

## San Diego Bay Environmental Restoration Fund – South

450 Montbrook Lane  
Knoxville, TN 37919  
Phone: (865) 691-5052

VIA Email and US Mail

January 15, 2014

David Gibson  
San Diego Regional Water Quality Control Board  
9174 Sky Park Court, Suite 100  
San Diego, California 92123-4353

Re: December 2013, Monthly Water Column Monitoring Report Submittal  
San Diego Shipyard Sediment Site – South Shipyard  
Place ID 794466, Order No. R9-2013-0093

To Mr. Gibson:

The December 2013 Monthly Water Column Monitoring Report is being submitted to the San Diego Regional Water Quality Control Board by the San Diego Bay Environmental Restoration Fund – South (Attached).

Should there be any questions regarding this Monthly Report, please do not hesitate to contact me at 619-546-8377 ext. 103 or at [mpalmer@demaximis.com](mailto:mpalmer@demaximis.com).

Sincerely,



Michael A. Palmer  
Project Coordinator

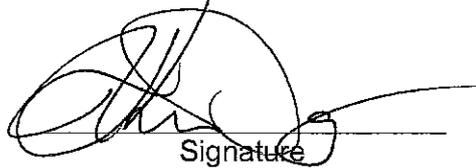
Attachment: San Diego Shipyard Sediment Site – South Shipyard (Place ID 794466, Order No. R9-2013-0093) Monthly Water Column Monitoring Report: December 2013

cc: Mike Chee, NASSCO (Via Email)  
David Templeton, Anchor QEA (Via Email)  
Chad Carpenter, R. E. Staite Engineering (Via Email)

**CERTIFICATION STATEMENT**

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

R. Thomas Dorsey  
Print Name  
Tom Dorsey

  
Signature

1/22/14  
Date

## TECHNICAL MEMORANDUM

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**To:** David Gibson, San Diego Regional Water Quality Control Board      **Date:** January 15, 2014

**From:** Chris Osuch, Adam Gale, and Elizabeth Appy, Anchor QEA      **Project:** 131003-01.02

**Cc:** Michael Chee, National Steel and Shipbuilding Company  
Michael Palmer, de maximis, inc.  
David Templeton and Michael Whelan, Anchor QEA  
Robert Smith, U.S. Army Corps of Engineers

**Re:** San Diego Shipyard Sediment Site – South Shipyard (Place ID 794466, Order No. R9-2013-0093) Monthly Water Column Monitoring Report: December 2013

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### INTRODUCTION

The San Diego Bay Environmental Restoration Fund – South (South Trust) is remediating contaminated sediments at the South Shipyard portion of the San Diego Shipyard Sediment Site (Site). Remediation is required to comply with Cleanup and Abatement Order (CAO) No. R9-2012-0024 issued by the San Diego Regional Water Quality Control Board (Water Board 2012a). Sediment is being dredged from the South Shipyard and if suitable, dredged material will be disposed of at the Otay Landfill. Water column monitoring must be conducted during dredging operations in order to comply with Waste Discharge Requirements and Section 401 Water Quality Certification (WDR/WQC; Water Board 2013). Anchor QEA was contracted by the South Trust to conduct this water column monitoring.

This technical memorandum summarizes dredging operations and results of water column monitoring during December 2013. Monitoring during dredging was conducted on December 10, 19, 23, and 31. Monitoring was performed in accordance with the WDR/WQC Section VIII(A) (Water Board 2013) and Appendix C of the Remedial Action Plan (RAP; Anchor QEA 2012). Water quality monitoring included dissolved oxygen (DO), pH, turbidity, and visual observations.

In addition to the manual water quality monitoring conducted by Anchor QEA, an automatic monitoring system was set up and monitored by Tierra Data, Inc. (TDI) in accordance with the Mitigation Monitoring and Reporting Program (MMRP; Water Board

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2012b). Automatic monitoring buoys were installed by TDI on September 26, prior to commencing dredging. Buoys are located at the reference station and two early warning stations. The reference station is located 1,000 feet from the remedial footprint in the direction of the ocean. Early warning stations are located 250 feet from the construction area;<sup>1</sup> however, it was necessary to slightly adjust this distance to allow for vessel traffic, including barge and tugboat access. Automatic monitoring is intended to alert the contractor if early warning triggers are achieved during dredging to allow for additional dredging best management practices (BMPs) to be implemented to prevent an exceedance at the compliance boundary. Automatic monitoring data are not presented in this technical memorandum but are available at <http://www.wqdata.com/webdblink/buoys.php>.

## **DREDGE VOLUMES AND LOCATIONS**

In December, 4,300 cubic yards (cy) of sediment was dredged from the Site, consisting of 900 cy from within Sediment Management Unit (SMU)-1 and 3,400 cy from within SMU-2 (Figure 1). Daily production rates ranged from 100 to 500 cy. All sediment was disposed of at the Otay Landfill. A summary of daily dredge volumes, locations from which sediment was removed, and final disposal locations is presented in Table 1. Waste manifests are provided in Attachment A.

## **WATER QUALITY MONITORING RESULTS**

This section describes water quality monitoring results, including sampling locations, water column measurements, and visual observations.

### **Sampling Locations**

Monitoring was performed at the reference station, two early warning stations, and four compliance stations. The reference station is located 1,000 feet from the remedial footprint in the direction of the ocean and beyond the influence of construction activities (Figure 2). Early warning and compliance stations are located 250 and 500 feet from the construction area, respectively. The general layout of early warning and compliance monitoring locations for SMU-1 and -2 are shown on Figures 3 and 4, respectively; however, actual locations were

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<sup>1</sup> The construction area is defined as the area occupied by the dredging barge, sediment scow, sand and rock placement equipment, demolition work equipment, silt curtains, and other work.

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positioned in the field relative to the construction area. Latitude and longitude coordinates for each monitoring location are presented in Table 2.

### **Water Column Measurements**

DO, pH, and turbidity were measured 10 feet below the surface at each station using a Hydrolab MS5 multi-probe sonde. The instrument was calibrated prior to sampling according to the manufacturer's recommendations. Hydrolab calibration worksheets for each sampling event are provided in Attachment B. Water quality sample forms are provided in Attachment C. A summary of monitoring results during dredging is presented in Table 2.

DO, pH, and turbidity results at each compliance station were compared to receiving water limitation compliance criteria. All measurements at the compliance stations were similar to the reference station and met compliance criteria.

### **Visual Observations**

Visual observations are summarized in Table 2. No odors or visual evidence of discoloration, turbidity, or surface pollution was observed at any station. The double silt curtain was in place during all dredging operations, and no damage, dislocation, or gaps were observed.

Visual monitoring of turbidity inside and outside the silt curtains was performed in concert with water quality parameter monitoring. Attachment D provides site photographs of the silt curtains that visualize typical conditions during construction, showing an attenuating turbidity plume inside the two silt curtains. These visual observations are consistent with the results presented in this technical memorandum.

### **SUMMARY OF NON-COMPLIANCE**

Based on the results of water quality monitoring, no incidents of non-compliance occurred during December.

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## **PERSONS CONTRIBUTING TO THIS REPORT**

Names, affiliations, and qualifications of the persons contributing to this technical memorandum are summarized in Table 3.

## **REFERENCES**

Anchor QEA, 2012. *Remedial Action Plan*. San Diego Shipyard Sediment Site. Revised October 2012.

Water Board (San Diego Regional Water Quality Control Board), 2012a. Cleanup and Abatement Order R9-2012-0024 for the Shipyard Sediment Site. Issued March 14, 2012.

Water Board, 2012b. Mitigation Monitoring and Reporting Program for the Shipyard Sediment Remediation Project Environmental Impact Report (SCH#2009111098). Issued on March 14, 2012.

Water Board, 2013. Waste Discharge Requirements for San Diego Shipyard Sediment Remediation Project, San Diego Bay, San Diego, California. Order No. R9-2013-0093. Issued on July 10, 2013.

