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July 15, 2014

Ms. Rachelle Thompson
United States Environmental Protection Agency Region 9
75 Hawthorne Street
San Francisco, California 94105

RE: 2013-2014 Annual Report for United Heckathorn Superfund Site
Upland Capping System
Richmond, California

Dear Ms. Thompson:

Enclosed please find the 2013-2014 Annual Report for the United Heckathorn Superfund Site Upland Capping System presenting inspection, monitoring, and maintenance activities performed on the upland capping and drainage system at the United Heckathorn Superfund Site located at 402 Wright Avenue, Richmond, California. This report was prepared in accordance with the *Revised Draft Operations and Maintenance Plan, Upland Capping System Former United Heckathorn Site*.

Please feel free to contact me if you have any questions or concerns with the attached report.

Sincerely,

Gary Levin

Gary Levin
Chief Executive Officer
(510) 307-4091

Attachment: 2013-2014 Annual Report for United Heckathorn Superfund Site Upland Capping System

Weiss Associates Environmental Science, Engineering, and Management
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2013-2014 ANNUAL REPORT

FOR

UNITED HECKATHORN SUPERFUND SITE UPLAND CAPPING SYSTEM RICHMOND, CALIFORNIA

prepared for

Levin Richmond Terminal Corporation
402 Wright Avenue
Richmond, California 94804

prepared by

Weiss Associates
2200 Powell Street, Suite 925
Emeryville, California 94608

July 15, 2014

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Weiss Job No. 426.1966.14

Weiss Associates' work for the Levin Richmond Terminal Corporation was conducted under my supervision. To the best of my knowledge, the data contained herein are true and accurate, are based on what can be reasonably understood as a result of this project, and satisfy the scope of work prescribed by the client for this project. The data, findings, recommendations, specifications or professional opinions were prepared solely for the use of the Levin Richmond Terminal Corporation and its agents, the United States Environmental Protection Agency in accordance with generally accepted professional engineering and geologic practice. We make no other warranty, either expressed or implied, and are not responsible for the interpretation by others of the contents herein.

July 15, 2014

Scott Bourne, P.E. Date
Principal

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ACRONYMS

BMP	best management practices
DDD	dichlorodiphenyldichloroethane
DDE	dichlorodiphenyldichloroethene
DDT	dichlorodiphenyltrichloroethane
Heckathorn site or Site	United Heckathorn Superfund Site
IGP	Storm Water Industrial General Permit
LRT	Levin Richmond Terminal
LRTC	Levin Richmond Terminal Corporation
Main Terminal	Levin Richmond Main Terminal
msl	mean sea level
O&M	operations and maintenance
O&M Plan	*Revised Draft Operations and Maintenance Plan, Upland Capping System, Former United Heckathorn Site*
ROD	Record of Decision
Subtronic	Subtronic Corporation
SWMP	Storm Water Monitoring Program
SWPPP	Storm Water Pollution Prevention Plan
Third-Five Year Review	*Third Five-Year Review Report for United Heckathorn Superfund Site, Richmond, California*
TestAmerica	TestAmerica, Inc.
µg/kg	micrograms per kilogram
µg/L	micrograms per liter
USEPA	United States Environmental Protection Agency
Weiss	Weiss Associates

1. INTRODUCTION

This 2013-2014 Annual Report was prepared to describe the inspection, monitoring, and maintenance activities performed on the upland capping and drainage system at the United Heckathorn Superfund Site (Heckathorn site or Site) located in the Richmond Harbor near the inter-section of the Santa Fe Channel and Inner Harbor Channel (Figure 1). The Site is part of the Levin Richmond Terminal (LRT) and this report has been prepared by Weiss Associates (Weiss) under contract with the Levin Richmond Terminal Corporation (LRTC).

1.1 Background

From 1947 through 1966, the Heckathorn site was used for processing, packaging, and shipping of pesticides including aldrin, dieldrin, dichlorodiphenyltrichloroethane (DDT), and endrin. In 1994, the United States Environmental Protection Agency (USEPA) adopted a Record of Decision (ROD) for the Site which limits use of the property and required LRTC to design, construct, and maintain a concrete cap to prevent erosion of upland soils (USEPA, 1994).

In 1996, LRTC entered into a Consent Decree with the USEPA, which outlined LRTC's responsibilities for long-term management of the upland capping system located on the northern half of the Levin Richmond Main Terminal (Main Terminal; United States District Court, 1996). LRTC performs operations and maintenance (O&M) activities in accordance with the *Revised Draft Operations and Maintenance Plan, Upland Capping System, Former United Heckathorn Site* (O&M Plan; PES, 1999).

A memorandum by a USEPA contractor dated July 22, 2011 was included in the *Third Five-Year Review Report for United Heckathorn Superfund Site, Richmond, California* (Third Five-Year Review; USEPA, 2011). This memorandum included recommendations for additional best management practices (BMPs) to be included in the O&M Plan, including annual monitoring for cap cracking and settlement, establishing monitoring points on the cap for settlement monitoring, collecting sediment samples from the storm drain interceptors for pesticide analysis, and periodic video inspections of the underground drainage systems.

1.2 Upland Cap Remediation Objective

The goal of the upland cap at the Heckathorn site is to reduce the potential for future pesticide contamination in the marine environment by containing contaminated soils and preventing erosion or soil loss from the Site caused by wind, rain, or facility activities.

1.3 Contents of this Report

The following sections describe activities to maintain the upland cap, including:

- Surface cap system activities;

- Storm water system activities;
- Annual cap inspection; and
- Proposed site work for 2014-2015.

A conclusion with Weiss's opinion as to the overall condition and effectiveness of the cap in meeting the upland cap remediation objective is also included.

2. SITE DESCRIPTION

LRTC loads and unloads approximately 1.5 million tons per year of dry bulk cargo from vessels, railcars, and trucks. The Heckathorn site includes the northern five acres of LRTC's Main Terminal at 402 Wright Avenue (Figure 2), known as the Upland Area.

2.1 Upland Area Description and Current Use

The Upland Area is bounded by Cutting Boulevard and railroad tracks to the north; South Fourth Street, Wright Avenue, and Sims Metal Management to the east; the Santa Fe Channel to the south; and the Lauritzen Channel, Manson Construction Company, and an unoccupied industrial property, to the west. The majority of the Upland Area is relatively flat with surface elevations of approximately 9 feet above mean sea level (msl). The portion of the Upland Area north of the Lauritzen Channel was raised to approximately 15 feet above msl.

The Upland Area is used primarily for rail operations, stockpiling dry bulk product and temporary equipment storage.

2.2 Nearby/On-site Water Bodies

LRTC storm water systems in the Upland Area discharge directly to the Lauritzen Channel (Figure 2), which receives urban and industrial storm water runoff from the City of Richmond's (City's) 30-inch diameter storm water outfall at the north end of the canal. The Larutizen Canal is connected to the San Francisco Bay via the Santa Fe Channel and Richmond Inner Harbor.

2.3 Upland Area Cap

Construction of the concrete cap at the Upland Area began in July 1998 and was completed in July 1999. Installation of the cap consisted of three steps: (1) Site grading to promote surface runoff to collection points; (2) installation of a drainage system to collect surface runoff, including BMPs for storm water pollution prevention; and, (3) construction of a reinforced concrete cap in the majority of the five-acre area used for material stockpiling and construction of a geotextile fabric and gravel cap in the railroad track area. The concrete and gravel/geotextile cap areas were designed to protect against erosion of contaminated soils and subsequent flow into the channel associated with surface water runoff (USEPA, 2011).

2.4 Storm Water Collection System

The Upland Area storm water collection system was installed in 1998 and is part of the larger storm water collection system at the LRT (Figure 3). The facility is paved with asphalt and concrete and is graded to direct surface water runoff via sheet flow or shallow swales to drop inlets. The drop inlets drain to below-grade interceptors via underground pipe. Five storm water interceptors, SW-3 through SW-7, are located within the Upland Area storm water drainage system and receive storm water runoff from catchment areas of the same name (i.e., areas SW-3 through SW-7). The wooden pier deck that extends over open water is not connected to the storm water drainage system. The upland capping system's storm water catchment areas are described in detail below.

Storm water interceptors SW-3 through SW-7 were constructed with compartments and steel baffles to allow the settling of sediments onto the chamber floor and separation of oil/grease and floatables, thereby decreasing the outflow of these pollutants into the Lauritzen Channel. Interceptors SW-3 through SW-7 were constructed with a capacity to provide a five-minute retention time during a 10-year, 24-hour storm event (PES, 1999). Interceptors SW-3 through SW-7 are equipped with normally closed gate valves, which are opened during heavy rains to enable discharge to the Lauritzen Channel.

In 2009, interceptor SW-3 was modified to include 2 new pumps. In 2012, valves and piping were installed to enable discharge to a 20,000-gallon nominal capacity rectangular tank for additional sediment removal. A second 20,000 gallon sedimentation tank was installed at interceptor SW-3 for the 2013-2014 storm water season. Storm water collected in the tanks was allowed to settle prior to reuse on-site for dust suppression or discharge.

In 2014 or 2015, a storm water treatment system may be installed at the SW-5 discharge location to prevent or reduce discharge of pollutants in storm water from industrial activities. The system may involve pumping storm water collected in the SW-4, SW-6, and SW-7 interceptors through the SW-5 interceptor prior to treatment by flocculation, settling and sand filtration, prior to discharge to the Lauritzen Channel.

3. CAPPING SYSTEM ACTIVITIES

This section describes repair and routine O&M of the upland capping system performed during the 2013-2014 reporting year. No maintenance activities involving the disturbance of or excavation into underlying, impacted soil were conducted.

3.1 Cap Settlement Monitoring

In its Third-Five Year Review, the USEPA recommended that the upland cap be periodically surveyed to monitor for differential settlement that could impact cap integrity (USEPA, 2011). During the 2013-2014 reporting year, LRTC performed a baseline survey that will be compared against future surveys to identify areas of differential movement.

Bellecci & Associates of Concord, California performed a topographic survey of the concrete cap surface on May 9, 2014. The survey plat produced is provided in Appendix A. Triennial surveys will be completed for comparison of the baseline cap elevations, with the next survey to occur during the 2016-2017 reporting period.

3.2 Repair of Concrete Cap

No major repair involving replacement of portions of the concrete cap was conducted during the 2013-2014 reporting year. Minor maintenance activities included the repair of a section of concrete located east of interceptor SW-4 (Figure 3) in the fall of 2013 as documented in the 2012-2013 annual report (Weiss, 2013b). Surface pavement repair was performed in the SW-3 and SW-4 areas in December 2013 and included sealing approximately 400 feet of small seams and cracks from interceptor SW-4 south, including drain inlets 3DI-11 and 3DI-11A (Appendix B, Photographs 4, 5, 6, 7). No other maintenance or repair activities were conducted.

3.3 Repair of Gravel Cover

No major repair involving replacement of portions of the gravel cover was conducted during the 2013-2014 reporting year.

3.4 Erosion Control

Erosion control work was performed during the 2013-2014 reporting year. LRTC installed shotcrete along the top of the embankment from interceptors SW-4 to SW-7 in May 2014 to prevent or reduce erosion and animal burrowing in those areas. No other activities related to erosion control were conducted.

4. STORM WATER SYSTEM ACTIVITIES

This section describes the storm water collection system activities performed during the 2013-2104 reporting period. Activities included sampling of storm water, sampling of accumulated sediments in the storm water interceptors, and video inspections of storm drain piping associated with interceptors SW-4 and SW-5. These activities were performed in order to evaluate the potential for transport mechanisms that could introduce pesticides into the storm water system.

4.1 Storm Water Sampling

The O&M Plan (PES, 1999) requires storm water sampling to assess the effectiveness of the upland capping system. Storm water discharges associated with industrial activities at the LRT are subject to the State Water Resources Control Board Water Quality Order 97-03-DWQ for National Pollutant Discharge Elimination System General Permit No. CAS000001 (*Waste Discharge Requirements for Discharges of Storm Water Associated with Industrial Activities excluding Construction Activities*), also referred to as the Storm Water Industrial General Permit (IGP). The O&M Plan expands the storm water monitoring requirements to include sampling for pesticides by USEPA Method 8081A in storm water discharges originating from the Upland Area (i.e., interceptors SW-3 through SW-7). Specifically, the O&M Plan requires samples to be collected at the outlet of each of the five interceptors. LRT maintains a Storm Water Monitoring Program (SWMP) as part of their Storm Water Pollution Prevention Plan (SWPPP; Weiss, 2013a) which details monitoring procedures to comply with the IGP and the O&M Plan.

Sample collection is to be performed in conjunction with requirements of the IGP which mandates:

- Sampling during two storm events producing discharges during the wet season (October through May);
- Collecting samples from a storm preceded by at least three days of dry weather; and
- Collecting samples during normal operating hours.

4.1.1 Sampling Results

During the 2013-2014 reporting year, interceptors SW-3 through SW-7 were sampled during the required two storm events per wet season. The interceptors were sampled as follows:

- SW-3 – sampled twice, on November 20, 2013 and February 6, 2014;
- SW-4 – sampled twice, on November 20, 2013 and February 7, 2014;
- SW-5 – sampled twice, on November 20, 2013 and February 6, 2014;
- SW-6 – sampled twice, on November 20, 2013 and February 6, 2014; and
- SW-7 – sampled once on February 6, 2014.

Interceptor SW-7 did not discharge any storm water during the November 20 storm event and was therefore not sampled the requisite two times.

Tables 1 and 2 provide the laboratory analytical results of storm water samples collected from the Upland Area drainage system discharges during the 2013-2014 reporting year. Table 1 presents results for pesticides to satisfy the requirements of the O&M Plan (PES, 1999) and Table 2 presents results for general parameters and metals collected to comply with the SWMP (Weiss, 2013a). Original laboratory reports, including applicable chain-of-custody forms, are included as part of the 2013-2014 Annual Storm Water Monitoring Report provided in Appendix C. Note that the laboratory analytical reports include results from other sampling locations (i.e., SW-1, SW-2, SW-11, and SW-12) collected as part of the LRT SWMP for 2013-2014.

This Annual Report focuses on the evaluation of analytical results for pesticides which were detected during the November 20, 2013 and February 6-7, 2014 storm sampling events.

4.1.1.1 November 20, 2013 Sample Results

Storm water samples were collected from interceptors SW-3, SW-4, SW-5, and SW-6 in the Upland Area and submitted to TestAmerica, Inc. (TestAmerica) in Pleasanton, California. Pesticides were detected in storm water samples collected at interceptors SW-3 and SW-6 as follows:

- DDT was detected at a concentration of 0.024 J micrograms per liter (µg/L) at interceptor SW-3 and at a concentration of 0.053 J µg/L at interceptor SW-6.
- DDE was detected at a concentration of 0.025 J µg/L at interceptor SW-5.
- DDD was also detected at interceptor SW-6 at a concentration of 0.016 J µg/L.

4.1.1.2 February 6-7, 2014 Sample Results

Storm water samples were collected from interceptors SW-3, SW-4, SW-5, SW-6, and SW-7 in the Upland Area and submitted to Calscience Environmental Laboratories in Concord, California. Pesticides were detected in storm water samples collected at interceptors SW-4, SW-5, and SW-6 as follows:

- DDT was detected at concentrations ranging from 0.0086 µg/L at interceptor SW-5 to 0.057 µg/L at interceptor SW-4.
- Endosulfan I was detected at concentrations ranging from 0.041 J µg/L at interceptor SW-5 to 0.077 J µg/L at interceptor SW-4.
- DDE was detected at a concentration of 0.014 µg/L at interceptor SW-4.
- DDD was also detected at interceptor SW-4 at a concentration of 0.024 µg/L.

4.1.2 Quality Assurance/Quality Control

The O&M Plan (PES, 1999) requires at least one duplicate sample be collected per storm sampling event. During the 2013-2014 reporting year, duplicate samples were submitted from the November 20, 2013 and the February 6, 2014 sampling events. No data quality issues were reported through the data validation process.

Approximately 10 of the 16 pesticide detections were flagged with a "J" qualifier by the laboratory, indicating that the reported concentrations are below the laboratory reporting limit but greater than the method detection limit. The presence of "J" flags does not constitute a data quality issue.

4.1.3 Assessment of Storm Water Sampling Results

The pesticides detected in storm water samples collected during the 2013-2014 storm water season were consistent with historical concentrations of pesticides detected in interceptor storm water discharge samples. Appendix D provides concentration trend charts for DDT and dieldrin from 2011 to present. DDT and dieldrin were selected because they have remediation goals established in the ROD (EPA, 1994). The charts provide both detected concentrations and non-detect results[1]. Prior to the 2013-2014 storm water season, the laboratory method detection limits for DDT and dieldrin were above the remediation goals and therefore the current trend charts provide limited information. Lower detection limits were instituted beginning in February 2014. LRTC will continue in its efforts to provide higher quality data by contracting with laboratories capable of providing ultra low detection limits for pesticides.

Annual storm water monitoring will continue in the 2014-2015 reporting year in accordance with the IGP and O&M Plan. Trend charts will be updated annually with new data.

4.2 Storm Water Interceptor Sediment Sampling

Weiss sampled sediment captured by the storm water interceptors on May 8, 2014, in accordance with the recommendation in the Third-Five Year Review (USEPA, 2011). Weiss collected sediment from interceptors SW-3, SW-5, SW-6, and SW-7. Interceptor SW-4 had recently been cleaned, and insufficient sediment was present for sampling.

Samples were collected using disposable, plastic hand trowels. SW-3 and SW-6 contained sufficient material to collect samples from the bottom of the interceptors. At SW-5 and SW-7, there was insufficient material in the bottom of the interceptors, so accumulated sediment was scraped from the inlet pipes. Samples were submitted to TestAmerica for pesticides analysis by USEPA Method 8081A.

[1] Denoted by "<*n*", where *n* is the detection limit, if available, or reporting limit otherwise.

4.2.1 Sediment Sample Results

Pesticides were detected in each of the samples collected on May 8, 2014 as shown in Table 3. Concentrations (dry weight basis) are as follows:

- DDT was detected in each sample, at concentrations ranging from 8.6 micrograms per kilogram (µg/kg) in SW-3 to 900 µg/kg in SW-6.
- DDD was detected in each sample, at concentrations ranging from 10.8 µg/kg in SW-3 to 1,633 µg/kg in SW-6.
- DDE was detected in each sample, at concentrations ranging from 14.1 µg/kg in SW-3 to 1,300 µg/kg in SW-6.
- Alpha-Chlordane was detected in samples from SW-5, SW-6, and SW-7 at concentrations of 15 µg/kg, 293 µg/kg, and 22 µg/kg, respectively.
- Gamma-Chlordane was detected in samples from SW-5, SW-6, and SW-7 at concentrations of 17 µg/kg, 277 µg/kg, and 16 µg/kg, respectively.
- Dieldrin was detected in samples from SW-5 and SW-7 at concentrations of 40 µg/kg and 77 µg/kg, respectively.
- Methoxychlor was detected in the sample from SW-3 at a concentration of 25 µg/kg.

4.2.2 Discussion of Sediment Sampling Results

Based on the recent sample results, sediments collected from interceptors SW-5 to SW-7 will be disposed off-site in accordance with applicable laws and regulations.

Interceptor SW-3 is in close proximity to LRTC's bulk material handling operations and material captured by the interceptor is primarily bulk product. The sample results show pesticide concentrations less than the most restrictive Regional Screening Level developed by USEPA for residential soil (USEPA, 2014). Pesticide levels in SW-3 are thus considered *de minimis*. Accumulated material from interceptor SW-3 will continue to be returned to the material stockpiles.

Interceptor SW-4 is also in close proximity to LRTC's bulk material handling operations, Sediments collected from interceptor SW-4 will be disposed of off-site until pesticide concentrations are demonstrated to be *de minimis*.

4.3 Storm Water Collection System Cleaning and Inspection

The USEPA recommended in the Third-Five Year Review (USEPA, 2011) that LRTC perform periodic underground video inspections to verify the integrity of the underground storm water collection and discharge structures in the Upland cap area. LRTC inspected the collection systems associated with interceptors SW-4 and SW-5 during the 2013-2014 reporting year. LRTC contracted Subtronic Corporation (Subtronic) of Martinez, California to clean and perform video inspections on the storm water collection systems in June 2014.

4.3.1 Cleaning at SW-4 and SW-5

Subtronic cleaned the SW-4 and SW-5 storm water piping on June 24-26, 2014 using a combination hydro-jet and vacuum truck. Material removed from the pipes included approximately 4,000 gallons of wash water and one cubic yard of solid debris.

The wash water was reclaimed and reused on-site for dust suppression. Solids have been retained on-site pending waste characterization analysis, and will be disposed of off-site in accordance with applicable laws and regulations.

4.3.2 Video Inspections at SW-4 and SW-5

Subtronic performed a video inspection of the storm drain lines in drainage areas SW-4 and SW-5 on June 25 and 26, 2014. Details of the inspection are provided below.

4.3.2.1 SW-4 Inspection

Subtronic accessed and inspected approximately 160 feet of piping in the SW-4 area. The pipes were observed to be clean and in good condition, with no cracking or deformation noted and all seams intact. No ground water infiltration or inflow was observed.

4.3.2.2 SW-5 Inspection

Subtronic accessed and inspected approximately 200 feet of piping in the SW-5 area. One section of pipe, shown on Figure 3, was observed to be damaged. This section of pipe is approximately 2 feet long and is located between 9 and 11 feet west of catch basin 5D1-14A. The pipe appeared to be deformed in the area beneath the rail line, and large cracks were observed along the bottom of the pipe. All other piping inspected in the SW-5 area was observed to be clean and in good condition. No ground water infiltration or inflow was observed.

4.3.3 Assessment of Drain Pipe Video Inspection and Cleaning

Based on the results of the video inspections, repairs are required for storm drain pipes in the SW-5 drainage area. LRTC will repair the affected pipe section in the summer of 2014, prior to the 2014-2015 wet season.

Cleaning and video inspection will also be performed for the SW-3, SW-6 and SW-7 underground pipe to indentify need for potential repairs.

4.4 Maintenance of Drainage System

Routine maintenance activities included the cleanout of storm water drain inlets and interceptors in accordance with the procedures outlined in the O&M Plan (PES, 1999). This maintenance included the removal of accumulated sediment from drain inlets and interceptors.

Accumulated storm water was reused on-site for dust suppression. Sediment was removed via vacuum trucks and hand shovels and transported to a drying bed located at LRT's South Parr Yard. Dewatered sediment was returned back to the material stockpiles from which it originated. Drain inlet protection BMPs and filter fabric socks on outfall pipes were maintained and optimized to ensure functionality and to prevent interference with Site operations.

5. ANNUAL SITE INSPECTION

This section describes the findings from the upland capping system inspection conducted during the 2013-2014 reporting year. Mr. Scott Bourne, P.E., and Ms. Mary Cunningham, P.E., of Weiss performed an annual inspection of the upland capping system on May 22 and 28, 2014, in accordance with the O&M Plan (PES, 1999). The inspection included visual observations of the concrete cap, gravel cover, and drainage system throughout the extent of the Upland Area. The findings of the inspection of the Upland Area storm water drainage system are included on the Upland Capping System Inspection Form (Appendix E); photographs taken during the inspection are included in Appendix B.

5.1 Concrete Cap Inspection

Visual observations of the concrete cap concentrated on cracks, joints, high-loading areas, and penetrations looking for signs of deterioration and exposure of the underlying subgrade. Any such defect was considered for its potential to compromise the ability of the cap to prevent wind and water erosion and lead to migration of pesticide-impacted sediments into the adjacent Lauritzen Channel, or to expose Site workers. Particular emphasis was placed on re-examining areas with cracks and potential settlement as identified in the Third Five-Year Review (USEPA, 2011) and in the 2012-2013 Annual Report (Weiss, 2013b). Minor cracks typical of those found on paved concrete and asphalt surfaces due to weathering and expansion/contraction were observed in the cap. Below is a summary of observations from the concrete cap inspection.

- **SW-3 Area** – Surficial cracks were observed within and to the west of the secondary storage area, with heavier cracks and seams located to the south of interceptor SW-3 at the southern end of the upland capping system (Appendix B; Photos 1 and 2). Cracks and concrete seams identified as high priority in the previous inspection were observed to have been patched (Appendix B; Photos 4, 5, and 6). Deteriorating concrete noted south of interceptor SW-3 is outside of the Upland Area (Appendix B; Photo 3).
- **SW-4 Area** – Sealant was noted extending from the southeast corner of interceptor SW-4 toward the east (Appendix B; Photo 7). Gaps were observed in the asphalt-concrete interfaces along the rail line running northeast toward the center of the Main Terminal (Appendix B; Photos 8, 9, and 10). New shotcrete was observed along the top of the embankment.
- **SW-5 Area** – Plant growth was observed in the asphalt-concrete interface along the rail line (Appendix B; Photo 11). New shotcrete was observed along the top of the embankment.
- **SW-6 Area** – Minor cracks were noted south of interceptor SW-6. Seams and surficial cracks were observed in the eastern swale of the Main Terminal (Appendix B; Photo 14). New shotcrete was observed along the top of the embankment.

- **SW-7 Area** – Minor cracks were observed to the north of interceptor SW-7. New shotcrete was observed along the top of the embankment (Appendix B; Photos 15, 16, and 17).

Figure 3 provides locations of photographs taken to document cracks and gaps as given in Appendix B and described above. No evidence of differential settling or vertical displacement was observed. In addition, no evidence of cracks, gaps, significant cap deterioration, or other material breach with potential for exposure of the underlying subgrade was observed. Weiss recommends that LRTC continue to regularly inspect the concrete cap and perform corrective actions as detailed in Section 6.

5.2 Gravel Cover Inspection

Visual observations of the gravel cover concentrated on gravel and rip-rap-covered areas of the upland capping system. Particular emphasis was placed on re-examining an area with potential settlement near interceptor SW-6 as identified in the Third Five-Year Review (USEPA, 2011). A geotextile membrane underlies the gravel cover, but was not visually observed in any of the areas inspected. Below is a summary of observations from the concrete cap inspection.

- **SW-5 Area** – The gravel cover in this area was observed to be thin in some areas. The underlying geotextile fabric was also exposed in certain areas (Appendix B; Photos 12, 13, 18, and 19).

No evidence of differential settling or vertical displacement was observed. Overall, the gravel cover was found to be in good condition and functioning properly with no apparent potential for exposure of the underlying subgrade observed. Weiss recommends that LRTC continue to regularly inspect the gravel cover and perform corrective actions as detailed in Section 6.

5.3 Storm Water Collection System Inspection

Visual observations were conducted at the drain inlets and five storm water interceptors in the SW-3, SW-4, SW-5, SW-6, and SW-7 catchment areas. The interceptors were inspected on May 8, 2014 during interceptor sediment sampling discussed in Section 4.2. LRTC cleaned the interceptors during the last two weeks of April 2014 as storm water season came to a close. Below is a summary of observations from the storm water collection system inspection.

- Several of the drain inlets required replacement of filter fabrics.
- The discharge pipes required replacement of filter fabric socks on discharge pipes.

Details of video inspections of underground pipe at SW-4 and SW-5 are described in Section 4.3.2. No structural improvements to the drain inlets were found to be necessary during the inspection. The interceptors were found to be in working order with no corrective actions required. Weiss recommends that LRTC continue to regularly inspect the collection system and implement BMPs in accordance with the current SWPPP (Weiss, 2013a).

6. PROPOSED SITE WORK FOR 2014-2015

During the 2014-2015 reporting year, O&M activities will continue in accordance with the O&M Plan (PES, 1999). Storm water discharge samples will be collected from interceptors SW-3 through SW-7 during a minimum of two storm events. Only discharging interceptors will be sampled; therefore, not every interceptor will necessarily be sampled twice in the storm water season. An annual inspection of the concrete cap and gravel cover in the Upland Area will be performed in the early summer of 2015. Informal inspections of the upland capping system, including the drainage system, will continue on a more frequent basis as part of SWPPP (Weiss, 2013a) compliance activities and daily operations. Any repairs to the cap, if required, will be documented and reported in a memorandum to the USEPA and the California Department of Toxic Substances Control. Proposed Site work for 2014-2015 is presented in the table below.

Aspect	Description	Anticipated Completion Date
General	Implement all activities (i.e., cap maintenance, storm water monitoring, interceptor cleanout) described in the O&M Plan.	Continuously
	Submit report of O&M performed for the period of July 1, 2014 to June 30, 2015.	July 15, 2015
Concrete Cap	Perform 2014-2015 annual inspection of the cap under oversight of a registered engineer.	June 1, 2015
	Monitor identified cracks, seals, and joints for signs of propagation and/or degradation throughout upland capping system, including: • Surficial cracks in the vicinity of the secondary storage area near interceptor SW-3; • Cracks and seams to the south of interceptor SW-3; • Concrete-asphalt seams along the rail line in the areas of interceptors SW-4 and SW-5; • Surficial cracks and seams in the eastern swale of the Main Terminal, near SW-6; • Surficial cracks to the south of interceptor SW-6; and • Minor cracks to the north of interceptor SW-7.	Continuously
Gravel Cover	Add gravel to the interceptor SW-5 areas identified in photographs 12, 13, 18, and 19 (Appendix B) to ensure proper coverage.	October 1, 2014
	Monitor the gravel cover throughout the Upland Area for signs of thinning or ground exposure.	Continuously
Storm Water System	Clean and perform video inspection of the storm water drainage system in the SW-3, SW-6, and SW-7 areas to evaluate damage, groundwater infiltration or inflow.	October 1, 2014
	Perform storm water drainage system repairs at interceptor SW-5 as described in Section 4.3 and shown on Figure 3. Perform other repairs as necessary based on video inspections of interceptors SW-3, SW-6, and SW-7.	May 1, 2015
	Continue developing trend graphs showing temporary and spatial distribution of detected pesticides for the preceding five years.	July 15, 2015
	Dispose of sediments collected in interceptors SW-4 to SW-7 at an off-site location in accordance with applicable laws and regulations.	As-needed

7. CONCLUSIONS

The annual upland capping system inspection found that the surface cap is in overall good condition and effectively functions to prevent wind and water erosion of the underlying soil. Damage was discovered in the underground storm water collection systems at SW-5 that could potentially allow for the transport of pesticides to storm water.

Continued monitoring and maintenance is required. Maintenance recommendations include:

- Repairing damaged underground storm water collection systems at SW-5;
- Cleaning, inspecting, and repairing (if necessary) of the collection systems at SW-3, SW-6, and SW-7;
- Removing plant growth in cracks and seams throughout the capped area;
- Adding gravel and filter fabrics in gravel cover areas;
- Regular cleaning of the SW-3 to SW-7 storm water drainage systems and disposing of accumulated sediment off-site; and
- Implementing BMPs identified in the LRT Storm Water Pollution Prevention Plan (Weiss, 2013a).

Pesticides were detected in storm water discharge samples during the 2013-2014 storm water season at concentrations consistent with historical detections. Continued monitoring of the Upland Area's storm water discharges for the presence of pesticides is required with ongoing assessment of spatial and temporal distribution of pesticide concentrations warranted, including further efforts to identify an analytical laboratory with detection limits at or below surface water cleanup levels.

8. REFERENCES

PES Environmental, Inc., 1999. *Revised Draft Operations and Maintenance Plan, Upland Capping System, Former United Heckathorn Site*, March.

State Water Resources Control Board, 1997. *Water Quality Order 97-03-DWQ for National Pollutant Discharge Elimination System General Permit No. CAS000001 (Waste Discharge Requirements for Discharges of Storm Water Associated with Industrial Activities excluding Construction Activities*), April.

United States District Court, Northern District of California, 1996. *Consent Decree, Levin Group RD/RA*, United States of America Plaintiff v. Montrose Chemical Corporation of California, et al., June.

United States Environmental Protection Agency (USEPA), 1994. *EPA Superfund Record of Decision: United Heckathorn Co., EPA ID: CAD981436363; OU 01, Richmond, CA*, EPA/ROD/R09-96/5021996, October.

USEPA, 2011. *Third Five-Year Review Report for United Heckathorn Superfund Site, Richmond, California*, September.

USEPA, 2014. Regional Screening Levels (RSL) for Chemical Contaminants at Superfund Sites. May. Access at: http://www.epa.gov/region9/superfund/prg/.

Weiss, 2013a. *Storm Water Pollution Prevention Plan for Levin Richmond Terminal*, September.

Weiss, 2013b. *2012-2013 Annual Report for the United Heckathorn Superfund Site, Upland Capping System, Richmond, California*, December.

