  
 Mission Viejo, CA 92691-8306

Date Received: 01/16/14  
 Work Order: 14-01-0932  
 Preparation: N/A  
 Method: SM 5220 C

Project: SD Shipyard Wastewater Discharge

Page 2 of 2

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	Duplicate Batch Number
D-ID-140116	Sample	Aqueous	BUR06	01/20/14 00:00	01/20/14 18:00	E0120ODD4
D-ID-140116	Sample Duplicate	Aqueous	BUR06	01/20/14 00:00	01/20/14 18:00	E0120ODD4

<u>Parameter</u>	<u>Sample Conc.</u>	<u>DUP Conc.</u>	<u>RPD</u>	<u>RPD CL</u>	<u>Qualifiers</u>
Chemical Oxygen Demand	276.5	268.8	3	0-25	

**Quality Control - LCS/LCSD**

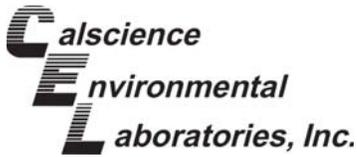
ANCHOR QEA, LLC  
 27201 Puerta Real, Suite 350  
 Mission Viejo, CA 92691-8306

Date Received: 01/16/14  
 Work Order: 14-01-0932  
 Preparation: N/A  
 Method: SM 2540 D

Project: SD Shipyard Wastewater Discharge

Page 1 of 5

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number			
099-09-010-6539	LCS	Aqueous	N/A	01/22/14	01/22/14 13:45	E0122TSSL1			
099-09-010-6539	LCSD	Aqueous	N/A	01/22/14	01/22/14 13:45	E0122TSSL1			
<u>Parameter</u>	<u>Spike Added</u>	<u>LCS Conc.</u>	<u>LCS %Rec.</u>	<u>LCSD Conc.</u>	<u>LCSD %Rec.</u>	<u>%Rec. CL</u>	<u>RPD</u>	<u>RPD CL</u>	<u>Qualifiers</u>
Solids, Total Suspended	100.0	93.00	93	91.00	91	80-120	2	0-20	



## Quality Control - LCS/LCSD

ANCHOR QEA, LLC  
 27201 Puerta Real, Suite 350  
 Mission Viejo, CA 92691-8306

Date Received: 01/16/14  
 Work Order: 14-01-0932  
 Preparation: N/A  
 Method: EPA 200.8

Project: SD Shipyard Wastewater Discharge

Page 2 of 5

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-16-094-167	LCS	Aqueous	ICP/MS 04	01/17/14	01/17/14 17:06	140117L01A
099-16-094-167	LCSD	Aqueous	ICP/MS 04	01/17/14	01/17/14 17:09	140117L01A

<u>Parameter</u>	<u>Spike Added</u>	<u>LCS Conc.</u>	<u>LCS %Rec.</u>	<u>LCSD Conc.</u>	<u>LCSD %Rec.</u>	<u>%Rec. CL</u>	<u>RPD</u>	<u>RPD CL</u>	<u>Qualifiers</u>
Arsenic	0.1000	0.1026	103	0.09802	98	80-120	5	0-20	
Copper	0.1000	0.1007	101	0.09687	97	80-120	4	0-20	
Lead	0.1000	0.1007	101	0.1031	103	80-120	2	0-20	
Nickel	0.1000	0.09755	98	0.09613	96	80-120	1	0-20	
Zinc	0.1000	0.1198	120	0.1151	115	80-120	4	0-20	

Return to Contents

RPD: Relative Percent Difference. CL: Control Limits

ANCHOR QEA, LLC  
 27201 Puerta Real, Suite 350  
 Mission Viejo, CA 92691-8306

Date Received: 01/16/14  
 Work Order: 14-01-0932  
 Preparation: EPA 245.1 Total  
 Method: EPA 245.1

Project: SD Shipyard Wastewater Discharge

Page 3 of 5

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-04-008-6798	LCS	Aqueous	Mercury	01/17/14	01/20/14 12:42	140117L03
099-04-008-6798	LCSD	Aqueous	Mercury	01/17/14	01/20/14 12:45	140117L03

Parameter	<u>Spike Added</u>	<u>LCS Conc.</u>	<u>LCS %Rec.</u>	<u>LCSD Conc.</u>	<u>LCSD %Rec.</u>	<u>%Rec. CL</u>	<u>RPD</u>	<u>RPD CL</u>	<u>Qualifiers</u>
Mercury	0.01000	0.009801	98	0.009962	100	85-121	2	0-10	

ANCHOR QEA, LLC  
 27201 Puerta Real, Suite 350  
 Mission Viejo, CA 92691-8306

Date Received: 01/16/14  
 Work Order: 14-01-0932  
 Preparation: EPA 3510C  
 Method: EPA 8081A

Project: SD Shipyard Wastewater Discharge

Page 4 of 5

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number				
099-12-529-675	LCS	Aqueous	GC 44	01/21/14	01/22/14 19:00	140121L16				
099-12-529-675	LCSD	Aqueous	GC 44	01/21/14	01/22/14 19:14	140121L16				
Parameter	Spike Added	LCS Conc.	LCS %Rec.	LCSD Conc.	LCSD %Rec.	%Rec. CL	ME CL	RPD	RPD CL	Qualifiers
Alpha-BHC	0.5000	0.4764	95	0.5122	102	50-135	36-149	7	0-25	
Gamma-BHC	0.5000	0.4692	94	0.5143	103	50-135	36-149	9	0-25	
Beta-BHC	0.5000	0.4214	84	0.4560	91	50-135	36-149	8	0-25	
Heptachlor	0.5000	0.4254	85	0.4617	92	50-135	36-149	8	0-25	
Delta-BHC	0.5000	0.4359	87	0.5104	102	50-135	36-149	16	0-25	
Aldrin	0.5000	0.4094	82	0.5050	101	50-135	36-149	21	0-25	
Heptachlor Epoxide	0.5000	0.4515	90	0.4598	92	50-135	36-149	2	0-25	
Endosulfan I	0.5000	0.4840	97	0.5012	100	50-135	36-149	4	0-25	
Dieldrin	0.5000	0.4696	94	0.5186	104	50-135	36-149	10	0-25	
4,4'-DDE	0.5000	0.4261	85	0.4913	98	50-135	36-149	14	0-25	
Endrin	0.5000	0.4807	96	0.5258	105	50-135	36-149	9	0-25	
Endrin Aldehyde	0.5000	0.3597	72	0.4012	80	50-135	36-149	11	0-25	
4,4'-DDD	0.5000	0.4096	82	0.4774	95	50-135	36-149	15	0-25	
Endosulfan II	0.5000	0.4729	95	0.5163	103	50-135	36-149	9	0-25	
4,4'-DDT	0.5000	0.4407	88	0.5052	101	50-135	36-149	14	0-25	
Endosulfan Sulfate	0.5000	0.4456	89	0.4867	97	50-135	36-149	9	0-25	
Methoxychlor	0.5000	0.4287	86	0.4891	98	50-135	36-149	13	0-25	

Total number of LCS compounds: 17  
 Total number of ME compounds: 0  
 Total number of ME compounds allowed: 1  
 LCS ME CL validation result: Pass

Return to Contents

ANCHOR QEA, LLC  
 27201 Puerta Real, Suite 350  
 Mission Viejo, CA 92691-8306

Date Received: 01/16/14  
 Work Order: 14-01-0932  
 Preparation: EPA 3510C  
 Method: EPA 8082

Project: SD Shipyard Wastewater Discharge

Page 5 of 5

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number			
099-12-533-882	LCS	Aqueous	GC 58	01/21/14	01/23/14 11:25	140121L17			
099-12-533-882	LCSD	Aqueous	GC 58	01/21/14	01/23/14 11:43	140121L17			
Parameter	Spike Added	LCS Conc.	LCS %Rec.	LCSD Conc.	LCSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
Aroclor-1016	2.000	2.609	130	2.370	119	50-135	10	0-25	
Aroclor-1260	2.000	1.919	96	1.976	99	50-135	3	0-25	

<u>Qualifiers</u>	<u>Definition</u>
*	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 suspected matrix interference. The associated LCS recovery was in control.
4	The MS/MSD RPD was out of control due to suspected matrix interference.
5	The PDS/PDSD or PES/PESD associated with this batch of samples was out of control due to suspected matrix interference.
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.
BV	Sample received 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.
JA	Analyte positively identified but quantitation is an estimate.
ME	LCS Recovery Percentage is within Marginal Exceedance (ME) Control Limit range (+/- 4 SD from the mean).
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.

Any parameter identified in 40CFR Part 136.3 Table II that is designated as "analyze immediately" with a holding time of <= 15 minutes (40CFR-136.3 Table II, footnote 4), is considered a "field" test and the reported results will be qualified as being received outside of the stated holding time unless received at the laboratory within 15 minutes of the collection time.

A calculated total result (Example: Total Pesticides) is the summation of each component concentration and/or, if "J" flags are reported, estimated concentration. Component concentrations showing not detected (ND) are summed into the calculated total result as zero concentrations.



**SAMPLE RECEIPT FORM**

Cooler 1 of 1

CLIENT: ANCHOR QEA

DATE: 01/16/14

TEMPERATURE: Thermometer ID: SC1 (Criteria: 0.0 °C – 6.0 °C, not frozen except sediment/tissue)

Temperature 1.8 °C - 0.3 °C (CF) = 1.5 °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

Checked by: 671

**CUSTODY SEALS INTACT:**

Cooler  \_\_\_\_\_  No (Not Intact)  Not Present  N/A Checked by: 671

Sample  \_\_\_\_\_  No (Not Intact)  Not Present Checked by: 681

**SAMPLE CONDITION:**

	Yes	No	N/A
Chain-Of-Custody (COC) document(s) received with samples.....	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
COC document(s) received complete.....	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> Collection date/time, matrix, and/or # of containers logged in based on sample labels.			
<input type="checkbox"/> No analysis requested. <input type="checkbox"/> Not relinquished. <input type="checkbox"/> No date/time relinquished.			
Sampler's name indicated on COC.....	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Sample container label(s) consistent with COC.....	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Sample container(s) intact and good condition.....	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Proper containers and sufficient volume for analyses requested.....	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Analyses received within holding time.....	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Aqueous samples received within 15-minute holding time			
<input type="checkbox"/> pH <input type="checkbox"/> Residual Chlorine <input type="checkbox"/> Dissolved Sulfides <input type="checkbox"/> Dissolved Oxygen.....	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Proper preservation noted on COC or sample container.....	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> Unpreserved vials received for Volatiles analysis			
Volatile analysis container(s) free of headspace.....	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Tedlar bag(s) free of condensation.....	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTAINER TYPE:**

Solid:  4ozCGJ  8ozCGJ  16ozCGJ  Sleeve (\_\_\_\_)  EnCores®  TerraCores®  \_\_\_\_\_

Aqueous:  VOA  VOAh  VOAna<sub>2</sub>  125AGB  125AGBh  125AGBp  1AGB  1AGBna<sub>2</sub>  1AGBs

500AGB  500AGJ  500AGJs  250AGB  250CGB  250CGBs  1PB  1PBna  500PB

250PB  250PBn<sub>4</sub>  125PB  125PBz<sub>na</sub>  100PJ  100PJna<sub>2</sub>  \_\_\_\_\_  \_\_\_\_\_  \_\_\_\_\_

Air:  Tedlar®  Canister Other:  \_\_\_\_\_ Trip Blank Lot#: \_\_\_\_\_ Labeled/Checked by: 681

Container: C: Clear A: Amber P: Plastic G: Glass J: Jar B: Bottle Z: Ziploc/Resealable Bag E: Envelope Reviewed by: 739

Preservative: h: HCL n: HNO<sub>3</sub> na<sub>2</sub>: Na<sub>2</sub>S<sub>2</sub>O<sub>3</sub> na: NaOH p: H<sub>3</sub>PO<sub>4</sub> s: H<sub>2</sub>SO<sub>4</sub> u: Ultra-pure z<sub>na</sub>: ZnAc<sub>2</sub>+NaOH f: Filtered Scanned by: 739

Return to Contents

**INDUSTRY SELF MONITORING FORM**

City of San Diego Public Utilities  
 Industrial Wastewater Control Program  
 9192 Topaz Wy San Diego, CA 92123-1119  
 Tel (858) 654-4100 Fax (858) 654-4110

*Note: If Monthly Average Limits apply, these self-monitoring results will be averaged with all other VALID analyses for samples collected in the same calendar year including IWCP monitoring data, to determine compliance.*

Michael Palmer  
 San Diego Bay Enviro Restoration Fund South Trust  
 c/o NASSCO MS 22A  
 2798 Harbor Dr  
 San Diego, CA 92113

\*\*\*\*\*  
 \* RETURN REPORT \*  
 \* by \*  
 \* 15-MAR-2014 \*  
 \*\*\*\*\*

IU# Pmt#: 11-0563 01-A Conn: 100 ISMF#: 154187

Site Address: Harbor Dr, San Diego Permitted IW Flow: 288000  
 Sample Point: Immediate left after guard station. The final 21,000 gallon tank of treatment system, just before water meter. Access sample tank through top access hole/port.