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# TABLES

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**Table 1**  
**Estimated Dredge Volumes, Dredging Locations, and Final Disposal Locations**  
**for December 2013**

<b>Date</b>	<b>Estimated Dredge Volume (cy)</b>	<b>Dredging Location</b>	<b>Final Disposal Location<sup>1</sup></b>
12/10/2013	350	SMU-1	Otay Landfill
12/11/2013	450	SMU-1	Otay Landfill
12/12/2013	100	SMU-1	Otay Landfill
12/17/2013	500	SMU-2	Otay Landfill
12/18/2013	300	SMU-2	Otay Landfill
12/19/2013	500	SMU-2	Otay Landfill
12/23/2013	500	SMU-2	Otay Landfill
12/24/2013	300	SMU-2	Otay Landfill
12/26/2013	500	SMU-2	Otay Landfill
12/27/2013	500	SMU-2	Otay Landfill
12/31/2013	300	SMU-2	Otay Landfill
<b>Total</b>	<b>4,300</b>	-	-

Notes:

cy = cubic yard

SMU = Sediment Management Unit

1 Otay Landfill is located at 1700 Maxwell Road, Chula Vista, California 91912

**Table 2**  
**Water Quality Monitoring Results During Dredging - December 1 through December 31, 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 2**  
**Water Quality Monitoring Results During Dredging - December 1 through December 31, 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 3**  
**Persons Contributing to this Report**

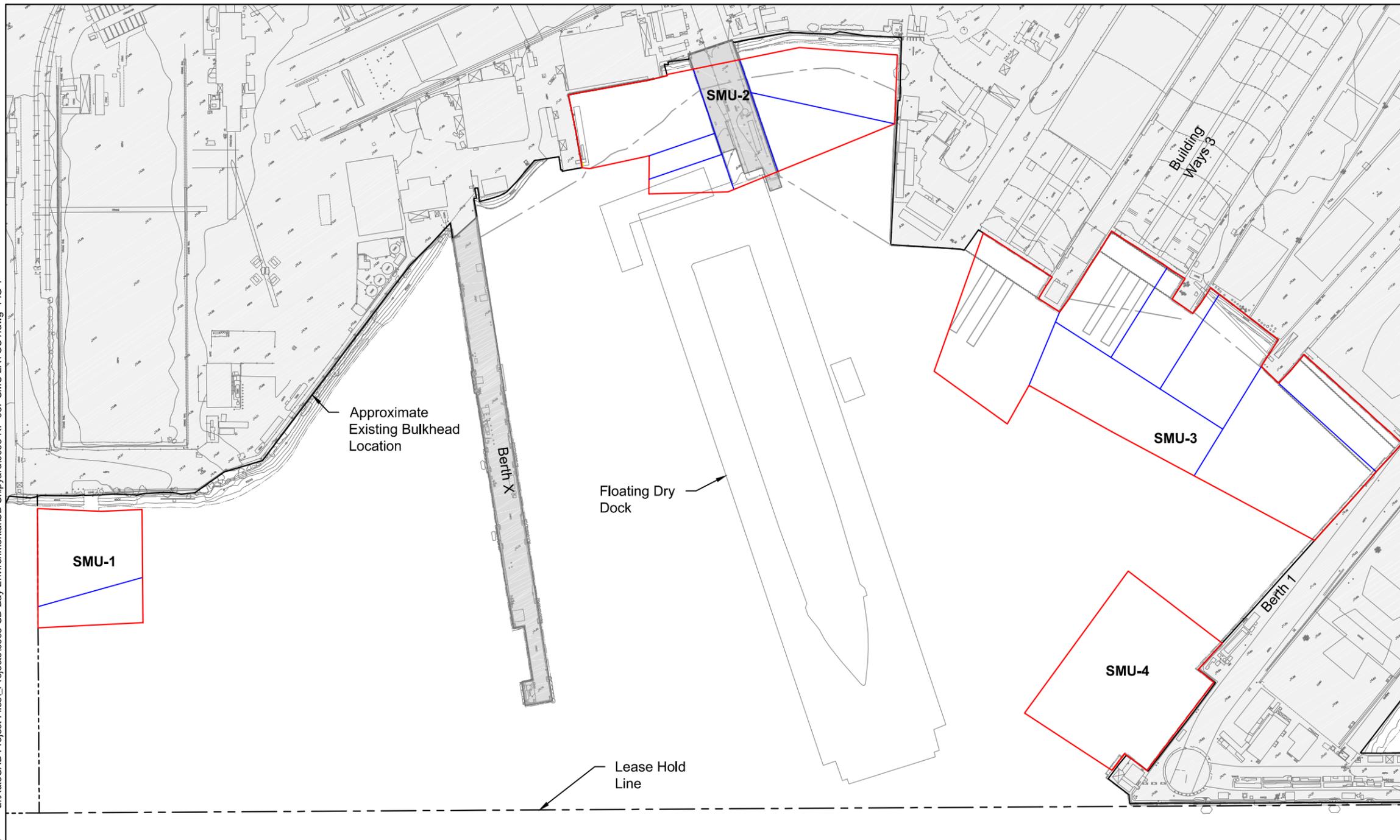
Name	Title	Affiliation	Qualifications
Chris Osuch	Senior Scientist	Anchor QEA	University of California, Santa Barbara, B.A., Environmental Studies, 1998 Environmental scientist with more than 14 years of professional experience Experienced with collecting and measuring water quality parameters
Adam Gale	Senior Planner	Anchor QEA	University of Washington, Certificate Program in Geographic Information Systems, 2007; California Polytechnic State University, San Luis Obispo, B.S., Ecology and Systematic Biology, 2004 Planner with more than 8 years of professional experience Experienced with implementing water quality monitoring programs for remediation projects
Elizabeth Appy	Managing Scientist	Anchor QEA	Colby College, B.A., Biology, 1994; Oregon State University, M.S., Marine Resource Management, 2000 Managing scientist with more than 15 years of professional experience Experienced with implementing water quality monitoring programs for remediation projects
Brittany Geisler	Environmental Scientist	Anchor QEA	University of California, Irvine, B.A., Social Ecology, 2006 Environmental scientist with more than 5 years of professional experience Experienced with collecting and measuring water quality parameters

# FIGURES

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L:\AutoCAD Project Files\Projects\0995-SD Bay Environmental\SD Shipyard\0995-RP-037 SMU LAYOUT.dwg FIG 1

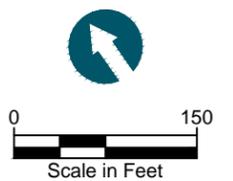
Nov 07, 2013 10:43am mpratschmer



**LEGEND:**

- Remediation Boundary
- Sub-SMU Boundary

**SOURCE:** Upland topography from Digital Mapping Inc., dated September 2009, and supplemented by Environmental Data Solutions survey dated April 13, 2013.  
**HORIZONTAL DATUM:** California State Plane, Zone 6, NAD83, U.S. Feet.