FIGURES

Figure 1. Site Location Map — United Heckathorn Superfund Site, Richmond, California

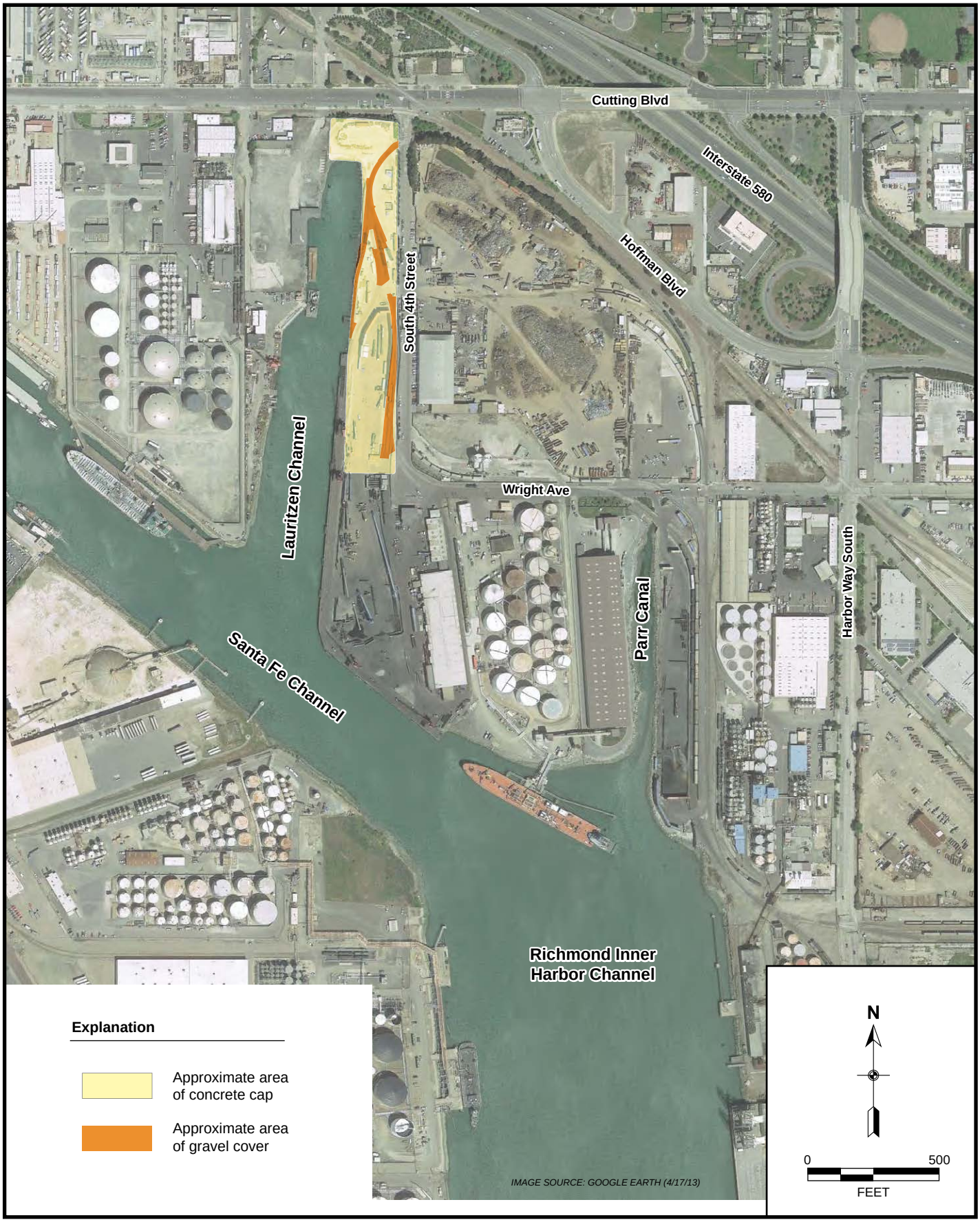


Figure 2. Site Layout — United Heckathorn Superfund Site, Richmond, California

LAURITZEN CANAL

INTERCEPTOR #7

7DI-20

7DI-19

7DI-18

MUNICIPAL OUTFALL

INTERCEPTOR #4

INTERCEPTOR #5

INTERCEPTOR #6

INTERCEPTOR #3

3DI-10

3DI-11

3DI-11A

4DI-19

5DI-14

5DI-13A

5DI-13

5DI-14A

5DI-12

6DI-15A

6DI-15

6DI-16

7DI-17

3DI-104

3DI-103

3DI-98

3DI-101

3DI-100

3DI-102

3DI-99

3DI-4

3DI-2

3DI-1

3DI-1A

3DI-5

3DI-6

3DI-7

4DI-18

TWO-FOOT SECTION OF PIPE WITH CRACKING AND DEFORMATION

SOUTH FOURTH STREET

NOTE: THE MAJORITY OF SURFACES ARE PAVED EXCEPT WHERE INDICATED. NO AREAS RECEIVNG RUNON FROM ADJACENT PROPERTIES HAVE BEEN IDENTIFIED.

LEGEND

FENCELINE

PHOTOGRAPH LOCATION, VIEW DIRECTION, NUMBER

STORM WATER SAMPLING LOCATION

STORM DRAIN INLET

GRAVEL COVER, LOCATION APPROXIMATE

STORM WATER INTERCEPTOR

UNDERGROUND STORM WATER PIPE

UPLAND AREA BOUNDARY

LEVIN RICHMOND TERMINAL CORPORATION FACILITY BOUNDARY

RAIL LINE

VEGETATION

N

0 100' 200'

Figure 3. Upland Area Photo Locations and Storm Drain Video Inspection Results – United Heckathorn Superfund Site, Richmond, California

TABLES

Table 1. 2013-2014 Annual Storm Water Sampling Data for Pesticides - Levin Richmond Terminal Corporation

Discharge Location	Notes	4,4'-DDD	4,4'-DDE	4,4'-DDT	Aldrin	alpha-BHC	alpha-Chlordane	beta-BHC	Chlordane	delta-BHC	Dieldrin	Endosulfan I	Endosulfan II	Endosulfan Sulfate	Endrin	Endrin Aldehyde	Endrin Ketone	gamma-BHC (Lindane)	gamma-Chlordane	Heptachlor	Heptachlor Epoxide	Hexachlorobenzene	Hexachlorocyclopentadiene	Methoxychlor	Toxaphene
		µg/L																							
SW-3																									
11/20/2013		< 0.062	< 0.062	**0.024 J**	< 0.062	< 0.062	< 0.062	< 0.062	< 1.0	< 0.062	< 0.062	< 0.062	< 0.062	< 0.062	< 0.062	< 0.062	< 0.062	< 0.062	< 0.062	< 0.062	< 0.062	---	---	< 0.062	< 1.0
2/6/2014		< 0.0022	< 0.0022	< 0.0022	< 0.0022	< 0.098	< 0.0022	< 0.098	< 0.98	< 0.098	< 0.0022	< 0.098	< 0.098	< 0.098	< 0.0022	< 0.098	---	< 0.0022	< 0.0022	< 0.0022	< 0.0022	---	---	< 0.098	< 0.027
SW-4																									
11/20/2013		< 0.057	< 0.057	< 0.057	< 0.057	< 0.057	< 0.057	< 0.057	< 0.95	< 0.057	< 0.057	< 0.057	< 0.057	< 0.057	< 0.057	< 0.057	< 0.057	< 0.057	< 0.057	< 0.057	< 0.057	---	---	< 0.057	< 0.95
2/7/2014	Note (a)	**0.024**	**0.014**	**0.057**	< 0.0021	< 0.11	< 0.0021	< 0.11	< 1.1	< 0.11	< 0.0021	**0.077 J**	< 0.11	< 0.11	< 0.0021	< 0.11	---	< 0.0021	< 0.0021	< 0.0021	< 0.0021	---	---	< 0.11	< 0.026
SW-5																									
11/20/2013		< 0.061	< 0.061	< 0.061	< 0.061	< 0.061	< 0.061	< 0.061	< 1.0	< 0.061	< 0.061	< 0.061	< 0.061	< 0.061	< 0.061	< 0.061	< 0.061	< 0.061	< 0.061	< 0.061	< 0.061	---	---	< 0.061	< 1.0
2/6/2014		< 0.0022	< 0.0022	**0.0092**	< 0.0022	< 0.097	< 0.0022	< 0.097	< 0.97	< 0.097	< 0.0022	**0.041 J**	< 0.097	< 0.097	< 0.0022	< 0.097	---	< 0.0022	< 0.0022	< 0.0022	< 0.0022	---	---	< 0.097	< 0.027
2/6/2014	Duplicate	< 0.0022	< 0.0022	**0.0086**	< 0.0022	< 0.096	< 0.0022	< 0.096	< 0.96	< 0.096	< 0.0022	**0.043 J**	< 0.096	< 0.096	< 0.0022	< 0.096	---	< 0.0022	< 0.0022	< 0.0022	< 0.0022	---	---	< 0.096	< 0.027
SW-6																									
11/20/2013		**0.016 J**	**0.025 J**	**0.053 J**	< 0.061	< 0.061	< 0.061	< 0.061	< 1.0	< 0.061	< 0.061	< 0.061	< 0.061	< 0.061	< 0.061	< 0.061	< 0.061	< 0.061	< 0.061	< 0.061	< 0.061	---	---	< 0.061	< 1.0
11/20/2013	Duplicate	< 0.057	**0.011 J**	**0.039 J**	< 0.057	< 0.057	< 0.057	< 0.057	< 0.95	< 0.057	< 0.057	< 0.057	< 0.057	< 0.057	< 0.057	< 0.057	< 0.057	< 0.057	< 0.057	< 0.057	< 0.057	---	---	< 0.057	< 0.95
2/6/2014		< 0.0019	< 0.0019	**0.026**	< 0.0019	< 0.096	< 0.0019	< 0.096	< 0.96	< 0.096	< 0.0019	**0.046 J**	< 0.096	< 0.096	< 0.0019	< 0.096	---	< 0.0019	< 0.0019	< 0.0019	< 0.0019	---	---	< 0.096	< 0.024
SW-7																									
2/6/2014		< 0.0022	< 0.0022	< 0.0022	< 0.0022	< 0.098	< 0.0022	< 0.098	< 0.98	< 0.098	< 0.0022	< 0.098	< 0.098	< 0.098	< 0.0022	< 0.098	---	< 0.0022	< 0.0022	< 0.0022	< 0.0022	---	---	< 0.098	< 0.027
Remediation Goal [b]				0.00059							0.00014														

Notes:

Data presented is from 2013-2014 storm water sampling events.

Detected concentrations of pesticides are displayed in **bold**.

[a] Storm water sample collected from interceptor SW-4 prior to time of discharge on evening of February 7, 2014. The interceptor was anticipated to discharge overnight outside of scheduled facility operating hours.

[b] Based on USEPA Superfund Record of Decision: United Heckathorn Co., October 1994, for surface waters in the Lauritzen, Santa Fe, and lower Richmond Inner Harbor Channels.

Acronyms/Abbreviations:

J - concentration reported is an estimated value

TPH - total petroleum hydrocarbons

< *n* - not detected above the reporting limit

--- - not analyzed

µg/L - micrograms pet liter

USEPA - United States Environmental Protection Agency

Table 2. 2013 - 2014 Annual Storm Water Sampling Data for General Parameters and Metals - Levin Richmond Terminal Corporation

Discharge Location	Notes	pH	Specific Conductance	Total Oil and Grease	Total Suspended Solids	Aluminum	Iron	Lead		Zinc	
		-	µmhos/cm	mg/L	mg/L	µg/L	µg/L	µg/L		µg/L	
SW-3											
11/20/2013		7.88	**300**	< 1.4	**220**	**7,600**	**5,000**	19	J	220	J
2/6/2014		7.72	**6,000**	< 1.5	53	550	**1,500**	7.9		130	
SW-4											
11/20/2013		7.50	**790**	< 1.3	**180**	**3,000**	**3,400**	36		200	
2/7/2014	Note (b)	7.52	**1,800**	< 1.4	37	**1,800**	**4,200**	69		**410**	
SW-5											
11/20/2013		7.63	**200**	< 1.4	17	260	540	9.1		130	
2/6/2014		7.65	**320**	< 1.4	35	**1,300**	**2,400**	35		240	
2/6/2014	Duplicate	7.66	**320**	< 1.5	37	**850**	**2,400**	38		**270**	
SW-6											
11/20/2013		7.26	140	< 1.4	22	620	**1,200**	17		190	
11/20/2013	Duplicate	7.27	150	< 1.4	17	530	**1,000**	15		180	
2/6/2014		7.57	110	< 1.3	9.1	340	**1,500**	13		170	
SW-7											
2/6/2014		7.65	**1,400**	< 1.3	5.2	79	220	2.5		30	
Benchmarks[a]		6.0-9.0	NA	15	100	750	1,000	262		260	

Note:

Data presented is from 2013-2014 storm water sampling events. **Bold** values exceed benchmarks listed at the bottom of the table.

Metal concentrations are reported on a total recoverable basis.

[a] Numeric Action Levels (NALs) from the State Water Resources Control Board (SWRCB) *Final National Pollutant Discharge Elimination System (NPDES), General Permit for Storm Water Discharges Associated with Industrial Activities, Order 2014-0057-DWQ, NPDES CAS000001* , April 1, 2014.

[b] Storm water sample collected from interceptor SW-4 prior to time of discharge on evening of 2/7/14. The interceptor was anticipated to discharge overnight outside of normal operating hours.

Acronyms/Abbreviations:

J - concentration reported is an estimated value
mg/L - milligrams per liter
NA - not applicable
< *n* - not detected above the detection limit
SWRCB - State Water Resources Control Board
µg/L - micrograms per liter
µmhos/cm - micromhos per centimeter

Table 3. 2014 Storm Water Interceptor Sediment Sampling Data for Pesticides

Sample Location	Reporting Basis	Sample Date	Percent Moisture	4,4'-DDD	4,4'-DDE	4,4'-DDT	Aldrin	Alpha-Bhc	Beta-Bhc	Chlordane	Alpha-Chlordane	Gamma-Chlordane	Delta-Bhc	Dieldrin	Endosulfan I	Endosulfan II	Endosulfan Sulfate	Endrin	Endrin Aldehyde	Endrin Ketone	Heptachlor	Heptachlor epoxide	Hexachlorobenzene	Hexachlorocyclohexane, Gamma- (Lindane)	Methoxychlor	Toxaphene	Moisture Content
				µg/kg																							percent
SW-3	Dry weight basis[a]	5/8/2014	37	22	14.1	8.6	< 4.9	< 4.9	< 4.9	< 98	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	< 4.9	25	< 98	37
	FD, Dry weight basis[a]	5/8/2014	36	10.8	23.4	< 4.8	< 4.8	< 4.8	< 4.8	< 96.9	< 4.8	< 4.8	< 4.8	< 4.8	< 4.8	< 4.8	< 4.8	< 4.8	< 4.8	< 4.8	< 4.8	< 4.8	< 4.8	< 4.8	< 4.8	< 97	36
SW-5	Dry weight basis[a]	5/8/2014	19	321	198	95	< 3.0	< 3.0	< 3.0	< 60	15	17	< 3.0	40	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0	< 60	19
SW-6	Dry weight basis[a]	5/8/2014	70	1,633	1,300	**900**	22.0	22.0	< 22	< 433	293	277	< 22	< 22	< 22	< 22	< 22	< 22	< 22	< 22	< 22	< 22	< 22	< 22	< 22	< 433	70
SW-7	Dry weight basis[a]	5/8/2014	2.9	216	206	196	< 10.3	< 10.3	< 10.3	< 206	22	16	< 10.3	77	< 10.3	< 10.3	< 10.3	< 10.3	< 10.3	< 10.3	< 10.3	< 10.3	< 10.3	< 10.3	< 10.3	< 206	2.9
Remediation Goals and Screening Levels																											
ROD Remediation Goal (µg/kg)[b]						590																					
USEPA RSL for Residential Soil (µg/kg)[c]				2,200	1,600	1,900	31	85	300		1,800			33	37,000			1,800			120	59	330	560	31,000	480	

Notes:

Concentrations exceeding the Record of Decision (ROD) remediation goal for sediments are **bold**.

Pesticide concentrations presented on a dry weight basis.

[a.] Dry weight basis calculated using the laboratory-reported as-is concentrations and percent moisture.

[b.] United States Environmental Protection Agency (USEPA), 1994. EPA Superfund Record of Decision: United Heckathorn Co., EPA ID: CAD981436363; OU 01, Richmond, CA, EPA/ROD/R09-96/5021996, October.

[c.] USEPA Regional Screening Level (RSL) Resident Soil Table, May 2014. The most stringent RSL value for each constituent is included on the table.

Abbreviations:

FD - Field Duplicate

µg/kg - micrograms per kilogram

< n - not detected above the detection limit

APPENDIX A

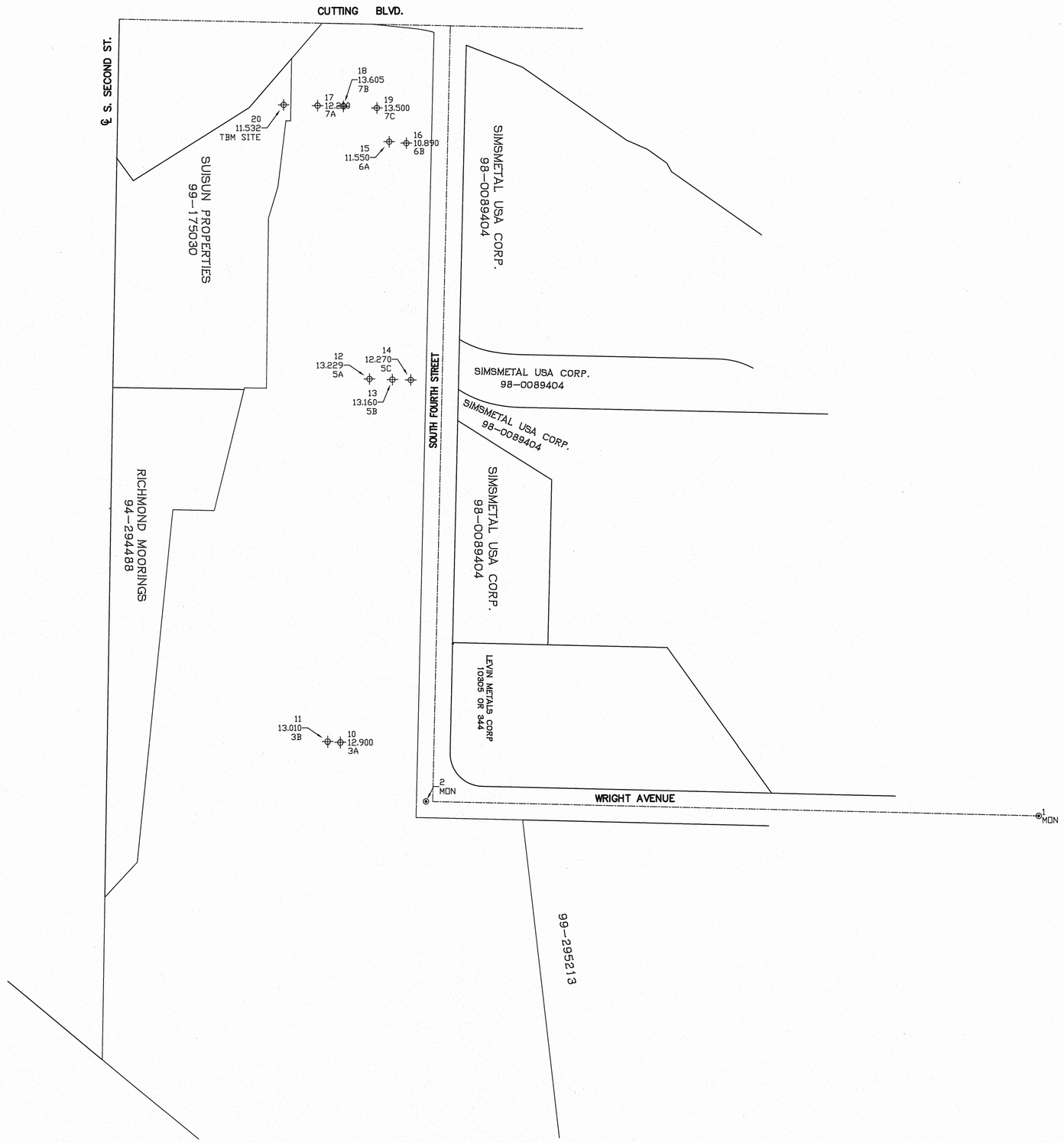
UPLAND CAP SURVEY PLAT

TOPOGRAPHIC SURVEY

LEVIN RICHMOND TERMINALS

CITY OF RICHMOND, COUNTY OF CONTRA COSTA, STATE OF CALIFORNIA

MAY 2014



Point Table				
Point #	Northing	Easting	Elevation	Raw Description
1	2163237.6800	6024596.4500		MON
2	2163265.8500	6023475.4900		MON
4	2159762.3530	6025316.9420	15.164	TBM
10	2163374.0390	6023319.3450	12.900	3A
11	2163375.5790	6023296.1160	13.010	3B
12	2164037.4320	6023374.6750	13.229	5A
13	2164036.1170	6023416.5070	13.160	5B
14	2164035.3860	6023450.0640	12.270	5C
15	2164470.1450	6023411.8380	11.550	6A
16	2164467.3940	6023443.1740	10.890	6B
17	2164536.6770	6023281.0150	12.200	7A
18	2164535.0830	6023328.3880	13.605	7B
19	2164531.9560	6023389.6420	13.500	7C
20	2164538.2420	6023219.0670	11.532	TBM SITE

BASIS OF ELEVATION

HORIZONTAL CONTROL IS BASED ON A MODIFIED CALIFORNIA COORDINATE SYSTEM. THE BASIS OF BEARING FOR THE MAP IS BETWEEN TWO BRASS DISKS WITHIN STANDARD CITY MONUMENT WELLS LOCATED AT THE INTERSECTIONS OF WRIGHT AVENUE WITH 4TH STREET AND 8TH STREET. THE COORDINATE VALUES AT 4TH STREET = NORTHING 2163265.85, EASTING 6023475.49 AND THE COORDINATE VALUES AT 8TH STREET = NORTHING 2163237.68, EASTING 6024596.45. THE VERTICAL CONTROL IS BASED ON TIDAL BENCH MARK STATION DISK STAMPED BM 2 1932, DESIGNATION BEING TIDAL 2 STA III 22 DESCRIBED AS A DISK SET VERTICALLY IN THE GRANITE FOUNDATION AT THE NORTHERN MOST ENTRANCE ON THE WEST SIDE OF THE OLD FORD PLANT. THE DISK HAVING A ELEVATION OF 4.902 FEET MEAN LOWER LOW WATER (MLLW).

SURVEYOR'S CERTIFICATION

THIS SURVEY WAS DONE BY A FIELD CREW UNDER THE SUPERVISION OF CHARLES CAPP, DATED MAY 9, 2014

6-2-14

CHARLES N. CAPP
PLS 6925

DATE:

LICENSED LAND SURVEYOR
CHARLES N. CAPP
Exp. 9-30-15
NO. 6925
STATE OF CALIFORNIA

6-2-14

Bellecci & Associates, inc.

Civil Engineering • Land Surveying

2290 Diamond Boulevard, Suite 100 Concord, CA 94520
Phone (925) 685-4569 Fax (925) 685-4838

SHEET 1 OF 1

JOB NO. 14037

APPENDIX B

UPLAND CAPPING SYSTEM INSPECTION PHOTOGRAPHS

Photo 1 – Looking north along western alley of secondary storage area: network of surficial cracking in SW-3 area.

Photo 2 – Looking northeast into the secondary storage area: network of surficial cracks.

Photo 3 – Southwest of interceptor SW-3 looking east: Thick seams and surface deterioration noted south of cap in SW-3 area.

Photo 4 - Looking north toward drain inlet 3-DI-11A: Sealant added to seam in concrete cap in December 2013.

Photo 5 - Drain inlet 3DI-11: Seams and cracking surrounding inlet sealed in December 2013.

Photo 6 - Looking west toward drain inlet 3DI-11A: Seams and cracking surrounding inlet sealed in December 2013.

Photo 7 – Corner of interceptor SW-4: Crack extending east with sealant added in December 2013.

Photo 8 – Looking southwest toward interceptor SW-4: Seams in concrete parallel to rail line.

Photo 9 - Looking southwest: Seam at concrete-asphalt interface along rail line which runs northeast to southwest.

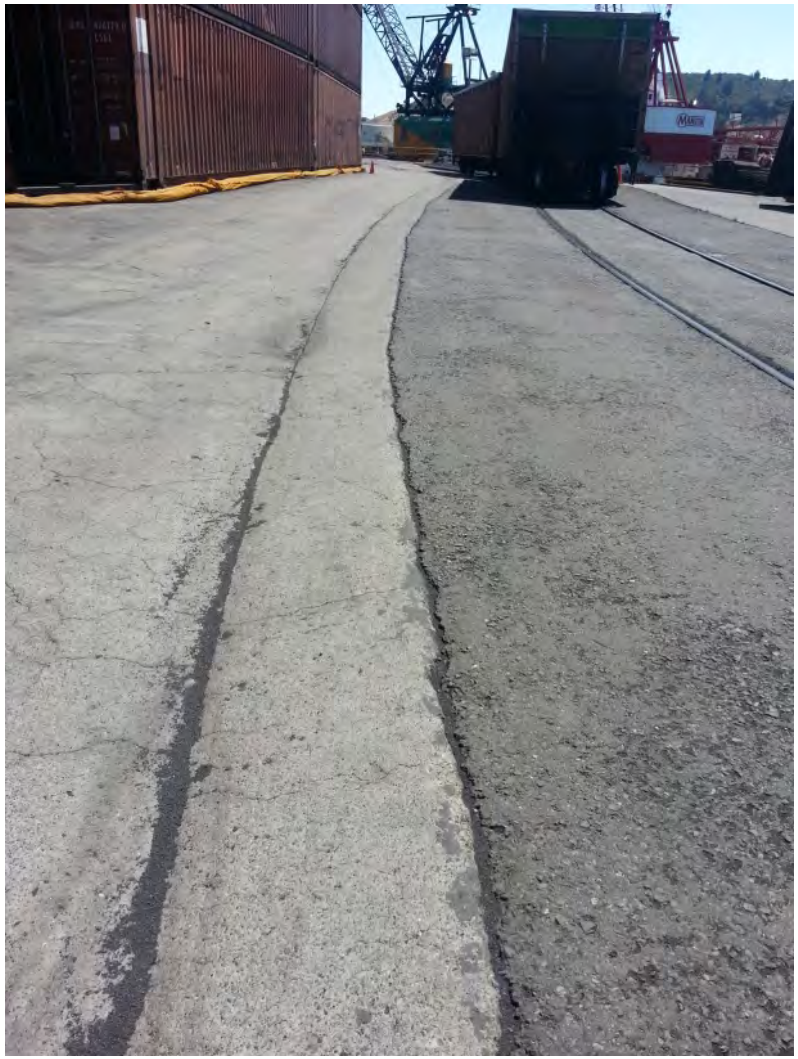


Photo 10 - Looking southwest: Seam at concrete-asphalt interface along rail line which runs northeast to southwest.

Photo 11 – SW-5 area: Plant growth in seam between concrete and asphalt.

Photo 12 – Looking north: Exposed geotextile fabric in gravel cover.

Photo 13 - Looking north: light gravel cover with bauxite present.

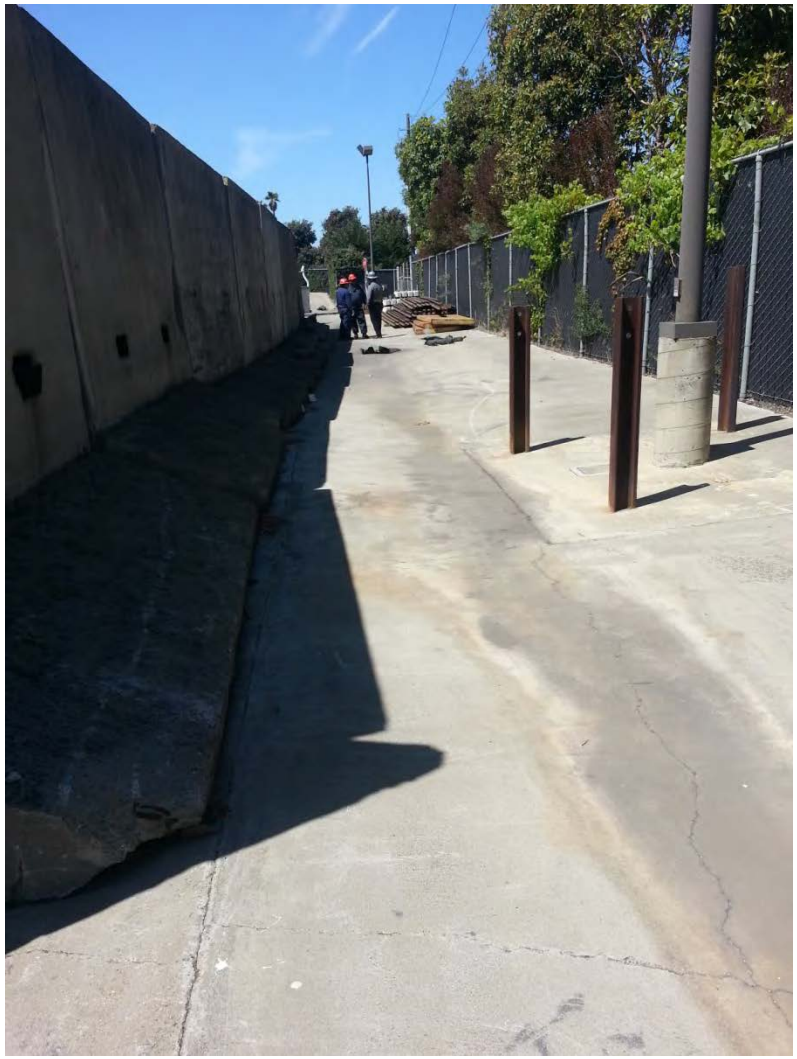


Photo 14 - Swale along eastern boundary of Main Terminal southeast of interceptor SW-6: seams and surficial cracks noted.

Photo 15- Southeast edge of interceptor SW-7, looking east: View of the shotcrete along the embankment south of the SW-7 area.

Photo 16 – Northwest edge of site, looking south toward interceptor SW-7. Minor surface cracks noted.

Photo 17 – Looking north: View of the shotcrete along the northern edge of embankment.

Photo 18 – Looking north: thin gravel cover and bauxite present in the SW-5 area.

Photo 19 – South of diesel fuel station, looking north: thin gravel cover and bauxite present.

APPENDIX C

2013-2014 ANNUAL STORM WATER MONITORING REPORT

June 30, 2014

Mr. Danny Pham
Regional Water Quality Control Board–San Francisco Bay Region
1515 Clay Street, Suite 1400
Oakland, California 94612

RE: *2013-2014 Annual Report for Storm Water Discharges Associated with Industrial Activities*
Levin Richmond Terminal Corporation
WDID No.: 2 07I002394

Dear Mr. Pham:

Enclosed please find the *2013-2014 Annual Report for Storm Water Discharges Associated with Industrial Activities* presenting storm water monitoring data and observations related to storm water compliance activities at the Levin Richmond Terminal Facility, located at 402 Wright Avenue, Richmond, California. Storm water compliance activities were conducted under the requirements of the *Waste Discharge Requirements for Discharges of Storm Water Associated with Industrial Activities Excluding Construction Activities* specified in the State Water Resources Control Board (SWRCB) Water Quality Order No. 97-03-DWQ, National Pollutant Discharge Elimination System (NPDES) General Permit No. CAS000001 (*Industrial General Permit*).

Please feel free to contact me if you have any questions or concerns with the attached report.

Sincerely,

Gary Levin

Gary Levin
Chief Executive Officer
(510) 307-4091

Attachment A. 2013-2014 Annual Report for Storm Water Discharges Associated with Industrial Activities
Attachment B. 2013-2014 Annual Report for Storm Water Discharges Associated with Industrial Activities - Additional Explanations
Attachment C. Analytical Data
Table 1. 2013 – 2014 Annual Storm Water Sampling Data for General Parameters and Metals
Table 2. 2013 – 2014 Annual Storm Water Sampling Data for Detected Pesticides
2013-2014 Laboratory Analytical Reports

2013-2014 ANNUAL REPORT FOR STORM WATER DISCHARGES ASSOCIATED WITH INDUSTRIAL ACTIVITIES

for

Levin Richmond Terminal Corporation
WDID No.: 2 07I002394

Prepared for

Regional Water Quality Control Board – San Francisco Bay Region
1515 Clay Street, Suite 1400
Oakland, California 94612

June 30, 2014

STATE OF CALIFORNIA
STATE WATER RESOURCES CONTROL BOARD
2013-2014 ANNUAL REPORT
FOR STORM WATER DISCHARGES ASSOCIATED
WITH INDUSTRIAL ACTIVITIES

Reporting Period July 1, 2013 through June 30, 2014

An Annual Report is required to be submitted to your local Regional Water Quality Control Board (Regional Board) by July 1 of each year. This document must be certified and signed, under penalty of perjury, by the appropriate official of your company. Many of the Annual Report questions require an explanation. Please provide explanations on a separate sheet as an attachment. **Retain a copy of the completed Annual Report for your records.**

Please circle or highlight any information contained in Items A, B, and C below that is new or revised so we can update our records. Please remember that a Notice of Termination and new Notice of Intent are required whenever a facility operation is relocated or changes ownership.

If you have any questions, please contact your Regional Board Industrial Storm Water Permit Contact. The names, telephone numbers, and e-mail addresses of the Regional Board contacts, as well as the Regional Board Offices addresses are indicated below.