Laboratory Name: Calscience Environmental Laboratories, Inc. \* COPY OF ANALYSIS REQUIRED \*

Sample#: 0154187-01 Date: 2/5/2014 Time(s): 11:28, 11:45, 12:05

**24 hour composite**

Sampler: K. Christensen Description: clear water

Parameter	Units	Daily Max	Result
Chemical Oxygen Demand	mg/L		340
Solids, Total Suspended	mg/L		374

Sample#: 0154187-02 Date: 2/28/2014 Time(s): 7:00

**Evaluation only (no sample)**

Sampler: K. Christensen Description: clear water

Beginning Meter Read and Date	gals		2/3/2014	1,006,300
Ending Meter Read and Date	gals		2/28/2014	1,113,200
Average Flow/calendar day thru Connection	gpd			3,820
Imported Flow During Period	gals			106,900
Maximum Flow/calendar day thru Connection	gpd			50,200
Maximum gals/min thru meter	gpm	250		250
Minimum gals/min thru meter when discharging	gpm	50-		50

# SELF MONITORING REPORT CERTIFICATION

City of San Diego Public Utilities Dept  
Industrial Wastewater Control Program  
9192 Topaz Way, San Diego, CA 92123-1119  
Tel (858) 654-4100 Fax (858) 654-4110

Applicability: These instructions apply to any industry whose Industrial User Discharge Permit includes an Attachment B, "SELF-MONITORING AND REPORTING REQUIREMENTS".

All self monitoring reports submitted to the Industrial Wastewater Control Program must include the following certification statement and be signed as required in the permit under STANDARD CONDITIONS, Signatory Requirements.

---

## CERTIFICATION STATEMENT

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, I certify that the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I certify that all wastewater samples analyzed and reported herein are representative of the ordinary process wastewater flow from this facility. I am aware of the potential for significant penalties for submission of false information, including the possibility of fines and imprisonment for knowing violations.

		-				
--	--	---	--	--	--	--

facility number

report due date

monitoring period

Print Name

Title

Signature

(Attach to Industry Self-Monitoring Form)

Date

## INDUSTRY SELF MONITORING FORM (ISMF) INSTRUCTIONS

Refer to the Attachment B and Appendix B of your IU Discharge Permit for the complete monitoring schedule and instructions. Questions concerning these requirements may be answered by contacting your area inspector.

- Sample collection for IU self monitoring can be conducted whenever the IWLab is not already monitoring at your facility. If the IWLab samples all the wastewater discharges in a monitoring period (this is unlikely but can occur for infrequently batch discharged wastestreams), indicate this on your ISMF to prompt the reviewer to waive your sampling, but not the reporting, requirements for the period. Otherwise representative samples must be collected at the **sampling location and for all** the required self monitoring parameters specified in the permit for at least (1) 24 hour period in the **monitoring period**; advise the Compliance Supervisor if you believe the location is inappropriate.
- IU self monitoring analyses must be conducted by an ELAP certified laboratory that has provided evidence of its current certifications to this office or the **analytical results will be considered invalid**.
- IU self monitoring analyses must be submitted on the ISMF provided or a similarly formatted data entry form. Transfer the analysis results to the ISMF (if a result is ND, enter the parameter's reporting limit preceded by "<", except flash point which is preceded by ">"), attach a copy of the laboratory analysis report including the chain of custody, and return the report to this office by the due date specified in your permit. You may email or fax the report to meet the due date; however you must also mail a signed original. Failure to use the required format with the ISMF# clearly listed, risks the loss of your data and consequently a violation for late and/or incomplete reporting.
- A **Sample Type** is specified for each parameter and is generally either a 24 hour composite or Grab (includes Grab/Field Measurement, Grab/separate analysis, TTO result (sum), VOC grab, etc.). A **Grab** is a single sample collected over a period of time not exceeding 15 minutes and is often accomplished by simply dipping a sample out of the wastestream with a bailer or the sample container. **Note: pH, temperature, flash point, and many TTO compounds require discrete grab samples and analyses.** A **24 hour composite** requires a series of samples be collected during a 24 hour period representative of normal process operations and combined into a single container for analysis. Composites must be flow or time proportioned and may be collected with automatic sampling equipment or by manually combining a **minimum of (4) grab samples**. For all manually collected samples each individual sample time must be listed on the ISMF. For autosamplers list the time sampling began and the time it ended. Example: for a 16 hour workday and flow of 8,000 gpd, samples are collected at least every 4 hours or 2,000 gals. In contrast, the **Evaluation only** and **Fixed probe with chart** sample types do not require the actual collection of samples; for flow measurements and continuous pH recording use the sampling information fields to indicate the applicable time period.
- The sample **Description** should include the appearance of the sample. Indicate the color, clarity, layering if present, etceteras. Examples: clear, colorless and cloudy, tan.
- If a **Flow** parameter is required, enter your best estimate if a metered value is not available.
- The attached Self Monitoring Report Certification must be signed and dated by a person in your firm having the authority as set forth in the permit under Standard Conditions, Signatory Requirements. This (SMR Certification) and other Supporting Documents are available at: <http://www.sandiego.gov/mwwd/environment/iwcp/index.shtml>.
- Self monitoring early in the period and more frequently than required in the permit is highly recommended. Simply make additional copies of the ISMF and replace the ISMF# with "extra". Note however, that you must submit all "representative" self monitoring results to this office. This does **not** include in-house testing at locations other than the permitted sample point or when non-EPA approved analytical methods (see 40 CFR Part 136) are utilized.
- If self monitoring **INDICATES A VIOLATION** of a daily maximum or instantaneous limit, you must 1) notify the Compliance Supervisor within 24 hours of becoming aware of the violation and 2) unless your permit requires monthly self monitoring for the pollutant(s) in violation, resample at the sample point for the parameters in violation and submit the results to this office within 30 days of becoming aware of the violation, including a properly signed Self Monitoring Report Certification. The resample requirement is in addition to your routine self monitoring and therefore the results cannot be used for your next report.



**CERTIFICATION**

All analyses were conducted at a laboratory certified for such analyses by the California Department of Public Health in accordance with applicable USEPA and NELAP accreditation procedures.

I certify under penalty of law that the data generated for Calscience Work Order No. 14-02-0283 were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. The Project Manager or designee who signed the Calscience Work Order has been specifically authorized and approved to do so.

The information submitted is, to the best of my knowledge and belief, true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of a fine and imprisonment for knowing violations.

A handwritten signature in black ink, appearing to read "S. Lane", is written over a horizontal line.

Signature, Laboratory Director

May 20, 2014

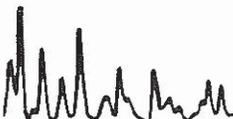
Date

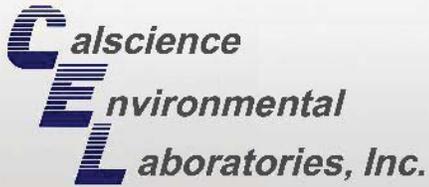
Name of Laboratory:  
Address of Laboratory:

**Calscience Environmental Laboratories**  
**7440 Lincoln Way**  
**Garden Grove, CA 92841-1432**

This Certification signed by:

**Steve Lane**





# CALSCIENCE

WORK ORDER NUMBER: 14-02-0283

*The difference is service*



AIR | SOIL | WATER | MARINE CHEMISTRY

### Analytical Report For

**Client:** ANCHOR QEA, LLC

**Client Project Name:** SD Shipyard Wastewater Discharge

**Attention:** Adam Gale  
27201 Puerta Real, Suite 350  
Mission Viejo, CA 92691-8306

Approved for release on 02/14/2014 by:  
Danielle Gonsman  
Project Manager

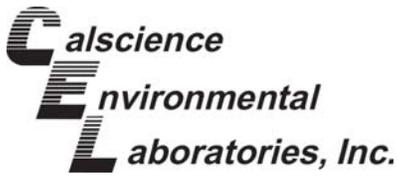
ResultLink ▶

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.





# Contents

---

Client Project Name: SD Shipyard Wastewater Discharge  
Work Order Number: 14-02-0283

1	Work Order Narrative. . . . .	3
2	Sample Summary. . . . .	4
3	Client Sample Data. . . . .	5
	3.1 SM 2540 D Total Suspended Solids (Aqueous). . . . .	5
	3.2 SM 5220 C Chemical Oxygen Demand (Aqueous). . . . .	6
4	Quality Control Sample Data. . . . .	7
	4.1 Sample Duplicate. . . . .	7
	4.2 LCS/LCSD. . . . .	9
5	Glossary of Terms and Qualifiers. . . . .	10
6	Chain of Custody/Sample Receipt Form. . . . .	11

**Work Order Narrative**

Work Order: 14-02-0283

Page 1 of 1

**Condition Upon Receipt:**

Samples were received under Chain of Custody (COC) on 02/05/14. They were assigned to Work Order 14-02-0283.

Unless otherwise noted on the Sample Receiving forms all samples were received in good condition and within the recommended EPA temperature criteria for the methods noted on the COC. The COC and Sample Receiving Documents are integral elements of the analytical report and are presented at the back of the report.

**Holding Times:**

All samples were analyzed within prescribed holding times (HT) and/or in accordance with the Calscience Sample Acceptance Policy unless otherwise noted in the analytical report and/or comprehensive case narrative, if required.

Any parameter identified in 40CFR Part 136.3 Table II that is designated as "analyze immediately" with a holding time of  $\leq 15$  minutes (40CFR-136.3 Table II, footnote 4), is considered a "field" test and the reported results will be qualified as being received outside of the stated holding time unless received at the laboratory within 15 minutes of the collection time.

**Quality Control:**

All quality control parameters (QC) were within established control limits except where noted in the QC summary forms or described further within this report.

**Additional Comments:**

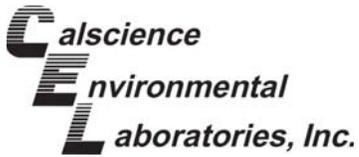
Air - Sorbent-extracted air methods (EPA TO-4A, EPA TO-10, EPA TO-13A, EPA TO-17): Analytical results are converted from mass/sample basis to mass/volume basis using client-supplied air volumes.

New York NELAP air certification does not certify for all reported methods and analytes, reference the accredited items here: [http://www.calscience.com/PDF/New\\_York.pdf](http://www.calscience.com/PDF/New_York.pdf)

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

**Subcontractor Information:**

Unless otherwise noted below (or on the subcontract form), no samples were subcontracted.

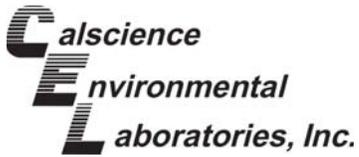


## Sample Summary

Client: ANCHOR QEA, LLC	Work Order: 14-02-0283
27201 Puerta Real, Suite 350	Project Name: SD Shipyard Wastewater Discharge
Mission Viejo, CA 92691-8306	PO Number:
	Date/Time Received: 02/05/14 19:15
	Number of Containers: 2

Attn: Adam Gale

Sample Identification	Lab Number	Collection Date and Time	Number of Containers	Matrix
D-ID-140205	14-02-0283-1	02/05/14 12:05	2	Aqueous



## Analytical Report

ANCHOR QEA, LLC  
 27201 Puerta Real, Suite 350  
 Mission Viejo, CA 92691-8306

Date Received: 02/05/14  
 Work Order: 14-02-0283  
 Preparation: N/A  
 Method: SM 2540 D  
 Units: mg/L

Project: SD Shipyard Wastewater Discharge

Page 1 of 1

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
D-ID-140205	14-02-0283-1-B	02/05/14 12:05	Aqueous	N/A	02/07/14	02/08/14 11:00	E0208TSSL1

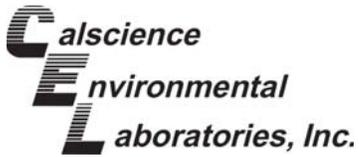
Parameter	Result	RL	DF	Qualifiers
Solids, Total Suspended	374	1.00	1	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	099-09-010-6555	N/A	Aqueous	N/A	02/07/14	02/08/14 11:00	E0208TSSL1

Parameter	Result	RL	DF	Qualifiers
Solids, Total Suspended	ND	1.0	1	

Return to Contents

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.



## Analytical Report

ANCHOR QEA, LLC  
 27201 Puerta Real, Suite 350  
 Mission Viejo, CA 92691-8306

Date Received: 02/05/14  
 Work Order: 14-02-0283  
 Preparation: N/A  
 Method: SM 5220 C  
 Units: mg/L

Project: SD Shipyard Wastewater Discharge

Page 1 of 1

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
D-ID-140205	14-02-0283-1-A	02/05/14 12:05	Aqueous	BUR06	02/13/14	02/13/14 15:30	E02130DB1

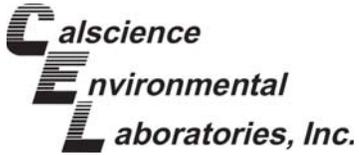
Parameter	Result	RL	DF	Qualifiers
Chemical Oxygen Demand	340	5.0	1	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	099-05-114-111	N/A	Aqueous	BUR06	02/13/14	02/13/14 15:30	E02130DB1

Parameter	Result	RL	DF	Qualifiers
Chemical Oxygen Demand	ND	5.0	1	

Return to Contents

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.