L:\AutoCAD Project Files\Projects\0995-SD Bay Environmental\SD Shipyard\0995-RP-027 REF SAMP 2.dwg FIG 2

Nov 07, 2013 10:04am mpratschner



**LEGEND:**

- Remediation Boundary
- BG Reference Sampling Location

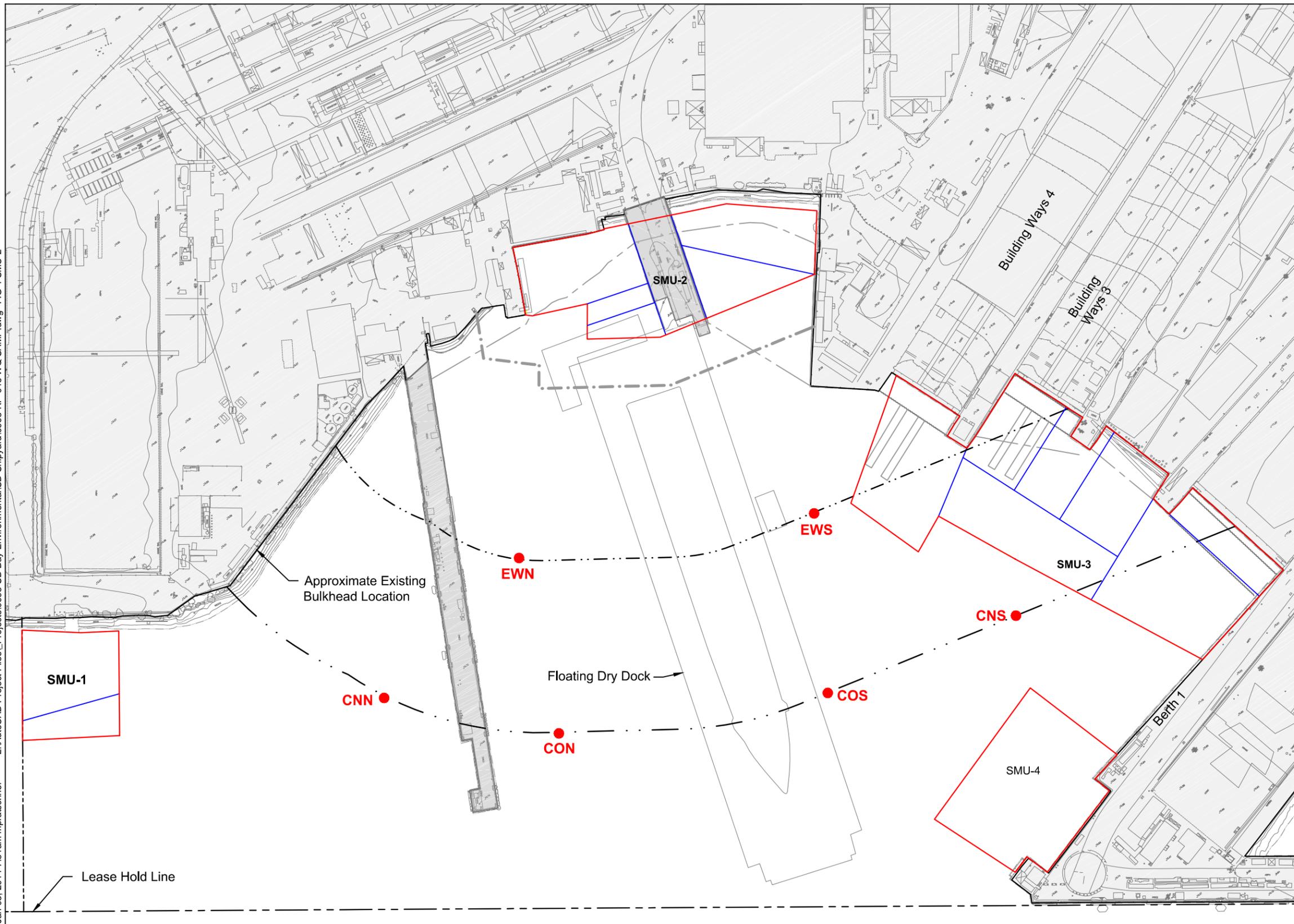
**SOURCE:** Aerial from ESRI base maps. Upland topography from Digital Mapping Inc., dated September 2009, and supplemented by Environmental Data Solutions survey dated April 13, 2013.  
**HORIZONTAL DATUM:** California State Plane, Zone 6, NAD83, U.S. Feet.

**NOTES:**  
 Reference Sampling Location BG  
 Latitude: 32° 41.4970'  
 Longitude: 117° 09.0185'

Scale in Feet



L:\AutoCAD Project Files\Projects\0995-SD Bay Environmental\SD Shipyard\0995-RP-046 WQ SAMP.dwg FIG 4 SMU-2  
 Jan 03, 2014 7:51am mpraischner

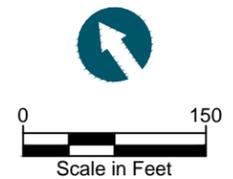


**LEGEND:**

	Remediation Boundary
	Sub-SMU Boundary
	250 ft from Construction Area
	500 ft from Construction Area
	Sampling Location
	Silt Curtain
EWN	Early Warning North
EWS	Early Warning South
CNN	Compliance Nearshore North
CNS	Compliance Nearshore South
CON	Compliance Offshore North
COS	Compliance Offshore North

**SOURCE:** Upland topography from Digital Mapping Inc., dated September 2009, and supplemented by Environmental Data Solutions survey dated April 13, 2013.  
**HORIZONTAL DATUM:** California State Plane, Zone 6, NAD83, U.S. Feet.

**NOTE:** Actual sampling locations determined in the field based on the location of the construction area.



ATTACHMENT A  
WASTE MANIFESTS

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PROVIDED ON CD

ATTACHMENT B  
CALIBRATION LOGS

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HYDROLAB CALIBRATION WORKSHEET

PROJECT(S): SD Water Quality

PROJECT #: 131003-01.02

REMINDER: ALLOW TWO MINUTES WARMUP BEFORE CALIBRATION OR USE.

Calib by:	Date	Time (24 Hr)	DO				pH					REDOX		
			Temp. (°C)	BP (mm Hg)	Initial DO (mg/L)	Final DO (mg/L)	Initial pH 7.0	Final pH 7.0	Temp. (°C)	Initial pH: 10.0	Final pH: 10.0	Initial (mV)	Final (mV)	Temp. (°C)
DF	12.10.13	0630	20.9	741.6	8.2	8.7	6.9	7.01	20.8	10.1	10.05			

Calib by:	Date	Time (24 Hr)	CONDUCTIVITY				TURBIDITY					
			Initial 0 µs/cm	Final 0 µs/cm	Temp. (°C)	Initial 1412 µs/cm	Final 1412 µs/cm	Initial 0 NTU	Final 0 NTU	Temp. (°C)	Initial 40 NTU	Final 40 NTU
DF	12.10.13	0630	0.0	0.0	18.9	1412	1412	0.0	0.0	20.9	37.5	40.0

Dissolved Oxygen Method (circle one):

Air Saturated Water Winkler Titration

Source of Barometric Pressure Surveyor  
 Turb. Std. (40 NTU)  
 Lot# A3280 Exp. 10/15

Turbidity Std (40.1 NTU)

Lot# A8347 Exp. Date: 12/10

Conductivity Stds: Calibration: 1412 µs/cm

Lot # A3262 Exp. Date: 9/14

Verification: \_\_\_\_\_ µs/cm

Lot # \_\_\_\_\_ Exp. Date: \_\_\_\_\_

pH Buffers:

pH 7.0 Lot # A3046 Exp. Date: 2/15

pH 10 Lot# A3042 Exp. Date: 2/14

pH 4 Lot# A3042 Exp. Date: 2/17

4.6 @ 20.8  
4.0

Redox Standard:

428 mV ± @ 25 °C (Zobell's)

Lot# \_\_\_\_\_ Exp. Date: \_\_\_\_\_

NOTES:

HYDROLAB CALIBRATION WORKSHEET

PROJECT(S): SD Water Quality

PROJECT #: 131003-01.02

REMINDER: ALLOW TWO MINUTES WARMUP BEFORE CALIBRATION OR USE.