REGIONAL BOARD INFORMATION:

San Francisco Bay Region
1515 Clay Street, Ste.1400
Oakland, CA 94612

Contact: Danny Pham
Tel: (510) 622-2300
Email: r2stormwater@waterboards.ca.gov

GENERAL INFORMATION

A. Facility Information:

Levin Richmond Terminal Corp
402 Wright Ave
Richmond, CA 94804
WDID NO: 2 07I002394

Contact: Gary Levin
Email:
Tel: 510-307-4091

SIC Code(s):
4491 Marine Cargo Handling

B. Facility Operator Information:

Levin Richmond Terminal Corp
402 Wright Ave
Richmond, CA 94804

Contact: Gary Levin
Email: garyl@levinterminal.com
Tel: 510-307-4091

C. Facility Billing Information:

Levin Richmond Terminal Corp
402 Wright Ave
Richmond, CA 94804

Contact: Gary Levin
Email: garyl@levinterminal.com
Tel: 510-307-4091

Additional Table D Parameters: Al,Fe,Pb,Zn

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ANNUAL REPORT

SPECIFIC INFORMATION

MONITORING AND REPORTING PROGRAM

D. SAMPLING AND ANALYSIS EXEMPTIONS AND REDUCTIONS

1. For the reporting period, was your facility exempt from collecting and analyzing samples from **two** storm events in accordance with sections B.12 or 15 of the General Permit?

   ☐ **YES** Go to Item D.2 ☒ **NO** Go to Section E

2. Indicate the reason your facility is exempt from collecting and analyzing samples from **two** storm events. Attach a copy of the first page of the appropriate certification if you check boxes ii, iii, iv, or v.

   i. ☐ Participating in an Approved Group Monitoring Plan **Group Name:** _____

   ii. ☐ Submitted **No Exposure Certification (NEC)** Date Submitted: _____

   Re-evaluation Date: _____

   Does facility continue to satisfy NEC conditions? ☐ YES ☐ NO

   iii. ☐ Submitted **Sampling Reduction Certification (SRC)** Date Submitted: _____

   Re-evaluation Date: _____

   Does facility continue to satisfy SRC conditions? ☐ YES ☐ NO

   iv. ☐ Received Regional Board Certification Certification Date: _____

   v. ☐ Received Local Agency Certification Cetification Date: _____

3. If you checked boxes i or iii above, were you scheduled to sample **one** storm event during the reporting year?

   ☐ **YES** Go to Section E ☐ **NO** Go to Section F

4. If you checked boxes ii, iv, or v, go to Section F.

E. SAMPLING AND ANALYSIS RESULTS

1. How many storm events did you sample? 2 If less than 2, **attach explanation** (if you checked item D.2.i or iii. above, only attach explanation if you answer "0").

2. Did you collect storm water samples from the first storm of the wet season that produced a discharge during scheduled facility operating hours? (Section B.5 of the General Permit)

   ☒ **YES** ☐ **NO, attach explanation (Please note that if you do not sample the first storm event, you are still required to sample 2 storm events)**

3. How many storm water discharge locations are at your facility? up to 10

4. For each storm event sampled, did you collect and analyze a sample from each of the facilitys' storm water discharge locations? ☒ YES, go to Item E.6 ☐ NO

5. Was sample collection or analysis reduced in accordance with Section B.7.d of the General Permit? ☐ YES ☐ NO, **attach explanation**

   If "YES", **attach documentation** supporting your determination that two or more drainage areas are substantially identical.

   Date facility's drainage areas were last evaluated _____

6. Were all samples collected during the first hour of discharge? ☐ YES ☒ NO, **attach explanation**

7. Was all storm water sampling preceded by three (3) working days without a storm water discharge? ☒ YES ☐ NO, **attach explanation**

8. Were there any discharges of stormwater that had been temporarily stored or contained? (such as from a pond) ☐ YES ☒ NO, go to Item E.10

9. Did you collect and analyze samples of temporarily stored or contained storm water discharges from two storm events? (or one storm event if you checked item D.2.i or iii. above) ☐ YES ☐ NO, **attach explanation**

10. Section B.5. of the General Permit requires you to analyze storm water samples for pH, Total Suspended Solids (TSS), Specific Conductance (SC), Total Organic Carbon (TOC) or Oil and Grease (O&G), other pollutants likely to be present in storm water discharges in significant quantities, and analytical parameters listed in Table D of the General Permit.

    a. Does Table D contain any additional parameters related to your facility's SIC code(s)? ☒ YES ☐ NO, Go to Item E.11

    b. Did you analyze all storm water samples for the applicable parameters listed in Table D? ☒ YES ☐ NO

    c. If you did not analyze all storm water samples for the applicable Table D parameters, check one of the following reasons:

    _____ In prior sampling years, the parameter(s) have not been detected in significant quantities from two consecutive sampling events. **Attach explanation**

    _____ The parameter(s) is not likely to be present in storm water discharges and authorized non-storm water discharges in significant quantities based upon the facility operator's evaluation. **Attach explanation**

    _____ Other. **Attach explanation**

11. For each storm event sampled, attach a copy of the laboratory analytical reports and report the sampling and analysis results using **Form 1** or its equivalent. The following must be provided for each sample collected:

- Date and time of sample collection
- Name and title of sampler.
- Parameters tested.
- Name of analytical testing laboratory.
- Discharge location identification.
- Testing results.
- Test methods used.
- Test detection limits.
- Date of testing.
- Copies of the laboratory analytical results.

F. QUARTERLY VISUAL OBSERVATIONS

1. **Authorized Non-Storm Water Discharges**
Section B.3.b of the General Permit requires quarterly visual observations of all authorized non-storm water discharges and their sources.

a. Do authorized non-storm water discharges occur at your facility?

☐ **YES** ☒ **NO** Go to Item F.2

b. Indicate whether you visually observed all authorized non-storm water discharges and their sources during the quarters when they were discharged. **Attach an explanation for any "NO" answers**. Indicate "N/A" for quarters without any authorized non-storm water discharges.

July -September	☐ **YES**	☐ **NO**	☐ **N/A**	October-December	☐ **YES**	☐ **NO**	☐ **N/A**
January-March	☐ **YES**	☐ **NO**	☐ **N/A**	April-June	☐ **YES**	☐ **NO**	☐ **N/A**

c. Use **Form 2** to report quarterly visual observations of authorized non-storm water discharges or provide the following information.

i. name of each authorized non-storm water discharge
ii. date and time of observation
iii. source and location of each authorized non-storm water discharge
iv. characteristics of the discharge at its source and impacted drainage area/discharge location
v. name, title, and signature of observer
vi. **any** new or revised BMPs necessary to reduce or prevent pollutants in authorized non-storm water discharges. Provide new or revised BMP implementation date.

2. **Unauthorized Non-Storm Water Discharges**
Section B.3.a of the General Permit requires quarterly visual observations of all drainage areas to detect the presence of unauthorized non-storm water discharges and their sources.

a. Indicate whether you visually observed all drainage areas to detect the presence of unauthorized non-storm water discharges and their sources. **Attach an explanation for any "NO" answers**.

July -September	☒ **YES**	☐ **NO**	October-December	☒ **YES**	☐ **NO**
January-March	☒ **YES**	☐ **NO**	April-June	☒ **YES**	☐ **NO**

b. Based upon the quarterly visual observations, were any unauthorized non-storm water discharges detected?

☐ **YES** ☒ **NO** Go to item F.2.d

c. Have each of the unauthorized non-storm water discharges been eliminated or permitted?

☐ **YES** ☐ **NO** **Attach explanation**

d. Use **Form 3** to report quarterly unauthorized non-storm water discharge visual observations or provide the following information.

i. name of each unauthorized non-storm water discharge.
ii. date and time of observation.
iii. source and location of each unauthorized non-storm water discharge.
iv. characteristics of the discharge at its source and impacted drainage area/discharge location.
v. name, title, and signature of observer.
vi. **any** corrective actions necessary to eliminate the source of each unauthorized non-storm water discharge and to clean impacted drainage areas. Provide date unauthorized non-storm water discharge(s) was eliminated or scheduled to be eliminated.

G. MONTHLY WET SEASON VISUAL OBSERVATIONS

Section B.4.a of the General Permit requires you to conduct monthly visual observations of storm water discharges at all storm water discharge locations during the wet season. These observations shall occur during the first hour of discharge or, in the case of temporarily stored or contained storm water, at the time of discharge.

1. Indicate below whether monthly visual observations of storm water discharges occurred at all discharge locations. **Attach an explanation for any "NO" answers**. Include in this explanation whether any eligible storm events occurred during scheduled facility operating hours that did not result in a storm water discharge, and provide the date, time, name and title of the person who observed that there was no storm water discharge.

	YES	NO		YES	NO
October	☐	☒	February	☒	☐
November	☒	☐	March	☒	☐
December	☐	☒	April	☒	☐
January	☐	☒	May	☐	☒

2. Report monthly wet season visual observations using **Form 4** or provide the following information.

   a. date, time, and location of observation
   b. name and title of observer
   c. characteristics of the discharge (i.e., odor, color, etc.) and source of any pollutants observed.
   d. **any** new or revised BMPs necessary to reduce or prevent pollutants in storm water discharges. Provide new or revised BMP implementation date.

ANNUAL COMPREHENSIVE SITE COMPLIANCE EVALUATION (ACSCE)

H. ACSCE CHECKLIST

Section A.9 of the General Permit requires the facility operator to conduct one ACSCE in each reporting period (July 1-June 30). Evaluations must be conducted within 8-16 months of each other. The SWPPP and monitoring program shall be revised and implemented, as necessary, within 90 days of the evaluation. The checklist below includes the minimum steps necessary to complete a ACSCE. Indicate whether you have performed each step below. **Attach an explanation for any "NO" answers.**

1. Have you inspected all potential pollutant sources and industrial activities areas? ☒ YES ☐ NO
   The following areas should be inspected:

   - areas where spills and leaks have occured during the last year.
   - outdoor wash and rinse areas.
   - process/manufacturing areas.
   - loading, unloading, and transfer areas.
   - waste storage/disposal areas.
   - dust/particulate generating areas.
   - erosion areas.
   - building repair, remodeling, and construction
   - material storage areas
   - vehicle/equipment storage areas
   - truck parking and access areas
   - rooftop equipment areas
   - vehicle fueling/maintenance areas
   - non-storm water discharge generating areas

2. Have you reviewed your SWPPP to assure that its BMPs address existing potential pollutant sources and industrial activities areas? ☒ YES ☐ NO

3. Have you inspected the entire facility to verify that the SWPPP's site map, is up-to-date? The following site map items should be verified: ☒ YES ☐ NO

   - facility boundaries
   - outline of all storm water drainage areas
   - areas impacted by run-on
   - storm water discharges locations
   - storm water collection and conveyance system
   - structural control measures such as catch basins, berms, containment areas, oil/water separators, etc.

4. Have you reviewed all General Permit compliance records generated since the last annual evaluation? ☒ YES ☐ NO

The following records should be reviewed:

- quarterly authorized non-storm water discharge visual observations
- monthly storm water discharge visual observation
- records of spills/leaks and associated clean-up/response activities
- quarterly unauthorized non-storm water discharge visual observations
- Sampling and Analysis records
- preventative maintenance inspection and maintenance records

5. Have you reviewed the major elements of the SWPPP to assure compliance with the General Permit? ☒ YES ☐ NO

The following SWPPP items should be reviewed:

- pollution prevention team
- list of significant materials
- description of potential pollutant sources
- assessment of potential pollutant sources
- identification and description of the BMPs to be implemented for each potential pollutant source

6. Have you reviewed your SWPPP to assure that a) the BMPs are adequate in reducing or preventing pollutants in storm water discharges and authorized non-storm water discharges, and b) the BMPs are being implemented? ☒ YES ☐ NO

The following BMP categories should be reviewed:

- good housekeeping practices
- spill response
- employee training
- erosion control
- quality assurance
- preventative maintenance
- material handling and storage practices
- waste handling/storage
- structural BMPs

7. Has all material handling equipment and equipment needed to implement the SWPPP been inspected? ☒ YES ☐ NO

I. ACSCE EVALUATION REPORT

The facility operator is required to provide an evaluation report that includes:

- identification of personnel performing the evaluation
- the date(s) of the evaluation
- necessary SWPPP revisions
- schedule for implementing SWPPP revisions
- any incidents of non-compliance and the corrective actions taken.

Use **Form 5** to report the results of your evaluation or develop an equivalent form.

J. ACSCE CERTIFICATION

The facility operator is required to certify compliance with the Industrial Activities Storm Water General Permit. To certify compliance, both the SWPPP and Monitoring Program must be up to date and be fully implemented.

Based upon your ACSCE, do you certify compliance with the Industrial Activities Storm Water General Permit? ☒ YES ☐ NO

If you answered "NO" **attach an explanation** to the ACSCE Evaluation Report why you are not in compliance with the Industrial Activities Storm Water General Permit.

ATTACHMENT SUMMARY

Answer the questions below to help you determine what should be attached to this annual report. Answer NA (Not Applicable) to questions 2-4 if you are not required to provide those attachments.

1. Have you attached Forms 1,2,3,4, and 5 or their equivalent?	[X] YES (Mandatory)		
2. If you conducted sampling and analysis, have you attached the laboratory analytical reports?	[X] YES	[ ] NO	[ ] NA
3. If you checked box II, III, IV, or V in item D.2 of this Annual Report, have you attached the first page of the appropriate certifications?	[ ] YES	[ ] NO	[X] NA
4. Have you attached an explanation for each "NO" answer in items E.1, E.2, E.5-E.7, E.9, E.10.c, F.1.b, F.2.a, F.2.c, G.1, H.1-H.7, or J?	[X] YES	[ ] NO	[ ] NA

ANNUAL REPORT CERTIFICATION

I am duly authorized to sign reports required by the INDUSTRIAL ACTIVITIES STORM WATER GENERAL PERMIT (see Standard Provision C.9) and 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 ensure 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 person 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.

Printed Name: GARY M. LEVIN

Signature: Gary M. Levin Date: 6/30/2014

Title: CEO

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SIDE A

FORM 1-SAMPLING & ANALYSIS RESULTS

FIRST STORM EVENT

- If analytical results are less than the detection limit (or non detectable), show the value as less than the numerical value of the detection limit (example: <.05)
- If you did not analyze for a required parameter, do not report "0". Instead, leave the appropriate box blank
- When analysis is done using portable analysis (such as portable pH meters, SC meters, etc.), indicate "PA" in the appropriate test method used box.
- Make additional copies of this form as necessary.

NAME OF PERSON COLLECTING SAMPLE(S): Greg Hulburd **TITLE:** Project Engineer **SIGNATURE:** Scott Bourne

Scott Bourne for Greg Hulburd

DESCRIBE DISCHARGE LOCATION Example: NW Out Fall	DATE/TIME OF SAMPLE COLLECTION	TIME DISCHARGE STARTED	ANALYTICAL RESULTS For First Storm Event									
			BASIC PARAMETERS					OTHER PARAMETERS*				
			pH	TSS	SC	O&G	TOC	Aluminum	Iron	Lead	Zinc	
TS1-E	11/20/13 2:15 ☐ AM ☒ PM	1:55 ☐ AM ☒ PM	6.96	83	240	< 1.4	-	1,700	1,600	16	190 J	
SW-3	11/20/13 1:25 ☐ AM ☒ PM	1:25 ☐ AM ☒ PM	7.88	220	300	< 1.4	-	7,600	5,000	19 J	220 J	
SW-4	11/20/13 1:10 ☐ AM ☒ PM	unknown ☐ AM ☐ PM	7.5	180	790	< 1.3	-	3,000	3,400	36	200	
SW-5	11/20/13 9:25 ☒ AM ☐ PM	9:10 ☒ AM ☐ PM	7.63	17	200	< 1.4	-	260	540	9.1	130	
TEST REPORTING UNITS:			pH Units	mg/l	umho/cm	mg/l	mg/l	ug/L	ug/L	ug/L	ug/L	
TEST METHOD DETECTION LIMIT:			0.100	1.3	1.0	1.3 - 1.4	-	5.0	8.0	0.50	5.0	
TEST METHOD USED:			9040B	SM 2540D	SM2510B	1644A	-	200.8	200.8	200.8	200.8	
ANALYZED BY (SELF/LAB):			Test America	Test America	Test America	Test America	-	Test America	Test America	Test America	Test America	

TSS - Total Suspended Solids J = concentration reported is an estimated value SC - Specific Conductance O&G - Oil & Grease TOC - Total Organic Carbon

*Pesticide data for SW-3, SW-4, SW-5, SW-6, and SW-7 included in Attachment C.

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SIDE A

FORM 1-SAMPLING & ANALYSIS RESULTS

FIRST STORM EVENT

- If analytical results are less than the detection limit (or non detectable), show the value as less than the numerical value of the detection limit (example: <.05)
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Scott Bourne for Greg Hulburd

DESCRIBE DISCHARGE LOCATION Example: NW Out Fall	DATE/TIME OF SAMPLE COLLECTION	TIME DISCHARGE STARTED	ANALYTICAL RESULTS For First Storm Event									
			BASIC PARAMETERS					OTHER PARAMETERS*				
			pH	TSS	SC	O&G	TOC	Aluminum	Iron	Lead	Zinc	
SW-6	11/20/13 ☐ AM 12:15 ☒ PM	12:10 ☐ AM ☒ PM	7.26	22	140	< 1.4	-	620	1,200	17	190	
SW-6-D	11/20/13 ☐ AM 12:20 ☒ PM	12:10 ☐ AM ☒ PM	7.27	17	150	< 1.4	-	530	1,000	15	180	
SW-11	11/20/13 ☒ AM 8:45 ☐ PM	08:45 ☒ AM ☐ PM	7.70	88	13,000	< 1.4	-	300	700	5.1	120	
SW-12	11/20/13 ☐ AM 12:00 ☒ PM	unknown ☐ AM ☐ PM	7.56	63	620	< 1.4	-	2,000	3,900	26	180	
TEST REPORTING UNITS:			pH Units	mg/l	umho/cm	mg/l	mg/l	ug/L	ug/L	ug/L	ug/L	
TEST METHOD DETECTION LIMIT:			0.100	1.3	1.0	1.4	-	5.0	8.0	0.50	5.0	
TEST METHOD USED:			9040B	SM 2540D	SM 2510B	1644A	-	200.8	200.8	200.8	200.8	
ANALYZED BY (SELF/LAB):			Test America	Test America	Test America	Test America	-	Test America	Test America	Test America	Test America	

TSS - Total Suspended Solids J = concentration reported is an estimated value SC - Specific Conductance O&G - Oil & Grease TOC - Total Organic Carbon

*Pesticide data for SW-3, SW-4, SW-5, SW-6, and SW-7 included in Attachment C.

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SIDE B

FORM 1-SAMPLING & ANALYSIS RESULTS

SECOND STORM EVENT

- If analytical results are less than the detection limit (or non detectable), show the value as less than the numerical value of the detection limit (example: <.05)
- If you did not analyze for a required parameter, do not report "0". Instead, leave the appropriate box blank
- When analysis is done using portable analysis (such as portable pH meters, SC meters, etc.), indicate "PA" in the appropriate test method used box.
- Make additional copies of this form as necessary.

NAME OF PERSON COLLECTING SAMPLE(S): Greg Hulburd **TITLE:** Project Engineer **SIGNATURE:** Scott Bourne

Scott Bourne for Greg Hulburd

DESCRIBE DISCHARGE LOCATION Example: NW Out Fall	DATE/TIME OF SAMPLE COLLECTION	TIME DISCHARGE STARTED	ANALYTICAL RESULTS For First Storm Event									
			BASIC PARAMETERS					OTHER PARAMETERS*				
			pH	TSS	SC	O&G	TOC	Aluminum	Iron	Lead	Zinc	
TS1-E	2/7/14 5:15 ☐ AM ☒ PM	5:00 ☐ AM ☒ PM	7.37	70	2,600	< 1.4	--	990	1,700	14	220	
SW-3	2/6/14 10:40 ☒ AM ☐ PM	2:00 ☐ AM ☒ PM	7.72	53	6,000	< 1.5	--	550	1,500	7.9	130	
SW-4	2/6/14 4:25 ☐ AM ☒ PM	Later PM ☐ AM ☐ PM	7.52	37	1,800	< 1.4	--	1,800	4,200	69	410	
SW-5	2/6/14 8:35 ☒ AM ☐ PM	unknown ☐ AM ☐ PM	7.65	35	320	< 1.4	--	1,300	2,400	35	240	
TEST REPORTING UNITS:			pH Units	mg/l	umho/cm	mg/l	mg/l	ug/L	ug/L	ug/L	ug/L	
TEST METHOD DETECTION LIMIT:			0.100	1.7	1.0	1.4 - 1.5		5.0	8.0	0.50	5.0	
TEST METHOD USED:			9040B	SM 2540D	SM 2510B	1664A		200.8	200.8	200.8	200.8	
ANALYZED BY (SELF/LAB):			Test America	Test America	Test America	Test America		Test America	Test America	Test America	Test America	

TSS - Total Suspended Solids J = concentration reported is an estimated value SC - Specific Conductance O&G - Oil & Grease TOC - Total Organic Carbon

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SIDE B

FORM 1-SAMPLING & ANALYSIS RESULTS

SECOND STORM EVENT

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- When analysis is done using portable analysis (such as portable pH meters, SC meters, etc.), indicate "PA" in the appropriate test method used box.
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Scott Bourne for Greg Hulburd

DESCRIBE DISCHARGE LOCATION Example: NW Out Fall	DATE/TIME OF SAMPLE COLLECTION	TIME DISCHARGE STARTED	ANALYTICAL RESULTS For First Storm Event									
			BASIC PARAMETERS					OTHER PARAMETERS*				
			pH	TSS	SC	O&G	TOC	Aluminum	Iron	Lead	Zinc	
SW-5D	2/6/14 8:40 ☒ AM ☐ PM	unknown ☐ AM ☐ PM	7.66	37	320	< 1.5	--	850	2,400	38	270	
SW-6	2/6/14 9:10 ☒ AM ☐ PM	9:05 ☒ AM ☐ PM	7.57	9.1	110	< 1.3	--	340	1,500	13	170	
SW-7	2/6/14 11:25 ☒ AM ☐ PM	11:25 ☒ AM ☐ PM	7.65	5.2	1,400	< 1.3	--	79	220	2.5	30	
SW-11	2/6/14 7:00 ☒ AM ☐ PM	7:00 ☒ AM ☐ PM	7.70	110	8,200	< 1.5	--	510	1,100	6.8 J	120 J	
TEST REPORTING UNITS:			pH Units	mg/l	umho/cm	mg/l	mg/l	ug/L	ug/L	ug/L	ug/L	
TEST METHOD DETECTION LIMIT:			0.100	1.7	1.0	1.3 - 1.5		5.0	8.0	0.50	5.0	
TEST METHOD USED:			9040B	SM 2540D	SM 2510B	1664A		200.8	200.8	200.8	200.8	
ANALYZED BY (SELF/LAB):			Test America	Test America	Test America	Test America		Test America	Test America	Test America	Test America	

TSS - Total Suspended Solids J = reported concentration is an estimated value SC - Specific Conductance O&G - Oil & Grease TOC - Total Organic Carbon

*Pesticide data for SW-3, SW-4, SW-5, SW-6, and SW-7 included in Attachment C.

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SIDE B

FORM 1-SAMPLING & ANALYSIS RESULTS

SECOND STORM EVENT

- If analytical results are less than the detection limit (or non detectable), show the value as less than the numerical value of the detection limit (example: <.05)
- If you did not analyze for a required parameter, do not report "0". Instead, leave the appropriate box blank
- When analysis is done using portable analysis (such as portable pH meters, SC meters, etc.), indicate "PA" in the appropriate test method used box.
- Make additional copies of this form as necessary.

NAME OF PERSON COLLECTING SAMPLE(S): Greg Hulburd **TITLE:** Project Engineer **SIGNATURE:** Scott Bourne

Scott Bourne for Greg Hulburd

DESCRIBE DISCHARGE LOCATION Example: NW Out Fall	DATE/TIME OF SAMPLE COLLECTION	TIME DISCHARGE STARTED	ANALYTICAL RESULTS For First Storm Event									
			BASIC PARAMETERS					OTHER PARAMETERS*				
			pH	TSS	SC	O&G	TOC	Aluminum	Iron	Lead	Zinc	
SW-12	2/6/14 ☒ AM 7:05 ☐ PM	7:05 ☒ AM ☐ PM	7.96	19	120	< 1.4	--	710	1,700	13	96	
	☐ AM ☐ PM	☐ AM ☐ PM										
	☐ AM ☐ PM	☐ AM ☐ PM										
	☐ AM ☐ PM	☐ AM ☐ PM										
TEST REPORTING UNITS:			pH Units	mg/l	umho/cm	mg/l	mg/l	ug/L	ug/L	ug/L	ug/L	
TEST METHOD DETECTION LIMIT:			0.100	12	10	1.4		25	40	2.5	25	
TEST METHOD USED:			9040B	SM 2540D	SM 2510B	1664A		200.8	200.8	200.8	200.8	
ANALYZED BY (SELF/LAB):			Test America	Test America	Test America	Test America		Test America	Test America	Test America	Test America	

TSS - Total Suspended Solids J = reported concentration is an estimated value SC - Specific Conductance O&G - Oil & Grease TOC - Total Organic Carbon

*Pesticide data for SW-3, SW-4, SW-5, SW-6, and SW-7 included in Attachment C.

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SIDE A

FORM 3-QUARTERLY VISUAL OBSERVATIONS OF UNAUTHORIZED NON-STORM WATER DISCHARGES (NSWDs)

- Unauthorized NSWDs are discharges (such as wash or rinse waters) that do not meet the conditions provided in Section D (pages 5-6) of the General Permit.
- Quarterly visual observations are required to observe current and detect prior unauthorized NSWDs.
- Quarterly visual observations are required during dry weather and at all facility drainage areas.
- Each unauthorized NSWD source, impacted drainage area, and discharge location must be identified and observed.
- Unauthorized NSWDs that can not be eliminated within 90 days of observation must be reported to the Regional Board in accordance with Section A.10.e of the General Permit.
- Make additional copies of this form as necessary.

QUARTER: **JULY-SEPT.** **DATE/TIME OF OBSERVATIONS** 9/12/13 9:00 ☒ AM ☐ PM	**Observers Name:** Greg Hulburd **Title:** Project Engineer **Signature:** Scott Bourne for Greg Hulburd	**WERE UNAUTHORIZED NSWDs OBSERVED?** ☐ YES ☒ NO **WERE THERE INDICATIONS OF PRIOR UNAUTHORIZED NSWDs?** ☐ YES ☒ NO	If **YES** to either question, complete reverse side.
QUARTER: **OCT.-DEC.** **DATE/TIME OF OBSERVATIONS** 10/31/13 10:30 ☒ AM ☐ PM	**Observers Name:** Greg Hulburd **Title:** Project Engineer **Signature:** Scott Bourne for Greg Hulburd	**WERE UNAUTHORIZED NSWDs OBSERVED?** ☐ YES ☒ NO **WERE THERE INDICATIONS OF PRIOR UNAUTHORIZED NSWDs?** ☐ YES ☒ NO	If **YES** to either question, complete reverse side.
QUARTER: **JAN.-MARCH** **DATE/TIME OF OBSERVATIONS** 1/30/14 9:30 ☒ AM ☐ PM	**Observers Name:** Greg Hulburd **Title:** Project Engineer **Signature:** Scott Bourne for Greg Hulburd	**WERE UNAUTHORIZED NSWDs OBSERVED?** ☐ YES ☒ NO **WERE THERE INDICATIONS OF PRIOR UNAUTHORIZED NSWDs?** ☐ YES ☒ NO	If **YES** to either question, complete reverse side.
QUARTER: **APRIL-JUNE** **DATE/TIME OF OBSERVATIONS** 5/22/14 1:30 ☐ AM ☒ PM	**Observers Name:** Mary Cunningham **Title:** Senior Staff Engineer **Signature:**	**WERE UNAUTHORIZED NSWDs OBSERVED?** ☐ YES ☒ NO **WERE THERE INDICATIONS OF PRIOR UNAUTHORIZED NSWDs?** ☐ YES ☒ NO	If **YES** to either question, complete reverse side.

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SIDE B

FORM 3 QUARTERLY VISUAL OBSERVATIONS OF UNAUTHORIZED NON-STORM WATER DISCHARGES (NSWDs)

OBSERVATION DATE (FROM REVERSE SIDE)	NAME OF UNAUTHORIZED NSWD EXAMPLE: Vehicle Wash Water	SOURCE AND LOCATION OF UNAUTHORIZED NSWD EXAMPLE: NW Corner of Parking Lot	DESCRIBE UNAUTHORIZED NSWD CHARACTERISTICS Indicate whether unauthorized NSWD is clear, cloudy, discolored, causing stains; contains floating objects or an oil sheen, has odors, etc.		DESCRIBE CORRECTIVE ACTIONS TO ELIMINATE UNAUTHORIZED NSWD AND TO CLEAN IMPACTED DRAINAGE AREAS. PROVIDE UNAUTHORIZED NSWD ELIMINATION DATE.
			AT THE UNAUTHORIZED NSWD SOURCE	AT THE UNAUTHORIZED NSWD AREA AND DISCHARGE LOCATION	
9/12/13 9:00 ☒ AM ☐ PM	N/A				
10/31/13 10:30 ☒ AM ☐ PM	N/A				
1/30/14 9:30 ☒ AM ☐ PM	N/A				
5/22/14 1:30 ☐ AM ☒ PM	N/A				

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FORM 4 - MONTHLY VISUAL OBSERVATIONS OF STORM WATER DISCHARGES

- Storm water discharge visual observations are required for at least one storm event per month between October 1 and May 31.
- Visual observations must be conducted during the first hour of discharge at all discharge locations.
- Discharges of temporarily stored or contained storm water must be observed at the time of discharge.
- Indicate "None" in the first column of this form if you did not conduct a monthly visual observation.
- Make additional copies of this form as necessary.
- Until a monthly visual observation is made, record any eligible storm events that do not result in a storm water discharge and note the date, time, name, and title of who observed there was no storm water discharge.

		Drainage Location Description:	**SW-1/SW-2**	**TS1-E**	**SW-3**	**SW-4**	**SW-5**	**SW-6**	**SW-7**	**SW-10**	**SW-11**	**SW-12**
Observation Date:	October 31, 2013	**Observation Time:**	--	--	--	--	--	--	--	--	--	--
Observer's Name:	Greg Hulburd	**Time Discharge Began:**	No discharge	No discharge	No discharge	No discharge	No discharge	No discharge	No discharge	No discharge	No discharge	No discharge
Title:	Project Engineer	**Approximate storm start date and time:**	No storm event in October 2013.									
Signature: (Scott Bourne for Greg Hulburd)	Scott Bourne	**Were Pollutants Observed (if yes, complete reverse side):**	No	No	No	No	No	No	No	No	No	No
Observations Date:	November 20, 2013	**Observation Time:**	8:00 AM	2:15 PM	1:25 PM	1:10 PM	9:25 AM	12:15 PM	8:00 AM	8:00 AM	8:45 AM	12:00 PM
Observer's Name:	Greg Hulburd	**Time Discharge Began:**	No discharge (1)	1:55 PM	1:25 PM	Unknown	9:10 AM	12:10 PM	No discharge	No discharge	8:45 AM	Unknown
Title:	Project Engineer	**Approximate storm start date and time:**	Evening of November 19, 2013.									
Signature: (Scott Bourne for Greg Hulburd)	Scott Bourne	**Were Pollutants Observed (if yes, complete reverse side):**	No (1)	Yes	Yes	Yes	Yes	Yes	No	No	Yes	Yes
Observations Date:	December 31, 2013	**Observation Time:**	--	--	--	--	--	--	--	--	--	--
Observer's Name:	Greg Hulburd	**Time Discharge Began:**	No discharge	No discharge	No discharge	No discharge	No discharge	No discharge	No discharge	No discharge	No discharge	No discharge
Title:	Project Engineer	**Approximate storm start date and time:**	No storm event during working hours in December 2013.									
Signature: (Scott Bourne for Greg Hulburd)	Scott Bourne	**Were Pollutants Observed (if yes, complete reverse side):**	No	No	No	No	No	No	No	No	No	No
Observations Date:	January 30, 2014	**Observation Time:**	--	--	--	--	--	--	--	--	--	--
Observer's Name:	Greg Hulburd	**Time Discharge Began:**	No discharge	No discharge	No discharge	No discharge	No discharge	No discharge	No discharge	No discharge	No discharge	No discharge
Title:	Project Engineer	**Approximate storm start date and time:**	No storm event in January 2014.									
Signature: (Scott Bourne for Greg Hulburd)	Scott Bourne	**Were Pollutants Observed (if yes, complete reverse side):**	No	No	No	No	No	No	No	No	No	No
Observations Date:	February 6, 2014	**Observation Time:**	7:00 AM	5:15 PM (2/7/14)	10:40 AM	4:25 PM (2/7/14)	8:35 AM	9:05 AM	11:25 AM	7:00 AM	7:00 AM	7:05 AM
Observer's Name:	Greg Hulburd	**Time Discharge Began:**	No discharge (1)	5:00 PM (2/7/14)	2:00 PM (2)	Evening 2/7/14 (2)	Unknown (3)	9:05 AM	11:25 AM	No discharge	7:00 AM	7:05 AM
Title:	Project Engineer	**Approximate storm start date and time:**	Late evening of February 5, 2014.									
Signature: (Scott Bourne for Greg Hulburd)	Scott Bourne	**Were Pollutants Observed (if yes, complete reverse side):**	No (1)	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes

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FORM 4 (continued) - MONTHLY VISUAL OBSERVATIONS OF STORM WATER DISCHARGES

		Drainage Location Description:	SW-1/SW-2	TS1-E	SW-3	SW-4	SW-5	SW-6	SW-7	SW-10	SW-11	SW-12
Observations Date:	March 26, 2014	**Observation Time:**	8:15 AM	8:15 AM	8:15 AM	8:15 AM	8:15 AM	8:15 AM	8:15 AM	8:15 AM	8:15 AM	8:15 AM
Observer's Name:	Mary Cunningham	**Time Discharge Began:**	No discharge	No discharge	No discharge	Unknown	No discharge	No discharge	No discharge	No discharge	No discharge	Unknown
Title:	Senior Staff Engineer	**Approximate storm start date and time:**	Midday on March 25, 2014									
Signature:		**Were Pollutants Observed (if yes, complete reverse side):**	No	No	No	Yes	No	No	No	No	No	Yes
Observations Date:	April 25, 2014	**Observation Time:**	9:00 AM	9:00 AM	9:00 AM	9:00 AM	9:00 AM	9:00 AM	9:00 AM	9:00 AM	9:00 AM	9:00 AM
Observer's Name:	Mary Cunningham	**Time Discharge Began:**	No discharge	No discharge	No discharge	No discharge	No discharge	No discharge	No discharge	No discharge	Unknown	No discharge
Title:	Senior Staff Engineer	**Approximate storm start date and time:**	Early morning of April 25, 2014.									
Signature:		**Were Pollutants Observed (if yes, complete reverse side):**	No	No	No	No	No	No	No	No	No	No
Observations Date:	May 31, 2014	**Observation Time:**	--	--	--	--	--	--	--	--	--	--
Observer's Name:	Mary Cunningham	**Time Discharge Began:**	No discharge	No discharge	No discharge	No discharge	No discharge	No discharge	No discharge	No discharge	No discharge	No discharge
Title:	Senior Staff Engineer	**Approximate storm start date and time:**	No storm event in May 2014.									
Signature:		**Were Pollutants Observed (if yes, complete reverse side):**	No	No	No	No	No	No	No	No	No	No

NA = not applicable NR = not recorded

(1) Storm water from interceptors SW-1 and SW-2 routed to treatment system. See TS1-E for discharge from treatment system.