## Quality Control - Sample Duplicate

ANCHOR QEA, LLC  
 27201 Puerta Real, Suite 350  
 Mission Viejo, CA 92691-8306

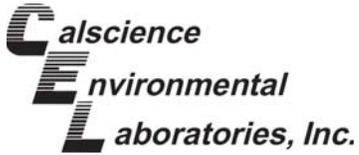
Date Received: 02/05/14  
 Work Order: 14-02-0283  
 Preparation: N/A  
 Method: SM 2540 D

Project: SD Shipyard Wastewater Discharge

Page 1 of 2

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	Duplicate Batch Number
14-02-0344-6	Sample	Aqueous	N/A	02/07/14 00:00	02/08/14 11:00	E0208TSSD1
14-02-0344-6	Sample Duplicate	Aqueous	N/A	02/07/14 00:00	02/08/14 11:00	E0208TSSD1

Parameter	Sample Conc.	DUP Conc.	RPD	RPD CL	Qualifiers
Solids, Total Suspended	16.30	18.80	14	0-20	



## Quality Control - Sample Duplicate

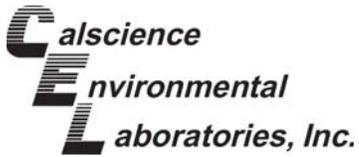
ANCHOR QEA, LLC  
 27201 Puerta Real, Suite 350  
 Mission Viejo, CA 92691-8306

Date Received: 02/05/14  
 Work Order: 14-02-0283  
 Preparation: N/A  
 Method: SM 5220 C

Project: SD Shipyard Wastewater Discharge

Page 2 of 2

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	Duplicate Batch Number
D-ID-140205	Sample	Aqueous	BUR06	02/13/14 00:00	02/13/14 15:30	E0213ODD1
D-ID-140205	Sample Duplicate	Aqueous	BUR06	02/13/14 00:00	02/13/14 15:30	E0213ODD1
<u>Parameter</u>		<u>Sample Conc.</u>	<u>DUP Conc.</u>	<u>RPD</u>	<u>RPD CL</u>	<u>Qualifiers</u>
Chemical Oxygen Demand		336.0	332.0	1	0-25	



## Quality Control - LCS/LCSD

ANCHOR QEA, LLC  
 27201 Puerta Real, Suite 350  
 Mission Viejo, CA 92691-8306

Date Received: 02/05/14  
 Work Order: 14-02-0283  
 Preparation: N/A  
 Method: SM 2540 D

Project: SD Shipyard Wastewater Discharge

Page 1 of 1

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number			
099-09-010-6555	LCS	Aqueous	N/A	02/07/14	02/08/14 11:00	E0208TSSL1			
099-09-010-6555	LCSD	Aqueous	N/A	02/07/14	02/08/14 11:00	E0208TSSL1			
Parameter	<u>Spike Added</u>	<u>LCS Conc.</u>	<u>LCS %Rec.</u>	<u>LCSD Conc.</u>	<u>LCSD %Rec.</u>	<u>%Rec. CL</u>	<u>RPD</u>	<u>RPD CL</u>	<u>Qualifiers</u>
Solids, Total Suspended	100.0	87.00	87	90.00	90	80-120	3	0-20	

## Glossary of Terms and Qualifiers

Work Order: 14-02-0283

Page 1 of 1

<u>Qualifiers</u>	<u>Definition</u>
*	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 suspected matrix interference. The associated LCS recovery was in control.
4	The MS/MSD RPD was out of control due to suspected matrix interference.
5	The PDS/PDSD or PES/PESD associated with this batch of samples was out of control due to suspected matrix interference.
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.
BV	Sample received 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.
JA	Analyte positively identified but quantitation is an estimate.
ME	LCS Recovery Percentage is within Marginal Exceedance (ME) Control Limit range (+/- 4 SD from the mean).
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.

Any parameter identified in 40CFR Part 136.3 Table II that is designated as "analyze immediately" with a holding time of  $\leq 15$  minutes (40CFR-136.3 Table II, footnote 4), is considered a "field" test and the reported results will be qualified as being received outside of the stated holding time unless received at the laboratory within 15 minutes of the collection time.

A calculated total result (Example: Total Pesticides) is the summation of each component concentration and/or, if "J" flags are reported, estimated concentration. Component concentrations showing not detected (ND) are summed into the calculated total result as zero concentrations.



**SAMPLE RECEIPT FORM**

Cooler 1 of 1

CLIENT: ANCHOR QEA

DATE: 02/05/14

**TEMPERATURE:** Thermometer ID: SC1 (Criteria: 0.0 °C – 6.0 °C, not frozen except sediment/tissue)

Temperature 1.8 °C - 0.3 °C (CF) = 1.5 °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 Checked by: 671

**CUSTODY SEALS INTACT:**

Cooler  \_\_\_\_\_  No (Not Intact)  Not Present  N/A Checked by: 671

Sample  \_\_\_\_\_  No (Not Intact)  Not Present Checked by: 681

<b>SAMPLE CONDITION:</b>	Yes	No	N/A
Chain-Of-Custody (COC) document(s) received with samples.....	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
COC document(s) received complete.....	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> Collection date/time, matrix, and/or # of containers logged in based on sample labels. <input type="checkbox"/> No analysis requested. <input type="checkbox"/> Not relinquished. <input type="checkbox"/> No date/time relinquished.			
Sampler's name indicated on COC.....	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Sample container label(s) consistent with COC.....	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Sample container(s) intact and good condition.....	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Proper containers and sufficient volume for analyses requested.....	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Analyses received within holding time.....	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Aqueous samples received within 15-minute holding time			
<input type="checkbox"/> pH <input type="checkbox"/> Residual Chlorine <input type="checkbox"/> Dissolved Sulfides <input type="checkbox"/> Dissolved Oxygen.....	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Proper preservation noted on COC or sample container.....	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> Unpreserved vials received for Volatiles analysis			
Volatile analysis container(s) free of headspace.....	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Tedlar bag(s) free of condensation.....	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTAINER TYPE:**

Solid:  4ozCGJ  8ozCGJ  16ozCGJ  Sleeve (\_\_\_\_)  EnCores®  TerraCores®  \_\_\_\_\_

Aqueous:  VOA  VOA<sub>h</sub>  VOA<sub>na2</sub>  125AGB  125AGB<sub>h</sub>  125AGB<sub>p</sub>  1AGB  1AGB<sub>na2</sub>  1AGB<sub>s</sub>

500AGB  500AGJ  500AGJ<sub>s</sub>  250AGB  250CGB  250CGB<sub>s</sub>  1PB  1PB<sub>na</sub>  500PB

250PB  250PB<sub>n</sub>  125PB  125PB<sub>z<sub>na</sub></sub>  100PJ  100PJ<sub>na2</sub>  \_\_\_\_\_  \_\_\_\_\_  \_\_\_\_\_

Air:  Tedlar®  Canister Other:  \_\_\_\_\_ Trip Blank Lot#: \_\_\_\_\_ Labeled/Checked by: 681

Container: C: Clear A: Amber P: Plastic G: Glass J: Jar B: Bottle Z: Ziploc/Resealable Bag E: Envelope Reviewed by: 776

Preservative: h: HCL n: HNO<sub>3</sub> na<sub>2</sub>:Na<sub>2</sub>S<sub>2</sub>O<sub>3</sub> na: NaOH p: H<sub>3</sub>PO<sub>4</sub> s: H<sub>2</sub>SO<sub>4</sub> u: Ultra-pure z<sub>na</sub>: ZnAc<sub>2</sub>+NaOH f: Filtered Scanned by: 776



**INDUSTRY SELF MONITORING FORM**

City of San Diego Public Utilities  
 Industrial Wastewater Control Program  
 9192 Topaz Wy San Diego, CA 92123-1119  
 Tel (858) 654-4100 Fax (858) 654-4110

*Note: If Monthly Average Limits apply, these self-monitoring results will be averaged with all other VALID analyses for samples collected in the same calendar year including IWCP monitoring data, to determine compliance.*

Michael Palmer  
 San Diego Bay Enviro Restoration Fund South Trust  
 c/o NASSCO MS 22A  
 2798 Harbor Dr  
 San Diego, CA 92113

\*\*\*\*\*  
 \* RETURN REPORT \*  
 \* by \*  
 \* 15-APR-2014 \*  
 \*\*\*\*\*

IU# Pmt#: 11-0563.01-A Conn: 100 ISMF#: 154560

Site Address: Harbor Dr, San Diego Permitted IW Flow: 288000  
 Sample Point: Immediate left after guard station. The final 21,000 gallon tank of treatment system, just before water meter. Access sample tank through top access hole/port.

Laboratory Name: Calscience Environmental Laboratories, Inc. \* COPY OF ANALYSIS REQUIRED \*  
 06:20, 08:45, 09:30, 10:30, 11:30

Sample#: 0154560-01 Date: 1/16/2014 and 3/3/2014 Time(s): 11:07, 11:20, 11:30, 11:45

**24 hour composite**

Sampler: K. King and K. Christensen Description: clear water

<u>Parameter</u>	<u>Units</u>	<u>Daily Max</u>	<u>Result</u>
Chemical Oxygen Demand	mg/L		250
Solids, Total Suspended	mg/L		76
Copper, Total	mg/L		0.280
Lead, Total	mg/L		0.0685
Nickel, Total	mg/L		0.0145
Zinc, Total	mg/L		0.0743
Arsenic, Total	mg/L	5	0.0113
Mercury, Total	mg/L	.2	0.0000631

Sample#: 0154560-02 Date: 3/31/2014 Time(s): 7:00

**Evaluation only (no sample)**

Sampler: K. King Description: clear water

Beginning Meter Read and Date	gals	3/01/2014	1,113,200
Ending Meter Read and Date	gals	3/31/2014	1,138,900
Average Flow/calendar day thru Connection	gpd		829
Imported Flow During Period	gals		25,700
Maximum Flow/calendar day thru Connection	gpd		25,700
Maximum gals/min thru meter	gpm	250	250
Minimum gals/min thru meter when discharging	gpm	50-	50

INDUSTRY SELF MONITORING FORM

City of San Diego Public Utilities  
Industrial Wastewater Control Program  
9192 Topaz Wy San Diego, CA 92123-1119  
Tel (858) 654-4100 Fax (858) 654-4110

Note: If Monthly Average Limits apply, these self-monitoring results will be averaged with all other VALID analyses for samples collected in the same calendar year including IWCP monitoring data, to determine compliance.

Michael Palmer  
San Diego Bay Enviro Restoration Fund South Trust  
c/o NASSCO MS 22A  
2798 Harbor Dr  
San Diego, CA 92113

\*\*\*\*\*  
\* RETURN REPORT \*  
\* by \*  
\* 15-APR-2014 \*  
\*\*\*\*\*

IU# Pmt#: 11-0563 01-A Conn: 100 ISMF#: 154560

Site Address: Harbor Dr, San Diego Permitted IW Flow: 288000  
Sample Point: Immediate left after guard station. The final 21,000 gallon tank of treatment system, just before water meter. Access sample tank through top access hole/port.

Laboratory Name: Calscience Environmental Laboratories, Inc. \* COPY OF ANALYSIS REQUIRED \*

Sample#: 0154560-03 Date: 3/3/2014 Time(s): 11:07, 11:20, 11:30, 11:45

Pesticide and PCB grab  
Sampler: K. Christensen Description: clear water

PCB's, Total ug/L 3 <0.98

# SELF MONITORING REPORT CERTIFICATION

City of San Diego Public Utilities Dept  
Industrial Wastewater Control Program  
9192 Topaz Way, San Diego, CA 92123-1119  
Tel (858) 654-4100 Fax (858) 654-4110

Applicability: These instructions apply to any industry whose Industrial User Discharge Permit includes an Attachment B, "SELF-MONITORING AND REPORTING REQUIREMENTS".

All self monitoring reports submitted to the Industrial Wastewater Control Program must include the following certification statement and be signed as required in the permit under STANDARD CONDITIONS, Signatory Requirements.

## CERTIFICATION STATEMENT

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, I certify that the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I certify that all wastewater samples analyzed and reported herein are representative of the ordinary process wastewater flow from this facility. I am aware of the potential for significant penalties for submission of false information, including the possibility of fines and imprisonment for knowing violations.

--	--	--	--	--	--	--	--

facility number

report due date

monitoring period

Print Name

Title

Signature  
(Attach to Industry Self-Monitoring Form)

Date

## INDUSTRY SELF MONITORING FORM (ISMF) INSTRUCTIONS

Refer to the Attachment B and Appendix B of your IU Discharge Permit for the complete monitoring schedule and instructions. Questions concerning these requirements may be answered by contacting your area inspector.

- Sample collection for IU self monitoring can be conducted whenever the IWLab is not already monitoring at your facility. If the IWLab samples all the wastewater discharges in a monitoring period (this is unlikely but can occur for infrequently batch discharged wastestreams), indicate this on your ISMF to prompt the reviewer to waive your sampling, but not the reporting, requirements for the period. Otherwise representative samples must be collected at the **sampling location and for all** the required self monitoring parameters specified in the permit for at least (1) 24 hour period in the **monitoring period**; advise the Compliance Supervisor if you believe the location is inappropriate.
- IU self monitoring analyses must be conducted by an ELAP certified laboratory that has provided evidence of its current certifications to this office **or the analytical results will be considered invalid.**
- IU self monitoring analyses must be submitted on the ISMF provided or a similarly formatted data entry form. Transfer the analysis results to the ISMF (if a result is ND, enter the parameter's reporting limit preceded by "<", except flash point which is preceded by ">"), attach a copy of the laboratory analysis report including the chain of custody, and return the report to this office by the due date specified in your permit. You may email or fax the report to meet the due date; however you must also mail a signed original. Failure to use the required format with the ISMF# clearly listed, risks the loss of your data and consequently a violation for late and/or incomplete reporting.
- A **Sample Type** is specified for each parameter and is generally either a 24 hour composite or Grab (includes Grab/Field Measurement, Grab/separate analysis, TTO result (sum), VOC grab, etc.). A **Grab** is a single sample collected over a period of time not exceeding 15 minutes and is often accomplished by simply dipping a sample out of the wastestream with a bailer or the sample container. **Note: pH, temperature, flash point, and many TTO compounds require discrete grab samples and analyses.** A **24 hour composite** requires a series of samples be collected during a 24 hour period representative of normal process operations and combined into a single container for analysis. Composites must be flow or time proportioned and may be collected with automatic sampling equipment or by manually combining a **minimum of (4)** grab samples. For all manually collected samples each individual sample time must be listed on the ISMF. For autosamplers list the time sampling began and the time it ended. Example: for a 16 hour workday and flow of 8,000 gpd, samples are collected at least every 4 hours or 2,000 gals. In contrast, the **Evaluation only** and **Fixed probe with chart** sample types do not require the actual collection of samples; for flow measurements and continuous pH recording use the sampling information fields to indicate the applicable time period.
- The sample **Description** should include the appearance of the sample. Indicate the color, clarity, layering if present, etceteras. Examples: clear, colorless and cloudy, tan.
- If a **Flow** parameter is required, enter your best estimate if a metered value is not available.
- The attached Self Monitoring Report Certification must be signed and dated by a person in your firm having the authority as set forth in the permit under Standard Conditions, Signatory Requirements. This (SMR Certification) and other Supporting Documents are available at: <http://www.sandiego.gov/mwwd/environment/iwcp/index.shtml>.
- Self monitoring early in the period and more frequently than required in the permit is highly recommended. Simply make additional copies of the ISMF and replace the ISMF# with "extra". Note however, that you must submit all "representative" self monitoring results to this office. This does **not** include in-house testing at locations other than the permitted sample point or when non-EPA approved analytical methods (see 40 CFR Part 136) are utilized.
- If self monitoring **INDICATES A VIOLATION** of a daily maximum or instantaneous limit, you must 1) notify the Compliance Supervisor within 24 hours of becoming aware of the violation and 2) unless your permit requires monthly self monitoring for the pollutant(s) in violation, resample at the sample point for the parameters in violation and submit the results to this office within 30 days of becoming aware of the violation, including a properly signed Self Monitoring Report Certification. The resample requirement is in addition to your routine self monitoring and therefore the results cannot be used for your next report.