			DO				pH					REDOX		
Calib by:	Date	Time (24 Hr)	Temp. (°C)	BP (mm Hg)	Initial DO (mg/L)	Final DO (mg/L)	Initial pH 7.0	Final pH 7.0	Temp. (°C)	Initial pH: 10.0	Final pH: 10.0	Initial (mV)	Final (mV)	Temp. (°C)
DF	12.19.13	0630	23.8	758	8.2	8.4	7.2	7.0	23.8	10.4	10.02	<del>                    </del>		

			CONDUCTIVITY					TURBIDITY					
Calib by:	Date	Time (24 Hr)	Initial 0 µs/cm	Final 0 µs/cm	Temp. (°C)	Initial 1412 µs/cm	Final 1412 µs/cm	Initial 0 NTU	Final 0 NTU	Temp. (°C)	Initial 40 NTU	Final 40 NTU	
DF	12.19.13	0630	0.0	0.0	21.7	1396	1412	0.0	0.0	23.8	40.5	40.0	

Dissolved Oxygen Method (circle one):

Air Saturated Water Winkler Titration

Source of Barometric Pressure Surveyor

Turb. Std. (40 NTU)  
Lot# A3280 Exp. 10/15

Turbidity Std (20.1 NTU)

Lot# A8347 Exp. Date: 12/10

Conductivity Stds:

Lot # A3262

Verification:

Lot #                     

pH Buffers:

pH 7.0 Lot # A3046

pH 10 Lot# A3042

pH 4 Lot# A3042

Redox Standard:

428 mV ± @ 25 °C (Zobell's)

Lot#                     

Calibration:

1412 µs/cm

Exp. Date: 9/14

Exp. Date:                     

Exp. Date: 2/15

Exp. Date: 2/14

Exp. Date: 2/17

Exp. Date:                     

43 @ 23.9  
4.01

NOTES:

HYDROLAB CALIBRATION WORKSHEET

PROJECT(S): SD Shipyards

PROJECT #: 131003-0102

REMINDER: ALLOW TWO MINUTES WARMUP BEFORE CALIBRATION OR USE.

Calib by:	Date	Time (24 Hr)	DO				pH					REDOX		
			Temp. (°C)	BP (mm Hg)	Initial DO (mg/L)	Final DO (mg/L)	Initial pH 7.0	Final pH 7.0	Temp. (°C)	Initial pH: 7.0	Final pH: 7.0	Initial (mV)	Final (mV)	Temp. (°C)
DF	12.23.13	0800	23.5	770	8.7	8.6	7.04	7.0	23.2	10.3	10.03			

Calib by:	Date	Time (24 Hr)	CONDUCTIVITY				TURBIDITY					
			Initial 0 µs/cm	Final 0 µs/cm	Temp. (°C)	Initial 1412 µs/cm	Final 1412 µs/cm	Initial 0 NTU	Final 0 NTU	Temp. (°C)	Initial 40 NTU	Final 40 NTU
DF	12.23.13	0800	0.0	0.0	21.9	1411	1412	0.0	0.0	23.6	41.3	40.0

Dissolved Oxygen Method (circle one):

Air Saturated Water Winkler Titration

Source of Barometric Pressure Surveijor

Turb. Std. (40 NTU)  
Lot# A3280 Exp. 10/15

Turbidity Std (40 NTU)

Lot# A8347 Exp. Date: 12/10

Conductivity Stds: Calibration: 1412 µs/cm

Lot # A3262 Exp. Date: 9/14

Verification: \_\_\_\_\_ µs/cm

Lot # \_\_\_\_\_ Exp. Date: \_\_\_\_\_

pH Buffers:

pH 7.0 Lot # A3046 Exp. Date: 2/15

pH 10 Lot# A3042 Exp. Date: 2/14

pH 4 Lot# A3042 Exp. Date: 2/17 4.2 @ 23.5

4.01

Redox Standard:

428 mV ± @ 25 °C (Zobell's)

Lot# \_\_\_\_\_ Exp. Date: \_\_\_\_\_

NOTES:  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

HYDROLAB CALIBRATION WORKSHEET

PROJECT(S): SD Shipyards

PROJECT #: 131003-01

REMINDER: ALLOW TWO MINUTES WARMUP BEFORE CALIBRATION OR USE.

			DO				pH					REDOX		
Calib by:	Date	Time (24 Hr)	Temp. (°C)	BP (mm Hg)	Initial DO (mg/L)	Final DO (mg/L)	Initial pH 7.0	Final pH 7.0	Temp. (°C)	Initial pH: 10	Final pH: 10	Initial (mV)	Final (mV)	Temp. (°C)
BG	12.30.13	1430	23.6	769.6	8.7	8.6	7.9	7.0	23.2	10.3	10.0			

			CONDUCTIVITY					TURBIDITY				
Calib by:	Date	Time (24 Hr)	Initial 0 µs/cm	Final 0 µs/cm	Temp. (°C)	Initial 1412 µs/cm	Final 1412 µs/cm	Initial 0 NTU	Final 0 NTU	Temp. (°C)	Initial 40 NTU	Final 40 NTU
BG	12.30.13	1430	0.0	0.0	21.3	1547	1411	0.3	0.0	21.2	37.8	<del>39.9</del> 40.0

Dissolved Oxygen Method (circle one):  
 Air Saturated Water Winkler Titration

Conductivity Stds: Calibration: 1412 µs/cm  
 Lot # A3038 Exp. Date: 2/14

Source of Barometric Pressure Surveyor

Verification: \_\_\_\_\_ µs/cm  
 Lot # \_\_\_\_\_ Exp. Date: \_\_\_\_\_

Turbidity (40 NTU)  
 Lot # A3280 Exp. 10/15

pH Buffers:  
 pH 7.0 Lot # A3046 Exp. Date: 2/15

Turbidity Std (40 NTU)  
 Lot# A 2347 Exp. Date: 12/14

pH 10 Lot# A 3042 Exp. Date: 2/14  
 pH 4 Lot# A 3042 Exp. Date: 2/17 4.3 @ 23.6  
 4.0 @ 23.5

Redox Standard:  
 428 mV ± @ 25 °C (Zobell's)  
 Lot# \_\_\_\_\_ Exp. Date: \_\_\_\_\_

NOTES:  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

ATTACHMENT C  
WATER QUALITY SAMPLE FORMS

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27201 Puerta Real, Suite 350  
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### Water Quality Sample Form

<b>Project Name:</b> San Diego Shipyard Sediment Site		<b>Project Number:</b> 131003-01.02		
<b>Field Personnel:</b> DFEY, KLING		<b>Date:</b> 12/10/13	<b>Tide:</b> Flood / Ebb / Slack	
<b>Station ID:</b> D-BG-131210			<b>Water Depth (ft):</b> 36.8'	
<b>Coordinates</b>				
<b>Latitude/Northing:</b> 32°41' 28.6560		<b>Longitude/Easting:</b> 117°09' 01.6020		
<b>Weather and Wind Conditions:</b> PARTLY CLOUDY, WIND FROM SW, 61°F				
<b>Predominant Current Direction:</b> SE				
<b>Field Parameters</b>				
Sample Time (hh:mm:ss)	Sample Depth (ft)	DO (mg/L)	pH	Turbidity (NTU)
12:04:54	10	7.4	8.4	0.6
<b>Odor:</b> none slight moderate strong H <sub>2</sub> S petroleum septic				
<b>Presence of Surface Pollution:</b> Y/N			<b>Photograph(s) Taken:</b> Y/N	
<b>Discoloration or Turbidity:</b> Y/N			<b>Recorded by:</b> KLING	
<b>Comments:</b>  NONE				



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### Water Quality Sample Form