(2) Sample collected from storage tank prior to outflow. Sample represents discharge.

(3) Seal around the SW-5 normally closed discharge valve was found compromised on 2/6/2014; unknown start of discharge. The seal on the normally closed discharge valve was repaired the week of February 10, 2014.

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FORM 4 (continued) - MONTHLY VISUAL OBSERVATIONS OF STORM WATER DISCHARGES

		Drainage Location Description:	Describe Storm Water Discharge Characteristics Indicate whether storm water discharge is clear, cloudy, or discolored; causing staining, containing floating objects or an oil sheen, has odors, etc.	Identify and Describe Source(s) of Pollutants	Describe any revised or new BMPs and their date of implementation
Observation Date and Time:	November 20, 2013, 2:15 PM	TS1-E	Discharge was tan/brown with trace solids and resembled root beer. No staining, odor, or sheen detected.	Not identified	The following new or revised BMPs were implemented between fall 2013 and winter 2014 in response to monitoring results: -Installed two 30,000-gallon clarifier tanks to enhance solids settling at the combined SW-1 and SW-2 discharge. -Installed a sand filtration system for the combined SW-1 and SW-2 discharge. -Installed overhead coverage for two areas where sheet metal was stored in the SW-1 and SW-2 drainage areas. -Continued retrofit of conveyors to increase coverage of handled material and prevent material spillage. -Continued increase in frequency of sweeping and overall improvements to housekeeping. -The SWPPP was updated to document existing BMPs for surface preparation, painting and outdoor maintenance.
Observation Date and Time:	November 20, 2013, 1:25 PM	SW-3	Discharge was brown/black with trace solids and resembled soda. No staining, odor, or sheen detected.	Coal stored in SW-3 area at time of observation.	The following new or revised BMPs were implemented between fall 2013 and winter 2014 in response to monitoring results: -Added new catch basin and plumbing to prevent mixing of sheet flow runoff from SW-3 area with storm water collected in Hopper Building sump. -Continued retrofit of conveyors to increase coverage of handled material and prevent material spillage. -Continued increase in frequency of sweeping and overall improvements to housekeeping. -The SWPPP was updated to document existing BMPs for outdoor maintenance.
Observation Date and Time:	November 20, 2013, 1:10 PM	SW-4	Discharge was tan/brown with trace solids. Fine sediments were observed in discharge stream. No staining, odor, or sheen detected.	Not identified	The following new or revised BMPs were implemented between fall 2013 and winter 2014 in response to monitoring results: -Continued increase in frequency of sweeping and overall improvements to housekeeping. -Sealed surficial cracks in concrete to enable improved sweeping. -The SWPPP was updated to document existing BMPs for outdoor maintenance.
Observation Date and Time:	November 20, 2013, 9:25 AM	SW-5	Discharge was tan/clear with trace solids. No staining, odor, or sheen detected.	Not identified	The following new or revised BMPs were implemented between fall 2013 and winter 2014 in response to monitoring results: -The pump handle at the diesel fuel tank adjacent to the Locomotive Maintenance Pit was replaced with a locking pump handle to reduce potential for overflow or spillage. -Continued increase in frequency of sweeping and overall improvements to housekeeping. -Sealed surficial cracks in concrete to enable improved sweeping. -The SWPPP was updated to document existing BMPs for outdoor maintenance.
Observation Date and Time:	November 20, 2013, 12:15 PM	SW-6	Discharge was tan/clear and resembled tea. No solids, staining, odor, or sheen detected.	Not identified	The following new or revised BMPs were implemented between fall 2013 and winter 2014 in response to monitoring results: -Continued increase in frequency of sweeping and overall improvements to housekeeping. -Sealed surficial cracks in concrete to enable improved sweeping. -The SWPPP was updated to document existing BMPs for outdoor maintenance.

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FORM 4 (continued) - MONTHLY VISUAL OBSERVATIONS OF STORM WATER DISCHARGES

		Drainage Location Description:	Describe Storm Water Discharge Characteristics Indicate whether storm water discharge is clear, cloudy, or discolored; causing staining, containing floating objects or an oil sheen, has odors, etc.	Identify and Describe Source(s) of Pollutants	Describe any revised or new BMPs and their date of implementation
Observation Date and Time:	November 20, 2013, 8:45 AM	SW-11	Discharge was dark brown and turbid, with trace solids. No odor, staining, or sheen detected.	Not identified	The following new or revised BMPs were implemented between fall 2013 and winter 2014 in response to monitoring results: -Continued increase in frequency of sweeping and overall improvements to housekeeping. -Installed a normally-closed gate valve at the SW-11 outfall. -Installed two 21,000-gallon storm water tanks at SW-11 to provide additional residence time for sediment removal prior to discharging to the City of Richmond storm water system.
Observation Date and Time:	November 20, 2013, 12:00 PM	SW-12	Discharge was tan/clear with trace solids and fine sediments. No staining, odor, or sheen detected.	Not identified	The following new or revised BMPs were implemented between fall 2013 and winter 2014 in response to monitoring results: -Continued increase in frequency of sweeping and overall improvements to housekeeping. -Installed a normally-closed gate valve at the SW-12 outfall. -Installed a 21,000-gallon storm water tank at SW-12 to provide additional residence time for sediment removal prior to discharging to the City of Richmond storm water system.
Observation Date and Time:	February 7, 2014, 5:15 PM	TS1-E	Discharge was yellow/tan with some macroscopic suspended particles and silt. No staining, odor, or sheen observed.	Not identified	See previous description for BMP improvements for TS1-E (SW-1/SW-2).
Observation Date and Time:	February 6, 2014, 10:40 AM	SW-3	Discharge was clear/gray/tan with some macroscopic suspended particles and trace silt. No staining, odor, or sheen observed.	Not identified	See previous description for BMP improvements for SW-3.
Observation Date and Time:	February 7, 2014, 4:25 PM	SW-4	Discharge was yellow/tan with trace sediments. No staining, odor, or sheen observed.	Not identified	See previous description for BMP improvements for SW-4.
Observation Date and Time:	February 6, 2014, 7:00 AM	SW-5	Discharge was gray/tan with trace solids. No staining, odor, or sheen observed.	Not identified	See previous description for BMP improvements for SW-5.
Observation Date and Time:	February 6, 2014, 9:05 AM	SW-6	Discharge was gray/yellow/tan. No solids, staining, odor, or sheen observed.	Not identified	See previous description for BMP improvements for SW-6.
Observation Date and Time:	February 6, 2014, 11:30 AM	SW-7	Discharge was clear/yellow with some macroscopic suspended particles and trace solids. No staining, odor, or sheen observed.	Not identified	The following new or revised BMPs were implemented between fall 2013 and winter 2014 in response to monitoring results: -Continued increase in frequency of sweeping and overall improvements to housekeeping. -The SWPPP was updated to document existing BMPs for outdoor maintenance.
Observation Date and Time:	February 6, 2014, 7:05 AM	SW-11	Discharge was gray/black and cloudy, with some macroscopic suspended particles and silt. No staining, odor, or sheen observed.	Not identified	See previous description for BMP improvements for SW-11.
Observation Date and Time:	February 6, 2014, 7:15 AM	SW-12	Discharge was clear/slightly yellow with trace solids. No staining, odor, or sheen observed.	Not identified	See previous description for BMP improvements for SW-12.
Observation Date and Time:	March 26, 2014, 8:15 AM	SW-4	Discharge was dark brown/black and opaque, with some sediments. No staining, odor, or sheen was observed.	Not identified	See previous description for BMP improvements for SW-4.
Observation Date and Time:	March 26, 2014, 8:15 AM	SW-12	Discharge was tan with good clarity and trace solids. No staining, odor, or sheen was observed.	Not identified	See previous description for BMP improvements for SW-12.

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ANNUAL REPORT

SIDE A

FORM 5-ANNUAL COMPREHENSIVE SITE COMPLIANCE EVALUATION
POTENTIAL POLLUTANT SOURCE/INDUSTRIAL ACTIVITY BMP STATUS

EVALUATION DATE: 5/22/2014 **INSPECTOR NAME:** Mary Cunningham **TITLE:** Senior Staff Engineer **SIGNATURE:**

POTENTIAL POLLUTANT SOURCE/INDUSTRIAL ACTIVITY AREA (as identified in your SWPPP)			Describe deficiencies in BMPs or BMP implementation	Describe additional/revised BMPs or corrective actions and their date(s) of implementation
South Main Yard Storm Water Interceptor SW-1	HAVE ANY BMPs NOT BEEN FULLY IMPLEMENTED? ☐ YES ☒ NO ARE ADDITIONAL/REVISED BMPs NECESSARY? ☒ YES ☐ NO	If yes, to either question, complete the next two columns of this form	Improvements are described in the next column.	The sheet metal rack to the east of the rigging shop will be removed or retrofit with cover prior to the start of the 2014-2015 wet season. Flocculation with non-toxic biopolymer to be added to SW-1/2 treatment system (TS1-E) per April 17, 2014 work plan submitted to San Francisco Regional Water Quality Control Board, pending approval.
South Main Yard Storm Water Interceptor SW-2	HAVE ANY BMPs NOT BEEN FULLY IMPLEMENTED? ☐ YES ☒ NO ARE ADDITIONAL/REVISED BMPs NECESSARY? ☒ YES ☐ NO	If yes, to either question, complete the next two columns of this form	Improvements are described in the next column.	The sheet metal rack to the west of the rigging shop will be removed or retrofit with cover prior to the start of the 2014-2015 wet season. Flocculation with non-toxic biopolymer to be added to SW-1/2 treatment system as described above, pending approval.
South Main Yard Storm Water Interceptor SW-3	HAVE ANY BMPs NOT BEEN FULLY IMPLEMENTED? ☐ YES ☒ NO ARE ADDITIONAL/REVISED BMPs NECESSARY? ☐ YES ☒ NO	If yes, to either question, complete the next two columns of this form		
North Main Yard/United Heckathorn Storm Water Interceptor SW-4	HAVE ANY BMPs NOT BEEN FULLY IMPLEMENTED? ☐ YES ☒ NO ARE ADDITIONAL/REVISED BMPs NECESSARY? ☐ YES ☒ NO	If yes, to either question, complete the next two columns of this form		

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ANNUAL REPORT

SIDE B

FORM 5 (Continued)-ANNUAL COMPREHENSIVE SITE COMPLIANCE EVALUATION
POTENTIAL POLLUTANT SOURCE/INDUSTRIAL ACTIVITY BMP STATUS

EVALUATION DATE: 5/22/2014 **INSPECTOR NAME:** Mary Cunningham **TITLE:** Senior Staff Engineer **SIGNATURE:**

POTENTIAL POLLUTANT SOURCE/INDUSTRIAL ACTIVITY AREA (as identified in your SWPPP)			Describe deficiencies in BMPs or BMP implementation	Describe additional/revised BMPs or corrective actions and their date(s) of implementation
North Main Yard/United Heckathorn Storm Water Interceptor SW-5	HAVE ANY BMPs NOT BEEN FULLY IMPLEMENTED? ☐ YES ☒ NO ARE ADDITIONAL/REVISED BMPs NECESSARY? ☐ YES ☒ NO	If yes, to either question, complete the next two columns of this form		
North Main Yard/United Heckathorn Storm Water Interceptor SW-6	HAVE ANY BMPs NOT BEEN FULLY IMPLEMENTED? ☐ YES ☒ NO ARE ADDITIONAL/REVISED BMPs NECESSARY? ☐ YES ☒ NO	If yes, to either question, complete the next two columns of this form		
North Main Yard/United Heckathorn Storm Water Interceptor SW-7	HAVE ANY BMPs NOT BEEN FULLY IMPLEMENTED? ☐ YES ☒ NO ARE ADDITIONAL/REVISED BMPs NECESSARY? ☒ YES ☐ NO	If yes, to either question, complete the next two columns of this form	Improvements are described in the next column.	Cover over railroad ties in equipment storage area was ripped. Coverings will be replaced/repaired prior to 2014-2015 wet season.
South Parr Yard Storm Water Interceptors SW-10/SW-11	HAVE ANY BMPs NOT BEEN FULLY IMPLEMENTED? ☐ YES ☒ NO ARE ADDITIONAL/REVISED BMPs NECESSARY? ☐ YES ☒ NO	If yes, to either question, complete the next two columns of this form		

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ANNUAL REPORT

SIDE B

FORM 5 (Continued)-ANNUAL COMPREHENSIVE SITE COMPLIANCE EVALUATION
POTENTIAL POLLUTANT SOURCE/INDUSTRIAL ACTIVITY BMP STATUS

EVALUATION DATE: 5/22/2014 **INSPECTOR NAME:** Mary Cunningham **TITLE:** Senior Staff Engineer **SIGNATURE:**

POTENTIAL POLLUTANT SOURCE/INDUSTRIAL ACTIVITY AREA (as identified in your SWPPP)			Describe deficiencies in BMPs or BMP implementation	Describe additional/revised BMPs or corrective actions and their date(s) of implementation
North Parr Yard Storm Water Interceptor SW-12	HAVE ANY BMPs NOT BEEN FULLY IMPLEMENTED? ☐ YES ☒ NO ARE ADDITIONAL/REVISED BMPs NECESSARY? ☐ YES ☒ NO	If yes, to either question, complete the next two columns of this form		
	HAVE ANY BMPs NOT BEEN FULLY IMPLEMENTED? ☐ YES ☐ NO ARE ADDITIONAL/REVISED BMPs NECESSARY? ☐ YES ☐ NO	If yes, to either question, complete the next two columns of this form		
	HAVE ANY BMPs NOT BEEN FULLY IMPLEMENTED? ☐ YES ☐ NO ARE ADDITIONAL/REVISED BMPs NECESSARY? ☐ YES ☐ NO	If yes, to either question, complete the next two columns of this form		
	HAVE ANY BMPs NOT BEEN FULLY IMPLEMENTED? ☐ YES ☐ NO ARE ADDITIONAL/REVISED BMPs NECESSARY? ☐ YES ☐ NO	If yes, to either question, complete the next two columns of this form		

ATTACHMENT B

2013-2014 ANNUAL REPORT FOR STORM WATER DISCHARGES
ASSOCIATED WITH INDUSTRIAL ACTIVITIES –
ADDITIONAL EXPLANATIONS

2013-2014 Annual Report
Storm Water Discharges Associated with Industrial Activities
Levin Richmond Terminal Corporation
Additional Explanations

E.6. During the first qualified storm event of the year (November 20, 2013), the normally closed gate valve at SW-4 and SW-12 interceptors were not closed. Discharge likely began shortly after the storm event started. Samples were collected at the beginning of operating hours and therefore were likely not collected in the first hour of discharge.

During the February 6-7, 2014 storm event, the seal on the normally closed gate valve at SW-5 was found compromised. The start of discharge was unknown. The SW-5 gate valve was repaired the week of February 10, 2014. Storm water collected from interceptors SW-3 and SW-4 was observed and sampled prior to overflow and start of discharge. The samples represent discharge.

G.1. No rain events occurred during scheduled work hours in October 2013, December 2013, January 2014, or May 2014.

ATTACHMENT C

ANALYTICAL DATA

Table 1. 2013 - 2014 Annual Storm Water Sampling Data for General Parameters and Metals - Levin Richmond Terminal Corporation

Discharge Location	Notes	pH	Specific Conductance	Total Oil and Grease	Total Suspended Solids	Aluminum	Iron	Lead		Zinc	
		-	µmhos/cm	mg/L	mg/L	µg/L	µg/L	µg/L		µg/L	
TS1-E											
11/20/2013	Note (a)	6.96	**240**	< 1.4	83	**1,700**	**1,600**	16		190	J
2/7/2014	Note (a)	7.37	**2,600**	< 1.4	70	**990**	**1,700**	14		220	
SW-3											
11/20/2013		7.88	**300**	< 1.4	**220**	**7,600**	**5,000**	19	J	220	J
2/6/2014		7.72	**6,000**	< 1.5	53	550	**1,500**	7.9		130	
SW-4											
11/20/2013		7.50	**790**	< 1.3	**180**	**3,000**	**3,400**	36		200	
2/7/2014	Note (e)	7.52	**1,800**	< 1.4	37	**1,800**	**4,200**	69		**410**	
SW-5											
11/20/2013		7.63	**200**	< 1.4	17	260	540	9.1		130	
2/6/2014		7.65	**320**	< 1.4	35	**1,300**	**2,400**	35		240	
2/6/2014	Duplicate	7.66	**320**	< 1.5	37	**850**	**2,400**	38		**270**	
SW-6											
11/20/2013		7.26	140	< 1.4	22	620	**1,200**	17		190	
11/20/2013	Duplicate	7.27	150	< 1.4	17	530	**1,000**	15		180	
2/6/2014		7.57	110	< 1.3	9.1	340	**1,500**	13		170	
SW-7											
2/6/2014		7.65	**1,400**	< 1.3	5.2	79	220	2.5		30	
S PARR SW-11											
11/20/2013		7.70	**13,000**	< 1.4	88	300	700	5.1		120	
2/6/2014		7.70	**8,200**	< 1.5	**110**	510	**1,100**	6.8	J	120	J
N PARR SW-12											
11/20/2013		7.56	**620**	< 1.4	63	**2,000**	**3,900**	26		180	
2/6/2014		7.96	120	< 1.4	19	710	**1,700**	13		96	
Benchmarks		6.0-9.0[b]	200[e]	15[c]	100[f]	750[d]	1,000[d]	262[d]		260[d]	

Note:

Data presented is from 2013-2014 storm water sampling events. **Bold** values exceed benchmarks listed at the bottom of the table.

Metal concentrations are reported on a total recoverable basis.

[a] Treatment system effluent sample. Storm water from drainage areas SW-1 and SW-2.

[b] Instantaneous maximum; benchmark based on San Francisco Bay Basins (Region 2) Water Quality Control Plan. California Regional Water Quality Control Board – San Francisco Bay Region, 2011.

[c] Based on Multi-sector General Permit for Stormwater Discharges Associated with Industrial Activities (MSGP), Modified May 27, 2009.

[d] Based on MSGP, Section 8, Subpart Q. Water Transportation. Water Hardness Range = 250+ mg/L.

[e] Based on SWRCB General Industrial Stormwater Permit Parameter Benchmark Values in March 18, 2013 letter from Shin-Roei Lee to Gary Levin.

[f] Storm water sample collected from interceptor SW-4 prior to time of discharge on evening of 2/7/14. The interceptor was anticipated to discharge overnight outside of normal operating hours.

Acronyms/Abbreviations:

J = concentration reported is an estimated value
mg/L = milligrams per liter
< *n* = not detected above the detection limit
SWRCB = State Water Resources Control Board
µg/L = micrograms per liter
µmhos/cm = micromhos per centimeter
--- = not analyzed or not applicable

Table 2. 2013-2014 Annual Storm Water Sampling Data for Pesticides - Levin Richmond Terminal Corporation

	Notes	4,4'-DDD	4,4'-DDE	4,4'-DDT	Aldrin	alpha-BHC	alpha-Chlordane	beta-BHC	Chlordane	delta-BHC	Dieldrin	Endosulfan I	Endosulfan II	Endosulfan sulfate	Endrin	Endrin aldehyde	Endrin ketone	gamma-BHC (Lind	gamma-Chlordane	Heptachlor	Heptachlor epoxide	Methoxychlor	Toxaphene
		µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
SW-3																							
11/20/2013		< 0.062	< 0.062	**0.024 J**	< 0.062	< 0.062	< 0.062	< 0.062	< 1.0	< 0.062	< 0.062	< 0.062	< 0.062	< 0.062	< 0.062	< 0.062	< 0.062	< 0.062	< 0.062	< 0.062	< 0.062	< 0.062	< 1.0
2/6/2014		< 0.0022	< 0.0022	< 0.0022	< 0.0022	< 0.098	< 0.0022	< 0.098	< 0.98	< 0.098	< 0.0022	< 0.098	< 0.098	< 0.098	< 0.0022	< 0.098	---	< 0.0022	< 0.0022	< 0.0022	< 0.0022	< 0.098	< 0.027
SW-4																							
11/20/2013		< 0.057	< 0.057	< 0.057	< 0.057	< 0.057	< 0.057	< 0.057	< 0.95	< 0.057	< 0.057	< 0.057	< 0.057	< 0.057	< 0.057	< 0.057	< 0.057	< 0.057	< 0.057	< 0.057	< 0.057	< 0.057	< 0.95
2/7/2014	Note (a)	**0.024**	**0.014**	**0.057**	< 0.0021	< 0.11	< 0.0021	< 0.11	< 1.1	< 0.11	< 0.0021	**0.077 J**	< 0.11	< 0.11	< 0.0021	< 0.11	---	< 0.0021	< 0.0021	< 0.0021	< 0.0021	< 0.11	< 0.026
SW-5																							
11/20/2013		< 0.061	< 0.061	< 0.061	< 0.061	< 0.061	< 0.061	< 0.061	< 1.0	< 0.061	< 0.061	< 0.061	< 0.061	< 0.061	< 0.061	< 0.061	< 0.061	< 0.061	< 0.061	< 0.061	< 0.061	< 0.061	< 1.0
2/6/2014		< 0.0022	< 0.0022	**0.0092**	< 0.0022	< 0.097	< 0.0022	< 0.097	< 0.97	< 0.097	< 0.0022	**0.041 J**	< 0.097	< 0.097	< 0.0022	< 0.097	---	< 0.0022	< 0.0022	< 0.0022	< 0.0022	< 0.097	< 0.027
2/6/2014	Duplicate	< 0.0022	< 0.0022	**0.0086**	< 0.0022	< 0.096	< 0.0022	< 0.096	< 0.96	< 0.096	< 0.0022	**0.043 J**	< 0.096	< 0.096	< 0.0022	< 0.096	---	< 0.0022	< 0.0022	< 0.0022	< 0.0022	< 0.096	< 0.027
SW-6																							
11/20/2013		**0.016 J**	**0.025 J**	**0.053 J**	< 0.061	< 0.061	< 0.061	< 0.061	< 1.0	< 0.061	< 0.061	< 0.061	< 0.061	< 0.061	< 0.061	< 0.061	< 0.061	< 0.061	< 0.061	< 0.061	< 0.061	< 0.061	< 1.0
11/20/2013	Duplicate	< 0.057	**0.011 J**	**0.039 J**	< 0.057	< 0.057	< 0.057	< 0.057	< 0.95	< 0.057	< 0.057	< 0.057	< 0.057	< 0.057	< 0.057	< 0.057	< 0.057	< 0.057	< 0.057	< 0.057	< 0.057	< 0.057	< 0.95
2/6/2014		< 0.0019	< 0.0019	**0.026**	< 0.0019	< 0.096	< 0.0019	< 0.096	< 0.96	< 0.096	< 0.0019	**0.046 J**	< 0.096	< 0.096	< 0.0019	< 0.096	---	< 0.0019	< 0.0019	< 0.0019	< 0.0019	< 0.096	< 0.024
SW-7																							
2/6/2014		< 0.0022	< 0.0022	< 0.0022	< 0.0022	< 0.098	< 0.0022	< 0.098	< 0.98	< 0.098	< 0.0022	< 0.098	< 0.098	< 0.098	< 0.0022	< 0.098	---	< 0.0022	< 0.0022	< 0.0022	< 0.0022	< 0.098	< 0.027
Remediation Goal [b]				0.00059							0.00014												

Notes:

Data presented is from 2013-2014 storm water sampling events.

Detected concentrations of pesticides are displayed in **bold**.

[a] Storm water sample collected from interceptor SW-4 prior to time of discharge on evening of 2/7/14. The interceptor was anticipated to discharge overnight outside of scheduled facility operating hours.

[b] Based on USEPA Superfund Record of Decision: United Heckathorn Co., October 1994.

Acronyms/Abbreviations:

J = concentration reported is an

TPH = total petroleum hydrocar

< *n* =not detected above the rep

--- = not analyzed

µg/L = micrograms pet liter

USEPA = United States Environmenal Protection Agency

2013 – 2014
LABORATORY ANALYTICAL REPORTS

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Pleasanton
1220 Quarry Lane
Pleasanton, CA 94566
Tel: (925)484-1919

TestAmerica Job ID: 720-53898-1
Client Project/Site: 2013-2014 Annual Sampling

For:
Weiss Associates
2200 Powell Street
Suite 925
Emeryville, California 94608

Attn: Greg Hulburd

Authorized for release by:
12/9/2013 11:57:38 AM

Micah Smith, Project Manager I
()
micah.smith@testamericainc.com

LINKS

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This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

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Definitions/Glossary

Client: Weiss Associates
Project/Site: 2013-2014 Annual Sampling

TestAmerica Job ID: 720-53898-1

Qualifiers

GC Semi VOA

Qualifier	Qualifier Description
*	LCS or LCSD exceeds the control limits
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
X	Surrogate is outside control limits
p	The %RPD between the primary and confirmation column/detector is >40%. The lower value has been reported.

Metals

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
B	Compound was found in the blank and sample.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CNF	Contains no Free Liquid
DER	Duplicate error ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative error ratio
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Job ID: 720-53898-1

Laboratory: TestAmerica Pleasanton

Narrative

Job Narrative
720-53898-1

Comments
No additional comments.

Receipt
The samples were received on 11/20/2013 5:10 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 5 coolers at receipt time were 6.2º C, 6.2º C, 7.5º C, 10.0º C and 10.3º C.

GC Semi VOA
Method(s) 8081A: The laboratory control sample duplicate (LCSD) for batch #149119 recovered outside control limits for the following analyte: Methoxychlor. Thos analyte was biased high in the LCSD and were not detected in the associated samples; therefore, the data have been reported.

Method(s) 8081A: Surrogate recovery for the following sample(s) was outside the upper control limit: SW-5 (720-53898-4). This sample did not contain any target analytes; therefore, re-extraction and/or re-analysis was not performed.

No other analytical or quality issues were noted.

Metals
No analytical or quality issues were noted.

General Chemistry
Method(s) 1664A: Insufficient sample volume was available to perform batch matrix spike/matrix spike duplicate (MS/MSD) associated with batch 146842. The laboratory control sample (LCS) was performed in duplicate to provide precision data for this batch.

Method(s) 1664A: Insufficient sample volume was available to perform batch matrix spike/matrix spike duplicate (MS/MSD) associated with batch 149007. The laboratory control sample (LCS) was performed in duplicate to provide precision data for this batch.

No other analytical or quality issues were noted.

Organic Prep
No analytical or quality issues were noted.

Detection Summary

Client: Weiss Associates
Project/Site: 2013-2014 Annual Sampling

TestAmerica Job ID: 720-53898-1

Client Sample ID: TS1-E — Lab Sample ID: 720-53898-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Aluminum	1700		100	50	ug/L	10		200.8	Total Recoverable
Iron	1600	B	200	80	ug/L	10		200.8	Total Recoverable
Lead	16		10	5.0	ug/L	10		200.8	Total Recoverable
Zinc	190	J	200	50	ug/L	10		200.8	Total Recoverable
Total Suspended Solids	83		10	5.0	mg/L	1		SM 2540D	Total/NA

Analyte	Result	Qualifier	RL	RL	Unit	Dil Fac	D	Method	Prep Type
pH	6.96		0.100	0.100	SU	1		9040B	Total/NA
Specific Conductance	240		1.0	1.0	umhos/cm	1		SM 2510B	Total/NA

Client Sample ID: SW-3 — Lab Sample ID: 720-53898-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
4,4'-DDT	0.024	J *	0.062	0.024	ug/L	1		8081A	Total/NA
Aluminum	7600		200	100	ug/L	20		200.8	Total Recoverable
Iron	5000	B	400	160	ug/L	20		200.8	Total Recoverable
Lead	19	J	20	10	ug/L	20		200.8	Total Recoverable
Zinc	220	J	400	100	ug/L	20		200.8	Total Recoverable
Total Suspended Solids	220		13	6.3	mg/L	1		SM 2540D	Total/NA

Analyte	Result	Qualifier	RL	RL	Unit	Dil Fac	D	Method	Prep Type
pH	7.88		0.100	0.100	SU	1		9040B	Total/NA
Specific Conductance	300		1.0	1.0	umhos/cm	1		SM 2510B	Total/NA

Client Sample ID: SW-4 — Lab Sample ID: 720-53898-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Aluminum	3000		100	50	ug/L	10		200.8	Total Recoverable
Iron	3400	B	200	80	ug/L	10		200.8	Total Recoverable
Lead	36		10	5.0	ug/L	10		200.8	Total Recoverable
Zinc	200		200	50	ug/L	10		200.8	Total Recoverable
Total Suspended Solids	180		13	6.3	mg/L	1		SM 2540D	Total/NA

Analyte	Result	Qualifier	RL	RL	Unit	Dil Fac	D	Method	Prep Type
pH	7.50		0.100	0.100	SU	1		9040B	Total/NA
Specific Conductance	790		1.0	1.0	umhos/cm	1		SM 2510B	Total/NA

Client Sample ID: SW-5 — Lab Sample ID: 720-53898-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Aluminum	260		10	5.0	ug/L	1		200.8	Total Recoverable
Iron	540	B	20	8.0	ug/L	1		200.8	Total Recoverable

This Detection Summary does not include radiochemical test results.

Detection Summary

Client: Weiss Associates
Project/Site: 2013-2014 Annual Sampling

TestAmerica Job ID: 720-53898-1

Client Sample ID: SW-5 (Continued) — Lab Sample ID: 720-53898-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Lead	9.1		1.0	0.50	ug/L	1		200.8	Total Recoverable
Zinc	130		20	5.0	ug/L	1		200.8	Total Recoverable
Total Suspended Solids	17		2.5	1.3	mg/L	1		SM 2540D	Total/NA

Analyte	Result	Qualifier	RL	RL	Unit	Dil Fac	D	Method	Prep Type
pH	7.63		0.100	0.100	SU	1		9040B	Total/NA
Specific Conductance	200		1.0	1.0	umhos/cm	1		SM 2510B	Total/NA

Client Sample ID: SW-6 — Lab Sample ID: 720-53898-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
4,4'-DDT	0.053	J	0.061	0.023	ug/L	1		8081A	Total/NA
4,4'-DDE	0.025	J	0.061	0.0061	ug/L	1		8081A	Total/NA
4,4'-DDD	0.016	J	0.061	0.015	ug/L	1		8081A	Total/NA
Aluminum	620		10	5.0	ug/L	1		200.8	Total Recoverable
Iron	1200	B	20	8.0	ug/L	1		200.8	Total Recoverable
Lead	17		1.0	0.50	ug/L	1		200.8	Total Recoverable
Zinc	190		20	5.0	ug/L	1		200.8	Total Recoverable
Total Suspended Solids	22		2.5	1.3	mg/L	1		SM 2540D	Total/NA

Analyte	Result	Qualifier	RL	RL	Unit	Dil Fac	D	Method	Prep Type
pH	7.26		0.100	0.100	SU	1		9040B	Total/NA
Specific Conductance	140		1.0	1.0	umhos/cm	1		SM 2510B	Total/NA

Client Sample ID: SW-11 — Lab Sample ID: 720-53898-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Aluminum	300		50	25	ug/L	5		200.8	Total Recoverable
Iron	700	B	100	40	ug/L	5		200.8	Total Recoverable
Lead	5.1		5.0	2.5	ug/L	5		200.8	Total Recoverable
Zinc	120		100	25	ug/L	5		200.8	Total Recoverable
Total Suspended Solids	88		5.0	2.5	mg/L	1		SM 2540D	Total/NA

Analyte	Result	Qualifier	RL	RL	Unit	Dil Fac	D	Method	Prep Type
pH	7.70		0.100	0.100	SU	1		9040B	Total/NA
Specific Conductance	13000		1.0	1.0	umhos/cm	1		SM 2510B	Total/NA

Client Sample ID: SW-12 — Lab Sample ID: 720-53898-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Aluminum	2000		10	5.0	ug/L	1		200.8	Total Recoverable
Iron	3900	B	20	8.0	ug/L	1		200.8	Total Recoverable
Lead	26		1.0	0.50	ug/L	1		200.8	Total Recoverable

This Detection Summary does not include radiochemical test results.