**CERTIFICATION**

All analyses were conducted at a laboratory certified for such analyses by the California Department of Public Health in accordance with applicable USEPA and NELAP accreditation procedures.

I certify under penalty of law that the data generated for Calscience Work Order No. 14-01-0932 were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. The Project Manager or designee who signed the Calscience Work Order has been specifically authorized and approved to do so.

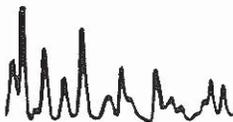
The information submitted is, to the best of my knowledge and belief, true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of a fine and imprisonment for knowing violations.

  
\_\_\_\_\_  
Signature, Laboratory Director

May 20, 2014  
Date

Name of Laboratory: **Calscience Environmental Laboratories**  
Address of Laboratory: **7440 Lincoln Way**  
**Garden Grove, CA 92841-1432**

This Certification signed by: **Steve Lane**





# CALSCIENCE

WORK ORDER NUMBER: 14-01-0932

*The difference is service*



AIR | SOIL | WATER | MARINE CHEMISTRY

## Analytical Report For

**Client:** ANCHOR QEA, LLC

**Client Project Name:** SD Shipyard Wastewater Discharge

**Attention:** Adam Gale  
27201 Puerta Real, Suite 350  
Mission Viejo, CA 92691-8306

Approved for release on 01/24/2014 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.



Client Project Name: SD Shipyard Wastewater Discharge  
 Work Order Number: 14-01-0932

1	Work Order Narrative. . . . .	3
2	Sample Summary. . . . .	4
3	Client Sample Data. . . . .	5
	3.1 SM 2540 D Total Suspended Solids (Aqueous). . . . .	5
	3.2 SM 5220 C Chemical Oxygen Demand (Aqueous). . . . .	6
	3.3 EPA 200.8 ICP/MS Metals (Aqueous). . . . .	7
	3.4 EPA 245.1 Mercury (Aqueous). . . . .	8
	3.5 EPA 8081A Organochlorine Pesticides (Aqueous). . . . .	9
	3.6 EPA 8082 PCB Aroclors (Aqueous). . . . .	11
4	Quality Control Sample Data. . . . .	12
	4.1 MS/MSD. . . . .	12
	4.2 Sample Duplicate. . . . .	14
	4.3 LCS/LCSD. . . . .	16
5	Glossary of Terms and Qualifiers. . . . .	21
6	Chain of Custody/Sample Receipt Form. . . . .	22

**Condition Upon Receipt:**

Samples were received under Chain of Custody (COC) on 01/16/14. They were assigned to Work Order 14-01-0932.

Unless otherwise noted on the Sample Receiving forms all samples were received in good condition and within the recommended EPA temperature criteria for the methods noted on the COC. The COC and Sample Receiving Documents are integral elements of the analytical report and are presented at the back of the report.

**Holding Times:**

All samples were analyzed within prescribed holding times (HT) and/or in accordance with the Calscience Sample Acceptance Policy unless otherwise noted in the analytical report and/or comprehensive case narrative, if required.

Any parameter identified in 40CFR Part 136.3 Table II that is designated as "analyze immediately" with a holding time of  $\leq 15$  minutes (40CFR-136.3 Table II, footnote 4), is considered a "field" test and the reported results will be qualified as being received outside of the stated holding time unless received at the laboratory within 15 minutes of the collection time.

**Quality Control:**

All quality control parameters (QC) were within established control limits except where noted in the QC summary forms or described further within this report.

**Additional Comments:**

Air - Sorbent-extracted air methods (EPA TO-4A, EPA TO-10, EPA TO-13A, EPA TO-17): Analytical results are converted from mass/sample basis to mass/volume basis using client-supplied air volumes.

New York NELAP air certification does not certify for all reported methods and analytes, reference the accredited items here: [http://www.calscience.com/PDF/New\\_York.pdf](http://www.calscience.com/PDF/New_York.pdf)

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

**Subcontractor Information:**

Unless otherwise noted below (or on the subcontract form), no samples were subcontracted.

## Sample Summary

---

Client: ANCHOR QEA, LLC	Work Order: 14-01-0932
27201 Puerta Real, Suite 350	Project Name: SD Shipyard Wastewater Discharge
Mission Viejo, CA 92691-8306	PO Number:
	Date/Time Received: 01/16/14 19:30
	Number of Containers: 5

Attn: Adam Gale

---

Sample Identification	Lab Number	Collection Date and Time	Number of Containers	Matrix
D-ID-140116	14-01-0932-1	01/16/14 06:20	5	Aqueous

## Analytical Report

ANCHOR QEA, LLC  
27201 Puerta Real, Suite 350  
Mission Viejo, CA 92691-8306

Date Received: 01/16/14  
Work Order: 14-01-0932  
Preparation: N/A  
Method: SM 2540 D  
Units: mg/L

Project: SD Shipyard Wastewater Discharge

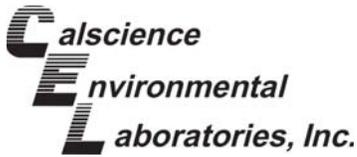
Page 1 of 1

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
D-ID-140116	14-01-0932-1-A	01/16/14 06:20	Aqueous	N/A	01/22/14	01/22/14 13:45	E0122TSSL1

Parameter	Result	RL	DF	Qualifiers
Solids, Total Suspended	6.8	1.0	1	

Method Blank	099-09-010-6539	N/A	Aqueous	N/A	01/22/14	01/22/14 13:45	E0122TSSL1
--------------	-----------------	-----	---------	-----	----------	-------------------	------------

Parameter	Result	RL	DF	Qualifiers
Solids, Total Suspended	ND	1.0	1	



## Analytical Report

ANCHOR QEA, LLC  
 27201 Puerta Real, Suite 350  
 Mission Viejo, CA 92691-8306

Date Received: 01/16/14  
 Work Order: 14-01-0932  
 Preparation: N/A  
 Method: SM 5220 C  
 Units: mg/L

Project: SD Shipyard Wastewater Discharge

Page 1 of 1

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
D-ID-140116	14-01-0932-1-B	01/16/14 06:20	Aqueous	BUR06	01/20/14	01/20/14 18:00	E0120ODB4

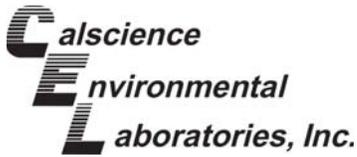
Parameter	Result	RL	DF	Qualifiers
Chemical Oxygen Demand	280	5.0	1	

Method Blank	099-05-114-110	N/A	Aqueous	BUR06	01/20/14	01/20/14 18:00	E0120ODB4
--------------	----------------	-----	---------	-------	----------	-------------------	-----------

Parameter	Result	RL	DF	Qualifiers
Chemical Oxygen Demand	ND	5.0	1	

Return to Contents

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.



## Analytical Report

ANCHOR QEA, LLC  
 27201 Puerta Real, Suite 350  
 Mission Viejo, CA 92691-8306

Date Received: 01/16/14  
 Work Order: 14-01-0932  
 Preparation: N/A  
 Method: EPA 200.8  
 Units: mg/L

Project: SD Shipyard Wastewater Discharge

Page 1 of 1

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
D-ID-140116	14-01-0932-1-C	01/16/14 06:20	Aqueous	ICP/MS 04	01/17/14	01/17/14 16:21	140117L01A

Comment(s):  
 - The reporting limit is elevated resulting from matrix interference.  
 - Results were evaluated to the MDL (DL), concentrations  $\geq$  to the MDL (DL) but  $<$  RL (LOQ), if found, are qualified with a "J" flag.

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>MDL</u>	<u>DF</u>	<u>Qualifiers</u>
Arsenic	0.0113	0.0100	0.00386	10	
Copper	0.280	0.0100	0.00140	10	
Lead	0.0685	0.0100	0.000898	10	
Nickel	0.0145	0.0100	0.00132	10	
Zinc	0.0743	0.0500	0.00479	10	

<b>Method Blank</b>	<b>099-16-094-167</b>	<b>N/A</b>	<b>Aqueous</b>	<b>ICP/MS 04</b>	<b>01/17/14</b>	<b>01/17/14 15:48</b>	<b>140117L01A</b>
---------------------	-----------------------	------------	----------------	------------------	-----------------	---------------------------	-------------------

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

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>MDL</u>	<u>DF</u>	<u>Qualifiers</u>
Arsenic	ND	0.00100	0.000386	1	
Copper	ND	0.00100	0.000140	1	
Lead	ND	0.00100	0.0000898	1	
Nickel	ND	0.00100	0.000132	1	
Zinc	ND	0.00500	0.000479	1	

Return to Contents

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

**Analytical Report**

ANCHOR QEA, LLC  
27201 Puerta Real, Suite 350  
Mission Viejo, CA 92691-8306

Date Received: 01/16/14  
Work Order: 14-01-0932  
Preparation: EPA 245.1 Total  
Method: EPA 245.1  
Units: mg/L

Project: SD Shipyard Wastewater Discharge

Page 1 of 1

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
D-ID-140116	14-01-0932-1-C	01/16/14 06:20	Aqueous	Mercury	01/17/14	01/17/14 17:27	140117L03

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	Qualifiers
Mercury	0.0000631	0.000200	0.0000453	1	J

Method Blank	099-04-008-6798	N/A	Aqueous	Mercury	01/17/14	01/20/14 12:40	140117L03
--------------	-----------------	-----	---------	---------	----------	-------------------	-----------

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	Qualifiers
Mercury	ND	0.000200	0.0000453	1	

Return to Contents

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

**Analytical Report**

ANCHOR QEA, LLC  
 27201 Puerta Real, Suite 350  
 Mission Viejo, CA 92691-8306

Date Received: 01/16/14  
 Work Order: 14-01-0932  
 Preparation: EPA 3510C  
 Method: EPA 8081A  
 Units: ug/L

Project: SD Shipyard Wastewater Discharge

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
D-ID-140116	14-01-0932-1-E	01/16/14 06:20	Aqueous	GC 44	01/21/14	01/22/14 20:02	140121L16

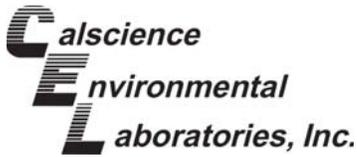
Comment(s): - Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Alpha-BHC	ND	0.10	0.028	1	
Gamma-BHC	ND	0.10	0.030	1	
Beta-BHC	ND	0.10	0.030	1	
Heptachlor	ND	0.10	0.026	1	
Delta-BHC	ND	0.10	0.029	1	
Aldrin	ND	0.10	0.027	1	
Heptachlor Epoxide	ND	0.10	0.025	1	
Endosulfan I	ND	0.10	0.028	1	
Dieldrin	ND	0.10	0.029	1	
4,4'-DDE	ND	0.10	0.027	1	
Endrin	ND	0.10	0.031	1	
Endrin Aldehyde	ND	0.10	0.026	1	
4,4'-DDD	ND	0.10	0.027	1	
Endosulfan II	ND	0.10	0.027	1	
4,4'-DDT	ND	0.10	0.027	1	
Endosulfan Sulfate	ND	0.10	0.029	1	
Methoxychlor	ND	0.10	0.025	1	
Chlordane	ND	1.0	0.33	1	
Toxaphene	ND	2.0	0.59	1	
Endrin Ketone	ND	0.10	0.024	1	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Decachlorobiphenyl	83	50-135	
2,4,5,6-Tetrachloro-m-Xylene	90	50-135	

Return to Contents

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.



## Analytical Report

ANCHOR QEA, LLC  
 27201 Puerta Real, Suite 350  
 Mission Viejo, CA 92691-8306

Date Received: 01/16/14  
 Work Order: 14-01-0932  
 Preparation: EPA 3510C  
 Method: EPA 8081A  
 Units: ug/L

Project: SD Shipyard Wastewater Discharge

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	099-12-529-675	N/A	Aqueous	GC 44	01/21/14	01/22/14 18:46	140121L16

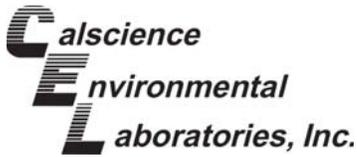
Comment(s): - Results were evaluated to the MDL (DL), concentrations  $\geq$  to the MDL (DL) but  $<$  RL (LOQ), if found, are qualified with a "J" flag.