<b>Project Name:</b> San Diego Shipyard Sediment Site		<b>Project Number:</b> 131003-01.02		
<b>Field Personnel:</b> D. Fellers, K. King		<b>Date:</b> 12/10/13	<b>Tide:</b> <u>Flood</u> / Ebb / Slack	
<b>Station ID:</b> D- <del>60</del> <sup>100</sup> GWN-131210			<b>Water Depth (ft):</b> 35.3	
<b>Coordinates</b>				
<b>Latitude/Northing:</b> 32° 41' 18.3900		<b>Longitude/Easting:</b> 117° 08' 32.5320		
<b>Weather and Wind Conditions:</b> PARTLY CLOUDY, WIND FROM SW, 6 MPH				
<b>Predominant Current Direction:</b> SE				
<b>Field Parameters</b>				
Sample Time (hh:mm:ss)	Sample Depth (ft)	DO (mg/L)	pH	Turbidity (NTU)
12:35:43	10	7.4	8.3	0.9
<b>Odor:</b> <u>none</u> slight   moderate   strong   H <sub>2</sub> S   petroleum   septic				
<b>Presence of Surface Pollution:</b> Y/ <u>N</u>			<b>Photograph(s) Taken:</b> <u>Y</u> / N	
<b>Discoloration or Turbidity:</b> Y/ <u>N</u>			<b>Recorded by:</b> K. KING	
<b>Comments:</b>  NONE				



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### Water Quality Sample Form

Project Name: San Diego Shipyard Sediment Site		Project Number: 131003-01.02		
Field Personnel: D. FENCERS, K. KING		Date: 12/10/13	Tide: <u>Flood</u> / Ebb / Slack	
Station ID: D-EWS-131210		Water Depth (ft): 36.6		
<b>Coordinates</b>				
Latitude/Northing: 32°41'19.5840		Longitude/Easting: 117°08'28.0860		
Weather and Wind Conditions: PARTLY CLOUDY, WIND FROM SW, 61°F				
Predominant Current Direction:				
<b>Field Parameters</b>				
Sample Time (hh:mm:ss)	Sample Depth (ft)	DO (mg/L)	pH	Turbidity (NTU)
12:42:56	10	7.4	8.3	2.0
Odor: <u>none</u> slight    moderate    strong    H <sub>2</sub> S    petroleum    septic				
Presence of Surface Pollution: Y <u>(N)</u>		Photograph(s) Taken: <u>(Y)</u> 1		
Discoloration or Turbidity: Y <u>(N)</u>		Recorded by: K. KING		
Comments:  NONE				



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### Water Quality Sample Form

Project Name: San Diego Shipyard Sediment Site		Project Number: 131003-01.02		
Field Personnel: D. FELLERS, K. KING		Date: 12/10/13	Tide: <u>Flood</u> Ebb / Slack	
Station ID: D-COO-131210		Water Depth (ft): 36.3		
<b>Coordinates</b>				
Latitude/Northing: 32° 41' 16.9380		Longitude/Easting: 117° 08' 37.2120		
Weather and Wind Conditions: PARTLY CLOUDY, WIND FROM SW, 610 R				
Predominant Current Direction: SE				
<b>Field Parameters</b>				
Sample Time (hh:mm:ss)	Sample Depth (ft)	DO (mg/L)	pH	Turbidity (NTU)
13:15:42	10	7.5	8.3	0.1
Odor: <u>none</u> slight moderate strong H <sub>2</sub> S petroleum septic				
Presence of Surface Pollution: Y <input checked="" type="checkbox"/> N		Photograph(s) Taken: <input checked="" type="checkbox"/> N 1		
Discoloration or Turbidity: Y <input checked="" type="checkbox"/> N		Recorded by: K. KING		
Comments:  NONE				



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### Water Quality Sample Form

Project Name: San Diego Shipyard Sediment Site		Project Number: 131003-01.02		
Field Personnel: D. Ferreres, K. King		Date: 12/10/13	Tide: <u>Flood</u> / Ebb / Slack	
Station ID: D-CO0-131012			Water Depth (ft): 37.4	
<b>Coordinates</b>				
Latitude/Northing: 32° 41' 15.5460		Longitude/Easting: 117° 08' 30.0060		
Weather and Wind Conditions: PARTLY CLOUDY, WIND FROM SW, 610F				
Predominant Current Direction: SE				
<b>Field Parameters</b>				
Sample Time (hh:mm:ss)	Sample Depth (ft)	DO (mg/L)	pH	Turbidity (NTU)
13:05:34	10	7.4	8.4	0.7
Odor: <u>none</u> slight   moderate   strong   H <sub>2</sub> S   petroleum   septic				
Presence of Surface Pollution: Y / <u>N</u>			Photograph(s) Taken: <u>Y</u> N	
Discoloration or Turbidity: Y / <u>N</u>			Recorded by: K. King	
Comments:  NONE				



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### Water Quality Sample Form

Project Name: San Diego Shipyard Sediment Site		Project Number: 131003-01.02		
Field Personnel: D. FRIGGS, K. KING		Date: 12/10/13	Tide: <u>Flood</u> / Ebb / Slack	
Station ID: D-COS-131010			Water Depth (ft): 45.3	
<b>Coordinates</b>				
Latitude/Northing: 32°41'14.9040		Longitude/Easting: 117°08'23.3640		
Weather and Wind Conditions: PARTLY CLOUDY, WIND FROM SW, 61°F				
Predominant Current Direction: SG				
<b>Field Parameters</b>				
Sample Time (hh:mm:ss)	Sample Depth (ft)	DO (mg/L)	pH	Turbidity (NTU)
12:59:53	10	7.4	8.3	0.4
Odor: <u>none</u> slight   moderate   strong   H <sub>2</sub> S   petroleum   septic				
Presence of Surface Pollution: Y/ <u>N</u>			Photograph(s) Taken: <u>1</u>	
Discoloration or Turbidity: Y/ <u>N</u>			Recorded by: K. KING	
Comments:  NONE				



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### Water Quality Sample Form

Project Name: San Diego Shipyard Sediment Site		Project Number: 131003-01.02		
Field Personnel: D. FUGERES, IC. KING		Date: 12/10/13	Tide: <del>Flood</del> / Ebb / Slack	
Station ID: D-COS-131010		Water Depth (ft): 44.9		
<b>Coordinates</b>				
Latitude/Northing: 32°41'20.4780		Longitude/Easting: 117°08'21.5640		
Weather and Wind Conditions: PARTLY CLOUDY, WIND FROM SW, 61°F				
Predominant Current Direction: SE				
<b>Field Parameters</b>				
Sample Time (hh:mm:ss)	Sample Depth (ft)	DO (mg/L)	pH	Turbidity (NTU)
12:55:22	44.9	7.4	8.3	0.2
Odor: <u>none</u> slight   moderate   strong   H <sub>2</sub> S   petroleum   septic				
Presence of Surface Pollution: Y/ <u>N</u>		Photograph(s) Taken <u>Y</u> /N		
Discoloration or Turbidity: Y/ <u>N</u>		Recorded by: IC. KING		
Comments:  NONE				



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### Water Quality Sample Form

Project Name: San Diego Shipyard Sediment Site		Project Number: 131003-01.02		
Field Personnel: A Cannon & DFellers		Date: 12/19/2013	Tide: Flood <input checked="" type="radio"/> Ebb <input type="radio"/> Slack	
Station ID: D-BG-131219		Water Depth (ft): 39.1		
<b>Coordinates</b>				
Latitude/Northing: 32° 41' 29.874" N		Longitude/Easting: 117° 09' 02.3220" W		
Weather and Wind Conditions: overcast moderately high winds from SW				
Predominant Current Direction: ebb SE				
<b>Field Parameters</b>				
Sample Time (hh:mm:ss)	Sample Depth (ft)	DO (mg/L)	pH	Turbidity (NTU)
13:13:09	10	7.8	8.0	<del>1.0</del> 1.0
Odor: <input checked="" type="radio"/> none    slight    moderate    strong    H <sub>2</sub> S    petroleum    septic				
Presence of Surface Pollution: Y/ <input checked="" type="radio"/> N			Photograph(s) Taken: Y/ <input checked="" type="radio"/> N 1	
Discoloration or Turbidity: Y/ <input checked="" type="radio"/> N			Recorded by: ACannon	
Comments:				



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### Water Quality Sample Form