Detection Summary

Client: Weiss Associates
Project/Site: 2013-2014 Annual Sampling

TestAmerica Job ID: 720-53898-1

Client Sample ID: SW-12 (Continued) — Lab Sample ID: 720-53898-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Zinc	180		20	5.0	ug/L	1		200.8	Total Recoverable
Total Suspended Solids	63		5.0	2.5	mg/L	1		SM 2540D	Total/NA

Analyte	Result	Qualifier	RL	RL	Unit	Dil Fac	D	Method	Prep Type
pH	7.56		0.100	0.100	SU	1		9040B	Total/NA
Specific Conductance	620		1.0	1.0	umhos/cm	1		SM 2510B	Total/NA

Client Sample ID: SW-6-D — Lab Sample ID: 720-53898-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
4,4'-DDT	0.039	J	0.057	0.022	ug/L	1		8081A	Total/NA
4,4'-DDE	0.011	J p	0.057	0.0057	ug/L	1		8081A	Total/NA
Aluminum	530		10	5.0	ug/L	1		200.8	Total Recoverable
Iron	1000	B	20	8.0	ug/L	1		200.8	Total Recoverable
Lead	15		1.0	0.50	ug/L	1		200.8	Total Recoverable
Zinc	180		20	5.0	ug/L	1		200.8	Total Recoverable
Total Suspended Solids	17		3.3	1.7	mg/L	1		SM 2540D	Total/NA

Analyte	Result	Qualifier	RL	RL	Unit	Dil Fac	D	Method	Prep Type
pH	7.27		0.100	0.100	SU	1		9040B	Total/NA
Specific Conductance	150		1.0	1.0	umhos/cm	1		SM 2510B	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample Results

Client: Weiss Associates
Project/Site: 2013-2014 Annual Sampling

TestAmerica Job ID: 720-53898-1

Client Sample ID: TS1-E

Lab Sample ID: 720-53898-1

Date Collected: 11/20/13 14:15

Matrix: Water

Date Received: 11/20/13 17:10

Method: 200.8 - ICPMS Total Metals - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	1700		100	50	ug/L		11/26/13 13:41	11/26/13 22:43	10
Iron	1600	B	200	80	ug/L		11/26/13 13:41	11/27/13 13:05	10
Lead	16		10	5.0	ug/L		11/26/13 13:41	11/26/13 22:43	10
Zinc	190	J	200	50	ug/L		11/26/13 13:41	11/26/13 22:43	10

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
SGT-HEM	ND		5.1	1.4	mg/L		12/06/13 12:45	12/06/13 12:47	1
Total Suspended Solids	83		10	5.0	mg/L			11/25/13 16:34	1

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
pH	6.96		0.100	0.100	SU			11/21/13 01:08	1
Specific Conductance	240		1.0	1.0	umhos/cm			11/25/13 13:37	1

Client Sample Results

Client: Weiss Associates
Project/Site: 2013-2014 Annual Sampling

TestAmerica Job ID: 720-53898-1

Client Sample ID: SW-3

Date Collected: 11/20/13 13:25
Date Received: 11/20/13 17:10

Lab Sample ID: 720-53898-2

Matrix: Water

Method: 8081A - Organochlorine Pesticides (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aldrin	ND		0.062	0.0051	ug/L		11/27/13 07:54	11/27/13 17:02	1
Dieldrin	ND		0.062	0.0092	ug/L		11/27/13 07:54	11/27/13 17:02	1
Endrin aldehyde	ND		0.062	0.016	ug/L		11/27/13 07:54	11/27/13 17:02	1
Endrin	ND		0.062	0.011	ug/L		11/27/13 07:54	11/27/13 17:02	1
Endrin ketone	ND		0.062	0.010	ug/L		11/27/13 07:54	11/27/13 17:02	1
Heptachlor	ND		0.062	0.0062	ug/L		11/27/13 07:54	11/27/13 17:02	1
Heptachlor epoxide	ND		0.062	0.0062	ug/L		11/27/13 07:54	11/27/13 17:02	1
4,4'-DDT	**0.024**	**J ***	0.062	0.024	ug/L		11/27/13 07:54	11/27/13 17:02	1
4,4'-DDE	ND		0.062	0.0062	ug/L		11/27/13 07:54	11/27/13 17:02	1
4,4'-DDD	ND		0.062	0.015	ug/L		11/27/13 07:54	11/27/13 17:02	1
Endosulfan I	ND		0.062	0.0062	ug/L		11/27/13 07:54	11/27/13 17:02	1
Endosulfan II	ND		0.062	0.014	ug/L		11/27/13 07:54	11/27/13 17:02	1
alpha-BHC	ND		0.062	0.0062	ug/L		11/27/13 07:54	11/27/13 17:02	1
beta-BHC	ND		0.062	0.010	ug/L		11/27/13 07:54	11/27/13 17:02	1
gamma-BHC (Lindane)	ND		0.062	0.0062	ug/L		11/27/13 07:54	11/27/13 17:02	1
delta-BHC	ND		0.062	0.0062	ug/L		11/27/13 07:54	11/27/13 17:02	1
Endosulfan sulfate	ND		0.062	0.010	ug/L		11/27/13 07:54	11/27/13 17:02	1
Methoxychlor	ND	*	0.062	0.0062	ug/L		11/27/13 07:54	11/27/13 17:02	1
Toxaphene	ND		1.0	0.40	ug/L		11/27/13 07:54	11/27/13 17:02	1
Chlordane (technical)	ND		1.0	0.41	ug/L		11/27/13 07:54	11/27/13 17:02	1
alpha-Chlordane	ND		0.062	0.0082	ug/L		11/27/13 07:54	11/27/13 17:02	1
gamma-Chlordane	ND		0.062	0.0062	ug/L		11/27/13 07:54	11/27/13 17:02	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*81*		*36 - 112*	*11/27/13 07:54*	*11/27/13 17:02*	*1*
DCB Decachlorobiphenyl	*56*		*14 - 103*	*11/27/13 07:54*	*11/27/13 17:02*	*1*

Method: 200.8 - ICPMS Total Metals - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	**7600**		200	100	ug/L		11/26/13 13:41	11/26/13 22:45	20
Iron	**5000**	**B**	400	160	ug/L		11/26/13 13:41	11/26/13 22:45	20
Lead	**19**	**J**	20	10	ug/L		11/26/13 13:41	11/26/13 22:45	20
Zinc	**220**	**J**	400	100	ug/L		11/26/13 13:41	11/26/13 22:45	20

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
SGT-HEM	ND		4.9	1.4	mg/L		11/26/13 06:06	11/26/13 06:18	1
Total Suspended Solids	**220**		13	6.3	mg/L			11/25/13 16:34	1

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
pH	**7.88**		0.100	0.100	SU			11/21/13 01:13	1
Specific Conductance	**300**		1.0	1.0	umhos/cm			11/25/13 13:37	1

Client Sample Results

Client: Weiss Associates
Project/Site: 2013-2014 Annual Sampling

TestAmerica Job ID: 720-53898-1

Client Sample ID: SW-4

Date Collected: 11/20/13 13:10
Date Received: 11/20/13 17:10

Lab Sample ID: 720-53898-3

Matrix: Water

Method: 8081A - Organochlorine Pesticides (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aldrin	ND		0.057	0.0048	ug/L		11/27/13 07:54	11/27/13 17:19	1
Dieldrin	ND		0.057	0.0086	ug/L		11/27/13 07:54	11/27/13 17:19	1
Endrin aldehyde	ND		0.057	0.015	ug/L		11/27/13 07:54	11/27/13 17:19	1
Endrin	ND		0.057	0.010	ug/L		11/27/13 07:54	11/27/13 17:19	1
Endrin ketone	ND		0.057	0.0095	ug/L		11/27/13 07:54	11/27/13 17:19	1
Heptachlor	ND		0.057	0.0057	ug/L		11/27/13 07:54	11/27/13 17:19	1
Heptachlor epoxide	ND		0.057	0.0057	ug/L		11/27/13 07:54	11/27/13 17:19	1
4,4'-DDT	ND		0.057	0.022	ug/L		11/27/13 07:54	11/27/13 17:19	1
4,4'-DDE	ND		0.057	0.0057	ug/L		11/27/13 07:54	11/27/13 17:19	1
4,4'-DDD	ND		0.057	0.014	ug/L		11/27/13 07:54	11/27/13 17:19	1
Endosulfan I	ND		0.057	0.0057	ug/L		11/27/13 07:54	11/27/13 17:19	1
Endosulfan II	ND		0.057	0.013	ug/L		11/27/13 07:54	11/27/13 17:19	1
alpha-BHC	ND		0.057	0.0057	ug/L		11/27/13 07:54	11/27/13 17:19	1
beta-BHC	ND		0.057	0.0095	ug/L		11/27/13 07:54	11/27/13 17:19	1
gamma-BHC (Lindane)	ND		0.057	0.0057	ug/L		11/27/13 07:54	11/27/13 17:19	1
delta-BHC	ND		0.057	0.0057	ug/L		11/27/13 07:54	11/27/13 17:19	1
Endosulfan sulfate	ND		0.057	0.0095	ug/L		11/27/13 07:54	11/27/13 17:19	1
Methoxychlor	ND	*	0.057	0.0057	ug/L		11/27/13 07:54	11/27/13 17:19	1
Toxaphene	ND		0.95	0.37	ug/L		11/27/13 07:54	11/27/13 17:19	1
Chlordane (technical)	ND		0.95	0.38	ug/L		11/27/13 07:54	11/27/13 17:19	1
alpha-Chlordane	ND		0.057	0.0076	ug/L		11/27/13 07:54	11/27/13 17:19	1
gamma-Chlordane	ND		0.057	0.0057	ug/L		11/27/13 07:54	11/27/13 17:19	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*111*		*36 - 112*	*11/27/13 07:54*	*11/27/13 17:19*	*1*
DCB Decachlorobiphenyl	*65*		*14 - 103*	*11/27/13 07:54*	*11/27/13 17:19*	*1*

Method: 200.8 - ICPMS Total Metals - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	**3000**		100	50	ug/L		11/26/13 13:41	11/26/13 22:53	10
Iron	**3400**	**B**	200	80	ug/L		11/26/13 13:41	11/26/13 22:53	10
Lead	**36**		10	5.0	ug/L		11/26/13 13:41	11/26/13 22:53	10
Zinc	**200**		200	50	ug/L		11/26/13 13:41	11/26/13 22:53	10

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
SGT-HEM	ND		4.8	1.3	mg/L		11/26/13 06:06	11/26/13 06:18	1
Total Suspended Solids	**180**		13	6.3	mg/L			11/25/13 16:34	1

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
pH	**7.50**		0.100	0.100	SU			11/21/13 01:20	1
Specific Conductance	**790**		1.0	1.0	umhos/cm			11/25/13 13:37	1

Client Sample Results

Client: Weiss Associates
Project/Site: 2013-2014 Annual Sampling

TestAmerica Job ID: 720-53898-1

Client Sample ID: SW-5

Date Collected: 11/20/13 09:25
Date Received: 11/20/13 17:10

Lab Sample ID: 720-53898-4

Matrix: Water

Method: 8081A - Organochlorine Pesticides (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aldrin	ND		0.061	0.0051	ug/L		11/27/13 07:54	11/27/13 17:35	1
Dieldrin	ND		0.061	0.0092	ug/L		11/27/13 07:54	11/27/13 17:35	1
Endrin aldehyde	ND		0.061	0.016	ug/L		11/27/13 07:54	11/27/13 17:35	1
Endrin	ND		0.061	0.011	ug/L		11/27/13 07:54	11/27/13 17:35	1
Endrin ketone	ND		0.061	0.010	ug/L		11/27/13 07:54	11/27/13 17:35	1
Heptachlor	ND		0.061	0.0061	ug/L		11/27/13 07:54	11/27/13 17:35	1
Heptachlor epoxide	ND		0.061	0.0061	ug/L		11/27/13 07:54	11/27/13 17:35	1
4,4'-DDT	ND		0.061	0.023	ug/L		11/27/13 07:54	11/27/13 17:35	1
4,4'-DDE	ND		0.061	0.0061	ug/L		11/27/13 07:54	11/27/13 17:35	1
4,4'-DDD	ND		0.061	0.015	ug/L		11/27/13 07:54	11/27/13 17:35	1
Endosulfan I	ND		0.061	0.0061	ug/L		11/27/13 07:54	11/27/13 17:35	1
Endosulfan II	ND		0.061	0.014	ug/L		11/27/13 07:54	11/27/13 17:35	1
alpha-BHC	ND		0.061	0.0061	ug/L		11/27/13 07:54	11/27/13 17:35	1
beta-BHC	ND		0.061	0.010	ug/L		11/27/13 07:54	11/27/13 17:35	1
gamma-BHC (Lindane)	ND		0.061	0.0061	ug/L		11/27/13 07:54	11/27/13 17:35	1
delta-BHC	ND		0.061	0.0061	ug/L		11/27/13 07:54	11/27/13 17:35	1
Endosulfan sulfate	ND		0.061	0.010	ug/L		11/27/13 07:54	11/27/13 17:35	1
Methoxychlor	ND	*	0.061	0.0061	ug/L		11/27/13 07:54	11/27/13 17:35	1
Toxaphene	ND		1.0	0.40	ug/L		11/27/13 07:54	11/27/13 17:35	1
Chlordane (technical)	ND		1.0	0.41	ug/L		11/27/13 07:54	11/27/13 17:35	1
alpha-Chlordane	ND		0.061	0.0082	ug/L		11/27/13 07:54	11/27/13 17:35	1
gamma-Chlordane	ND		0.061	0.0061	ug/L		11/27/13 07:54	11/27/13 17:35	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*149*	*X*	*36 - 112*	*11/27/13 07:54*	*11/27/13 17:35*	*1*
DCB Decachlorobiphenyl	*111*	*X*	*14 - 103*	*11/27/13 07:54*	*11/27/13 17:35*	*1*

Method: 200.8 - ICPMS Total Metals - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	**260**		10	5.0	ug/L		11/26/13 13:41	11/26/13 22:55	1
Iron	**540**	**B**	20	8.0	ug/L		11/26/13 13:41	11/26/13 22:55	1
Lead	**9.1**		1.0	0.50	ug/L		11/26/13 13:41	11/26/13 22:55	1
Zinc	**130**		20	5.0	ug/L		11/26/13 13:41	11/26/13 22:55	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
SGT-HEM	ND		5.0	1.4	mg/L		11/26/13 06:06	11/26/13 06:18	1
Total Suspended Solids	**17**		2.5	1.3	mg/L			11/25/13 16:34	1

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
pH	**7.63**		0.100	0.100	SU			11/21/13 01:23	1
Specific Conductance	**200**		1.0	1.0	umhos/cm			11/26/13 12:38	1

Client Sample Results

Client: Weiss Associates
Project/Site: 2013-2014 Annual Sampling

TestAmerica Job ID: 720-53898-1

Client Sample ID: SW-6

Lab Sample ID: 720-53898-5

Date Collected: 11/20/13 12:15
Date Received: 11/20/13 17:10

Matrix: Water

Method: 8081A - Organochlorine Pesticides (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aldrin	ND		0.061	0.0051	ug/L		11/27/13 07:54	11/27/13 17:52	1
Dieldrin	ND		0.061	0.0091	ug/L		11/27/13 07:54	11/27/13 17:52	1
Endrin aldehyde	ND		0.061	0.016	ug/L		11/27/13 07:54	11/27/13 17:52	1
Endrin	ND		0.061	0.011	ug/L		11/27/13 07:54	11/27/13 17:52	1
Endrin ketone	ND		0.061	0.010	ug/L		11/27/13 07:54	11/27/13 17:52	1
Heptachlor	ND		0.061	0.0061	ug/L		11/27/13 07:54	11/27/13 17:52	1
Heptachlor epoxide	ND		0.061	0.0061	ug/L		11/27/13 07:54	11/27/13 17:52	1
4,4'-DDT	**0.053**	**J**	0.061	0.023	ug/L		11/27/13 07:54	11/27/13 17:52	1
4,4'-DDE	**0.025**	**J**	0.061	0.0061	ug/L		11/27/13 07:54	11/27/13 17:52	1
4,4'-DDD	**0.016**	**J**	0.061	0.015	ug/L		11/27/13 07:54	11/27/13 17:52	1
Endosulfan I	ND		0.061	0.0061	ug/L		11/27/13 07:54	11/27/13 17:52	1
Endosulfan II	ND		0.061	0.014	ug/L		11/27/13 07:54	11/27/13 17:52	1
alpha-BHC	ND		0.061	0.0061	ug/L		11/27/13 07:54	11/27/13 17:52	1
beta-BHC	ND		0.061	0.010	ug/L		11/27/13 07:54	11/27/13 17:52	1
gamma-BHC (Lindane)	ND		0.061	0.0061	ug/L		11/27/13 07:54	11/27/13 17:52	1
delta-BHC	ND		0.061	0.0061	ug/L		11/27/13 07:54	11/27/13 17:52	1
Endosulfan sulfate	ND		0.061	0.010	ug/L		11/27/13 07:54	11/27/13 17:52	1
Methoxychlor	ND	*	0.061	0.0061	ug/L		11/27/13 07:54	11/27/13 17:52	1
Toxaphene	ND		1.0	0.39	ug/L		11/27/13 07:54	11/27/13 17:52	1
Chlordane (technical)	ND		1.0	0.40	ug/L		11/27/13 07:54	11/27/13 17:52	1
alpha-Chlordane	ND		0.061	0.0081	ug/L		11/27/13 07:54	11/27/13 17:52	1
gamma-Chlordane	ND		0.061	0.0061	ug/L		11/27/13 07:54	11/27/13 17:52	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*83*		*36 - 112*	*11/27/13 07:54*	*11/27/13 17:52*	*1*
DCB Decachlorobiphenyl	*46*		*14 - 103*	*11/27/13 07:54*	*11/27/13 17:52*	*1*

Method: 200.8 - ICPMS Total Metals - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	**620**		10	5.0	ug/L		11/26/13 13:41	11/26/13 22:57	1
Iron	**1200**	**B**	20	8.0	ug/L		11/26/13 13:41	11/26/13 22:57	1
Lead	**17**		1.0	0.50	ug/L		11/26/13 13:41	11/26/13 22:57	1
Zinc	**190**		20	5.0	ug/L		11/26/13 13:41	11/26/13 22:57	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
SGT-HEM	ND		5.1	1.4	mg/L		11/26/13 06:06	11/26/13 06:18	1
Total Suspended Solids	**22**		2.5	1.3	mg/L			11/25/13 16:34	1

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
pH	**7.26**		0.100	0.100	SU			11/21/13 01:25	1
Specific Conductance	**140**		1.0	1.0	umhos/cm			11/26/13 12:38	1

Client Sample Results

Client: Weiss Associates
Project/Site: 2013-2014 Annual Sampling

TestAmerica Job ID: 720-53898-1

Client Sample ID: SW-11

Lab Sample ID: 720-53898-6

Date Collected: 11/20/13 08:45
Date Received: 11/20/13 17:10

Matrix: Water

Method: 200.8 - ICPMS Total Metals - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	300		50	25	ug/L		11/26/13 13:41	11/26/13 23:00	5
Iron	700	B	100	40	ug/L		11/26/13 13:41	11/26/13 23:00	5
Lead	5.1		5.0	2.5	ug/L		11/26/13 13:41	11/26/13 23:00	5
Zinc	120		100	25	ug/L		11/26/13 13:41	11/26/13 23:00	5

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
SGT-HEM	ND		5.1	1.4	mg/L		11/26/13 06:06	11/26/13 06:18	1
Total Suspended Solids	88		5.0	2.5	mg/L			11/25/13 16:34	1

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
pH	7.70		0.100	0.100	SU			11/21/13 01:26	1
Specific Conductance	13000		1.0	1.0	umhos/cm			11/26/13 12:38	1

Client Sample Results

Client: Weiss Associates
Project/Site: 2013-2014 Annual Sampling

TestAmerica Job ID: 720-53898-1

Client Sample ID: SW-12

Lab Sample ID: 720-53898-7

Date Collected: 11/20/13 12:00
Matrix: Water
Date Received: 11/20/13 17:10

Method: 200.8 - ICPMS Total Metals - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	2000		10	5.0	ug/L		11/26/13 13:41	11/26/13 23:02	1
Iron	3900	B	20	8.0	ug/L		11/26/13 13:41	11/26/13 23:02	1
Lead	26		1.0	0.50	ug/L		11/26/13 13:41	11/26/13 23:02	1
Zinc	180		20	5.0	ug/L		11/26/13 13:41	11/26/13 23:02	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
SGT-HEM	ND		5.1	1.4	mg/L		11/26/13 06:06	11/26/13 06:18	1
Total Suspended Solids	63		5.0	2.5	mg/L			11/25/13 16:34	1

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
pH	7.56		0.100	0.100	SU			11/21/13 01:28	1
Specific Conductance	620		1.0	1.0	umhos/cm			11/26/13 12:38	1

Client Sample Results

Client: Weiss Associates
Project/Site: 2013-2014 Annual Sampling

TestAmerica Job ID: 720-53898-1

Client Sample ID: SW-6-D

Lab Sample ID: 720-53898-8

Date Collected: 11/20/13 12:20
Matrix: Water
Date Received: 11/20/13 17:10

Method: 8081A - Organochlorine Pesticides (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aldrin	ND		0.057	0.0048	ug/L		11/27/13 07:54	11/27/13 18:09	1
Dieldrin	ND		0.057	0.0086	ug/L		11/27/13 07:54	11/27/13 18:09	1
Endrin aldehyde	ND		0.057	0.015	ug/L		11/27/13 07:54	11/27/13 18:09	1
Endrin	ND		0.057	0.010	ug/L		11/27/13 07:54	11/27/13 18:09	1
Endrin ketone	ND		0.057	0.0095	ug/L		11/27/13 07:54	11/27/13 18:09	1
Heptachlor	ND		0.057	0.0057	ug/L		11/27/13 07:54	11/27/13 18:09	1
Heptachlor epoxide	ND		0.057	0.0057	ug/L		11/27/13 07:54	11/27/13 18:09	1
4,4'-DDT	**0.039**	**J**	0.057	0.022	ug/L		11/27/13 07:54	11/27/13 18:09	1
4,4'-DDE	**0.011**	**J p**	0.057	0.0057	ug/L		11/27/13 07:54	11/27/13 18:09	1
4,4'-DDD	ND	*	0.057	0.014	ug/L		11/27/13 07:54	11/27/13 18:09	1
Endosulfan I	ND		0.057	0.0057	ug/L		11/27/13 07:54	11/27/13 18:09	1
Endosulfan II	ND		0.057	0.013	ug/L		11/27/13 07:54	11/27/13 18:09	1
alpha-BHC	ND		0.057	0.0057	ug/L		11/27/13 07:54	11/27/13 18:09	1
beta-BHC	ND		0.057	0.0095	ug/L		11/27/13 07:54	11/27/13 18:09	1
gamma-BHC (Lindane)	ND		0.057	0.0057	ug/L		11/27/13 07:54	11/27/13 18:09	1
delta-BHC	ND		0.057	0.0057	ug/L		11/27/13 07:54	11/27/13 18:09	1
Endosulfan sulfate	ND		0.057	0.0095	ug/L		11/27/13 07:54	11/27/13 18:09	1
Methoxychlor	ND	*	0.057	0.0057	ug/L		11/27/13 07:54	11/27/13 18:09	1
Toxaphene	ND		0.95	0.37	ug/L		11/27/13 07:54	11/27/13 18:09	1
Chlordane (technical)	ND		0.95	0.38	ug/L		11/27/13 07:54	11/27/13 18:09	1
alpha-Chlordane	ND		0.057	0.0076	ug/L		11/27/13 07:54	11/27/13 18:09	1
gamma-Chlordane	ND		0.057	0.0057	ug/L		11/27/13 07:54	11/27/13 18:09	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*80*		*36 - 112*	*11/27/13 07:54*	*11/27/13 18:09*	*1*
DCB Decachlorobiphenyl	*44*		*14 - 103*	*11/27/13 07:54*	*11/27/13 18:09*	*1*

Method: 200.8 - ICPMS Total Metals - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	**530**		10	5.0	ug/L		11/26/13 13:41	11/26/13 22:04	1
Iron	**1000**	**B**	20	8.0	ug/L		11/26/13 13:41	11/26/13 22:04	1
Lead	**15**		1.0	0.50	ug/L		11/26/13 13:41	11/26/13 22:04	1
Zinc	**180**		20	5.0	ug/L		11/26/13 13:41	11/26/13 22:04	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
SGT-HEM	ND		5.2	1.4	mg/L		11/26/13 06:06	11/26/13 06:18	1
Total Suspended Solids	**17**		3.3	1.7	mg/L			11/25/13 16:34	1

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
pH	**7.27**		0.100	0.100	SU			11/21/13 01:30	1
Specific Conductance	**150**		1.0	1.0	umhos/cm			11/26/13 12:38	1

Method: 8081A - Organochlorine Pesticides (GC)

Lab Sample ID: MB 720-149119/1-A | **Client Sample ID: Method Blank**
Matrix: Water | **Prep Type: Total/NA**
Analysis Batch: 149151 | **Prep Batch: 149119**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aldrin	ND		0.060	0.0050	ug/L		11/27/13 07:54	11/27/13 15:17	1
Dieldrin	ND		0.060	0.0090	ug/L		11/27/13 07:54	11/27/13 15:17	1
Endrin aldehyde	ND		0.060	0.016	ug/L		11/27/13 07:54	11/27/13 15:17	1
Endrin	ND		0.060	0.011	ug/L		11/27/13 07:54	11/27/13 15:17	1
Endrin ketone	ND		0.060	0.010	ug/L		11/27/13 07:54	11/27/13 15:17	1
Heptachlor	ND		0.060	0.0060	ug/L		11/27/13 07:54	11/27/13 15:17	1
Heptachlor epoxide	ND		0.060	0.0060	ug/L		11/27/13 07:54	11/27/13 15:17	1
4,4'-DDT	ND		0.060	0.023	ug/L		11/27/13 07:54	11/27/13 15:17	1
4,4'-DDE	ND		0.060	0.0060	ug/L		11/27/13 07:54	11/27/13 15:17	1
4,4'-DDD	ND		0.060	0.015	ug/L		11/27/13 07:54	11/27/13 15:17	1
Endosulfan I	ND		0.060	0.0060	ug/L		11/27/13 07:54	11/27/13 15:17	1
Endosulfan II	ND		0.060	0.014	ug/L		11/27/13 07:54	11/27/13 15:17	1
alpha-BHC	ND		0.060	0.0060	ug/L		11/27/13 07:54	11/27/13 15:17	1
beta-BHC	ND		0.060	0.010	ug/L		11/27/13 07:54	11/27/13 15:17	1
gamma-BHC (Lindane)	ND		0.060	0.0060	ug/L		11/27/13 07:54	11/27/13 15:17	1
delta-BHC	ND		0.060	0.0060	ug/L		11/27/13 07:54	11/27/13 15:17	1
Endosulfan sulfate	ND		0.060	0.010	ug/L		11/27/13 07:54	11/27/13 15:17	1
Methoxychlor	ND		0.060	0.0060	ug/L		11/27/13 07:54	11/27/13 15:17	1
Toxaphene	ND		1.0	0.39	ug/L		11/27/13 07:54	11/27/13 15:17	1
Chlordane (technical)	ND		1.0	0.40	ug/L		11/27/13 07:54	11/27/13 15:17	1
alpha-Chlordane	ND		0.060	0.0080	ug/L		11/27/13 07:54	11/27/13 15:17	1
gamma-Chlordane	ND		0.060	0.0060	ug/L		11/27/13 07:54	11/27/13 15:17	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*79*		*36 - 112*	*11/27/13 07:54*	*11/27/13 15:17*	*1*
Tetrachloro-m-xylene	*76*		*36 - 112*	*11/27/13 07:54*	*11/27/13 15:17*	*1*
DCB Decachlorobiphenyl	*102*		*14 - 103*	*11/27/13 07:54*	*11/27/13 15:17*	*1*
DCB Decachlorobiphenyl	*103*		*14 - 103*	*11/27/13 07:54*	*11/27/13 15:17*	*1*

Lab Sample ID: LCS 720-149119/2-A | **Client Sample ID: Lab Control Sample**
Matrix: Water | **Prep Type: Total/NA**
Analysis Batch: 149151 | **Prep Batch: 149119**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Aldrin	0.500	0.413		ug/L		83	44 - 120
Dieldrin	0.500	0.454		ug/L		91	43 - 120
Endrin	0.500	0.453		ug/L		91	15 - 138
Heptachlor	0.500	0.400		ug/L		80	17 - 128
4,4'-DDT	0.500	0.473		ug/L		95	46 - 120
gamma-BHC (Lindane)	0.500	0.414		ug/L		83	46 - 121

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
Tetrachloro-m-xylene	*75*		*36 - 112*
DCB Decachlorobiphenyl	*96*		*14 - 103*

Method: 8081A - Organochlorine Pesticides (GC) (Continued)

Lab Sample ID: LCSD 720-149119/3-A — **Client Sample ID: Lab Control Sample Dup**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 149151 — **Prep Batch: 149119**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Aldrin	0.500	0.442		ug/L		88	44 - 120	7	20
Dieldrin	0.500	0.526		ug/L		105	43 - 120	15	20
Endrin	0.500	0.524		ug/L		105	15 - 138	15	20
Heptachlor	0.500	0.422		ug/L		84	17 - 128	5	20
4,4'-DDT	0.500	0.575		ug/L		115	46 - 120	19	20
gamma-BHC (Lindane)	0.500	0.433		ug/L		87	46 - 121	4	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
Tetrachloro-m-xylene	*74*		*36 - 112*
DCB Decachlorobiphenyl	*103*		*14 - 103*

Method: 200.8 - ICPMS Total Metals

Lab Sample ID: MB 440-147011/1-A — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total Recoverable**
Analysis Batch: 147204 — **Prep Batch: 147011**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	ND		10	5.0	ug/L		11/26/13 13:41	11/26/13 21:52	1
Iron	11.4	J	20	8.0	ug/L		11/26/13 13:41	11/26/13 21:52	1
Lead	ND		1.0	0.50	ug/L		11/26/13 13:41	11/26/13 21:52	1
Zinc	ND		20	5.0	ug/L		11/26/13 13:41	11/26/13 21:52	1

Lab Sample ID: LCS 440-147011/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total Recoverable**
Analysis Batch: 147204 — **Prep Batch: 147011**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Aluminum	80.0	75.2		ug/L		94	85 - 115
Iron	800	751		ug/L		94	85 - 115
Lead	80.0	72.1		ug/L		90	85 - 115
Zinc	80.0	85.1		ug/L		106	85 - 115

Method: 1664A - HEM and SGT-HEM

Lab Sample ID: MB 440-146842/1-A — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 146847 — **Prep Batch: 146842**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
SGT-HEM	ND		5.0	1.4	mg/L		11/26/13 06:06	11/26/13 06:18	1

Lab Sample ID: LCS 440-146842/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 146847 — **Prep Batch: 146842**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
SGT-HEM	10.0	7.50		mg/L		75	70 - 110

Method: 1664A - HEM and SGT-HEM (Continued)

Lab Sample ID: LCSD 440-146842/3-A — **Client Sample ID: Lab Control Sample Dup**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 146847 — **Prep Batch: 146842**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
SGT-HEM	10.0	8.30		mg/L		83	70 - 110	10	15

Lab Sample ID: MB 440-149007/1-A — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 149013 — **Prep Batch: 149007**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
SGT-HEM	ND		5.0	1.4	mg/L		12/06/13 08:24	12/06/13 08:39	1

Lab Sample ID: LCS 440-149007/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 149013 — **Prep Batch: 149007**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
SGT-HEM	10.0	9.00		mg/L		90	70 - 110

Lab Sample ID: LCSD 440-149007/3-A — **Client Sample ID: Lab Control Sample Dup**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 149013 — **Prep Batch: 149007**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
SGT-HEM	10.0	8.50		mg/L		85	70 - 110	6	15

Method: 9040B - pH

Lab Sample ID: LCS 720-148717/1 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 148717

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
pH	7.00	7.000		SU		100	99 - 101

Lab Sample ID: 720-53898-1 DU — **Client Sample ID: TS1-E**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 148717