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>MDL</u>	<u>DF</u>	<u>Qualifiers</u>
Alpha-BHC	ND	0.10	0.028	1	
Gamma-BHC	ND	0.10	0.030	1	
Beta-BHC	ND	0.10	0.030	1	
Heptachlor	ND	0.10	0.026	1	
Delta-BHC	ND	0.10	0.029	1	
Aldrin	ND	0.10	0.027	1	
Heptachlor Epoxide	ND	0.10	0.025	1	
Endosulfan I	ND	0.10	0.028	1	
Dieldrin	ND	0.10	0.029	1	
4,4'-DDE	ND	0.10	0.027	1	
Endrin	ND	0.10	0.031	1	
Endrin Aldehyde	ND	0.10	0.026	1	
4,4'-DDD	ND	0.10	0.027	1	
Endosulfan II	ND	0.10	0.027	1	
4,4'-DDT	ND	0.10	0.027	1	
Endosulfan Sulfate	ND	0.10	0.029	1	
Methoxychlor	ND	0.10	0.025	1	
Chlordane	ND	1.0	0.33	1	
Toxaphene	ND	2.0	0.59	1	
Endrin Ketone	ND	0.10	0.024	1	

<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
Decachlorobiphenyl	90	50-135	
2,4,5,6-Tetrachloro-m-Xylene	88	50-135	



RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.



## Analytical Report

ANCHOR QEA, LLC  
 27201 Puerta Real, Suite 350  
 Mission Viejo, CA 92691-8306

Date Received: 01/16/14  
 Work Order: 14-01-0932  
 Preparation: EPA 3510C  
 Method: EPA 8082  
 Units: ug/L

Project: SD Shipyard Wastewater Discharge

Page 1 of 1

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
D-ID-140116	14-01-0932-1-E	01/16/14 06:20	Aqueous	GC 58	01/21/14	01/23/14 14:07	140121L17

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

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>MDL</u>	<u>DF</u>	<u>Qualifiers</u>
Aroclor-1016	ND	0.98	0.29	1	
Aroclor-1221	ND	0.98	0.28	1	
Aroclor-1232	ND	0.98	0.24	1	
Aroclor-1242	ND	0.98	0.18	1	
Aroclor-1248	ND	0.98	0.20	1	
Aroclor-1254	ND	0.98	0.22	1	
Aroclor-1260	ND	0.98	0.26	1	
Aroclor-1262	ND	0.98	0.25	1	

<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
Decachlorobiphenyl	102	50-135	
2,4,5,6-Tetrachloro-m-Xylene	104	50-135	

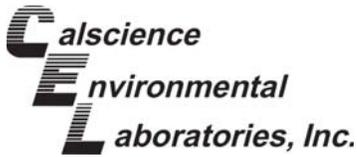
Method Blank	099-12-533-882	N/A	Aqueous	GC 58	01/21/14	01/23/14 12:02	140121L17
--------------	----------------	-----	---------	-------	----------	-------------------	-----------

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

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>MDL</u>	<u>DF</u>	<u>Qualifiers</u>
Aroclor-1016	ND	1.0	0.29	1	
Aroclor-1221	ND	1.0	0.28	1	
Aroclor-1232	ND	1.0	0.25	1	
Aroclor-1242	ND	1.0	0.18	1	
Aroclor-1248	ND	1.0	0.20	1	
Aroclor-1254	ND	1.0	0.23	1	
Aroclor-1260	ND	1.0	0.26	1	
Aroclor-1262	ND	1.0	0.26	1	

<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
Decachlorobiphenyl	103	50-135	
2,4,5,6-Tetrachloro-m-Xylene	97	50-135	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.



## Quality Control - Spike/Spike Duplicate

ANCHOR QEA, LLC  
 27201 Puerta Real, Suite 350  
 Mission Viejo, CA 92691-8306

Date Received: 01/16/14  
 Work Order: 14-01-0932  
 Preparation: N/A  
 Method: EPA 200.8

Project: SD Shipyard Wastewater Discharge

Page 1 of 2

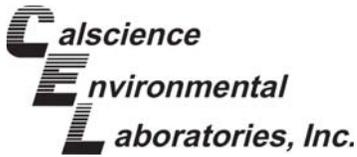
Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
14-01-0947-1	Sample	Aqueous	ICP/MS 04	01/17/14	01/17/14 16:08	140117S01
14-01-0947-1	Matrix Spike	Aqueous	ICP/MS 04	01/17/14	01/17/14 15:58	140117S01
14-01-0947-1	Matrix Spike Duplicate	Aqueous	ICP/MS 04	01/17/14	01/17/14 16:01	140117S01

<u>Parameter</u>	<u>Sample Conc.</u>	<u>Spike Added</u>	<u>MS Conc.</u>	<u>MS %Rec.</u>	<u>MSD Conc.</u>	<u>MSD %Rec.</u>	<u>%Rec. CL</u>	<u>RPD</u>	<u>RPD CL</u>	<u>Qualifiers</u>
Arsenic	0.01602	0.1000	0.1134	97	0.1230	107	80-120	8	0-20	
Copper	ND	0.1000	0.09295	93	0.1003	100	80-120	8	0-20	
Lead	ND	0.1000	0.09924	99	0.1081	108	80-120	8	0-20	
Nickel	ND	0.1000	0.09188	92	0.1009	101	80-120	9	0-20	
Zinc	0.1832	0.1000	0.2865	103	0.2861	103	80-120	0	0-20	

Return to Contents

RPD: Relative Percent Difference. CL: Control Limits



## Quality Control - Spike/Spike Duplicate

ANCHOR QEA, LLC  
 27201 Puerta Real, Suite 350  
 Mission Viejo, CA 92691-8306

Date Received: 01/16/14  
 Work Order: 14-01-0932  
 Preparation: EPA 245.1 Total  
 Method: EPA 245.1

Project: SD Shipyard Wastewater Discharge

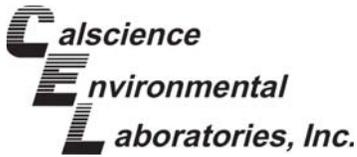
Page 2 of 2

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
14-01-0314-1	Sample	Aqueous	Mercury	01/17/14	01/20/14 12:47	140117S03
14-01-0314-1	Matrix Spike	Aqueous	Mercury	01/17/14	01/20/14 12:49	140117S03
14-01-0314-1	Matrix Spike Duplicate	Aqueous	Mercury	01/17/14	01/20/14 12:51	140117S03

<u>Parameter</u>	<u>Sample Conc.</u>	<u>Spike Added</u>	<u>MS Conc.</u>	<u>MS %Rec.</u>	<u>MSD Conc.</u>	<u>MSD %Rec.</u>	<u>%Rec. CL</u>	<u>RPD</u>	<u>RPD CL</u>	<u>Qualifiers</u>
Mercury	0.002339	0.01000	0.01175	94	0.01170	94	57-141	0	0-10	

Return to Contents

RPD: Relative Percent Difference. CL: Control Limits



## Quality Control - Sample Duplicate

ANCHOR QEA, LLC  
 27201 Puerta Real, Suite 350  
 Mission Viejo, CA 92691-8306

Date Received: 01/16/14  
 Work Order: 14-01-0932  
 Preparation: N/A  
 Method: SM 2540 D

Project: SD Shipyard Wastewater Discharge

Page 1 of 2

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	Duplicate Batch Number
14-01-0918-3	Sample	Aqueous	N/A	01/22/14 00:00	01/22/14 13:45	E0122TSSD1
14-01-0918-3	Sample Duplicate	Aqueous	N/A	01/22/14 00:00	01/22/14 13:45	E0122TSSD1

<u>Parameter</u>	<u>Sample Conc.</u>	<u>DUP Conc.</u>	<u>RPD</u>	<u>RPD CL</u>	<u>Qualifiers</u>
Solids, Total Suspended	203.0	198.0	2	0-20	

[Return to Contents](#)

RPD: Relative Percent Difference. CL: Control Limits

**Quality Control - Sample Duplicate**

ANCHOR QEA, LLC  
 27201 Puerta Real, Suite 350  
 Mission Viejo, CA 92691-8306

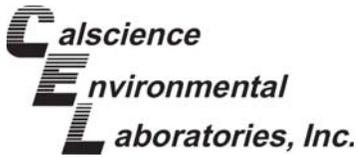
Date Received: 01/16/14  
 Work Order: 14-01-0932  
 Preparation: N/A  
 Method: SM 5220 C

Project: SD Shipyard Wastewater Discharge

Page 2 of 2

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	Duplicate Batch Number
D-ID-140116	Sample	Aqueous	BUR06	01/20/14 00:00	01/20/14 18:00	E0120ODD4
D-ID-140116	Sample Duplicate	Aqueous	BUR06	01/20/14 00:00	01/20/14 18:00	E0120ODD4

<u>Parameter</u>	<u>Sample Conc.</u>	<u>DUP Conc.</u>	<u>RPD</u>	<u>RPD CL</u>	<u>Qualifiers</u>
Chemical Oxygen Demand	276.5	268.8	3	0-25	



## Quality Control - LCS/LCSD

ANCHOR QEA, LLC  
 27201 Puerta Real, Suite 350  
 Mission Viejo, CA 92691-8306

Date Received: 01/16/14  
 Work Order: 14-01-0932  
 Preparation: N/A  
 Method: SM 2540 D

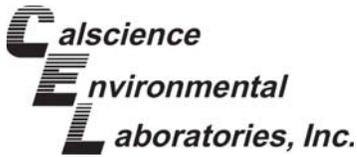
Project: SD Shipyard Wastewater Discharge

Page 1 of 5

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number			
099-09-010-6539	LCS	Aqueous	N/A	01/22/14	01/22/14 13:45	E0122TSSL1			
099-09-010-6539	LCSD	Aqueous	N/A	01/22/14	01/22/14 13:45	E0122TSSL1			
<u>Parameter</u>	<u>Spike Added</u>	<u>LCS Conc.</u>	<u>LCS %Rec.</u>	<u>LCSD Conc.</u>	<u>LCSD %Rec.</u>	<u>%Rec. CL</u>	<u>RPD</u>	<u>RPD CL</u>	<u>Qualifiers</u>
Solids, Total Suspended	100.0	93.00	93	91.00	91	80-120	2	0-20	

Return to Contents

RPD: Relative Percent Difference. CL: Control Limits



## Quality Control - LCS/LCSD

ANCHOR QEA, LLC  
 27201 Puerta Real, Suite 350  
 Mission Viejo, CA 92691-8306

Date Received: 01/16/14  
 Work Order: 14-01-0932  
 Preparation: N/A  
 Method: EPA 200.8

Project: SD Shipyard Wastewater Discharge

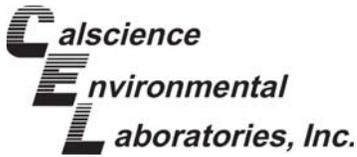
Page 2 of 5

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-16-094-167	LCS	Aqueous	ICP/MS 04	01/17/14	01/17/14 17:06	140117L01A
099-16-094-167	LCSD	Aqueous	ICP/MS 04	01/17/14	01/17/14 17:09	140117L01A

<u>Parameter</u>	<u>Spike Added</u>	<u>LCS Conc.</u>	<u>LCS %Rec.</u>	<u>LCSD Conc.</u>	<u>LCSD %Rec.</u>	<u>%Rec. CL</u>	<u>RPD</u>	<u>RPD CL</u>	<u>Qualifiers</u>
Arsenic	0.1000	0.1026	103	0.09802	98	80-120	5	0-20	
Copper	0.1000	0.1007	101	0.09687	97	80-120	4	0-20	
Lead	0.1000	0.1007	101	0.1031	103	80-120	2	0-20	
Nickel	0.1000	0.09755	98	0.09613	96	80-120	1	0-20	
Zinc	0.1000	0.1198	120	0.1151	115	80-120	4	0-20	

[Return to Contents](#)

RPD: Relative Percent Difference. CL: Control Limits



## Quality Control - LCS/LCSD

ANCHOR QEA, LLC  
 27201 Puerta Real, Suite 350  
 Mission Viejo, CA 92691-8306

Date Received: 01/16/14  
 Work Order: 14-01-0932  
 Preparation: EPA 245.1 Total  
 Method: EPA 245.1

Project: SD Shipyard Wastewater Discharge

Page 3 of 5

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-04-008-6798	LCS	Aqueous	Mercury	01/17/14	01/20/14 12:42	140117L03
099-04-008-6798	LCSD	Aqueous	Mercury	01/17/14	01/20/14 12:45	140117L03

<u>Parameter</u>	<u>Spike Added</u>	<u>LCS Conc.</u>	<u>LCS %Rec.</u>	<u>LCSD Conc.</u>	<u>LCSD %Rec.</u>	<u>%Rec. CL</u>	<u>RPD</u>	<u>RPD CL</u>	<u>Qualifiers</u>
Mercury	0.01000	0.009801	98	0.009962	100	85-121	2	0-10	

↑  
Return to Contents

RPD: Relative Percent Difference. CL: Control Limits

ANCHOR QEA, LLC  
 27201 Puerta Real, Suite 350  
 Mission Viejo, CA 92691-8306

Date Received: 01/16/14  
 Work Order: 14-01-0932  
 Preparation: EPA 3510C  
 Method: EPA 8081A