Project Name: San Diego Shipyard Sediment Site		Project Number: 131003-01.02		
Field Personnel: ACannon DFellers		Date: 12/19/2013	Tide: Flood / <u>Ebb</u> / Slack	
Station ID: D-EWN-131219		Water Depth (ft): 50.5		
<b>Coordinates</b>				
Latitude/Northing: 32° 41' 19.1160"		Longitude/Easting: 117° 08' 22.2120"		
Weather and Wind Conditions: overcast/rain, moderately high winds from SW				
Predominant Current Direction: SE				
<b>Field Parameters</b>				
Sample Time (hh:mm:ss)	Sample Depth (ft)	DO (mg/L)	pH	Turbidity (NTU)
13:54:48	10	7.7	8.1	0.6
Odor: <u>none</u> slight   moderate   strong   H <sub>2</sub> S   petroleum   septic				
Presence of Surface Pollution: Y / <u>N</u>			Photograph(s) Taken: Y / N (	
Discoloration or Turbidity: Y / <u>N</u>			Recorded by: ACannon	
Comments:				



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### Water Quality Sample Form

Project Name: San Diego Shipyard Sediment Site		Project Number: 131003-01.02		
Field Personnel: <i>ACannon DEllers</i>		Date: <i>12/19/2013</i>	Tide: Flood / <u>Ebb</u> / Slack	
Station ID: <i>D-EWS-131219</i>		Water Depth (ft): <i>23.8</i>		
<b>Coordinates</b>				
Latitude/Northing: <i>32° 41' 19.734"</i>		Longitude/Easting: <i>117° 08' 19.494"</i>		
Weather and Wind Conditions: <i>overcast/Rain, moderately high winds from SW</i>				
Predominant Current Direction: <i>SE</i>				
<b>Field Parameters</b>				
Sample Time (hh:mm:ss)	Sample Depth (ft)	DO (mg/L)	pH	Turbidity (NTU)
<i>13:48:29</i>	<i>10</i>	<i>7.8</i>	<i>8.1</i>	<i>0.1</i>
Odor: <u>none</u> slight   moderate   strong   H <sub>2</sub> S   petroleum   septic				
Presence of Surface Pollution: Y / <u>N</u>			Photograph(s) Taken: Y / <u>N</u>	
Discoloration or Turbidity: Y / <u>N</u>			Recorded by: <i>ACannon</i>	
Comments:				



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### Water Quality Sample Form

Project Name: San Diego Shipyard Sediment Site		Project Number: 131003-01.02		
Field Personnel: ACannon DFellers		Date: 12/19/2013	Tide: Flood / <u>Ebb</u> / Slack	
Station ID: D-CNN-131219			Water Depth (ft): 47.2	
<b>Coordinates</b>				
Latitude/Northing: 32° 41' 20.2380"		Longitude/Easting: 117° 08' 25.3500"		
Weather and Wind Conditions: overcast / Rain, moderately high winds from SW				
Predominant Current Direction: SE				
<b>Field Parameters</b>				
Sample Time (hh:mm:ss)	Sample Depth (ft)	DO (mg/L)	pH	Turbidity (NTU)
14:06:10	10	7.7	8.1	0.2
Odor: <u>none</u> slight   moderate   strong   H <sub>2</sub> S   petroleum   septic				
Presence of Surface Pollution: Y / <u>N</u>			Photograph(s) Taken: <u>Y</u> / <u>N</u> 1	
Discoloration or Turbidity: Y / <u>N</u>			Recorded by: ACannon	
Comments:				



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### Water Quality Sample Form

Project Name: San Diego Shipyard Sediment Site		Project Number: 131003-01.02		
Field Personnel: ACannon DFellers		Date: 12/19/2013	Tide: Flood / <u>Ebb</u> / Slack	
Station ID: D-CON-131219		Water Depth (ft): 52.1		
<b>Coordinates</b>				
Latitude/Northing: 32° 41' 16.6760"		Longitude/Easting: 117° 08' 22.842"		
Weather and Wind Conditions: overcast/rain, moderately high winds from SW				
Predominant Current Direction: SE				
<b>Field Parameters</b>				
Sample Time (hh:mm:ss)	Sample Depth (ft)	DO (mg/L)	pH	Turbidity (NTU)
14:17:14	10	7.7	8.1	1.1
Odor: <u>none</u> slight   moderate   strong   H <sub>2</sub> S   petroleum   septic				
Presence of Surface Pollution: Y / <u>N</u>			Photograph(s) Taken: <u>Y</u> / N   1	
Discoloration or Turbidity: Y / <u>N</u>			Recorded by: ACannon	
Comments:				



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### Water Quality Sample Form

Project Name: San Diego Shipyard Sediment Site		Project Number: 131003-01.02		
Field Personnel: A Cannon D Fellers		Date: 12/19/2013	Tide: Flood / <u>Ebb</u> / Slack	
Station ID: D-COS-131219		Water Depth (ft): 35.9		
<b>Coordinates</b>				
Latitude/Northing: 32° 41' 14.802"		Longitude/Easting: 117° 08' 20.100"		
Weather and Wind Conditions: overcast/rain, moderately high winds from SW				
Predominant Current Direction: SE				
<b>Field Parameters</b>				
Sample Time (hh:mm:ss)	Sample Depth (ft)	DO (mg/L)	pH	Turbidity (NTU)
14:16:09	10	7.7	8.1	0.3
Odor: <u>none</u> slight   moderate   strong   H <sub>2</sub> S   petroleum   septic				
Presence of Surface Pollution: Y / <u>N</u>		Photograph(s) Taken: <u>Y</u> / N		
Discoloration or Turbidity: Y / <u>N</u>		Recorded by: A. Cannon		
Comments:				



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### Water Quality Sample Form

<b>Project Name:</b> San Diego Shipyard Sediment Site		<b>Project Number:</b> 131003-01.02		
<b>Field Personnel:</b> A Cannon, D. Fellers		<b>Date:</b> 12/19/13	<b>Tide:</b> Flood (Ebb) Slack	
<b>Station ID:</b> D-CNS-131219			<b>Water Depth (ft):</b> 35.5	
<b>Coordinates</b>				
<b>Latitude/Northing:</b> 32°41'16.9320"		<b>Longitude/Easting:</b> 117°08'17.514"		
<b>Weather and Wind Conditions:</b> Overcast/Rain, Moderately high winds from SW.				
<b>Predominant Current Direction:</b> SE				
<b>Field Parameters</b>				
Sample Time (hh:mm:ss)	Sample Depth (ft)	DO (mg/L)	pH	Turbidity (NTU)
14:00:19	10	7.8	8.1	0.2
<b>Odor:</b> (none) slight moderate strong H <sub>2</sub> S petroleum septic				
<b>Presence of Surface Pollution:</b> Y/N (N)			<b>Photograph(s) Taken:</b> Y/N (N)	
<b>Discoloration or Turbidity:</b> Y/N (N)			<b>Recorded by:</b> A. Cannon	
<b>Comments:</b>				



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### Water Quality Sample Form

Project Name: San Diego Shipyard Sediment Site		Project Number: 131003-01.02		
Field Personnel: D. Fellers, B. Geisler		Date: 12.23.13	Tide: Flood / <u>Ebb</u> / Slack	
Station ID: D-BG-131223		Water Depth (ft): 37.9		
<b>Coordinates</b>				
Latitude/Northing: 32° 41' 28.536"		Longitude/Easting: 117° 09' 01.254"		
Weather and Wind Conditions: Sunny, moderate wind				
Predominant Current Direction: NW				
<b>Field Parameters</b>				
Sample Time (hh:mm:ss)	Sample Depth (ft)	DO (mg/L)	pH	Turbidity (NTU)
14:37:56	10	8.1	7.7	0.2
Odor: <u>none</u> slight   moderate   strong   H <sub>2</sub> S   petroleum   septic				
Presence of Surface Pollution: Y / <u>N</u>		Photograph(s) Taken: <u>Y</u> / N		
Discoloration or Turbidity: Y / <u>N</u>		Recorded by: <i>B. Geisler</i>		
Comments:				