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
pH	6.96		6.950		SU		0.1	5

Method: SM 2510B - Conductivity, Specific Conductance

Lab Sample ID: MB 440-146704/3 — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 146704

Analyte	MB Result	MB Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Specific Conductance	ND		1.0	1.0	umhos/cm			11/25/13 13:37	1

Method: SM 2510B - Conductivity, Specific Conductance (Continued)

Lab Sample ID: LCS 440-146704/4 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 146704

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Specific Conductance	504	547		umhos/cm		109	90 - 110

Lab Sample ID: MB 440-146977/3 — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 146977

Analyte	MB Result	MB Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Specific Conductance	ND		1.0	1.0	umhos/cm			11/26/13 12:38	1

Lab Sample ID: LCS 440-146977/4 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 146977

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Specific Conductance	504	540		umhos/cm		107	90 - 110

Method: SM 2540D - Solids, Total Suspended (TSS)

Lab Sample ID: MB 440-146766/2 — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 146766

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids	ND		1.0	0.50	mg/L			11/25/13 16:34	1

Lab Sample ID: LCS 440-146766/1 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 146766

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Suspended Solids	1000	1060		mg/L		106	85 - 115

Lab Sample ID: 720-53898-1 DU — **Client Sample ID: TS1-E**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 146766

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Total Suspended Solids	83		85.0		mg/L		2	10

Lab Sample ID: 720-53898-6 DU — **Client Sample ID: SW-11**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 146766

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Total Suspended Solids	88		87.0		mg/L		0.6	10

QC Association Summary

Client: Weiss Associates
Project/Site: 2013-2014 Annual Sampling

TestAmerica Job ID: 720-53898-1

GC Semi VOA

Prep Batch: 149119

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-53898-2	SW-3	Total/NA	Water	3510C	
720-53898-3	SW-4	Total/NA	Water	3510C	
720-53898-4	SW-5	Total/NA	Water	3510C	
720-53898-5	SW-6	Total/NA	Water	3510C	
720-53898-8	SW-6-D	Total/NA	Water	3510C	
LCS 720-149119/2-A	Lab Control Sample	Total/NA	Water	3510C	
LCSD 720-149119/3-A	Lab Control Sample Dup	Total/NA	Water	3510C	
MB 720-149119/1-A	Method Blank	Total/NA	Water	3510C	

Analysis Batch: 149150

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-53898-2	SW-3	Total/NA	Water	8081A	149119
720-53898-3	SW-4	Total/NA	Water	8081A	149119
720-53898-4	SW-5	Total/NA	Water	8081A	149119
720-53898-5	SW-6	Total/NA	Water	8081A	149119
720-53898-8	SW-6-D	Total/NA	Water	8081A	149119

Analysis Batch: 149151

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 720-149119/2-A	Lab Control Sample	Total/NA	Water	8081A	149119
LCSD 720-149119/3-A	Lab Control Sample Dup	Total/NA	Water	8081A	149119
MB 720-149119/1-A	Method Blank	Total/NA	Water	8081A	149119

Metals

Prep Batch: 147011

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-53898-1	TS1-E	Total Recoverable	Water	200.2	
720-53898-2	SW-3	Total Recoverable	Water	200.2	
720-53898-3	SW-4	Total Recoverable	Water	200.2	
720-53898-4	SW-5	Total Recoverable	Water	200.2	
720-53898-5	SW-6	Total Recoverable	Water	200.2	
720-53898-6	SW-11	Total Recoverable	Water	200.2	
720-53898-7	SW-12	Total Recoverable	Water	200.2	
720-53898-8	SW-6-D	Total Recoverable	Water	200.2	
LCS 440-147011/2-A	Lab Control Sample	Total Recoverable	Water	200.2	
MB 440-147011/1-A	Method Blank	Total Recoverable	Water	200.2	

Analysis Batch: 147204

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-53898-1	TS1-E	Total Recoverable	Water	200.8	147011
720-53898-2	SW-3	Total Recoverable	Water	200.8	147011
720-53898-3	SW-4	Total Recoverable	Water	200.8	147011
720-53898-4	SW-5	Total Recoverable	Water	200.8	147011
720-53898-5	SW-6	Total Recoverable	Water	200.8	147011
720-53898-6	SW-11	Total Recoverable	Water	200.8	147011
720-53898-7	SW-12	Total Recoverable	Water	200.8	147011
720-53898-8	SW-6-D	Total Recoverable	Water	200.8	147011
LCS 440-147011/2-A	Lab Control Sample	Total Recoverable	Water	200.8	147011
MB 440-147011/1-A	Method Blank	Total Recoverable	Water	200.8	147011

Metals (Continued)

Analysis Batch: 147339

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-53898-1	TS1-E	Total Recoverable	Water	200.8	147011

General Chemistry

Analysis Batch: 146704

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-53898-1	TS1-E	Total/NA	Water	SM 2510B	
720-53898-2	SW-3	Total/NA	Water	SM 2510B	
720-53898-3	SW-4	Total/NA	Water	SM 2510B	
LCS 440-146704/4	Lab Control Sample	Total/NA	Water	SM 2510B	
MB 440-146704/3	Method Blank	Total/NA	Water	SM 2510B	

Analysis Batch: 146766

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-53898-1	TS1-E	Total/NA	Water	SM 2540D	
720-53898-1 DU	TS1-E	Total/NA	Water	SM 2540D	
720-53898-2	SW-3	Total/NA	Water	SM 2540D	
720-53898-3	SW-4	Total/NA	Water	SM 2540D	
720-53898-4	SW-5	Total/NA	Water	SM 2540D	
720-53898-5	SW-6	Total/NA	Water	SM 2540D	
720-53898-6	SW-11	Total/NA	Water	SM 2540D	
720-53898-6 DU	SW-11	Total/NA	Water	SM 2540D	
720-53898-7	SW-12	Total/NA	Water	SM 2540D	
720-53898-8	SW-6-D	Total/NA	Water	SM 2540D	
LCS 440-146766/1	Lab Control Sample	Total/NA	Water	SM 2540D	
MB 440-146766/2	Method Blank	Total/NA	Water	SM 2540D	

Prep Batch: 146842

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-53898-2	SW-3	Total/NA	Water	1664A	
720-53898-3	SW-4	Total/NA	Water	1664A	
720-53898-4	SW-5	Total/NA	Water	1664A	
720-53898-5	SW-6	Total/NA	Water	1664A	
720-53898-6	SW-11	Total/NA	Water	1664A	
720-53898-7	SW-12	Total/NA	Water	1664A	
720-53898-8	SW-6-D	Total/NA	Water	1664A	
LCS 440-146842/2-A	Lab Control Sample	Total/NA	Water	1664A	
LCSD 440-146842/3-A	Lab Control Sample Dup	Total/NA	Water	1664A	
MB 440-146842/1-A	Method Blank	Total/NA	Water	1664A	

Analysis Batch: 146847

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-53898-2	SW-3	Total/NA	Water	1664A	146842
720-53898-3	SW-4	Total/NA	Water	1664A	146842
720-53898-4	SW-5	Total/NA	Water	1664A	146842
720-53898-5	SW-6	Total/NA	Water	1664A	146842
720-53898-6	SW-11	Total/NA	Water	1664A	146842
720-53898-7	SW-12	Total/NA	Water	1664A	146842
720-53898-8	SW-6-D	Total/NA	Water	1664A	146842
LCS 440-146842/2-A	Lab Control Sample	Total/NA	Water	1664A	146842

General Chemistry (Continued)

Analysis Batch: 146847 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCSD 440-146842/3-A	Lab Control Sample Dup	Total/NA	Water	1664A	146842
MB 440-146842/1-A	Method Blank	Total/NA	Water	1664A	146842

Analysis Batch: 146977

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-53898-4	SW-5	Total/NA	Water	SM 2510B	
720-53898-5	SW-6	Total/NA	Water	SM 2510B	
720-53898-6	SW-11	Total/NA	Water	SM 2510B	
720-53898-7	SW-12	Total/NA	Water	SM 2510B	
720-53898-8	SW-6-D	Total/NA	Water	SM 2510B	
LCS 440-146977/4	Lab Control Sample	Total/NA	Water	SM 2510B	
MB 440-146977/3	Method Blank	Total/NA	Water	SM 2510B	

Analysis Batch: 148717

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-53898-1	TS1-E	Total/NA	Water	9040B	
720-53898-1 DU	TS1-E	Total/NA	Water	9040B	
720-53898-2	SW-3	Total/NA	Water	9040B	
720-53898-3	SW-4	Total/NA	Water	9040B	
720-53898-4	SW-5	Total/NA	Water	9040B	
720-53898-5	SW-6	Total/NA	Water	9040B	
720-53898-6	SW-11	Total/NA	Water	9040B	
720-53898-7	SW-12	Total/NA	Water	9040B	
720-53898-8	SW-6-D	Total/NA	Water	9040B	
LCS 720-148717/1	Lab Control Sample	Total/NA	Water	9040B	

Prep Batch: 149007

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-53898-1	TS1-E	Total/NA	Water	1664A	
LCS 440-149007/2-A	Lab Control Sample	Total/NA	Water	1664A	
LCSD 440-149007/3-A	Lab Control Sample Dup	Total/NA	Water	1664A	
MB 440-149007/1-A	Method Blank	Total/NA	Water	1664A	

Analysis Batch: 149013

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-53898-1	TS1-E	Total/NA	Water	1664A	149007
LCS 440-149007/2-A	Lab Control Sample	Total/NA	Water	1664A	149007
LCSD 440-149007/3-A	Lab Control Sample Dup	Total/NA	Water	1664A	149007
MB 440-149007/1-A	Method Blank	Total/NA	Water	1664A	149007

Lab Chronicle

Client: Weiss Associates
Project/Site: 2013-2014 Annual Sampling

TestAmerica Job ID: 720-53898-1

Client Sample ID: TS1-E — Lab Sample ID: 720-53898-1

Date Collected: 11/20/13 14:15 — **Matrix: Water**
Date Received: 11/20/13 17:10

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Analysis	200.8		10	147204	11/26/13 22:43	RC	TAL IRV
Total Recoverable	Prep	200.2			147011	11/26/13 13:41	ND	TAL IRV
Total Recoverable	Analysis	200.8		10	147339	11/27/13 13:05	YS	TAL IRV
Total/NA	Analysis	SM 2510B		1	146704	11/25/13 13:37	BS	TAL IRV
Total/NA	Analysis	SM 2540D		1	146766	11/25/13 16:34	NTN	TAL IRV
Total/NA	Prep	1664A			149007	12/06/13 12:45	DA	TAL IRV
Total/NA	Analysis	1664A		1	149013	12/06/13 12:47	DA	TAL IRV
Total/NA	Analysis	9040B		1	148717	11/21/13 01:08	EYT	TAL PLS

Client Sample ID: SW-3 — Lab Sample ID: 720-53898-2

Date Collected: 11/20/13 13:25 — **Matrix: Water**
Date Received: 11/20/13 17:10

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8081A		1	149150	11/27/13 17:02	JZT	TAL PLS
Total/NA	Prep	3510C			149119	11/27/13 07:54	NVP	TAL PLS
Total Recoverable	Prep	200.2			147011	11/26/13 13:41	ND	TAL IRV
Total Recoverable	Analysis	200.8		20	147204	11/26/13 22:45	RC	TAL IRV
Total/NA	Analysis	SM 2510B		1	146704	11/25/13 13:37	BS	TAL IRV
Total/NA	Analysis	SM 2540D		1	146766	11/25/13 16:34	NTN	TAL IRV
Total/NA	Prep	1664A			146842	11/26/13 06:06	DA	TAL IRV
Total/NA	Analysis	1664A		1	146847	11/26/13 06:18	DA	TAL IRV
Total/NA	Analysis	9040B		1	148717	11/21/13 01:13	EYT	TAL PLS

Client Sample ID: SW-4 — Lab Sample ID: 720-53898-3

Date Collected: 11/20/13 13:10 — **Matrix: Water**
Date Received: 11/20/13 17:10

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			149119	11/27/13 07:54	NVP	TAL PLS
Total/NA	Analysis	8081A		1	149150	11/27/13 17:19	JZT	TAL PLS
Total Recoverable	Prep	200.2			147011	11/26/13 13:41	ND	TAL IRV
Total Recoverable	Analysis	200.8		10	147204	11/26/13 22:53	RC	TAL IRV
Total/NA	Analysis	SM 2510B		1	146704	11/25/13 13:37	BS	TAL IRV
Total/NA	Analysis	SM 2540D		1	146766	11/25/13 16:34	NTN	TAL IRV
Total/NA	Prep	1664A			146842	11/26/13 06:06	DA	TAL IRV
Total/NA	Analysis	1664A		1	146847	11/26/13 06:18	DA	TAL IRV
Total/NA	Analysis	9040B		1	148717	11/21/13 01:20	EYT	TAL PLS

Lab Chronicle

Client: Weiss Associates
Project/Site: 2013-2014 Annual Sampling

TestAmerica Job ID: 720-53898-1

Client Sample ID: SW-5 — Lab Sample ID: 720-53898-4

Date Collected: 11/20/13 09:25 — **Matrix: Water**
Date Received: 11/20/13 17:10

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			149119	11/27/13 07:54	NVP	TAL PLS
Total/NA	Analysis	8081A		1	149150	11/27/13 17:35	JZT	TAL PLS
Total Recoverable	Prep	200.2			147011	11/26/13 13:41	ND	TAL IRV
Total Recoverable	Analysis	200.8		1	147204	11/26/13 22:55	RC	TAL IRV
Total/NA	Analysis	SM 2540D		1	146766	11/25/13 16:34	NTN	TAL IRV
Total/NA	Prep	1664A			146842	11/26/13 06:06	DA	TAL IRV
Total/NA	Analysis	1664A		1	146847	11/26/13 06:18	DA	TAL IRV
Total/NA	Analysis	SM 2510B		1	146977	11/26/13 12:38	BS	TAL IRV
Total/NA	Analysis	9040B		1	148717	11/21/13 01:23	EYT	TAL PLS

Client Sample ID: SW-6 — Lab Sample ID: 720-53898-5

Date Collected: 11/20/13 12:15 — **Matrix: Water**
Date Received: 11/20/13 17:10

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			149119	11/27/13 07:54	NVP	TAL PLS
Total/NA	Analysis	8081A		1	149150	11/27/13 17:52	JZT	TAL PLS
Total Recoverable	Prep	200.2			147011	11/26/13 13:41	ND	TAL IRV
Total Recoverable	Analysis	200.8		1	147204	11/26/13 22:57	RC	TAL IRV
Total/NA	Analysis	SM 2540D		1	146766	11/25/13 16:34	NTN	TAL IRV
Total/NA	Prep	1664A			146842	11/26/13 06:06	DA	TAL IRV
Total/NA	Analysis	1664A		1	146847	11/26/13 06:18	DA	TAL IRV
Total/NA	Analysis	SM 2510B		1	146977	11/26/13 12:38	BS	TAL IRV
Total/NA	Analysis	9040B		1	148717	11/21/13 01:25	EYT	TAL PLS

Client Sample ID: SW-11 — Lab Sample ID: 720-53898-6

Date Collected: 11/20/13 08:45 — **Matrix: Water**
Date Received: 11/20/13 17:10

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	200.2			147011	11/26/13 13:41	ND	TAL IRV
Total Recoverable	Analysis	200.8		5	147204	11/26/13 23:00	RC	TAL IRV
Total/NA	Analysis	SM 2540D		1	146766	11/25/13 16:34	NTN	TAL IRV
Total/NA	Prep	1664A			146842	11/26/13 06:06	DA	TAL IRV
Total/NA	Analysis	1664A		1	146847	11/26/13 06:18	DA	TAL IRV
Total/NA	Analysis	SM 2510B		1	146977	11/26/13 12:38	BS	TAL IRV
Total/NA	Analysis	9040B		1	148717	11/21/13 01:26	EYT	TAL PLS

Lab Chronicle

Client: Weiss Associates
Project/Site: 2013-2014 Annual Sampling

TestAmerica Job ID: 720-53898-1

Client Sample ID: SW-12

Lab Sample ID: 720-53898-7

Date Collected: 11/20/13 12:00
Matrix: Water
Date Received: 11/20/13 17:10

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	200.2			147011	11/26/13 13:41	ND	TAL IRV
Total Recoverable	Analysis	200.8		1	147204	11/26/13 23:02	RC	TAL IRV
Total/NA	Analysis	SM 2540D		1	146766	11/25/13 16:34	NTN	TAL IRV
Total/NA	Prep	1664A			146842	11/26/13 06:06	DA	TAL IRV
Total/NA	Analysis	1664A		1	146847	11/26/13 06:18	DA	TAL IRV
Total/NA	Analysis	SM 2510B		1	146977	11/26/13 12:38	BS	TAL IRV
Total/NA	Analysis	9040B		1	148717	11/21/13 01:28	EYT	TAL PLS

Client Sample ID: SW-6-D

Lab Sample ID: 720-53898-8

Date Collected: 11/20/13 12:20
Matrix: Water
Date Received: 11/20/13 17:10

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			149119	11/27/13 07:54	NVP	TAL PLS
Total/NA	Analysis	8081A		1	149150	11/27/13 18:09	JZT	TAL PLS
Total Recoverable	Prep	200.2			147011	11/26/13 13:41	ND	TAL IRV
Total Recoverable	Analysis	200.8		1	147204	11/26/13 22:04	RC	TAL IRV
Total/NA	Analysis	SM 2540D		1	146766	11/25/13 16:34	NTN	TAL IRV
Total/NA	Prep	1664A			146842	11/26/13 06:06	DA	TAL IRV
Total/NA	Analysis	1664A		1	146847	11/26/13 06:18	DA	TAL IRV
Total/NA	Analysis	SM 2510B		1	146977	11/26/13 12:38	BS	TAL IRV
Total/NA	Analysis	9040B		1	148717	11/21/13 01:30	EYT	TAL PLS

Laboratory References:

TAL IRV = TestAmerica Irvine, 17461 Derian Ave, Suite 100, Irvine, CA 92614-5817, TEL (949)261-1022

TAL PLS = TestAmerica Pleasanton, 1220 Quarry Lane, Pleasanton, CA 94566, TEL (925)484-1919

Certification Summary

Client: Weiss Associates
Project/Site: 2013-2014 Annual Sampling

TestAmerica Job ID: 720-53898-1

Laboratory: TestAmerica Pleasanton

All certifications held by this laboratory are listed. Not all certifications are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
California	State Program	9	2496	01-31-14

Laboratory: TestAmerica Irvine

All certifications held by this laboratory are listed. Not all certifications are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
Alaska	State Program	10	CA01531	06-30-14
Arizona	State Program	9	AZ0671	10-13-14
California	LA Cty Sanitation Districts	9	10256	01-31-14
California	NELAP	9	1108CA	01-31-14
California	State Program	9	2706	06-30-14
Guam	State Program	9	Cert. No. 12.002r	01-23-14 *
Hawaii	State Program	9	N/A	01-31-14
Nevada	State Program	9	CA015312007A	07-31-14
New Mexico	State Program	6	N/A	01-31-14
Northern Mariana Islands	State Program	9	MP0002	01-31-14
Oregon	NELAP	10	4005	09-12-14
USDA	Federal		P330-09-00080	06-06-14
USEPA UCMR	Federal	1	CA01531	01-31-15

* Expired certification is currently pending renewal and is considered valid.

Method Summary

Client: Weiss Associates
Project/Site: 2013-2014 Annual Sampling

TestAmerica Job ID: 720-53898-1

Method	Method Description	Protocol	Laboratory
8081A	Organochlorine Pesticides (GC)	SW846	TAL PLS
200.8	ICPMS Total Metals	EPA	TAL IRV
1664A	HEM and SGT-HEM	1664A	TAL IRV
9040B	pH	SW846	TAL PLS
SM 2510B	Conductivity, Specific Conductance	SM	TAL IRV
SM 2540D	Solids, Total Suspended (TSS)	SM	TAL IRV

Protocol References:

1664A = EPA-821-98-002

EPA = US Environmental Protection Agency

SM = "Standard Methods For The Examination Of Water And Wastewater",

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL IRV = TestAmerica Irvine, 17461 Derian Ave, Suite 100, Irvine, CA 92614-5817, TEL (949)261-1022

TAL PLS = TestAmerica Pleasanton, 1220 Quarry Lane, Pleasanton, CA 94566, TEL (925)484-1919

Sample Summary

Client: Weiss Associates
Project/Site: 2013-2014 Annual Sampling

TestAmerica Job ID: 720-53898-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
720-53898-1	TS1-E	Water	11/20/13 14:15	11/20/13 17:10
720-53898-2	SW-3	Water	11/20/13 13:25	11/20/13 17:10
720-53898-3	SW-4	Water	11/20/13 13:10	11/20/13 17:10
720-53898-4	SW-5	Water	11/20/13 09:25	11/20/13 17:10
720-53898-5	SW-6	Water	11/20/13 12:15	11/20/13 17:10
720-53898-6	SW-11	Water	11/20/13 08:45	11/20/13 17:10
720-53898-7	SW-12	Water	11/20/13 12:00	11/20/13 17:10
720-53898-8	SW-6-D	Water	11/20/13 12:20	11/20/13 17:10

720-53898

Chain of Custody Record

720-53898 Chain of Custody

TestAmerica
1220 Quarry Lane
Pleasanton, CA 94566
Phone: 925-484-1919 ext.137

Please send analytic results, electronic deliverables and the original chain-of-custody form to:
labresults@weiss.com
gch@weiss.com
sab@weiss.com

INSTRUCTIONS FOR LAB PERSONNEL:
GeoTracker EDF required? ☐ Yes ☒ No
Equis 4-file EDWEDD required? ☒ Yes ☐ No
Specify analytic/prep method and detection limit in report.
Notify us of any anomalous peaks in GC or other scans
Call immediately with any questions or problems.

150190

Client Contact		Project Manager: Scott Bourne	Protocol ID/path: J:\Levin Richmond\03b_Sampling	COC Number:
Weiss Associates		Project ID: 426-1966.13		
2200 Powell Street, Suite 925		Sampled by: GCH		Page 1 of 1
Emeryville, CA 94608		Sample date(s): 11/20/13		
(510) 450-6000	Phone	Analysis Turnaround Time:		SDG number:
(510) 547-5043	FAX	Standard		
Job Name: 2013-2014 Annual Stormwater Sampling		(Specify Days or Hours)		
Address: Levin Richmond Terminal, 402 Wright Avenue, Richmond, CA 94804				

Lab ID	Sample Identification	Sample Date	Sample Time	Sample Matrix	# of Cont.	pH (EPA 9040B)	Specific Conductance (SM 2510B)	Total Suspended Solids (SM 2540D)	Oil & Grease (EPA 1664A SGT-HEM)	Total Metals- Al, Fe, Pb, Zn (EPA 200.8)	Pesticides (EPA 8081A)	BTEX (EPA 8021B)									Sample Specific Notes:
1	TS1-E	11/20/13	1415	WT	5	X	X	X	X	X											
2	SW-3	"	1325		7	X	X	X	X	X	X										
3	SW-4	"	1310		8	X	X	X	X	X	X										
4	SW-5	"	0925		8	X	X	X	X	X	X										
5	SW-6	"	1215		7	X	X	X	X	X	X										
6	SW-11	"	0845		6	X	X	X	X	X											
7	SW-12	"	1200		5	X	X	X	X	X											
8	SW-6-D	11/20/13	1220	WT	7	X	X	X	X	X	X										
					Field Filtered (X):																
					Preservation Used: 1= Ice, 2= HCl; 3= H_2SO_4; 4=HNO_3; 5=NaOH; 6= Other	1	1	1	1, 2	1, 4	1	1,2	1	1	1	1	1	1	1	1	

Special Instructions/QC Requirements & Comments: Level II Report. Report with reporting limit and method detection limit. Analyze and report only the metals listed above (Al, Fe, Pb and Zn).

6.2, 6.2, 10.0, 10.3, 7.5°C

Relinquished by:	Company	Date/Time	Received by:	Company:	Date/Time
[signature]	Weiss Associates	11/20/13 1521	[signature]	TestAmerica	11/20/13 15:20
[signature]		11/20/13 17:10	[signature]	TAI	11/20/13 1710

☒ = Samples released to a secured, locked area.

● = Samples received from a secured, locked area

Login Sample Receipt Checklist

Client: Weiss Associates

Job Number: 720-53898-1

Login Number: 53898

List Source: TestAmerica Pleasanton

List Number: 1

Creator: Bullock, Tracy

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	N/A	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Login Sample Receipt Checklist

Client: Weiss Associates

Job Number: 720-53898-1

Login Number: 53898
List Number: 1
Creator: Perez, Angel

List Source: TestAmerica Irvine
List Creation: 11/23/13 12:14 PM

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	N/A	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Pleasanton
1220 Quarry Lane
Pleasanton, CA 94566
Tel: (925)484-1919

TestAmerica Job ID: 720-55372-1
Client Project/Site: 2013-2014 Annual LRTC Stormwater
Revision: 1

For:
Weiss Associates
2200 Powell Street
Suite 925
Emeryville, California 94608

Attn: Greg Hulburd

Authorized for release by:
2/20/2014 2:48:20 PM

Micah Smith, Project Manager I
()
micah.smith@testamericainc.com

LINKS

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Visit us at:
www.testamericainc.com

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

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Definitions/Glossary

Client: Weiss Associates
Project/Site: 2013-2014 Annual LRTC Stormwater

TestAmerica Job ID: 720-55372-1

Qualifiers

Metals

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CNF	Contains no Free Liquid
DER	Duplicate error ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative error ratio
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Case Narrative

Client: Weiss Associates
Project/Site: 2013-2014 Annual LRTC Stormwater

TestAmerica Job ID: 720-55372-1

Job ID: 720-55372-1

Laboratory: TestAmerica Pleasanton

Narrative

Job Narrative
720-55372-1

Comments
This report was revised to report the re-analysis of sample SW-6 (720-55372-4) for TSS.

Receipt
The samples were received on 2/6/2014 5:30 PM; the samples arrived in good condition, properly preserved and, where required, on ice.
The temperatures of the 3 coolers at receipt time were 1.3º C, 3.1º C and 5.3º C.

Metals
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

General Chemistry
Method(s) 1664A: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate/sample duplicate (MS/MSD/DUP) associated with batch 161923.

No other analytical or quality issues were noted.

Detection Summary

Client: Weiss Associates
Project/Site: 2013-2014 Annual LRTC Stormwater

TestAmerica Job ID: 720-55372-1

Client Sample ID: SW-3 — Lab Sample ID: 720-55372-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Aluminum	550		50	25	ug/L	5		200.8	Total Recoverable
Iron	1500		100	40	ug/L	5		200.8	Total Recoverable
Lead	7.9		5.0	2.5	ug/L	5		200.8	Total Recoverable
Zinc	130		100	25	ug/L	5		200.8	Total Recoverable
Total Suspended Solids	53		6.7	3.3	mg/L	1		SM 2540D	Total/NA

Analyte	Result	Qualifier	RL	RL	Unit	Dil Fac	D	Method	Prep Type
pH	7.72		0.100	0.100	SU	1		9040B	Total/NA
Specific Conductance	6000		1.0	1.0	umhos/cm	1		SM 2510B	Total/NA

Client Sample ID: SW-5 — Lab Sample ID: 720-55372-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Aluminum	1300		50	25	ug/L	5		200.8	Total Recoverable
Iron	2400		100	40	ug/L	5		200.8	Total Recoverable
Lead	35		5.0	2.5	ug/L	5		200.8	Total Recoverable
Zinc	240		100	25	ug/L	5		200.8	Total Recoverable
Total Suspended Solids	35		6.7	3.3	mg/L	1		SM 2540D	Total/NA

Analyte	Result	Qualifier	RL	RL	Unit	Dil Fac	D	Method	Prep Type
pH	7.65		0.100	0.100	SU	1		9040B	Total/NA
Specific Conductance	320		1.0	1.0	umhos/cm	1		SM 2510B	Total/NA

Client Sample ID: SW-5-D — Lab Sample ID: 720-55372-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Aluminum	850		50	25	ug/L	5		200.8	Total Recoverable
Iron	2400		100	40	ug/L	5		200.8	Total Recoverable
Lead	38		5.0	2.5	ug/L	5		200.8	Total Recoverable
Zinc	270		100	25	ug/L	5		200.8	Total Recoverable
Total Suspended Solids	37		6.7	3.3	mg/L	1		SM 2540D	Total/NA

Analyte	Result	Qualifier	RL	RL	Unit	Dil Fac	D	Method	Prep Type
pH	7.66		0.100	0.100	SU	1		9040B	Total/NA
Specific Conductance	320		1.0	1.0	umhos/cm	1		SM 2510B	Total/NA

Client Sample ID: SW-6 — Lab Sample ID: 720-55372-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Aluminum	340		10	5.0	ug/L	1		200.8	Total Recoverable
Iron	1500		20	8.0	ug/L	1		200.8	Total Recoverable

This Detection Summary does not include radiochemical test results.

Detection Summary

Client: Weiss Associates
Project/Site: 2013-2014 Annual LRTC Stormwater

TestAmerica Job ID: 720-55372-1

Client Sample ID: SW-6 (Continued) — Lab Sample ID: 720-55372-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Lead	13		1.0	0.50	ug/L	1		200.8	Total Recoverable
Zinc	170		20	5.0	ug/L	1		200.8	Total Recoverable
Total Suspended Solids	9.1		1.7	0.85	mg/L	1		SM 2540D	Total/NA

Analyte	Result	Qualifier	RL	RL	Unit	Dil Fac	D	Method	Prep Type
pH	7.57		0.100	0.100	SU	1		9040B	Total/NA
Specific Conductance	110		1.0	1.0	umhos/cm	1		SM 2510B	Total/NA

Client Sample ID: SW-11 — Lab Sample ID: 720-55372-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Aluminum	510		100	50	ug/L	10		200.8	Total Recoverable
Iron	1100		200	80	ug/L	10		200.8	Total Recoverable
Lead	6.8	J	10	5.0	ug/L	10		200.8	Total Recoverable
Zinc	120	J	200	50	ug/L	10		200.8	Total Recoverable
Total Suspended Solids	110		10	5.0	mg/L	1		SM 2540D	Total/NA

Analyte	Result	Qualifier	RL	RL	Unit	Dil Fac	D	Method	Prep Type
pH	7.70		0.100	0.100	SU	1		9040B	Total/NA
Specific Conductance	8200		1.0	1.0	umhos/cm	1		SM 2510B	Total/NA

Client Sample ID: SW-12 — Lab Sample ID: 720-55372-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Aluminum	710		10	5.0	ug/L	1		200.8	Total Recoverable
Iron	1700		20	8.0	ug/L	1		200.8	Total Recoverable
Lead	13		1.0	0.50	ug/L	1		200.8	Total Recoverable
Zinc	96		20	5.0	ug/L	1		200.8	Total Recoverable
Total Suspended Solids	19		3.3	1.7	mg/L	1		SM 2540D	Total/NA

Analyte	Result	Qualifier	RL	RL	Unit	Dil Fac	D	Method	Prep Type
pH	7.96		0.100	0.100	SU	1		9040B	Total/NA
Specific Conductance	120		1.0	1.0	umhos/cm	1		SM 2510B	Total/NA

Client Sample ID: SW-7 — Lab Sample ID: 720-55372-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Aluminum	79		10	5.0	ug/L	1		200.8	Total Recoverable
Iron	220		20	8.0	ug/L	1		200.8	Total Recoverable
Lead	2.5		1.0	0.50	ug/L	1		200.8	Total Recoverable
Zinc	30		20	5.0	ug/L	1		200.8	Total Recoverable
Total Suspended Solids	5.2		2.1	1.0	mg/L	1		SM 2540D	Total/NA

This Detection Summary does not include radiochemical test results.