Project: SD Shipyard Wastewater Discharge

Page 4 of 5

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number				
099-12-529-675	LCS	Aqueous	GC 44	01/21/14	01/22/14 19:00	140121L16				
099-12-529-675	LCSD	Aqueous	GC 44	01/21/14	01/22/14 19:14	140121L16				
Parameter	Spike Added	LCS Conc.	LCS %Rec.	LCSD Conc.	LCSD %Rec.	%Rec. CL	ME CL	RPD	RPD CL	Qualifiers
Alpha-BHC	0.5000	0.4764	95	0.5122	102	50-135	36-149	7	0-25	
Gamma-BHC	0.5000	0.4692	94	0.5143	103	50-135	36-149	9	0-25	
Beta-BHC	0.5000	0.4214	84	0.4560	91	50-135	36-149	8	0-25	
Heptachlor	0.5000	0.4254	85	0.4617	92	50-135	36-149	8	0-25	
Delta-BHC	0.5000	0.4359	87	0.5104	102	50-135	36-149	16	0-25	
Aldrin	0.5000	0.4094	82	0.5050	101	50-135	36-149	21	0-25	
Heptachlor Epoxide	0.5000	0.4515	90	0.4598	92	50-135	36-149	2	0-25	
Endosulfan I	0.5000	0.4840	97	0.5012	100	50-135	36-149	4	0-25	
Dieldrin	0.5000	0.4696	94	0.5186	104	50-135	36-149	10	0-25	
4,4'-DDE	0.5000	0.4261	85	0.4913	98	50-135	36-149	14	0-25	
Endrin	0.5000	0.4807	96	0.5258	105	50-135	36-149	9	0-25	
Endrin Aldehyde	0.5000	0.3597	72	0.4012	80	50-135	36-149	11	0-25	
4,4'-DDD	0.5000	0.4096	82	0.4774	95	50-135	36-149	15	0-25	
Endosulfan II	0.5000	0.4729	95	0.5163	103	50-135	36-149	9	0-25	
4,4'-DDT	0.5000	0.4407	88	0.5052	101	50-135	36-149	14	0-25	
Endosulfan Sulfate	0.5000	0.4456	89	0.4867	97	50-135	36-149	9	0-25	
Methoxychlor	0.5000	0.4287	86	0.4891	98	50-135	36-149	13	0-25	

Total number of LCS compounds: 17  
 Total number of ME compounds: 0  
 Total number of ME compounds allowed: 1  
 LCS ME CL validation result: Pass

Return to Contents

ANCHOR QEA, LLC  
 27201 Puerta Real, Suite 350  
 Mission Viejo, CA 92691-8306

Date Received: 01/16/14  
 Work Order: 14-01-0932  
 Preparation: EPA 3510C  
 Method: EPA 8082

Project: SD Shipyard Wastewater Discharge

Page 5 of 5

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number			
099-12-533-882	LCS	Aqueous	GC 58	01/21/14	01/23/14 11:25	140121L17			
099-12-533-882	LCSD	Aqueous	GC 58	01/21/14	01/23/14 11:43	140121L17			
Parameter	Spike Added	LCS Conc.	LCS %Rec.	LCSD Conc.	LCSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
Aroclor-1016	2.000	2.609	130	2.370	119	50-135	10	0-25	
Aroclor-1260	2.000	1.919	96	1.976	99	50-135	3	0-25	

<u>Qualifiers</u>	<u>Definition</u>
*	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 suspected matrix interference. The associated LCS recovery was in control.
4	The MS/MSD RPD was out of control due to suspected matrix interference.
5	The PDS/PDSD or PES/PESD associated with this batch of samples was out of control due to suspected matrix interference.
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.
BV	Sample received 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.
JA	Analyte positively identified but quantitation is an estimate.
ME	LCS Recovery Percentage is within Marginal Exceedance (ME) Control Limit range (+/- 4 SD from the mean).
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.

Any parameter identified in 40CFR Part 136.3 Table II that is designated as "analyze immediately" with a holding time of <= 15 minutes (40CFR-136.3 Table II, footnote 4), is considered a "field" test and the reported results will be qualified as being received outside of the stated holding time unless received at the laboratory within 15 minutes of the collection time.

A calculated total result (Example: Total Pesticides) is the summation of each component concentration and/or, if "J" flags are reported, estimated concentration. Component concentrations showing not detected (ND) are summed into the calculated total result as zero concentrations.

**CHAIN OF CUSTODY RECORD**

DATE: 1/16/2014 OF 1  
 PAGE: 1 OF 1

WORKLAB USE ONLY  
**14-01-0932**

CLIENT PROJECT NAME / NUMBER  
**SD Shipyard Wastewater Discharge**

LAB CONTACT OR QUOTE NO.:

PROJECT CONTACT:  
**Adam Gale**

SAMPLER(S):  
**Kyle King**

LAB USE ONLY

LABORATORY CLIENT: **Anchor QEA**

ADDRESS: **27201 Puerta Real, Ste 350**

CITY: **Mission Viejo** STATE: **CA** ZIP: **92691**

TEL: **949-334-9635** E-MAIL: **agale@anchorage.com**

TURNAROUND TIME:  
 SAME DAY  24 HR  48 HR  72 HR  STANDARD

**REQUESTED ANALYSIS**

EPA 200.8 As, Cu, Pb, Ni, Zn	X				
EPA 245.1 Mercury	X				
EPA 8082 PCB Aroclors	X				
EPA 8081 Pesticides					
SM 5220C COD (reflux)	X				
SM 2540D TSS					

LAB USE ONLY	SAMPLE ID	SAMPLING		MATRIX	NO. OF CONT.	LOG CODE		
		DATE	TIME #			Unpreserved	Preserved	Field Filtered
	D-ID-140116	1/16/2014	0620 1845, 1930	WS	1		HNO <sub>3</sub>	
	D-ID-140116	1/16/2014	0620 1850, 1930	WS	1		H <sub>2</sub> SO <sub>4</sub>	
	D-ID-140116	1/16/2014	0620 1030, 1130	WS	1	X		
	D-ID-140116	1/16/2014	0620	WS	1	X		
	D-ID-140116	1/16/2014	0620 0845, 0930, 1030, 1130	WS	1	X		

*HOW FIRST SAMPLE BOTTLES WRITTEN ON BOTTLES*

*etc*

Relinquished by: (Signature) *[Signature]* Date: 1/16/2014 Time: 19:30

Relinquished by: (Signature) *[Signature]* Date: 1/16/2014 Time: 19:30

Relinquished by: (Signature) *[Signature]* Date: 1/16/2014 Time: 19:30

*Anchor QEA*



**SAMPLE RECEIPT FORM**

Cooler 1 of 1

CLIENT: ANCHOR QEA

DATE: 01/16/14

TEMPERATURE: Thermometer ID: SC1 (Criteria: 0.0 °C – 6.0 °C, not frozen except sediment/tissue)

Temperature 1.8 °C - 0.3 °C (CF) = 1.5 °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

Checked by: 671

**CUSTODY SEALS INTACT:**

Cooler  \_\_\_\_\_

No (Not Intact)

Not Present

N/A

Checked by: 671

Sample  \_\_\_\_\_

No (Not Intact)

Not Present

Checked by: 681

**SAMPLE CONDITION:**

	Yes	No	N/A
Chain-Of-Custody (COC) document(s) received with samples.....	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
COC document(s) received complete.....	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> Collection date/time, matrix, and/or # of containers logged in based on sample labels. <input type="checkbox"/> No analysis requested. <input type="checkbox"/> Not relinquished. <input type="checkbox"/> No date/time relinquished.			
Sampler's name indicated on COC.....	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Sample container label(s) consistent with COC.....	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Sample container(s) intact and good condition.....	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Proper containers and sufficient volume for analyses requested.....	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Analyses received within holding time.....	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Aqueous samples received within 15-minute holding time			
<input type="checkbox"/> pH <input type="checkbox"/> Residual Chlorine <input type="checkbox"/> Dissolved Sulfides <input type="checkbox"/> Dissolved Oxygen.....	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Proper preservation noted on COC or sample container.....	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> Unpreserved vials received for Volatiles analysis			
Volatile analysis container(s) free of headspace.....	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Tedlar bag(s) free of condensation.....	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTAINER TYPE:**

Solid:  4ozCGJ  8ozCGJ  16ozCGJ  Sleeve (\_\_\_\_)  EnCores®  TerraCores®  \_\_\_\_\_

Aqueous:  VOA  VOA<sup>h</sup>  VOAna<sub>2</sub>  125AGB  125AGB<sup>h</sup>  125AGB<sup>p</sup>  1AGB  1AGBna<sub>2</sub>  1AGBs

500AGB  500AGJ  500AGJs  250AGB  250CGB  250CGBs  1PB  1PBna  500PB

250PB  250PBn<sub>4</sub>  125PB  125PBz<sub>na</sub>  100PJ  100PJna<sub>2</sub>  \_\_\_\_\_  \_\_\_\_\_  \_\_\_\_\_

Air:  Tedlar®  Canister Other:  \_\_\_\_\_ Trip Blank Lot#: \_\_\_\_\_ Labeled/Checked by: 681

Container: C: Clear A: Amber P: Plastic G: Glass J: Jar B: Bottle Z: Ziploc/Resealable Bag E: Envelope Reviewed by: 739

Preservative: h: HCL n: HNO<sub>3</sub> na<sub>2</sub>: Na<sub>2</sub>S<sub>2</sub>O<sub>3</sub> na: NaOH p: H<sub>3</sub>PO<sub>4</sub> s: H<sub>2</sub>SO<sub>4</sub> u: Ultra-pure z<sub>na</sub>: ZnAc<sub>2</sub>+NaOH f: Filtered Scanned by: 739



## CERTIFICATION

All analyses were conducted at a laboratory certified for such analyses by the California Department of Public Health in accordance with applicable USEPA and NELAP accreditation procedures.

I certify under penalty of law that the data generated for Calscience Work Order No. 14-03-0247 were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. The Project Manager or designee who signed the Calscience Work Order has been specifically authorized and approved to do so.

The information submitted is, to the best of my knowledge and belief, true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of a fine and imprisonment for knowing violations.

  
\_\_\_\_\_  
Signature, Laboratory Director

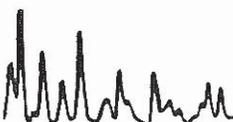
May 21, 2014  
Date

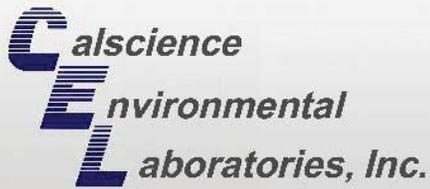
Name of Laboratory:  
Address of Laboratory:

**Calscience Environmental Laboratories**  
**7440 Lincoln Way**  
**Garden Grove, CA 92841-1432**

This Certification signed by:

**Steve Lane**





# CALSCIENCE

WORK ORDER NUMBER: 14-03-0247

*The difference is service*



AIR | SOIL | WATER | MARINE CHEMISTRY

### Analytical Report For

**Client:** ANCHOR QEA, LLC

**Client Project Name:** SD Shipyard Wastewater Discharge

**Attention:** Adam Gale  
27201 Puerta Real, Suite 350  
Mission Viejo, CA 92691-8306

Approved for release on 03/13/2014 by:  
Danielle Gonsman  
Project Manager

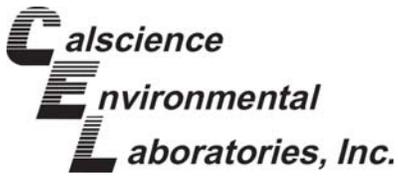
ResultLink ▶

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.





# Contents

---

Client Project Name: SD Shipyard Wastewater Discharge  
Work Order Number: 14-03-0247

1	Work Order Narrative. . . . .	3
2	Sample Summary. . . . .	4
3	Client Sample Data. . . . .	5
	3.1 SM 2540 D Total Suspended Solids (Aqueous). . . . .	5
	3.2 SM 5220 C Chemical Oxygen Demand (Aqueous). . . . .	6
4	Quality Control Sample Data. . . . .	7
	4.1 Sample Duplicate. . . . .	7
	4.2 LCS/LCSD. . . . .	9
5	Glossary of Terms and Qualifiers. . . . .	10
6	Chain of Custody/Sample Receipt Form. . . . .	11

**Work Order Narrative**

Work Order: 14-03-0247

Page 1 of 1

**Condition Upon Receipt:**

Samples were received under Chain of Custody (COC) on 03/04/14. They were assigned to Work Order 14-03-0247.

Unless otherwise noted on the Sample Receiving forms all samples were received in good condition and within the recommended EPA temperature criteria for the methods noted on the COC. The COC and Sample Receiving Documents are integral elements of the analytical report and are presented at the back of the report.

**Holding Times:**

All samples were analyzed within prescribed holding times (HT) and/or in accordance with the Calscience Sample Acceptance Policy unless otherwise noted in the analytical report and/or comprehensive case narrative, if required.

Any parameter identified in 40CFR Part 136.3 Table II that is designated as "analyze immediately" with a holding time of  $\leq 15$  minutes (40CFR-136.3 Table II, footnote 4), is considered a "field" test and the reported results will be qualified as being received outside of the stated holding time unless received at the laboratory within 15 minutes of the collection time.

**Quality Control:**

All quality control parameters (QC) were within established control limits except where noted in the QC summary forms or described further within this report.

**Additional Comments:**

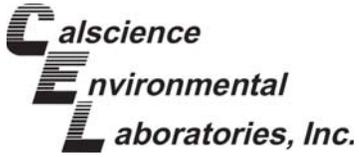
Air - Sorbent-extracted air methods (EPA TO-4A, EPA TO-10, EPA TO-13A, EPA TO-17): Analytical results are converted from mass/sample basis to mass/volume basis using client-supplied air volumes.

New York NELAP air certification does not certify for all reported methods and analytes, reference the accredited items here: [http://www.calscience.com/PDF/New\\_York.pdf](http://www.calscience.com/PDF/New_York.pdf)

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

**Subcontractor Information:**

Unless otherwise noted below (or on the subcontract form), no samples were subcontracted.