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### Water Quality Sample Form

Project Name: San Diego Shipyard Sediment Site		Project Number: 131003-01.02		
Field Personnel: D. Fellers, B. Geister		Date: 12.23.13	Tide: Flood / <u>Ebb</u> / Slack	
Station ID: D-EWS-131223		Water Depth (ft): 33.8		
<b>Coordinates</b>				
Latitude/Northing: 32° 41' 18.640"		Longitude/Easting: 117° 08' 18.612"		
Weather and Wind Conditions: Sunny, light wind				
Predominant Current Direction: NW				
<b>Field Parameters</b>				
Sample Time (hh:mm:ss)	Sample Depth (ft)	DO (mg/L)	pH	Turbidity (NTU)
15:06:04	10	8.0	8.0	0.1
Odor: <u>none</u> slight   moderate   strong   H <sub>2</sub> S   petroleum   septic				
Presence of Surface Pollution: Y / <u>N</u>		Photograph(s) Taken: <u>Y</u> / N		
Discoloration or Turbidity: Y / <u>N</u>		Recorded by: <i>[Signature]</i>		
Comments:				



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### Water Quality Sample Form

Project Name: San Diego Shipyard Sediment Site		Project Number: 131003-01.02		
Field Personnel: D. Fellers, B. Geisler		Date: 12.23.13	Tide: Flood / <u>Ebb</u> / Slack	
Station ID: D-CNS-131223			Water Depth (ft): 26.2	
<b>Coordinates</b>				
Latitude/Northing: 32° 41' 15.984"		Longitude/Easting: 117° 08' 15.978"		
Weather and Wind Conditions: Sunny, light wind				
Predominant Current Direction: NW				
<b>Field Parameters</b>				
Sample Time (hh:mm:ss)	Sample Depth (ft)	DO (mg/L)	pH	Turbidity (NTU)
15:11:13	10	8.0	8.0	0.1
Odor: <u>none</u> slight   moderate   strong   H <sub>2</sub> S   petroleum   septic				
Presence of Surface Pollution: Y <u>(N)</u>		Photograph(s) Taken: Y / N		
Discoloration or Turbidity: Y <u>(N)</u>		Recorded by: <i>Betty Cole</i>		
Comments:				



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### Water Quality Sample Form

Project Name: San Diego Shipyard Sediment Site		Project Number: 131003-01.02		
Field Personnel: D. Fellers, B. Geister		Date: 12-23-13	Tide: Flood <input checked="" type="radio"/> Ebb <input type="radio"/> Slack	
Station ID: D-COS-131223			Water Depth (ft): 32.2	
<b>Coordinates</b>				
Latitude/Northing: 32° 41' 14.460"		Longitude/Easting: 117° 08' 20.718"		
Weather and Wind Conditions: Sunny, light wind				
Predominant Current Direction: NW				
<b>Field Parameters</b>				
Sample Time (hh:mm:ss)	Sample Depth (ft)	DO (mg/L)	pH	Turbidity (NTU)
15:14:52	10	8.0	8.0	0.2
Odor: <input checked="" type="radio"/> none    slight    moderate    strong    H <sub>2</sub> S    petroleum    septic				
Presence of Surface Pollution: Y/ <input checked="" type="radio"/> N			Photograph(s) Taken: <input checked="" type="radio"/> Y/ <input type="radio"/> N	
Discoloration or Turbidity: Y/ <input checked="" type="radio"/> N			Recorded by: <i>Betty Gil</i>	
Comments:				



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### Water Quality Sample Form

Project Name: San Diego Shipyard Sediment Site		Project Number: 131003-01.02		
Field Personnel: D. Fellers, B. Geisler		Date: 12.23.13	Tide: Flood / <u>Ebb</u> / Slack	
Station ID: D-EWN-131223			Water Depth (ft): 49.8	
<b>Coordinates</b>				
Latitude/Northing: 32° 41' 17.988"		Longitude/Easting: 117° 08' 22.992"		
Weather and Wind Conditions: Sunny, light wind				
Predominant Current Direction: NW				
<b>Field Parameters</b>				
Sample Time (hh:mm:ss)	Sample Depth (ft)	DO (mg/L)	pH	Turbidity (NTU)
15:17:38	10	7.8	8.0	0.0
Odor: <u>none</u> slight   moderate   strong   H <sub>2</sub> S   petroleum   septic				
Presence of Surface Pollution: Y/ <u>N</u>			Photograph(s) Taken: <u>Y</u> / N /	
Discoloration or Turbidity: Y/ <u>N</u>			Recorded by: <i>Betty Gil</i>	
Comments:				



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### Water Quality Sample Form

Project Name: San Diego Shipyard Sediment Site		Project Number: 131003-01.02		
Field Personnel: D. Felters, B. Geister		Date: 12.23.13	Tide: Flood / <input checked="" type="radio"/> Ebb / Slack	
Station ID: D-CON-B1223			Water Depth (ft): 40.1	
<b>Coordinates</b>				
Latitude/Northing: 32° 41' 10.302"		Longitude/Easting: 117° 08' 26.598"		
Weather and Wind Conditions: Sunny, light wind				
Predominant Current Direction: NW				
<b>Field Parameters</b>				
Sample Time (hh:mm:ss)	Sample Depth (ft)	DO (mg/L)	pH	Turbidity (NTU)
15:22:30	10	7.7	8.0	0.1
Odor: <input checked="" type="radio"/> none    slight    moderate    strong    H <sub>2</sub> S    petroleum    septic				
Presence of Surface Pollution: Y / <input checked="" type="radio"/> N			Photograph(s) Taken: <input checked="" type="radio"/> Y / <input type="radio"/> N	
Discoloration or Turbidity: Y / <input checked="" type="radio"/> N			Recorded by: <i>Billy Geister</i>	
Comments:				



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### Water Quality Sample Form

Project Name: San Diego Shipyard Sediment Site		Project Number: 131003-01.02		
Field Personnel: D. Fellers, B. Geister		Date: 12-23-13	Tide: Flood <input checked="" type="radio"/> Ebb / Slack	
Station ID: D-CNN-131223		Water Depth (ft): 43.9		
<b>Coordinates</b>				
Latitude/Northing: 32° 41' 21.954"		Longitude/Easting: 117° 08' 24.804"		
Weather and Wind Conditions: Sunny, light wind				
Predominant Current Direction: NW				
<b>Field Parameters</b>				
Sample Time (hh:mm:ss)	Sample Depth (ft)	DO (mg/L)	pH	Turbidity (NTU)
15:27:01	10	7.9	8.0	0.1
Odor: <input checked="" type="radio"/> none    slight    moderate    strong    H <sub>2</sub> S    petroleum    septic				
Presence of Surface Pollution: Y <input checked="" type="radio"/> N <input type="radio"/>		Photograph(s) Taken: Y <input checked="" type="radio"/> N <input type="radio"/>		
Discoloration or Turbidity: Y <input checked="" type="radio"/> N <input type="radio"/>		Recorded by: <i>Betty Geister</i>		
Comments:				



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### Water Quality Sample Form

Project Name: San Diego Shipyard Sediment Site		Project Number: 131003-01.02		
Field Personnel: B. Geisler, T. Merritts		Date: 12.31.13	Tide: Flood ( <u>Ebb</u> ) / Slack	
Station ID: D-BG-131231		Water Depth (ft): 32.4		
<b>Coordinates</b>				
Latitude/Northing: 32° 41' 29.400"		Longitude/Easting: 117° 09' 01.980"		
Weather and Wind Conditions: Sunny, light wind				
Predominant Current Direction: NW				
<b>Field Parameters</b>				
Sample Time (hh:mm:ss)	Sample Depth (ft)	DO (mg/L)	pH	Turbidity (NTU)
12:35:22	10	8.4	7.9	1.4
Odor: <u>none</u> slight   moderate   strong   H <sub>2</sub> S   petroleum   septic				
Presence of Surface Pollution: Y/ <u>N</u>		Photograph(s) Taken: Y/ <u>N</u>		
Discoloration or Turbidity: Y/ <u>N</u>		Recorded by: <i>[Signature]</i>		
Comments:				