Detection Summary

Client: Weiss Associates
Project/Site: 2013-2014 Annual LRTC Stormwater

TestAmerica Job ID: 720-55372-1

Client Sample ID: SW-7 (Continued)

Lab Sample ID: 720-55372-7

Analyte	Result	Qualifier	RL	RL	Unit	Dil Fac	D	Method	Prep Type
pH	7.65		0.100	0.100	SU	1		9040B	Total/NA
Specific Conductance	1400		1.0	1.0	umhos/cm	1		SM 2510B	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample Results

Client: Weiss Associates
Project/Site: 2013-2014 Annual LRTC Stormwater

TestAmerica Job ID: 720-55372-1

Client Sample ID: SW-3

Lab Sample ID: 720-55372-1

Date Collected: 02/06/14 10:40

Matrix: Water

Date Received: 02/06/14 17:30

Method: 200.8 - ICPMS Total Metals - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	550		50	25	ug/L		02/12/14 08:38	02/12/14 22:44	5
Iron	1500		100	40	ug/L		02/12/14 08:38	02/12/14 19:37	5
Lead	7.9		5.0	2.5	ug/L		02/12/14 08:38	02/12/14 19:37	5
Zinc	130		100	25	ug/L		02/12/14 08:38	02/12/14 19:37	5

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
SGT-HEM	ND		5.2	1.5	mg/L		02/13/14 07:07	02/13/14 07:14	1
Total Suspended Solids	53		6.7	3.3	mg/L			02/11/14 19:24	1

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
pH	7.72		0.100	0.100	SU			02/06/14 18:09	1
Specific Conductance	6000		1.0	1.0	umhos/cm			02/12/14 09:00	1

Client Sample Results

Client: Weiss Associates
Project/Site: 2013-2014 Annual LRTC Stormwater

TestAmerica Job ID: 720-55372-1

Client Sample ID: SW-5

Lab Sample ID: 720-55372-2

Date Collected: 02/06/14 08:35
Date Received: 02/06/14 17:30

Matrix: Water

Method: 200.8 - ICPMS Total Metals - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	1300		50	25	ug/L		02/12/14 08:38	02/12/14 22:46	5
Iron	2400		100	40	ug/L		02/12/14 08:38	02/12/14 19:39	5
Lead	35		5.0	2.5	ug/L		02/12/14 08:38	02/12/14 19:39	5
Zinc	240		100	25	ug/L		02/12/14 08:38	02/12/14 19:39	5

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
SGT-HEM	ND		4.9	1.4	mg/L		02/13/14 07:07	02/13/14 07:14	1
Total Suspended Solids	35		6.7	3.3	mg/L			02/11/14 19:24	1

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
pH	7.65		0.100	0.100	SU			02/06/14 18:12	1
Specific Conductance	320		1.0	1.0	umhos/cm			02/12/14 09:00	1

Client Sample Results

Client: Weiss Associates
Project/Site: 2013-2014 Annual LRTC Stormwater

TestAmerica Job ID: 720-55372-1

Client Sample ID: SW-5-D

Lab Sample ID: 720-55372-3

Date Collected: 02/06/14 08:40
Date Received: 02/06/14 17:30

Matrix: Water

Method: 200.8 - ICPMS Total Metals - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	850		50	25	ug/L		02/12/14 08:38	02/12/14 22:48	5
Iron	2400		100	40	ug/L		02/12/14 08:38	02/12/14 19:42	5
Lead	38		5.0	2.5	ug/L		02/12/14 08:38	02/12/14 19:42	5
Zinc	270		100	25	ug/L		02/12/14 08:38	02/12/14 19:42	5

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
SGT-HEM	ND		5.3	1.5	mg/L		02/13/14 07:07	02/13/14 07:14	1
Total Suspended Solids	37		6.7	3.3	mg/L			02/11/14 19:24	1

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
pH	7.66		0.100	0.100	SU			02/06/14 18:16	1
Specific Conductance	320		1.0	1.0	umhos/cm			02/12/14 09:00	1

Client Sample Results

Client: Weiss Associates
Project/Site: 2013-2014 Annual LRTC Stormwater

TestAmerica Job ID: 720-55372-1

Client Sample ID: SW-6

Lab Sample ID: 720-55372-4

Date Collected: 02/06/14 09:10
Date Received: 02/06/14 17:30

Matrix: Water

Method: 200.8 - ICPMS Total Metals - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	340		10	5.0	ug/L		02/12/14 08:38	02/12/14 19:49	1
Iron	1500		20	8.0	ug/L		02/12/14 08:38	02/12/14 19:49	1
Lead	13		1.0	0.50	ug/L		02/12/14 08:38	02/12/14 19:49	1
Zinc	170		20	5.0	ug/L		02/12/14 08:38	02/12/14 19:49	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
SGT-HEM	ND		4.7	1.3	mg/L		02/13/14 07:07	02/13/14 07:14	1
Total Suspended Solids	9.1		1.7	0.85	mg/L			02/12/14 16:33	1

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
pH	7.57		0.100	0.100	SU			02/06/14 19:06	1
Specific Conductance	110		1.0	1.0	umhos/cm			02/12/14 09:00	1

Client Sample Results

Client: Weiss Associates
Project/Site: 2013-2014 Annual LRTC Stormwater

TestAmerica Job ID: 720-55372-1

Client Sample ID: SW-11

Lab Sample ID: 720-55372-5

Date Collected: 02/06/14 07:00
Date Received: 02/06/14 17:30

Matrix: Water

Method: 200.8 - ICPMS Total Metals - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	510		100	50	ug/L		02/12/14 08:38	02/12/14 19:51	10
Iron	1100		200	80	ug/L		02/12/14 08:38	02/12/14 19:51	10
Lead	6.8	J	10	5.0	ug/L		02/12/14 08:38	02/12/14 19:51	10
Zinc	120	J	200	50	ug/L		02/12/14 08:38	02/12/14 19:51	10

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
SGT-HEM	ND		5.3	1.5	mg/L		02/13/14 07:07	02/13/14 07:14	1
Total Suspended Solids	110		10	5.0	mg/L			02/11/14 19:24	1

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
pH	7.70		0.100	0.100	SU			02/06/14 19:13	1
Specific Conductance	8200		1.0	1.0	umhos/cm			02/12/14 09:00	1

Client Sample Results

Client: Weiss Associates
Project/Site: 2013-2014 Annual LRTC Stormwater

TestAmerica Job ID: 720-55372-1

Client Sample ID: SW-12

Lab Sample ID: 720-55372-6

Date Collected: 02/06/14 07:05
Date Received: 02/06/14 17:30

Matrix: Water

Method: 200.8 - ICPMS Total Metals - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	710		10	5.0	ug/L		02/12/14 08:38	02/12/14 19:54	1
Iron	1700		20	8.0	ug/L		02/12/14 08:38	02/12/14 19:54	1
Lead	13		1.0	0.50	ug/L		02/12/14 08:38	02/12/14 19:54	1
Zinc	96		20	5.0	ug/L		02/12/14 08:38	02/12/14 19:54	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
SGT-HEM	ND		5.1	1.4	mg/L		02/13/14 07:07	02/13/14 07:14	1
Total Suspended Solids	19		3.3	1.7	mg/L			02/11/14 19:24	1

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
pH	7.96		0.100	0.100	SU			02/06/14 19:17	1
Specific Conductance	120		1.0	1.0	umhos/cm			02/12/14 09:00	1

Client Sample Results

Client: Weiss Associates
Project/Site: 2013-2014 Annual LRTC Stormwater

TestAmerica Job ID: 720-55372-1

Client Sample ID: SW-7

Lab Sample ID: 720-55372-7

Date Collected: 02/06/14 11:25
Date Received: 02/06/14 17:30

Matrix: Water

Method: 200.8 - ICPMS Total Metals - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	79		10	5.0	ug/L		02/12/14 08:38	02/12/14 19:56	1
Iron	220		20	8.0	ug/L		02/12/14 08:38	02/12/14 19:56	1
Lead	2.5		1.0	0.50	ug/L		02/12/14 08:38	02/12/14 19:56	1
Zinc	30		20	5.0	ug/L		02/12/14 08:38	02/12/14 19:56	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
SGT-HEM	ND		4.7	1.3	mg/L		02/13/14 07:07	02/13/14 07:14	1
Total Suspended Solids	5.2		2.1	1.0	mg/L			02/11/14 19:24	1

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
pH	7.65		0.100	0.100	SU			02/06/14 19:21	1
Specific Conductance	1400		1.0	1.0	umhos/cm			02/12/14 09:00	1

QC Sample Results

Client: Weiss Associates
Project/Site: 2013-2014 Annual LRTC Stormwater

TestAmerica Job ID: 720-55372-1

Method: 200.8 - ICPMS Total Metals

Lab Sample ID: MB 440-161617/1-A — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total Recoverable**
Analysis Batch: 161876 — **Prep Batch: 161617**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	ND		20	8.0	ug/L		02/12/14 08:38	02/12/14 19:21	1
Lead	ND		1.0	0.50	ug/L		02/12/14 08:38	02/12/14 19:21	1
Zinc	ND		20	5.0	ug/L		02/12/14 08:38	02/12/14 19:21	1

Lab Sample ID: MB 440-161617/1-A — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total Recoverable**
Analysis Batch: 161935 — **Prep Batch: 161617**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	ND		10	5.0	ug/L		02/12/14 08:38	02/12/14 22:27	1

Lab Sample ID: LCS 440-161617/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total Recoverable**
Analysis Batch: 161876 — **Prep Batch: 161617**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Iron	800	827		ug/L		103	85 - 115
Lead	80.0	83.4		ug/L		104	85 - 115
Zinc	80.0	84.3		ug/L		105	85 - 115

Lab Sample ID: LCS 440-161617/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total Recoverable**
Analysis Batch: 161935 — **Prep Batch: 161617**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Aluminum	80.0	81.8		ug/L		102	85 - 115

Method: 1664A - HEM and SGT-HEM

Lab Sample ID: MB 440-161923/1-A — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 161926 — **Prep Batch: 161923**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
SGT-HEM	ND		5.0	1.4	mg/L		02/13/14 07:07	02/13/14 07:14	1

Lab Sample ID: LCS 440-161923/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 161926 — **Prep Batch: 161923**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
SGT-HEM	10.0	8.00		mg/L		80	70 - 110

Lab Sample ID: LCSD 440-161923/3-A — **Client Sample ID: Lab Control Sample Dup**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 161926 — **Prep Batch: 161923**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
SGT-HEM	10.0	8.80		mg/L		88	70 - 110	10	15

Method: 9040B - pH

Lab Sample ID: LCS 720-153103/1 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 153103

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
pH			7.00	7.050		SU		101	99 - 101		

Lab Sample ID: LCS 720-153170/1 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 153170

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
pH			7.00	7.080		SU		101	99 - 101		

Lab Sample ID: 720-55372-4 DU — **Client Sample ID: SW-6**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 153170

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
pH	7.57			7.590		SU				0.3	5

Method: SM 2510B - Conductivity, Specific Conductance

Lab Sample ID: MB 440-161656/3 — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 161656

Analyte	MB Result	MB Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Specific Conductance	ND		1.0	1.0	umhos/cm			02/12/14 09:00	1

Lab Sample ID: LCS 440-161656/4 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 161656

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Specific Conductance			871	908		umhos/cm		104	90 - 110		

Lab Sample ID: 720-55372-7 DU — **Client Sample ID: SW-7**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 161656

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
Specific Conductance	1400			1410		umhos/cm				0.9	5

Lab Sample ID: MB 440-162055/3 — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 162055

Analyte	MB Result	MB Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Specific Conductance	ND		1.0	1.0	umhos/cm			02/13/14 11:00	1

Method: SM 2510B - Conductivity, Specific Conductance (Continued)

Lab Sample ID: LCS 440-162055/4 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 162055

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Specific Conductance	871	908		umhos/cm		104	90 - 110

Method: SM 2540D - Solids, Total Suspended (TSS)

Lab Sample ID: MB 440-161541/2 — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 161541

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids	ND		1.0	0.50	mg/L			02/11/14 19:24	1

Lab Sample ID: LCS 440-161541/1 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 161541

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Suspended Solids	1000	1040		mg/L		104	85 - 115

Lab Sample ID: MB 440-161817/2 — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 161817

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids	ND		1.0	0.50	mg/L			02/12/14 16:33	1

Lab Sample ID: LCS 440-161817/1 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 161817

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Suspended Solids	1000	985		mg/L		99	85 - 115

QC Association Summary

Client: Weiss Associates
Project/Site: 2013-2014 Annual LRTC Stormwater

TestAmerica Job ID: 720-55372-1

Metals

Prep Batch: 161617

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-55372-1	SW-3	Total Recoverable	Water	200.2	
720-55372-2	SW-5	Total Recoverable	Water	200.2	
720-55372-3	SW-5-D	Total Recoverable	Water	200.2	
720-55372-4	SW-6	Total Recoverable	Water	200.2	
720-55372-5	SW-11	Total Recoverable	Water	200.2	
720-55372-6	SW-12	Total Recoverable	Water	200.2	
720-55372-7	SW-7	Total Recoverable	Water	200.2	
LCS 440-161617/2-A	Lab Control Sample	Total Recoverable	Water	200.2	
MB 440-161617/1-A	Method Blank	Total Recoverable	Water	200.2	

Analysis Batch: 161876

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-55372-1	SW-3	Total Recoverable	Water	200.8	161617
720-55372-2	SW-5	Total Recoverable	Water	200.8	161617
720-55372-3	SW-5-D	Total Recoverable	Water	200.8	161617
720-55372-4	SW-6	Total Recoverable	Water	200.8	161617
720-55372-5	SW-11	Total Recoverable	Water	200.8	161617
720-55372-6	SW-12	Total Recoverable	Water	200.8	161617
720-55372-7	SW-7	Total Recoverable	Water	200.8	161617
LCS 440-161617/2-A	Lab Control Sample	Total Recoverable	Water	200.8	161617
MB 440-161617/1-A	Method Blank	Total Recoverable	Water	200.8	161617

Analysis Batch: 161935

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-55372-1	SW-3	Total Recoverable	Water	200.8	161617
720-55372-2	SW-5	Total Recoverable	Water	200.8	161617
720-55372-3	SW-5-D	Total Recoverable	Water	200.8	161617
LCS 440-161617/2-A	Lab Control Sample	Total Recoverable	Water	200.8	161617
MB 440-161617/1-A	Method Blank	Total Recoverable	Water	200.8	161617

General Chemistry

Analysis Batch: 153103

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-55372-1	SW-3	Total/NA	Water	9040B	
720-55372-2	SW-5	Total/NA	Water	9040B	
720-55372-3	SW-5-D	Total/NA	Water	9040B	
LCS 720-153103/1	Lab Control Sample	Total/NA	Water	9040B	

Analysis Batch: 153170

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-55372-4	SW-6	Total/NA	Water	9040B	
720-55372-4 DU	SW-6	Total/NA	Water	9040B	
720-55372-5	SW-11	Total/NA	Water	9040B	
720-55372-6	SW-12	Total/NA	Water	9040B	
720-55372-7	SW-7	Total/NA	Water	9040B	
LCS 720-153170/1	Lab Control Sample	Total/NA	Water	9040B	

General Chemistry (Continued)

Analysis Batch: 161541

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-55372-1	SW-3	Total/NA	Water	SM 2540D	
720-55372-2	SW-5	Total/NA	Water	SM 2540D	
720-55372-3	SW-5-D	Total/NA	Water	SM 2540D	
720-55372-5	SW-11	Total/NA	Water	SM 2540D	
720-55372-6	SW-12	Total/NA	Water	SM 2540D	
720-55372-7	SW-7	Total/NA	Water	SM 2540D	
LCS 440-161541/1	Lab Control Sample	Total/NA	Water	SM 2540D	
MB 440-161541/2	Method Blank	Total/NA	Water	SM 2540D	

Analysis Batch: 161656

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-55372-1	SW-3	Total/NA	Water	SM 2510B	
720-55372-2	SW-5	Total/NA	Water	SM 2510B	
720-55372-3	SW-5-D	Total/NA	Water	SM 2510B	
720-55372-4	SW-6	Total/NA	Water	SM 2510B	
720-55372-5	SW-11	Total/NA	Water	SM 2510B	
720-55372-6	SW-12	Total/NA	Water	SM 2510B	
720-55372-7	SW-7	Total/NA	Water	SM 2510B	
720-55372-7 DU	SW-7	Total/NA	Water	SM 2510B	
LCS 440-161656/4	Lab Control Sample	Total/NA	Water	SM 2510B	
MB 440-161656/3	Method Blank	Total/NA	Water	SM 2510B	

Analysis Batch: 161817

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-55372-4	SW-6	Total/NA	Water	SM 2540D	
LCS 440-161817/1	Lab Control Sample	Total/NA	Water	SM 2540D	
MB 440-161817/2	Method Blank	Total/NA	Water	SM 2540D	

Prep Batch: 161923

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-55372-1	SW-3	Total/NA	Water	1664A	
720-55372-2	SW-5	Total/NA	Water	1664A	
720-55372-3	SW-5-D	Total/NA	Water	1664A	
720-55372-4	SW-6	Total/NA	Water	1664A	
720-55372-5	SW-11	Total/NA	Water	1664A	
720-55372-6	SW-12	Total/NA	Water	1664A	
720-55372-7	SW-7	Total/NA	Water	1664A	
LCS 440-161923/2-A	Lab Control Sample	Total/NA	Water	1664A	
LCSD 440-161923/3-A	Lab Control Sample Dup	Total/NA	Water	1664A	
MB 440-161923/1-A	Method Blank	Total/NA	Water	1664A	

Analysis Batch: 161926

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-55372-1	SW-3	Total/NA	Water	1664A	161923
720-55372-2	SW-5	Total/NA	Water	1664A	161923
720-55372-3	SW-5-D	Total/NA	Water	1664A	161923
720-55372-4	SW-6	Total/NA	Water	1664A	161923
720-55372-5	SW-11	Total/NA	Water	1664A	161923
720-55372-6	SW-12	Total/NA	Water	1664A	161923
720-55372-7	SW-7	Total/NA	Water	1664A	161923
LCS 440-161923/2-A	Lab Control Sample	Total/NA	Water	1664A	161923

General Chemistry (Continued)

Analysis Batch: 161926 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCSD 440-161923/3-A	Lab Control Sample Dup	Total/NA	Water	1664A	161923
MB 440-161923/1-A	Method Blank	Total/NA	Water	1664A	161923

Analysis Batch: 162055

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 440-162055/4	Lab Control Sample	Total/NA	Water	SM 2510B	
MB 440-162055/3	Method Blank	Total/NA	Water	SM 2510B	

Lab Chronicle

Client: Weiss Associates
Project/Site: 2013-2014 Annual LRTC Stormwater

TestAmerica Job ID: 720-55372-1

Client Sample ID: SW-3

Lab Sample ID: 720-55372-1
Date Collected: 02/06/14 10:40
Matrix: Water
Date Received: 02/06/14 17:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Analysis	200.8		5	161876	02/12/14 19:37	NH	TAL IRV
Total Recoverable	Prep	200.2			161617	02/12/14 08:38	ND	TAL IRV
Total Recoverable	Analysis	200.8		5	161935	02/12/14 22:44	NH	TAL IRV
Total/NA	Analysis	SM 2540D		1	161541	02/11/14 19:24	ACAN	TAL IRV
Total/NA	Analysis	SM 2510B		1	161656	02/12/14 09:00	XL	TAL IRV
Total/NA	Prep	1664A			161923	02/13/14 07:07	DA	TAL IRV
Total/NA	Analysis	1664A		1	161926	02/13/14 07:14	DA	TAL IRV
Total/NA	Analysis	9040B		1	153103	02/06/14 18:09	MJK	TAL PLS

Client Sample ID: SW-5

Lab Sample ID: 720-55372-2
Date Collected: 02/06/14 08:35
Matrix: Water
Date Received: 02/06/14 17:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Analysis	200.8		5	161876	02/12/14 19:39	NH	TAL IRV
Total Recoverable	Prep	200.2			161617	02/12/14 08:38	ND	TAL IRV
Total Recoverable	Analysis	200.8		5	161935	02/12/14 22:46	NH	TAL IRV
Total/NA	Analysis	SM 2540D		1	161541	02/11/14 19:24	ACAN	TAL IRV
Total/NA	Analysis	SM 2510B		1	161656	02/12/14 09:00	XL	TAL IRV
Total/NA	Prep	1664A			161923	02/13/14 07:07	DA	TAL IRV
Total/NA	Analysis	1664A		1	161926	02/13/14 07:14	DA	TAL IRV
Total/NA	Analysis	9040B		1	153103	02/06/14 18:12	MJK	TAL PLS

Client Sample ID: SW-5-D

Lab Sample ID: 720-55372-3
Date Collected: 02/06/14 08:40
Matrix: Water
Date Received: 02/06/14 17:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	200.2			161617	02/12/14 08:38	ND	TAL IRV
Total Recoverable	Analysis	200.8		5	161876	02/12/14 19:42	NH	TAL IRV
Total Recoverable	Analysis	200.8		5	161935	02/12/14 22:48	NH	TAL IRV
Total/NA	Analysis	SM 2540D		1	161541	02/11/14 19:24	ACAN	TAL IRV
Total/NA	Analysis	SM 2510B		1	161656	02/12/14 09:00	XL	TAL IRV
Total/NA	Prep	1664A			161923	02/13/14 07:07	DA	TAL IRV
Total/NA	Analysis	1664A		1	161926	02/13/14 07:14	DA	TAL IRV
Total/NA	Analysis	9040B		1	153103	02/06/14 18:16	MJK	TAL PLS

Lab Chronicle

Client: Weiss Associates
Project/Site: 2013-2014 Annual LRTC Stormwater

TestAmerica Job ID: 720-55372-1

Client Sample ID: SW-6

Lab Sample ID: 720-55372-4
Date Collected: 02/06/14 09:10
Matrix: Water
Date Received: 02/06/14 17:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	200.2			161617	02/12/14 08:38	ND	TAL IRV
Total Recoverable	Analysis	200.8		1	161876	02/12/14 19:49	NH	TAL IRV
Total/NA	Analysis	SM 2510B		1	161656	02/12/14 09:00	XL	TAL IRV
Total/NA	Analysis	SM 2540D		1	161817	02/12/14 16:33	NTN	TAL IRV
Total/NA	Prep	1664A			161923	02/13/14 07:07	DA	TAL IRV
Total/NA	Analysis	1664A		1	161926	02/13/14 07:14	DA	TAL IRV
Total/NA	Analysis	9040B		1	153170	02/06/14 19:06	MJK	TAL PLS

Client Sample ID: SW-11

Lab Sample ID: 720-55372-5
Date Collected: 02/06/14 07:00
Matrix: Water
Date Received: 02/06/14 17:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	200.2			161617	02/12/14 08:38	ND	TAL IRV
Total Recoverable	Analysis	200.8		10	161876	02/12/14 19:51	NH	TAL IRV
Total/NA	Analysis	SM 2540D		1	161541	02/11/14 19:24	ACAN	TAL IRV
Total/NA	Analysis	SM 2510B		1	161656	02/12/14 09:00	XL	TAL IRV
Total/NA	Prep	1664A			161923	02/13/14 07:07	DA	TAL IRV
Total/NA	Analysis	1664A		1	161926	02/13/14 07:14	DA	TAL IRV
Total/NA	Analysis	9040B		1	153170	02/06/14 19:13	MJK	TAL PLS

Client Sample ID: SW-12

Lab Sample ID: 720-55372-6
Date Collected: 02/06/14 07:05
Matrix: Water
Date Received: 02/06/14 17:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	200.2			161617	02/12/14 08:38	ND	TAL IRV
Total Recoverable	Analysis	200.8		1	161876	02/12/14 19:54	NH	TAL IRV
Total/NA	Analysis	SM 2540D		1	161541	02/11/14 19:24	ACAN	TAL IRV
Total/NA	Analysis	SM 2510B		1	161656	02/12/14 09:00	XL	TAL IRV
Total/NA	Prep	1664A			161923	02/13/14 07:07	DA	TAL IRV
Total/NA	Analysis	1664A		1	161926	02/13/14 07:14	DA	TAL IRV
Total/NA	Analysis	9040B		1	153170	02/06/14 19:17	MJK	TAL PLS

Client Sample ID: SW-7

Lab Sample ID: 720-55372-7
Date Collected: 02/06/14 11:25
Matrix: Water
Date Received: 02/06/14 17:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	200.2			161617	02/12/14 08:38	ND	TAL IRV
Total Recoverable	Analysis	200.8		1	161876	02/12/14 19:56	NH	TAL IRV
Total/NA	Analysis	SM 2540D		1	161541	02/11/14 19:24	ACAN	TAL IRV

Lab Chronicle

Client: Weiss Associates
Project/Site: 2013-2014 Annual LRTC Stormwater

TestAmerica Job ID: 720-55372-1

Client Sample ID: SW-7

Lab Sample ID: 720-55372-7

Date Collected: 02/06/14 11:25

Matrix: Water

Date Received: 02/06/14 17:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 2510B		1	161656	02/12/14 09:00	XL	TAL IRV
Total/NA	Prep	1664A			161923	02/13/14 07:07	DA	TAL IRV
Total/NA	Analysis	1664A		1	161926	02/13/14 07:14	DA	TAL IRV
Total/NA	Analysis	9040B		1	153170	02/06/14 19:21	MJK	TAL PLS

Laboratory References:

TAL IRV = TestAmerica Irvine, 17461 Derian Ave, Suite 100, Irvine, CA 92614-5817, TEL (949)261-1022

TAL PLS = TestAmerica Pleasanton, 1220 Quarry Lane, Pleasanton, CA 94566, TEL (925)484-1919

Certification Summary

Client: Weiss Associates
Project/Site: 2013-2014 Annual LRTC Stormwater

TestAmerica Job ID: 720-55372-1

Laboratory: TestAmerica Pleasanton

All certifications held by this laboratory are listed. Not all certifications are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
California	State Program	9	2496	01-31-16

Laboratory: TestAmerica Irvine

All certifications held by this laboratory are listed. Not all certifications are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
Alaska	State Program	10	CA01531	06-30-14
Arizona	State Program	9	AZ0671	10-13-14
California	LA Cty Sanitation Districts	9	10256	01-31-15
California	State Program	9	2706	06-30-14
Guam	State Program	9	Cert. No. 12.002r	01-23-14 *
Hawaii	State Program	9	N/A	01-31-14 *
Nevada	State Program	9	CA015312007A	07-31-14
New Mexico	State Program	6	N/A	01-31-14 *
Northern Mariana Islands	State Program	9	MP0002	01-31-14 *
Oregon	NELAP	10	4005	01-29-15
USDA	Federal		P330-09-00080	06-06-14
USEPA UCMR	Federal	1	CA01531	01-31-15

* Expired certification is currently pending renewal and is considered valid.

Method Summary

Client: Weiss Associates
Project/Site: 2013-2014 Annual LRTC Stormwater

TestAmerica Job ID: 720-55372-1

Method	Method Description	Protocol	Laboratory
200.8	ICPMS Total Metals	EPA	TAL IRV
1664A	HEM and SGT-HEM	1664A	TAL IRV
9040B	pH	SW846	TAL PLS
SM 2510B	Conductivity, Specific Conductance	SM	TAL IRV
SM 2540D	Solids, Total Suspended (TSS)	SM	TAL IRV

Protocol References:

1664A = EPA-821-98-002

EPA = US Environmental Protection Agency

SM = "Standard Methods For The Examination Of Water And Wastewater",

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL IRV = TestAmerica Irvine, 17461 Derian Ave, Suite 100, Irvine, CA 92614-5817, TEL (949)261-1022

TAL PLS = TestAmerica Pleasanton, 1220 Quarry Lane, Pleasanton, CA 94566, TEL (925)484-1919

Sample Summary

Client: Weiss Associates
Project/Site: 2013-2014 Annual LRTC Stormwater

TestAmerica Job ID: 720-55372-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
720-55372-1	SW-3	Water	02/06/14 10:40	02/06/14 17:30
720-55372-2	SW-5	Water	02/06/14 08:35	02/06/14 17:30
720-55372-3	SW-5-D	Water	02/06/14 08:40	02/06/14 17:30
720-55372-4	SW-6	Water	02/06/14 09:10	02/06/14 17:30
720-55372-5	SW-11	Water	02/06/14 07:00	02/06/14 17:30
720-55372-6	SW-12	Water	02/06/14 07:05	02/06/14 17:30
720-55372-7	SW-7	Water	02/06/14 11:25	02/06/14 17:30

720-55372

Chain of Custody Record

720-55372 Chain of Custody

2/20/2014

151692

TestAmerica
1220 Quarry Lane
Pleasanton, CA 94566
Phone: 925-484-1919 ext.137

Please send analytic results, electronic deliverables and the original chain-of-custody form to:
labresults@weiss.com
gch@weiss.com
sab@weiss.com

INSTRUCTIONS FOR LAB PERSONNEL:
GeoTracker EDF required? ☐ Yes ☒ No
Equis 4-file EDWEDD required? ☒ Yes ☐ No
Specify analytic/prep method and detection limit in report.
Notify us of any anomalous peaks in GC or other scans
Call immediately with any questions or problems.

Client Contact		Project Manager: Scott Bourne	Protocol ID/path: J:\Levin Richmond\03b_Sampling	COC Number:
Weiss Associates		Project ID: 426-1966.13		
2200 Powell Street, Suite 925		Sampled by: TL, GCH		Page 1 of 1
Emeryville, CA 94608		Sample date(s): 2/6/14		
(510) 450-6000	Phone	Analysis Turnaround Time:		SDG number:
(510) 547-5043	FAX			
Job Name: 2013-2014 Annual Storm Water Sampling		Standard		
Address: Levin Richmond Terminal, 402 Wright Avenue, Richmond, CA 94804		(Specify Days or Hours)		Sample Specific Notes:

Lab ID	Sample Identification	Sample Date	Sample Time	Sample Matrix	# of Cont.	pH (EPA 9040B)	Specific Conductance (SM 2510B)	Total Suspended Solids (SM 2540D)	Oil & Grease (EPA 1664A SGT-HEM)	Total Metals- Al, Fe, Pb, Zn (EPA 200.8)	Pesticides (EPA 8081A)	BTEX (EPA 8021B)									
1	SW-3	2/6/14	1040	WT	5	X	X	X	X	X											
2	SW-5	2/6/14	0935	WT	6	X	X	X	X	X											
3	SW-5-D	2/6/14	0940	WT	6	X	X	X	X	X											
4	SW-6	2/6/14	0910	WT	7	X	X	X	X	X											
5	SW-11	2/6/14	0700	WT	6	X	X	X	X	X											
6	SW-12	2/6/14	0705	WT	5	X	X	X	X	X											
7	SW-7	2/6/14	1125	WT	6	X	X	X	X	X											
					Field Filtered (X):																
Preservation Used: 1= Ice, 2= HCl; 3= H_2SO_4; 4=HNO_3; 5=NaOH; 6= Other						1	1	1	1, 2	1, 4	1	1,2	1	1	1	1	1	1	1	1	1

Special Instructions/QC Requirements & Comments: Level II Report. Report with reporting limit and method detection limit. Analyze and report only the metals listed above (Al, Fe, Pb and Zn).

Relinquished by:	Company	Date/Time:	Received by:	Company	Date/Time:
[signature] ☒	Weiss Associates	2/6/14 1830	○		
[signature] ☐	Levin	2/6/14 1430	[signature] ○	TASF	2-6-14 1610
[signature] ☐	Courier TestAmerica	2-6-14 1730	Received by [signature] ○	[signature]	2-6-14 1730

☒ = Samples released to a secured, locked area.

● = Samples received from a secured, locked area

5.3°C, 3.1°C, 1.3°C

Login Sample Receipt Checklist

Client: Weiss Associates

Job Number: 720-55372-1

Login Number: 55372

List Source: TestAmerica Pleasanton

List Number: 1

Creator: Bullock, Tracy

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	N/A	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	N/A	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Login Sample Receipt Checklist

Client: Weiss Associates

Job Number: 720-55372-1

Login Number: 55372
List Number: 1
Creator: Perez, Angel

List Source: TestAmerica Irvine
List Creation: 02/08/14 03:41 PM

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	Fed-Ex#: 5816 9346 1964
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	N/A	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Pleasanton
1220 Quarry Lane
Pleasanton, CA 94566
Tel: (925)484-1919

TestAmerica Job ID: 720-55437-1
Client Project/Site: 2013-2014 Annual Storm Water Sampling

For:
Weiss Associates
2200 Powell Street
Suite 925
Emeryville, California 94608

Attn: Greg Hulburd

Authorized for release by:
2/21/2014 5:31:26 PM

Micah Smith, Project Manager I
()
micah.smith@testamericainc.com

LINKS

Review your project results through TotalAccess

Have a Question? Ask The Expert

Visit us at:
www.testamericainc.com

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

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Definitions/Glossary

Client: Weiss Associates
Project/Site: 2013-2014 Annual Storm Water Sampling

TestAmerica Job ID: 720-55437-1

Qualifiers

Metals

Qualifier	Qualifier Description
B	Compound was found in the blank and sample.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

General Chemistry

Qualifier	Qualifier Description
H	Sample was prepped or analyzed beyond the specified holding time

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CNF	Contains no Free Liquid
DER	Duplicate error ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative error ratio
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Case Narrative

Client: Weiss Associates
Project/Site: 2013-2014 Annual Storm Water Sampling

TestAmerica Job ID: 720-55437-1

Job ID: 720-55437-1

Laboratory: TestAmerica Pleasanton

Narrative

Job Narrative
720-55437-1

Comments
No additional comments.

Receipt
The samples were received on 2/10/2014 5:24 PM; the samples arrived in good condition, properly preserved and, where required, on ice.
The temperatures of the 2 coolers at receipt time were 1.6º C and 1.9º C.

Except:

The following sample(s) was received outside of holding time: Samples SW-4 and TS1-E were received out of hold for pH analysis.

Metals
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

General Chemistry
Method(s) 1664A: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate/sample duplicate (MS/MSD/DUP) associated with batch 162679.

No other analytical or quality issues were noted.