## Sample Summary

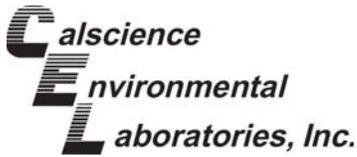
---

Client: ANCHOR QEA, LLC	Work Order: 14-03-0247
27201 Puerta Real, Suite 350	Project Name: SD Shipyard Wastewater Discharge
Mission Viejo, CA 92691-8306	PO Number:
	Date/Time Received: 03/04/14 18:55
	Number of Containers: 2

Attn: Adam Gale

---

Sample Identification	Lab Number	Collection Date and Time	Number of Containers	Matrix
D-1D-140303	14-03-0247-1	03/03/14 11:07	2	Aqueous



## Analytical Report

ANCHOR QEA, LLC  
 27201 Puerta Real, Suite 350  
 Mission Viejo, CA 92691-8306

Date Received: 03/04/14  
 Work Order: 14-03-0247  
 Preparation: N/A  
 Method: SM 2540 D  
 Units: mg/L

Project: SD Shipyard Wastewater Discharge

Page 1 of 1

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
D-1D-140303	14-03-0247-1-B	03/03/14 11:07	Aqueous	N/A	03/08/14	03/08/14 13:30	E0308TSSL1

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

Parameter	Result	RL	MDL	DF	Qualifiers
Solids, Total Suspended	76	1.0	0.95	1.00	

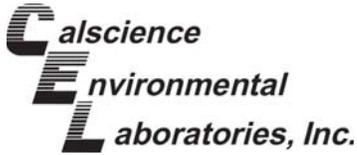
Method Blank	099-09-010-6610	N/A	Aqueous	N/A	03/08/14	03/08/14 13:30	E0308TSSL1
--------------	-----------------	-----	---------	-----	----------	-------------------	------------

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

Parameter	Result	RL	MDL	DF	Qualifiers
Solids, Total Suspended	ND	1.0	0.95	1.00	

Return to Contents

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.



## Analytical Report

ANCHOR QEA, LLC  
 27201 Puerta Real, Suite 350  
 Mission Viejo, CA 92691-8306

Date Received: 03/04/14  
 Work Order: 14-03-0247  
 Preparation: N/A  
 Method: SM 5220 C  
 Units: mg/L

Project: SD Shipyard Wastewater Discharge

Page 1 of 1

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
D-1D-140303	14-03-0247-1-A	03/03/14 11:07	Aqueous	BUR06	03/12/14	03/12/14 14:00	E0312ODB1

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

Parameter	Result	RL	MDL	DF	Qualifiers
Chemical Oxygen Demand	250	5.0	4.8	1.00	

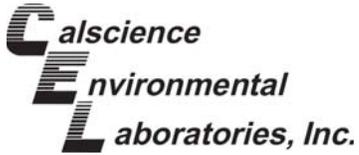
Method Blank	099-05-114-112	N/A	Aqueous	BUR06	03/12/14	03/12/14 14:00	E0312ODB1
--------------	----------------	-----	---------	-------	----------	-------------------	-----------

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

Parameter	Result	RL	MDL	DF	Qualifiers
Chemical Oxygen Demand	ND	5.0	4.8	1.00	

Return to Contents

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.



## Quality Control - Sample Duplicate

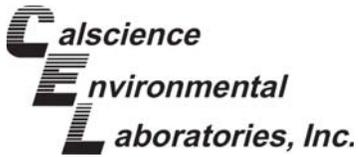
ANCHOR QEA, LLC  
 27201 Puerta Real, Suite 350  
 Mission Viejo, CA 92691-8306

Date Received: 03/04/14  
 Work Order: 14-03-0247  
 Preparation: N/A  
 Method: SM 2540 D

Project: SD Shipyard Wastewater Discharge

Page 1 of 2

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	Duplicate Batch Number
14-03-0311-4	Sample	Aqueous	N/A	03/08/14 00:00	03/08/14 13:30	E0308TSSD1
14-03-0311-4	Sample Duplicate	Aqueous	N/A	03/08/14 00:00	03/08/14 13:30	E0308TSSD1
<u>Parameter</u>		<u>Sample Conc.</u>	<u>DUP Conc.</u>	<u>RPD</u>	<u>RPD CL</u>	<u>Qualifiers</u>
Solids, Total Suspended		4717	4710	0	0-20	



## Quality Control - Sample Duplicate

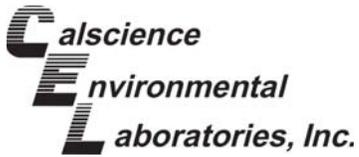
ANCHOR QEA, LLC  
 27201 Puerta Real, Suite 350  
 Mission Viejo, CA 92691-8306

Date Received: 03/04/14  
 Work Order: 14-03-0247  
 Preparation: N/A  
 Method: SM 5220 C

Project: SD Shipyard Wastewater Discharge

Page 2 of 2

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	Duplicate Batch Number
D-1D-140303	Sample	Aqueous	BUR06	03/12/14 00:00	03/12/14 14:00	E0312ODD1
D-1D-140303	Sample Duplicate	Aqueous	BUR06	03/12/14 00:00	03/12/14 14:00	E0312ODD1
<u>Parameter</u>		<u>Sample Conc.</u>	<u>DUP Conc.</u>	<u>RPD</u>	<u>RPD CL</u>	<u>Qualifiers</u>
Chemical Oxygen Demand		253.0	250.0	1	0-25	



## Quality Control - LCS/LCSD

ANCHOR QEA, LLC  
 27201 Puerta Real, Suite 350  
 Mission Viejo, CA 92691-8306

Date Received: 03/04/14  
 Work Order: 14-03-0247  
 Preparation: N/A  
 Method: SM 2540 D

Project: SD Shipyard Wastewater Discharge

Page 1 of 1

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number			
099-09-010-6610	LCS	Aqueous	N/A	03/08/14	03/08/14 13:30	E0308TSSL1			
099-09-010-6610	LCSD	Aqueous	N/A	03/08/14	03/08/14 13:30	E0308TSSL1			
Parameter	<u>Spike Added</u>	<u>LCS Conc.</u>	<u>LCS %Rec.</u>	<u>LCSD Conc.</u>	<u>LCSD %Rec.</u>	<u>%Rec. CL</u>	<u>RPD</u>	<u>RPD CL</u>	<u>Qualifiers</u>
Solids, Total Suspended	100.0	93.00	93	92.00	92	80-120	1	0-20	

## Glossary of Terms and Qualifiers

Work Order: 14-03-0247

Page 1 of 1

<u>Qualifiers</u>	<u>Definition</u>
*	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 suspected matrix interference. The associated LCS recovery was in control.
4	The MS/MSD RPD was out of control due to suspected matrix interference.
5	The PDS/PDSD or PES/PESD associated with this batch of samples was out of control due to suspected matrix interference.
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.
BV	Sample received 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.
JA	Analyte positively identified but quantitation is an estimate.
ME	LCS Recovery Percentage is within Marginal Exceedance (ME) Control Limit range (+/- 4 SD from the mean).
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.

Any parameter identified in 40CFR Part 136.3 Table II that is designated as "analyze immediately" with a holding time of  $\leq 15$  minutes (40CFR-136.3 Table II, footnote 4), is considered a "field" test and the reported results will be qualified as being received outside of the stated holding time unless received at the laboratory within 15 minutes of the collection time.

A calculated total result (Example: Total Pesticides) is the summation of each component concentration and/or, if "J" flags are reported, estimated concentration. Component concentrations showing not detected (ND) are summed into the calculated total result as zero concentrations.

WO # / LAB USE ONLY  
**14-03-0247**  
 Date 3/3/2014 Page 1 of 1

LABORATORY CLIENT: Anchovy QEA P.O. NO.:  
 ADDRESS: 27201 Puerta Real, Ste 350 STATE: CA ZIP: 92691  
 CITY: Mission Viejo E-MAIL: agale@anchovyqea.com  
 TEL: 949-334-9635  
 TURNAROUND TIME:  SAME DAY  24 HR  48 HR  72 HR  STANDARD  
 COELTEDF GLOBAL ID

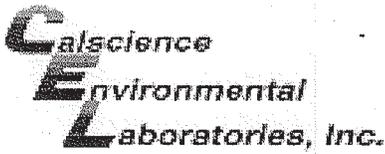
CLIENT PROJECT NAME / NUMBER: SD Shipyard Wastewater Discharge P.O. NO.:  
 PROJECT CONTACT: Adam Gale SAMPLER(S): (PRINT) K. Christensen

SPECIAL INSTRUCTIONS:  
Cap in 1L Amber dr. not have 250mL clear  
Preserved onsite.  
Only first sample time written on bottle

LAB USE ONLY	SAMPLE ID	SAMPLING		MATRIX	NO. OF CONT.	LOG CODE		
		DATE	TIME			Unpreserved	Preserved	Field Filtered
	<u>14D-1D-140303</u>	<u>3/3/2014</u>	<u>11:07, 11:20 11:30, 11:45</u>	<u>WS</u>	<u>1</u>	<input checked="" type="checkbox"/>		
	<u>14D-1D-140303</u>	<u>3/3/2014</u>	<u>11:07, 11:20 11:30, 11:45</u>	<u>WS</u>	<u>1</u>		<input checked="" type="checkbox"/>	

Requested Analyses:  
 TPB  TPB(g)  GRO  TPB(d)  DRO  TPB  C6-C36  C6-C44  
 TPH  BTEX / MTBE  8260   
 VOCs (8260) Oxygenates (8260) Prep (5035)  En Core  Terra Core  
 SVOCs (8270) Pesticides (8081) PCBs (8082) PAHs  8270  8270 SIM  
 T22 Metals  6010/747X  6020/747X  
 Cr(VI)  7196  7199  218.6  
 SM 2540D TSS   
 SM 5220C CdD (refux)

Received by: (Signature/Affiliation) [Signature] Date: 03/04/14 Time: 14:50  
 Received by: (Signature/Affiliation) [Signature] Date: 3/4/14 Time: 18:55  
 Received by: (Signature/Affiliation) [Signature] Date: \_\_\_\_\_ Time: \_\_\_\_\_



WORK ORDER #: 14-03-0247

SAMPLE RECEIPT FORM

Cooler 1 of 1

CLIENT: ANCHOR QEA

DATE: 03/04/14

TEMPERATURE: Thermometer ID: SC1 (Criteria: 0.0 °C - 6.0 °C, not frozen except sediment/tissue)
Temperature 1.7 °C - 0.3 °C (CF) = 1.4 °C
Checked by: 671

CUSTODY SEALS INTACT:
Checked by: 671
Checked by: 681

SAMPLE CONDITION:
Chain-Of-Custody (COC) document(s) received with samples...
COC document(s) received complete...
Checked by: 681

Return to Contents

APPENDIX G  
SUMMARY OF BIOLOGICAL  
MONITORING RESULTS

---



# Daily Special Status Bird Monitoring Form

San Diego Shipyard Sediment Site – South Shipyard



<b>Biologist:</b> Ali Meeks	<b>Start Date:</b> 9/30/2013
*Observations are recorded only when special status birds observed.	<b>End Date:</b> 11/2/2013

Observation No.	Date	Time	Special Status Bird Species Observed	No. of Special Status Birds Observed	Location/Behavior/Comments
1	9/30/2013	710	California brown pelican	1	SMU-4, waterward and over barge, flying overhead. No disturbance.
2	9/30/2013	1145	California brown pelican	2	SMU-4, waterward and over barge, flying overhead. No disturbance.
3	10/1/2013	1530	Osprey	1	Alighted on adjacent ship scaffolding, observed, flew away. No disturbance.
4	10/10/2013	900	California brown pelican	1	SMU-1, resting on timber pier. No disturbance.
5	10/15/2013	1425	California brown pelican	1	SMU-4, flying over adjacent ship scaffolding. No disturbance.
6	10/16/2013	810	California brown pelican	1	SMU-2 and -3, flying over adjacent ship. No disturbance.
7	10/18/2013	825	California brown pelican	1	SMU-4, waterward and over barge, flying overhead. No disturbance.
8	10/21/2013	930	California brown pelican	1	SMU-4, over security boom, flying overhead. No disturbance.
9	10/23/2013	1000	California brown pelican	1	SMU -3, flying over water more than 300 feet from shore. No disturbance.
10	10/25/2013	1145	Double-crested cormorant	1	SMU-1, resting on timber pier. No disturbance.
11	10/25/2013	1225	California brown pelican	1	SMU-4, over security boom, flying overhead. No disturbance.





















































APPENDIX H  
CAO-MANDATED ELECTRONIC  
REPORTING SUBMITTALS

---

*CAO Provision G.10 (b) (1) – Laboratory Analytical Data: Analytical data (including geotechnical data) for all sediment and water samples in Electronic Data File (EDF) format. Water, sediment, and soil include analytical results of samples collected from: dredging equipment, monitoring wells, boreholes, gas and vapor wells or other collection devices, surface water, groundwater, piezometers, and stockpiles.*

- Post-Dredge Confirmatory Sample Analytical Data (included in Appendix C of this report)
- Discharge Monitoring Sampling Results (included in Appendix F of this report)

*CAO Provision G.10 (b) (2) – Locational Data: The latitude and longitude for any permanent monitoring location (surface water or sediment sampling location) for which data is reported in EDF format, accurate to within 1 meter and referenced to a minimum of two reference points from the California Spatial Reference System (CSRS-H), if available.*

- Post-Dredge Confirmatory Sample Locations
- Discharge Monitoring Sampling Location

*CAO Provision G.10 (b) (3) – Site Map: Site map or maps which display discharge locations, streets bordering the facility, and sampling locations for all sediment, soil, and water samples. The site map is a stand-alone document that may be submitted in various electronic formats. A site map must also be uploaded to show the maximum extent of sediment and water pollution. An update to the site map may be uploaded at any time.*