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### Water Quality Sample Form

Project Name: San Diego Shipyard Sediment Site		Project Number: 131003-01.02		
Field Personnel: B. Geisler, T. Merritts		Date: 12.31.13	Tide: Flood (Ebb) Slack	
Station ID: D-EWN-131231			Water Depth (ft): 28.1	
Coordinates				
Latitude/Northing: 32° 41' 19.974"		Longitude/Easting: 117° 08' 21.264"		
Weather and Wind Conditions: sunny, light wind				
Predominant Current Direction: NW				
Field Parameters				
Sample Time (hh:mm:ss)	Sample Depth (ft)	DO (mg/L)	pH	Turbidity (NTU)
12:57:35	10	8.1	8.0	0.5
Odor: <u>none</u> slight   moderate   strong   H <sub>2</sub> S   petroleum   septic				
Presence of Surface Pollution: Y/ <u>N</u>			Photograph(s) Taken: <u>Y</u> /N	
Discoloration or Turbidity: Y/ <u>N</u>			Recorded by: <i>Bobby Gail</i>	
Comments:				



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### Water Quality Sample Form

Project Name: San Diego Shipyard Sediment Site		Project Number: 131003-01.02		
Field Personnel: B. Geisler, T. Merritts		Date: 12.31.13	Tide: Flood (Ebb) / Slack	
Station ID: D-EWS-131231		Water Depth (ft): 29.9/29.8		
Coordinates				
Latitude/Northing: 32° 41' 19.506"		Longitude/Easting: 117° 08' 20.142"		
Weather and Wind Conditions: Sunny, light wind				
Predominant Current Direction: NW				
Field Parameters				
Sample Time (hh:mm:ss)	Sample Depth (ft)	DO (mg/L)	pH	Turbidity (NTU)
<del>12:45:10</del>	10	8.2	8.0	0.2
12:54:31 <sup>80</sup>		<del>8.2</del>	<del>8.0</del>	0
13:04:15	10	8.2	8.0	0.6
Odor: <input checked="" type="radio"/> none    slight    moderate    strong    H <sub>2</sub> S    petroleum    septic				
Presence of Surface Pollution: Y/ <input checked="" type="radio"/> N		Photograph(s) Taken: <input checked="" type="radio"/> Y / N		
Discoloration or Turbidity: Y/ <input checked="" type="radio"/> N		Recorded by: <i>Betty Gil</i>		
Comments: 1 <sup>st</sup> Attempt - button stuck on laptop and did not properly record data.  2 <sup>nd</sup> Attempt - 32° 41' 19.194" 117° 08' 20.268"				



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### Water Quality Sample Form

Project Name: San Diego Shipyard Sediment Site		Project Number: 131003-01.02		
Field Personnel: B. Geisler, T. Merritts		Date: 12.31.13	Tide: Flood <input checked="" type="radio"/> Ebb / Slack	
Station ID: D-CNS-131231		Water Depth (ft): 20.5		
<b>Coordinates</b>				
Latitude/Northing: 32° 41' 16.938"		Longitude/Easting: 117° 08' 13.582"		
Weather and Wind Conditions: Sunny, light wind				
Predominant Current Direction: NW				
<b>Field Parameters</b>				
Sample Time (hh:mm:ss)	Sample Depth (ft)	DO (mg/L)	pH	Turbidity (NTU)
13:09:50	10	8.2	8.0	0.8
Odor: <input checked="" type="radio"/> none    slight    moderate    strong    H <sub>2</sub> S    petroleum    septic				
Presence of Surface Pollution: Y <input checked="" type="radio"/> N			Photograph(s) Taken: Y / N 2	
Discoloration or Turbidity: Y <input checked="" type="radio"/> N			Recorded by: <i>Betty Gil</i>	
Comments:				



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### Water Quality Sample Form

Project Name: San Diego Shipyard Sediment Site		Project Number: 131003-01.02		
Field Personnel: B. Geisler, T. Merritts		Date: 12.31.13	Tide: Flood (Ebb) / Slack	
Station ID: D-COS-131231		Water Depth (ft): 23.0		
<b>Coordinates</b>				
Latitude/Northing: 32° 41' 16.572"		Longitude/Easting: 117° 08' 19.410"		
Weather and Wind Conditions: Sunny, light wind				
Predominant Current Direction: NW				
<b>Field Parameters</b>				
Sample Time (hh:mm:ss)	Sample Depth (ft)	DO (mg/L)	pH	Turbidity (NTU)
13:13:35	10	8.2	8.0	0.8
Odor: (none) slight moderate strong H <sub>2</sub> S petroleum septic				
Presence of Surface Pollution: Y / (N)			Photograph(s) Taken: (Y) / N	
Discoloration or Turbidity: Y / (N)			Recorded by: <i>Bertie G</i>	
Comments:				



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### Water Quality Sample Form

Project Name: San Diego Shipyard Sediment Site		Project Number: 131003-01.02		
Field Personnel: B Geister, T. Merritts		Date: 12.31.13	Tide: Flood <input checked="" type="radio"/> Ebb <input type="radio"/> Slack	
Station ID: 0-CON- <del>13123</del> <sup>86</sup> -131231			Water Depth (ft): 41.4	
<b>Coordinates</b>				
Latitude/Northing: 32° 41' 16.212"		Longitude/Easting: 117° 08' 23.688"		
Weather and Wind Conditions: Sunny, light wind				
Predominant Current Direction: NW				
<b>Field Parameters</b>				
Sample Time (hh:mm:ss)	Sample Depth (ft)	DO (mg/L)	pH	Turbidity (NTU)
13:21:19	10	8.2	8.0	0.3
Odor: <input checked="" type="radio"/> none    slight    moderate    strong    H <sub>2</sub> S    petroleum    septic				
Presence of Surface Pollution: Y/ <input checked="" type="radio"/> N			Photograph(s) Taken <input checked="" type="radio"/> Y/ <input type="radio"/> N	
Discoloration or Turbidity: Y/ <input checked="" type="radio"/> N			Recorded by: <i>Bertley G</i>	
Comments:				



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### Water Quality Sample Form

Project Name: San Diego Shipyard Sediment Site		Project Number: 131003-01.02		
Field Personnel: D-CNN-131231		Date: 12.31.13	Tide: Flood / <u>Ebb</u> / Slack	
Station ID: B. Geisler, T. Merritts			Water Depth (ft): 39.4	
<b>Coordinates</b>				
Latitude/Northing: 32° 41' 17.892"		Longitude/Easting: 117° 08' 25.668"		
Weather and Wind Conditions: Sunny, light wind				
Predominant Current Direction: NW				
<b>Field Parameters</b>				
Sample Time (hh:mm:ss)	Sample Depth (ft)	DO (mg/L)	pH	Turbidity (NTU)
13:23:48	10	8.0	8.0	0.6
Odor: <u>none</u> slight   moderate   strong   H <sub>2</sub> S   petroleum   septic				
Presence of Surface Pollution: Y / <u>N</u>			Photograph(s) Taken <u>Y</u> / N	
Discoloration or Turbidity: Y / <u>N</u>			Recorded by: <i>Billy Gal</i>	
Comments:				

ATTACHMENT D  
PHOTOGRAPHS

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**View west of silt curtains at SMU-1, December 10, 2013**



**View southwest of silt curtains at SMU-2, December 19, 2013**



**View northeast of silt curtains at SMU-2, December 23, 2013**



**View north of silt curtains at SMU-2, December 31, 2013**