- Figure 1 – Site Map

*CAO Provision G.10 (b) (4) – Electronic Report: A complete copy (in searchable PDF format) of all workplans, assessment, cleanup, and monitoring reports including the signed transmittal letters, professional certifications, and all data presented in the reports.*

**Table H-1**  
**Electronic Reports Submitted to Geotracker**

Document Title	Document Date
RAP 2012-06-12 ATTACHMENT D - SAMPLING AND ANALYSIS PLAN	6/12/2012
RAP 2012-06-12 REMEDIAL ACTION PLAN	6/12/2012
PRMP 2012-06-12 POST REMEDIAL WORK PLAN	6/12/2012
RAP 2012-06-12 ATTACHMENT F - HEALTH AND SAFETY PLAN	6/12/2012
RAP 2012-06-12 ATTACHMENT C - REMEDIAL MONITORING PLAN	6/12/2012
RAP 2012-06-12 ATTACHMENT A - DESIGN CRITERIA REPORT	6/12/2012
RAP 2012-06-12 ATTACHMENT B - QUALITY ASSURANCE PROJECT PLAN	6/12/2012
RAP 2012-06-12 ATTACHMENT E - COMMUNITY RELATIONS PLAN	6/12/2012
QUARTERLY PROGRESS REPORT # 1	6/13/2012
RAP 2012-08-17 - APPENDIX D - SAMPLING AND ANALYSIS PLAN	8/17/2012
RAP 2012-08-17 - REMEDIAL ACTION PLAN	8/17/2012
RAP 2012-08-17 - APPENDIX F - HEALTH AND SAFETY PLAN	8/17/2012
RAP 2012-08-17 - COVER LETTER	8/17/2012
RAP 2012-08-17 - APPENDIX C - REMEDIATION MONITORING PLAN	8/17/2012
RAP 2012-08-17 - APPENDIX A - DESIGN CRITERIA REPORT	8/17/2012
RAP 2012-08-17 - APPENDIX E - COMMUNITY RELATIONS PLAN	8/17/2012
RAP 2012-08-17 - APPENDIX B - QUALITY ASSURANCE PROJECT PLAN	8/17/2012
RAP 2012-09-07 AMENDED RAP COVER LETTER	9/7/2012
RAP 2012-09-07 APPENDIX A: DESIGN CRITERIA REPORT	9/7/2012
RAP 2012-09-07 AMENDED REMEDIAL ACTION PLAN (RAP)	9/7/2012
RAP 2012-09-07 APPENDIX D: SAMPLING AND ANALYSIS PLAN	9/7/2012
RAP 2012-09-07 APPENDIX E: COMMUNITY RELATIONS PLAN	9/7/2012
RAP 2012-09-07 APPENDIX B: QUALITY ASSURANCE PROJECT PLAN	9/7/2012
RAP 2012-09-07 APPENDIX F: HEALTH AND SAFETY PLAN	9/7/2012
RAP 2012-09-07 APPENDIX C: REMEDIATION MONITORING PLAN	9/7/2012
PRMP 2012-09-10 AMENDED POST RMP COVER LETTER	9/10/2012
PRMP 2012-09-10 AMENDED POST REMEDIAL MONITORING PLAN	9/10/2012
QUARTERLY PROGRESS REPORT #2	9/12/2012
RAP 2012-10-26 APPENDIX C: REMEDIATION MONITORING PLAN	10/26/2012
RAP 2012-10-26 REMEDIAL ACTION PLAN (RAP)	10/27/2012
RAP 2012-10-26 APPENDIX E: COMMUNITY RELATIONS PLAN	10/27/2012
PRMP 2012-11-02 AMENDED POST REMEDIAL MONITORING WORK PLAN	11/2/2012

Appendix H – CAO-Mandated Electronic Reporting Submittals

Document Title	Document Date
RAP 2012-11-08 APPENDIX E - COMMUNITY RELATIONS PLAN, REVISED	11/8/2012
QUARTERLY PROGRESS REPORT # 3	12/14/2012
QUARTERLY PROGRESS REPORT # 4	3/15/2013
QUARTERLY PROGRESS REPORT # 5	6/17/2013
QUARTERLY PROGRESS REPORT # 5 WITH ATTACHMENTS	7/3/2013
SOUTH- PROJECT SCHEDULE 2013-09-03 – RAP	9/3/2013
SOUTH- HAZARDOUS MATERIAL TRANSPORTATION PLAN 2013-09-03 – MMRP	9/3/2013
SOUTH- CONTINGENCY PLAN 2013-09-03 – MMRP	9/3/2013
SOUTH- COMPREHENSIVE ENVIRONMENTAL MANAGEMENT PLAN 2013-09-03 - RAP	9/3/2013
SOUTH- SEDIMENT MANAGEMENT PLAN 2013-09-03 – MMRP	9/3/2013
SOUTH- CONSTRUCTION QUALITY CONTROL PLAN 2013-09-03 – RAP	9/3/2013
SOUTH- TECHNICAL SPECIFICATIONS 2013-07-01 – RAP	9/3/2013
SOUTH- BIOLOGICAL ASSESSMENT AND EFH EVALUATION REPORT 2013-02-01 – RA	9/3/2013
SOUTH- LETTER TO LANDFILL REGARDING IN-SITU PRE-APPROVAL 2013-08-06 – RAP	9/3/2013
SOUTH- COMMUNICATION PLAN 2013-09-03 – MMRP	9/3/2013
SOUTH- FINAL DESIGN PLANS 2013-08-27 – RAP	9/3/2013
SOUTH- TRAFFIC CONTROL PLAN 2013-09-03 – MMRP	9/3/2013
SOUTH- BASIS OF DESIGN MEMORANDUM 2013-08-01 – RAP	9/3/2013
SOUTH- NOTIFICATION OF SUBMITTAL OF DOCUMENTS 2013-09-03	9/3/2013
SOUTH-DREDGING MANAGEMENT PLAN 2013-09-03 – MMRP	9/3/2013
SOUTH- DEMOLITION PLAN 2013-09-03	9/3/2013
SOUTH- CONSTRUCTION STORMWATER POLLUTION PREVENTION PLAN FOR S LANE 2013-09-03 – MMRP	9/3/2013
SOUTH- BORROW SOURCE CHARACTERIZATION 2013-08-19 – RAP	9/3/2013
SOUTH- CONTRACTOR SITE-SPECIFIC HEALTH AND SAFETY PLAN 2013-09-03 – RAP	9/3/2013
SOUTH - NOTIFICATION OF SUBMITTAL OF DOCUMENTS 2013-09-04	9/5/2013
03-09-2013_SOUTH SHIPYARD_NOTIFICATION OF FIELD WORK_FINAL	9/5/2013
QUARTERLY PROGRESS REPORT #6 -- ATTACHMENT 1	9/16/2013
QUARTERLY PROGRESS REPORT #6	9/16/2013
TRANSMITTAL_INDUSTRIAL USER DISCHARGE PERMIT	9/24/2013
NOTIFICATION OF DREDGING START DATE	9/26/2013
DREDGING MANAGEMENT PLAN	9/27/2013
SOUTH SHIPYARD -- MONTHLY WATER QUALITY MONITORING REPORT: SEPTEMBER	10/24/2013
SOUTH SHIPYARD -- MONTHLY BIOLOGICAL AND ENVIRONMENTAL MONITORING REPORT: SEPTEMBER	10/24/2013

Document Title	Document Date
SOUTH SHIPYARD -- WEEKLY WATER QUALITY MONITORING REPORT: SEPTEMBER 30 TO OCTOBER 4, 2013	10/24/2013
SOUTH SHIPYARD -- WEEKLY WATER QUALITY MONITORING REPORT: OCTOBER 7 TO 12, 2013	10/24/2013
SOUTH SHIPYARD -- WEEKLY WATER QUALITY MONITORING REPORT: OCTOBER 14 TO 19, 2013	10/30/2013
SOUTH SHIPYARD -- WEEKLY WATER QUALITY MONITORING REPORT: OCTOBER 21 TO 26, 2013	11/6/2013
SOUTH SHIPYARD -- WEEKLY WATER QUALITY MONITORING REPORT: OCTOBER 28 TO NOVEMBER 2, 2013	11/13/2013
SOUTH SHIPYARD -- MONTHLY BIOLOGICAL AND ENVIRONMENTAL MONITORING REPORT: OCTOBER	11/13/2013
SOUTH SHIPYARD -- WEEKLY WATER QUALITY MONITORING REPORT: NOVEMBER 4 TO 9, 2013	11/19/2013
SOUTH SHIPYARD -- MONTHLY WATER QUALITY MONITORING REPORT: OCTOBER	11/19/2013
SOUTH SHIPYARD -- WEEKLY WATER QUALITY MONITORING REPORT: NOVEMBER 11 TO 16, 2013	11/25/2013
SOUTH SHIPYARD -- WEEKLY WATER QUALITY MONITORING REPORT: NOVEMBER 18 TO 23, 2013	12/2/2013
SOUTH SHIPYARD -- WEEKLY WATER QUALITY MONITORING REPORT: DECEMBER 2 TO 7, 2013	12/13/2013
SOUTH SHIPYARD -- WEEKLY WATER QUALITY MONITORING REPORT: NOVEMBER 25 TO 30, 2013	12/13/2013
SOUTH SHIPYARD -- MONTHLY BIOLOGICAL AND ENVIRONMENTAL MONITORING REPORT: NOVEMBER	12/13/2013
SOUTH SHIPYARD -- MONTHLY WATER QUALITY MONITORING REPORT: NOVEMBER	12/16/2013
SOUTH SHIPYARD -- QUARTERLY PROGRESS REPORT NO. 7	12/16/2013
SOUTH SHIPYARD -- WEEKLY WATER QUALITY MONITORING REPORT: DECEMBER 9 TO 14, 2013	12/20/2013
SOUTH SHIPYARD -- WEEKLY WATER QUALITY MONITORING REPORT: DECEMBER 16 TO 21, 2013	12/27/2013
SOUTH SHIPYARD -- WEEKLY WATER QUALITY MONITORING REPORT: DECEMBER 23 TO 28, 2013	1/3/2014
SOUTH SHIPYARD -- WEEKLY WATER QUALITY MONITORING REPORT: DECEMBER 30, 2013, TO JANUARY 4, 2014	1/10/2014
SOUTH SHIPYARD -- MONTHLY WATER QUALITY MONITORING REPORT: DECEMBER	1/15/2014
SOUTH SHIPYARD -- MONTHLY BIOLOGICAL AND ENVIRONMENTAL MONITORING REPORT: DECEMBER	1/15/2014

Document Title	Document Date
SOUTH SHIPYARD -- WEEKLY WATER QUALITY MONITORING REPORT: JANUARY 6 TO 11, 2014	1/17/2014
SOUTH SHIPYARD -- WEEKLY WATER QUALITY MONITORING REPORT: JANUARY 13 TO 18, 2014	1/24/2014
SOUTH SHIPYARD -- WEEKLY WATER QUALITY MONITORING REPORT: JANUARY 20 TO 25, 2014	1/31/2014
SOUTH SHIPYARD -- WEEKLY WATER QUALITY MONITORING REPORT: JANUARY 27 TO FEBRUARY 1, 2014	2/7/2014
SOUTH SHIPYARD -- WEEKLY WATER QUALITY MONITORING REPORT: FEBRUARY 3 TO 8, 2014	2/14/2014
SOUTH SHIPYARD -- MONTHLY WATER QUALITY MONITORING REPORT: JANUARY	2/15/2014
SOUTH SHIPYARD -- MONTHLY BIOLOGICAL AND ENVIRONMENTAL MONITORING REPORT: JANUARY	2/15/2014
SOUTH SHIPYARD -- WEEKLY WATER QUALITY MONITORING REPORT: FEBRUARY 10 TO 15, 2014	2/21/2014
SOUTH SHIPYARD -- WEEKLY WATER QUALITY MONITORING REPORT: FEBRUARY 17 TO 22, 2014	2/28/2014
SOUTH SHIPYARD -- WEEKLY WATER QUALITY MONITORING REPORT: FEBRUARY 24 TO MARCH 1, 2014	3/7/2014
SOUTH SHIPYARD -- MONTHLY WATER QUALITY MONITORING REPORT: FEBRUARY	3/14/2014
SOUTH SHIPYARD -- WEEKLY WATER QUALITY MONITORING REPORT: MARCH 3 TO 8, 2014	3/14/2014
SOUTH SHIPYARD -- MONTHLY BIOLOGICAL AND ENVIRONMENTAL MONITORING REPORT: FEBRUARY	3/14/2014
SOUTH SHIPYARD -- WEEKLY WATER QUALITY MONITORING REPORT: MARCH 10 TO 15, 2014	3/14/2014
SOUTH SHIPYARD -- QUARTERLY PROGRESS REPORT NO. 8	3/17/2014
SOUTH SHIPYARD -- WEEKLY WATER QUALITY MONITORING REPORT: MARCH 17 TO 22, 2014	3/28/2014
SOUTH SHIPYARD -- WEEKLY WATER QUALITY MONITORING REPORT: MARCH 24 TO 29, 2014	4/8/2014
SOUTH SHIPYARD -- MONTHLY BIOLOGICAL AND ENVIRONMENTAL MONITORING REPORT: MARCH	4/8/2014
SOUTH SHIPYARD – MMRP VERIFICATION LETTER	4/15/2014
SOUTH SHIPYARD -- MONTHLY BIOLOGICAL AND ENVIRONMENTAL MONITORING REPORT: MARCH	4/15/2014
SOUTH SHIPYARD – POST-CONSTRUCTION EELGRASS SURVEY REPORT	4/22/2014