Detection Summary

Client: Weiss Associates
Project/Site: 2013-2014 Annual Storm Water Sampling

TestAmerica Job ID: 720-55437-1

Client Sample ID: SW-4 — Lab Sample ID: 720-55437-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Aluminum	1800		20	10	ug/L	2		200.8	Total Recoverable
Iron	4200	B	40	16	ug/L	2		200.8	Total Recoverable
Lead	69		2.0	1.0	ug/L	2		200.8	Total Recoverable
Zinc	410		40	10	ug/L	2		200.8	Total Recoverable

Analyte	Result	Qualifier	RL	RL	Unit	Dil Fac	D	Method	Prep Type
pH	7.52	H	0.100	0.100	SU	1		9040B	Total/NA
Specific Conductance	1800		10	10	umhos/cm	1		SM 2510B	Total/NA
Total Suspended Solids	37		13	13	mg/L	1		SM 2540D	Total/NA

Client Sample ID: TS1-E — Lab Sample ID: 720-55437-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Aluminum	990		50	25	ug/L	5		200.8	Total Recoverable
Iron	1700	B	100	40	ug/L	5		200.8	Total Recoverable
Lead	14		5.0	2.5	ug/L	5		200.8	Total Recoverable
Zinc	220		100	25	ug/L	5		200.8	Total Recoverable

Analyte	Result	Qualifier	RL	RL	Unit	Dil Fac	D	Method	Prep Type
pH	7.37	H	0.100	0.100	SU	1		9040B	Total/NA
Specific Conductance	2600		10	10	umhos/cm	1		SM 2510B	Total/NA
Total Suspended Solids	70		12	12	mg/L	1		SM 2540D	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample Results

Client: Weiss Associates
Project/Site: 2013-2014 Annual Storm Water Sampling

TestAmerica Job ID: 720-55437-1

Client Sample ID: SW-4

Lab Sample ID: 720-55437-1

Date Collected: 02/07/14 16:25

Matrix: Water

Date Received: 02/10/14 17:24

Method: 200.8 - ICPMS Total Metals - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	1800		20	10	ug/L		02/17/14 09:57	02/17/14 16:42	2
Iron	4200	B	40	16	ug/L		02/17/14 09:57	02/17/14 16:42	2
Lead	69		2.0	1.0	ug/L		02/17/14 09:57	02/17/14 16:42	2
Zinc	410		40	10	ug/L		02/17/14 09:57	02/17/14 16:42	2

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
SGT-HEM	ND		5.0	1.4	mg/L		02/17/14 10:32	02/17/14 10:40	1

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
pH	7.52	H	0.100	0.100	SU			02/10/14 22:36	1
Specific Conductance	1800		10	10	umhos/cm			02/18/14 14:26	1
Total Suspended Solids	37		13	13	mg/L			02/12/14 17:05	1

Client Sample Results

Client: Weiss Associates
Project/Site: 2013-2014 Annual Storm Water Sampling

TestAmerica Job ID: 720-55437-1

Client Sample ID: TS1-E

Lab Sample ID: 720-55437-2

Date Collected: 02/07/14 17:15
Date Received: 02/10/14 17:24

Matrix: Water

Method: 200.8 - ICPMS Total Metals - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	990		50	25	ug/L		02/17/14 09:57	02/17/14 16:49	5
Iron	1700	B	100	40	ug/L		02/17/14 09:57	02/17/14 16:49	5
Lead	14		5.0	2.5	ug/L		02/17/14 09:57	02/17/14 16:49	5
Zinc	220		100	25	ug/L		02/17/14 09:57	02/17/14 16:49	5

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
SGT-HEM	ND		5.1	1.4	mg/L		02/17/14 10:32	02/17/14 10:40	1

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
pH	7.37	H	0.100	0.100	SU			02/10/14 22:38	1
Specific Conductance	2600		10	10	umhos/cm			02/18/14 14:27	1
Total Suspended Solids	70		12	12	mg/L			02/12/14 17:05	1

QC Sample Results

Client: Weiss Associates
Project/Site: 2013-2014 Annual Storm Water Sampling

TestAmerica Job ID: 720-55437-1

Method: 200.8 - ICPMS Total Metals

Lab Sample ID: MB 440-162661/1-A — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total Recoverable**
Analysis Batch: 162852 — **Prep Batch: 162661**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	ND		10	5.0	ug/L		02/17/14 09:57	02/17/14 15:40	1
Iron	9.71	J	20	8.0	ug/L		02/17/14 09:57	02/17/14 15:40	1
Lead	ND		1.0	0.50	ug/L		02/17/14 09:57	02/17/14 15:40	1
Zinc	ND		20	5.0	ug/L		02/17/14 09:57	02/17/14 15:40	1

Lab Sample ID: LCS 440-162661/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total Recoverable**
Analysis Batch: 162852 — **Prep Batch: 162661**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Aluminum	80.0	79.8		ug/L		100	85 - 115
Iron	800	808		ug/L		101	85 - 115
Lead	80.0	76.6		ug/L		96	85 - 115
Zinc	80.0	80.3		ug/L		100	85 - 115

Method: 1664A - HEM and SGT-HEM

Lab Sample ID: MB 440-162679/1-A — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 162686 — **Prep Batch: 162679**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
SGT-HEM	ND		5.0	1.4	mg/L		02/17/14 10:32	02/17/14 10:40	1

Lab Sample ID: LCS 440-162679/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 162686 — **Prep Batch: 162679**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
SGT-HEM	10.0	9.00		mg/L		90	70 - 110

Lab Sample ID: LCSD 440-162679/3-A — **Client Sample ID: Lab Control Sample Dup**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 162686 — **Prep Batch: 162679**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
SGT-HEM	10.0	8.50		mg/L		85	70 - 110	6	15

Method: 9040B - pH

Lab Sample ID: LCS 720-153262/1 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 153262

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
pH	7.00	6.950		SU		99	99 - 101

QC Sample Results

Client: Weiss Associates
Project/Site: 2013-2014 Annual Storm Water Sampling

TestAmerica Job ID: 720-55437-1

Method: SM 2510B - Conductivity, Specific Conductance

Lab Sample ID: MB 720-153768/2 — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 153768

Analyte	MB Result	MB Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Specific Conductance	ND		10	10	umhos/cm			02/18/14 14:04	1

Lab Sample ID: LCS 720-153768/3 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 153768

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Specific Conductance			1000	1030		umhos/cm		103	90 - 110		

Lab Sample ID: LCSD 720-153768/4 — **Client Sample ID: Lab Control Sample Dup**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 153768

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Specific Conductance			1000	1020		umhos/cm		102	90 - 110	2	20

Method: SM 2540D - Solids, Total Suspended (TSS)

Lab Sample ID: MB 720-153427/2 — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 153427

Analyte	MB Result	MB Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids	ND		10	10	mg/L			02/12/14 17:05	1

Lab Sample ID: LCS 720-153427/1 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 153427

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Total Suspended Solids			500	433		mg/L		87	69 - 117		

QC Association Summary

Client: Weiss Associates
Project/Site: 2013-2014 Annual Storm Water Sampling

TestAmerica Job ID: 720-55437-1

Metals

Prep Batch: 162661

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-55437-1	SW-4	Total Recoverable	Water	200.2	
720-55437-2	TS1-E	Total Recoverable	Water	200.2	
LCS 440-162661/2-A	Lab Control Sample	Total Recoverable	Water	200.2	
MB 440-162661/1-A	Method Blank	Total Recoverable	Water	200.2	

Analysis Batch: 162852

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-55437-1	SW-4	Total Recoverable	Water	200.8	162661
720-55437-2	TS1-E	Total Recoverable	Water	200.8	162661
LCS 440-162661/2-A	Lab Control Sample	Total Recoverable	Water	200.8	162661
MB 440-162661/1-A	Method Blank	Total Recoverable	Water	200.8	162661

General Chemistry

Analysis Batch: 153262

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-55437-1	SW-4	Total/NA	Water	9040B	
720-55437-2	TS1-E	Total/NA	Water	9040B	
LCS 720-153262/1	Lab Control Sample	Total/NA	Water	9040B	

Analysis Batch: 153427

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-55437-1	SW-4	Total/NA	Water	SM 2540D	
720-55437-2	TS1-E	Total/NA	Water	SM 2540D	
LCS 720-153427/1	Lab Control Sample	Total/NA	Water	SM 2540D	
MB 720-153427/2	Method Blank	Total/NA	Water	SM 2540D	

Analysis Batch: 153768

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-55437-1	SW-4	Total/NA	Water	SM 2510B	
720-55437-2	TS1-E	Total/NA	Water	SM 2510B	
LCS 720-153768/3	Lab Control Sample	Total/NA	Water	SM 2510B	
LCSD 720-153768/4	Lab Control Sample Dup	Total/NA	Water	SM 2510B	
MB 720-153768/2	Method Blank	Total/NA	Water	SM 2510B	

Prep Batch: 162679

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-55437-1	SW-4	Total/NA	Water	1664A	
720-55437-2	TS1-E	Total/NA	Water	1664A	
LCS 440-162679/2-A	Lab Control Sample	Total/NA	Water	1664A	
LCSD 440-162679/3-A	Lab Control Sample Dup	Total/NA	Water	1664A	
MB 440-162679/1-A	Method Blank	Total/NA	Water	1664A	

Analysis Batch: 162686

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-55437-1	SW-4	Total/NA	Water	1664A	162679
720-55437-2	TS1-E	Total/NA	Water	1664A	162679
LCS 440-162679/2-A	Lab Control Sample	Total/NA	Water	1664A	162679
LCSD 440-162679/3-A	Lab Control Sample Dup	Total/NA	Water	1664A	162679
MB 440-162679/1-A	Method Blank	Total/NA	Water	1664A	162679

Lab Chronicle

Client: Weiss Associates
Project/Site: 2013-2014 Annual Storm Water Sampling

TestAmerica Job ID: 720-55437-1

Client Sample ID: SW-4

Lab Sample ID: 720-55437-1

Date Collected: 02/07/14 16:25

Matrix: Water

Date Received: 02/10/14 17:24

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	200.2			162661	02/17/14 09:57	ND	TAL IRV
Total Recoverable	Analysis	200.8		2	162852	02/17/14 16:42	YS	TAL IRV
Total/NA	Prep	1664A			162679	02/17/14 10:32	DA	TAL IRV
Total/NA	Analysis	1664A		1	162686	02/17/14 10:40	DA	TAL IRV
Total/NA	Analysis	9040B		1	153262	02/10/14 22:36	EYT	TAL PLS
Total/NA	Analysis	SM 2540D		1	153427	02/12/14 17:05	EYT	TAL PLS
Total/NA	Analysis	SM 2510B		1	153768	02/18/14 14:26	MJK	TAL PLS

Client Sample ID: TS1-E

Lab Sample ID: 720-55437-2

Date Collected: 02/07/14 17:15

Matrix: Water

Date Received: 02/10/14 17:24

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	200.2			162661	02/17/14 09:57	ND	TAL IRV
Total Recoverable	Analysis	200.8		5	162852	02/17/14 16:49	YS	TAL IRV
Total/NA	Prep	1664A			162679	02/17/14 10:32	DA	TAL IRV
Total/NA	Analysis	1664A		1	162686	02/17/14 10:40	DA	TAL IRV
Total/NA	Analysis	9040B		1	153262	02/10/14 22:38	EYT	TAL PLS
Total/NA	Analysis	SM 2540D		1	153427	02/12/14 17:05	EYT	TAL PLS
Total/NA	Analysis	SM 2510B		1	153768	02/18/14 14:27	MJK	TAL PLS

Laboratory References:

TAL IRV = TestAmerica Irvine, 17461 Derian Ave, Suite 100, Irvine, CA 92614-5817, TEL (949)261-1022

TAL PLS = TestAmerica Pleasanton, 1220 Quarry Lane, Pleasanton, CA 94566, TEL (925)484-1919

Certification Summary

Client: Weiss Associates
Project/Site: 2013-2014 Annual Storm Water Sampling

TestAmerica Job ID: 720-55437-1

Laboratory: TestAmerica Pleasanton

All certifications held by this laboratory are listed. Not all certifications are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
California	State Program	9	2496	01-31-16

Laboratory: TestAmerica Irvine

All certifications held by this laboratory are listed. Not all certifications are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
Alaska	State Program	10	CA01531	06-30-14
Arizona	State Program	9	AZ0671	10-13-14
California	LA Cty Sanitation Districts	9	10256	01-31-15
California	State Program	9	2706	06-30-14
Guam	State Program	9	Cert. No. 12.002r	01-23-14 *
Hawaii	State Program	9	N/A	01-31-14 *
Nevada	State Program	9	CA015312007A	07-31-14
New Mexico	State Program	6	N/A	01-31-14 *
Northern Mariana Islands	State Program	9	MP0002	01-31-14 *
Oregon	NELAP	10	4005	01-29-15
USDA	Federal		P330-09-00080	06-06-14
USEPA UCMR	Federal	1	CA01531	01-31-15

* Expired certification is currently pending renewal and is considered valid.

Method Summary

Client: Weiss Associates
Project/Site: 2013-2014 Annual Storm Water Sampling

TestAmerica Job ID: 720-55437-1

Method	Method Description	Protocol	Laboratory
200.8	ICPMS Total Metals	EPA	TAL IRV
1664A	HEM and SGT-HEM	1664A	TAL IRV
9040B	pH	SW846	TAL PLS
SM 2510B	Conductivity, Specific Conductance	SM	TAL PLS
SM 2540D	Solids, Total Suspended (TSS)	SM	TAL PLS

Protocol References:

1664A = EPA-821-98-002

EPA = US Environmental Protection Agency

SM = "Standard Methods For The Examination Of Water And Wastewater",

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL IRV = TestAmerica Irvine, 17461 Derian Ave, Suite 100, Irvine, CA 92614-5817, TEL (949)261-1022

TAL PLS = TestAmerica Pleasanton, 1220 Quarry Lane, Pleasanton, CA 94566, TEL (925)484-1919

Sample Summary

Client: Weiss Associates
Project/Site: 2013-2014 Annual Storm Water Sampling

TestAmerica Job ID: 720-55437-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
720-55437-1	SW-4	Water	02/07/14 16:25	02/10/14 17:24
720-55437-2	TS1-E	Water	02/07/14 17:15	02/10/14 17:24

720-55437

151757

Chain of Custody Record

TestAmerica
1220 Quarry Lane
Pleasanton, CA 94566
Phone: 925-484-1919 ext.137

Please send analytic results, electronic deliverables and the original chain-of-custody form to.
labresults@weiss.com
gch@weiss.com
sab@weiss.com

INSTRUCTIONS FOR LAB PERSONNEL:
GeoTracker EDF required? ☐ Yes ☒ No
Equis 4-file EDWEDD required? ☒ Yes ☐ No
Specify analytic/prep method and detection limit in report.
Notify us of any anomalous peaks in GC or other scans
Call immediately with any questions or problems

Client Contact		Project Manager: Scott Bourne	Protocol ID/path: J:\Levin Richmond\03b_Sampling	COC Number:
Weiss Associates		Project ID: 426-1966.13		
2200 Powell Street, Suite 925		Sampled by: GCH - Greg Hulbert		Page 1 of 1
Emeryville, CA 94608		Sample date(s): 2/7/14		
(510) 450-6000	Phone	Analysis Turnaround Time:		SDG number:
(510) 547-5043	FAX			
Job Name: 2013-209 Annual Storm Water Sampling		Standard		
Address: Levin Richmond Terminal, 402 Wright Avenue, Richmond, CA 94804		(Specify Days or Hours)		Sample Specific Notes:

Lab ID	Sample Identification	Sample Date	Sample Time	Sample Matrix	# of Cont.	pH (EPA 9040B)	Specific Conductance (SM 2510B)	Total Suspended Solids (SM 2540D)	Oil & Grease (EPA 1664A SGT-HEM)	Total Metals- Al, Fe, Pb, Zn (EPA 200.8)	Pesticides (EPA 8081A)	BTEX (EPA 8021B)									
	SW-4	2/7/14	1625	WT	5	X	X	X	X	X											
	TS1-E	2/7/14	1715	WT	5	X	X	X	X	X											
Field Filtered (X):																					
Preservation Used: 1=Ice, 2=HCl; 3=H_2SO_4; 4=HNO_3; 5=NaOH; 6=Other						1	1	1	1,2	1,4	1	1,2	1	1	1	1	1	1	1	1	1

720-55437 Chain of Custody

GCH

Special Instructions/QC Requirements & Comments: Level II Report. Report with reporting limit and method detection limit. Analyze and report only the metals listed above (Al, Fe, Pb and Zn).

1.9°c / 1.6°c

Relinquished by	Company	Date/Time	Received by	Company	Date/Time
[signature] ☐	Weiss Associates	2/7/14 1900	[signature] ○	Weiss	2/10/14 1148
[signature] ☐	Weiss	2/10/14 1148	[signature] ○	TAP	2-10-14 1148
[signature] ☐	TAP	2-10-14 1724	[signature] ○	TAP	2/10/14 1724

☒ = Samples released to a secured, locked area.

● = Samples received from a secured, locked area

Login Sample Receipt Checklist

Client: Weiss Associates

Job Number: 720-55437-1

Login Number: 55437

List Source: TestAmerica Pleasanton

List Number: 1

Creator: Gonzales, Justinn

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	N/A	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time.	False	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Login Sample Receipt Checklist

Client: Weiss Associates

Job Number: 720-55437-1

Login Number: 55437
List Number: 1
Creator: Sung, Hubert

List Source: TestAmerica Irvine
List Creation: 02/12/14 03:29 PM

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	N/A	Received project as a subcontract.
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Calscience Environmental Laboratories, Inc.

CALSCIENCE

WORK ORDER NUMBER: 14-02-0399

The difference is service

AIR | SOIL | WATER | MARINE CHEMISTRY

Analytical Report For

Client: Weiss Associates

Client Project Name: 2013-2014 Annual Storm Water Sampling / 426-1966.13

Attention: Scott Bourne
2200 Powell Street
Suite 925
Emeryville, CA 94608-1879

Approved for release on 02/17/2014 by:
Virendra Patel
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.

Calscience Environmental Laboratories, Inc.

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Client Project Name: 2013-2014 Annual Storm Water Sampling / 426-1966.13
Work Order Number: 14-02-0399

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Calscience Environmental Laboratories, Inc.

Work Order Narrative

Work Order: 14-02-0399 Page 1 of 1

Condition Upon Receipt:

Samples were received under Chain of Custody (COC) on 02/07/14. They were assigned to Work Order 14-02-0399.

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 <= 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

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.

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Calscience Environmental Laboratories, Inc.

Sample Summary

Client:	Weiss Associates 2200 Powell Street, Suite 925 Emeryville, CA 94608-1879	Work Order:	14-02-0399
		Project Name:	2013-2014 Annual Storm Water Sampling / 426-1966.13
		PO Number:	
		Date/Time Received:	02/07/14 09:30
		Number of Containers:	10
Attn:	Scott Bourne		

Sample Identification	Lab Number	Collection Date and Time	Number of Containers	Matrix
SW-3	14-02-0399-1	02/06/14 10:40	2	Aqueous
SW-5	14-02-0399-2	02/06/14 08:35	2	Aqueous
SW-5-D	14-02-0399-3	02/06/14 08:40	2	Aqueous
SW-6	14-02-0399-4	02/06/14 09:10	2	Aqueous
SW-7	14-02-0399-5	02/06/14 11:25	2	Aqueous

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Calscience Environmental Laboratories, Inc.

Detections Summary

Client:	Weiss Associates 2200 Powell Street, Suite 925 Emeryville, CA 94608-1879	Work Order:	14-02-0399
		Project Name:	2013-2014 Annual Storm Water Sampling / 426-1966.13
		Received:	02/07/14
Attn:	Scott Bourne		Page 1 of 1

Client SampleID Analyte	Result	Qualifiers	RL	Units	Method	Extraction
SW-5 (14-02-0399-2)						
4,4'-DDT	9.2		2.2	ng/L	EPA 8081A	EPA 3510C
Endosulfan I	0.041	J	0.027*	ug/L	EPA 8081A	EPA 3510C
SW-5-D (14-02-0399-3)						
4,4'-DDT	8.6		2.2	ng/L	EPA 8081A	EPA 3510C
Endosulfan I	0.043	J	0.027*	ug/L	EPA 8081A	EPA 3510C
SW-6 (14-02-0399-4)						
4,4'-DDT	26		1.9	ng/L	EPA 8081A	EPA 3510C
Endosulfan I	0.046	J	0.027*	ug/L	EPA 8081A	EPA 3510C

Subcontracted analyses, if any, are not included in this summary.

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* MDL is shown

Calscience Environmental Laboratories, Inc.

Analytical Report

Weiss Associates		Date Received:	02/07/14
2200 Powell Street, Suite 925		Work Order:	14-02-0399
Emeryville, CA 94608-1879		Preparation:	EPA 3510C
		Method:	EPA 8081A
		Units:	ug/L
Project: 2013-2014 Annual Storm Water Sampling / 426-1966.13			Page 1 of 3

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SW-3	**14-02-0399-1-B**	**02/06/14 10:40**	**Aqueous**	**GC 51**	**02/07/14**	**02/13/14 14:34**	**140207L01**

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	0.098	0.027	1	
Beta-BHC	ND	0.098	0.029	1	
Delta-BHC	ND	0.098	0.028	1	
Endosulfan I	ND	0.098	0.027	1	
Endrin Aldehyde	ND	0.098	0.026	1	
Endosulfan II	ND	0.098	0.027	1	
Endosulfan Sulfate	ND	0.098	0.029	1	
Methoxychlor	ND	0.098	0.025	1	
Chlordane	ND	0.98	0.32	1	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Decachlorobiphenyl	105	50-135	
2,4,5,6-Tetrachloro-m-Xylene	103	50-135	

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	0.097	0.027	1	
Beta-BHC	ND	0.097	0.029	1	
Delta-BHC	ND	0.097	0.028	1	
Endosulfan I	0.041	0.097	0.027	1	J
Endrin Aldehyde	ND	0.097	0.026	1	
Endosulfan II	ND	0.097	0.026	1	
Endosulfan Sulfate	ND	0.097	0.028	1	
Methoxychlor	ND	0.097	0.024	1	
Chlordane	ND	0.97	0.32	1	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Decachlorobiphenyl	99	50-135	
2,4,5,6-Tetrachloro-m-Xylene	111	50-135	

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

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Calscience Environmental Laboratories, Inc.

Analytical Report

Weiss Associates		Date Received:	02/07/14
2200 Powell Street, Suite 925		Work Order:	14-02-0399
Emeryville, CA 94608-1879		Preparation:	EPA 3510C
		Method:	EPA 8081A
		Units:	ug/L
Project: 2013-2014 Annual Storm Water Sampling / 426-1966.13			Page 2 of 3

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SW-5-D	**14-02-0399-3-B**	**02/06/14 08:40**	**Aqueous**	**GC 51**	**02/07/14**	**02/13/14 15:03**	**140207L01**

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	0.096	0.027	1	
Beta-BHC	ND	0.096	0.029	1	
Delta-BHC	ND	0.096	0.028	1	
Endosulfan I	0.043	0.096	0.027	1	J
Endrin Aldehyde	ND	0.096	0.025	1	
Endosulfan II	ND	0.096	0.026	1	
Endosulfan Sulfate	ND	0.096	0.028	1	
Methoxychlor	ND	0.096	0.024	1	
Chlordane	ND	0.96	0.32	1	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Decachlorobiphenyl	96	50-135	
2,4,5,6-Tetrachloro-m-Xylene	111	50-135	

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	0.096	0.027	1	
Beta-BHC	ND	0.096	0.029	1	
Delta-BHC	ND	0.096	0.028	1	
Endosulfan I	0.046	0.096	0.027	1	J
Endrin Aldehyde	ND	0.096	0.025	1	
Endosulfan II	ND	0.096	0.026	1	
Endosulfan Sulfate	ND	0.096	0.028	1	
Methoxychlor	ND	0.096	0.024	1	
Chlordane	ND	0.96	0.32	1	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Decachlorobiphenyl	89	50-135	
2,4,5,6-Tetrachloro-m-Xylene	105	50-135	

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

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Calscience Environmental Laboratories, Inc.

Analytical Report

Weiss Associates		Date Received:	02/07/14
2200 Powell Street, Suite 925		Work Order:	14-02-0399
Emeryville, CA 94608-1879		Preparation:	EPA 3510C
		Method:	EPA 8081A
		Units:	ug/L
Project: 2013-2014 Annual Storm Water Sampling / 426-1966.13			Page 3 of 3

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SW-7	**14-02-0399-5-B**	**02/06/14 11:25**	**Aqueous**	**GC 51**	**02/07/14**	**02/13/14 15:32**	**140207L01**

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	0.098	0.027	1	
Beta-BHC	ND	0.098	0.029	1	
Delta-BHC	ND	0.098	0.028	1	
Endosulfan I	ND	0.098	0.027	1	
Endrin Aldehyde	ND	0.098	0.026	1	
Endosulfan II	ND	0.098	0.027	1	
Endosulfan Sulfate	ND	0.098	0.029	1	
Methoxychlor	ND	0.098	0.025	1	
Chlordane	ND	0.98	0.32	1	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Decachlorobiphenyl	102	50-135	
2,4,5,6-Tetrachloro-m-Xylene	120	50-135	

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	
Beta-BHC	ND	0.10	0.030	1	
Delta-BHC	ND	0.10	0.029	1	
Endosulfan I	ND	0.10	0.028	1	
Endrin Aldehyde	ND	0.10	0.026	1	
Endosulfan II	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	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Decachlorobiphenyl	115	50-135	
2,4,5,6-Tetrachloro-m-Xylene	135	50-135	

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

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Calscience Environmental Laboratories, Inc.

Analytical Report

Weiss Associates		Date Received:	02/07/14
2200 Powell Street, Suite 925		Work Order:	14-02-0399
Emeryville, CA 94608-1879		Preparation:	EPA 3510C
		Method:	EPA 8081A
		Units:	ng/L
Project: 2013-2014 Annual Storm Water Sampling / 426-1966.13			Page 1 of 6

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SW-3	**14-02-0399-1-A**	**02/06/14 10:40**	**Aqueous**	**GC 44**	**02/10/14**	**02/13/14 17:09**	**140210L17**

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
Aldrin	ND	2.2	0.36	1	
4,4'-DDD	ND	2.2	0.60	1	
4,4'-DDE	ND	2.2	0.52	1	
4,4'-DDT	ND	2.2	0.60	1	
Alpha Chlordane	ND	2.2	0.54	1	
Dieldrin	ND	2.2	0.60	1	
Gamma Chlordane	ND	2.2	0.53	1	
Toxaphene	ND	27	9.0	1	
Endrin	ND	2.2	0.34	1	
Gamma-BHC	ND	2.2	0.50	1	
Heptachlor	ND	2.2	0.39	1	
Heptachlor Epoxide	ND	2.2	0.37	1	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Decachlorobiphenyl	87	50-150	
2,4,5,6-Tetrachloro-m-Xylene	77	50-150	

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

Calscience Environmental Laboratories, Inc.

Analytical Report

Weiss Associates		Date Received:	02/07/14
2200 Powell Street, Suite 925		Work Order:	14-02-0399
Emeryville, CA 94608-1879		Preparation:	EPA 3510C
		Method:	EPA 8081A
		Units:	ng/L
Project: 2013-2014 Annual Storm Water Sampling / 426-1966.13			Page 2 of 6

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SW-5	**14-02-0399-2-A**	**02/06/14 08:35**	**Aqueous**	**GC 44**	**02/10/14**	**02/13/14 17:24**	**140210L17**

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
Aldrin	ND	2.2	0.36	1	
4,4'-DDD	ND	2.2	0.60	1	
4,4'-DDE	ND	2.2	0.52	1	
4,4'-DDT	9.2	2.2	0.60	1	
Alpha Chlordane	ND	2.2	0.54	1	
Dieldrin	ND	2.2	0.60	1	
Gamma Chlordane	ND	2.2	0.53	1	
Toxaphene	ND	27	9.0	1	
Endrin	ND	2.2	0.34	1	
Gamma-BHC	ND	2.2	0.50	1	
Heptachlor	ND	2.2	0.39	1	
Heptachlor Epoxide	ND	2.2	0.37	1	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Decachlorobiphenyl	79	50-150	
2,4,5,6-Tetrachloro-m-Xylene	54	50-150	

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

Calscience Environmental Laboratories, Inc.

Analytical Report

Weiss Associates		Date Received:	02/07/14
2200 Powell Street, Suite 925		Work Order:	14-02-0399
Emeryville, CA 94608-1879		Preparation:	EPA 3510C
		Method:	EPA 8081A
		Units:	ng/L
Project: 2013-2014 Annual Storm Water Sampling / 426-1966.13			Page 3 of 6

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SW-5-D	**14-02-0399-3-A**	**02/06/14 08:40**	**Aqueous**	**GC 44**	**02/10/14**	**02/13/14 17:38**	**140210L17**

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
Aldrin	ND	2.2	0.36	1	
4,4'-DDD	ND	2.2	0.60	1	
4,4'-DDE	ND	2.2	0.52	1	
4,4'-DDT	8.6	2.2	0.60	1	
Alpha Chlordane	ND	2.2	0.54	1	
Dieldrin	ND	2.2	0.60	1	
Gamma Chlordane	ND	2.2	0.53	1	
Toxaphene	ND	27	9.0	1	
Endrin	ND	2.2	0.34	1	
Gamma-BHC	ND	2.2	0.50	1	
Heptachlor	ND	2.2	0.39	1	
Heptachlor Epoxide	ND	2.2	0.37	1	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Decachlorobiphenyl	99	50-150	
2,4,5,6-Tetrachloro-m-Xylene	65	50-150	

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

Calscience Environmental Laboratories, Inc.

Analytical Report

Weiss Associates		Date Received:	02/07/14
2200 Powell Street, Suite 925		Work Order:	14-02-0399
Emeryville, CA 94608-1879		Preparation:	EPA 3510C
		Method:	EPA 8081A
		Units:	ng/L
Project: 2013-2014 Annual Storm Water Sampling / 426-1966.13			Page 4 of 6

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SW-6	**14-02-0399-4-A**	**02/06/14 09:10**	**Aqueous**	**GC 44**	**02/10/14**	**02/13/14 17:52**	**140210L17**

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
Aldrin	ND	1.9	0.31	1	
4,4'-DDD	ND	1.9	0.52	1	
4,4'-DDE	ND	1.9	0.46	1	
4,4'-DDT	26	1.9	0.52	1	
Alpha Chlordane	ND	1.9	0.47	1	
Dieldrin	ND	1.9	0.52	1	
Gamma Chlordane	ND	1.9	0.46	1	
Toxaphene	ND	24	7.9	1	
Endrin	ND	1.9	0.30	1	
Gamma-BHC	ND	1.9	0.44	1	
Heptachlor	ND	1.9	0.34	1	
Heptachlor Epoxide	ND	1.9	0.32	1	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Decachlorobiphenyl	80	50-150	
2,4,5,6-Tetrachloro-m-Xylene	66	50-150	

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

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Calscience Environmental Laboratories, Inc.

Analytical Report

Weiss Associates		Date Received:	02/07/14
2200 Powell Street, Suite 925		Work Order:	14-02-0399
Emeryville, CA 94608-1879		Preparation:	EPA 3510C
		Method:	EPA 8081A
		Units:	ng/L
Project: 2013-2014 Annual Storm Water Sampling / 426-1966.13			Page 5 of 6

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SW-7	**14-02-0399-5-A**	**02/06/14 11:25**	**Aqueous**	**GC 44**	**02/10/14**	**02/13/14 18:07**	**140210L17**

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
Aldrin	ND	2.2	0.36	1	
4,4'-DDD	ND	2.2	0.60	1	
4,4'-DDE	ND	2.2	0.52	1	
4,4'-DDT	ND	2.2	0.60	1	
Alpha Chlordane	ND	2.2	0.54	1	
Dieldrin	ND	2.2	0.60	1	
Gamma Chlordane	ND	2.2	0.53	1	
Toxaphene	ND	27	9.0	1	
Endrin	ND	2.2	0.34	1	
Gamma-BHC	ND	2.2	0.50	1	
Heptachlor	ND	2.2	0.39	1	
Heptachlor Epoxide	ND	2.2	0.37	1	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Decachlorobiphenyl	79	50-150	
2,4,5,6-Tetrachloro-m-Xylene	65	50-150	

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

Calscience Environmental Laboratories, Inc.

Analytical Report

Weiss Associates		Date Received:	02/07/14
2200 Powell Street, Suite 925		Work Order:	14-02-0399
Emeryville, CA 94608-1879		Preparation:	EPA 3510C
		Method:	EPA 8081A
		Units:	ng/L
Project: 2013-2014 Annual Storm Water Sampling / 426-1966.13			Page 6 of 6

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	**099-16-036-2**	**N/A**	**Aqueous**	**GC 44**	**02/10/14**	**02/13/14 16:26**	**140210L17**

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
Aldrin	ND	2.0	0.33	1	
4,4'-DDD	ND	2.0	0.55	1	
4,4'-DDE	ND	2.0	0.48	1	
4,4'-DDT	ND	2.0	0.55	1	
Alpha Chlordane	ND	2.0	0.49	1	
Dieldrin	ND	2.0	0.55	1	
Gamma Chlordane	ND	2.0	0.49	1	
Toxaphene	ND	25	8.2	1	
Endrin	ND	2.0	0.31	1	
Gamma-BHC	ND	2.0	0.46	1	
Heptachlor	ND	2.0	0.36	1	
Heptachlor Epoxide	ND	2.0	0.34	1	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Decachlorobiphenyl	92	50-150	
2,4,5,6-Tetrachloro-m-Xylene	81	50-150	

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

Calscience Environmental Laboratories, Inc.

Quality Control - LCS/LCSD

Weiss Associates		Date Received:	02/07/14
2200 Powell Street, Suite 925		Work Order:	14-02-0399
Emeryville, CA 94608-1879		Preparation:	EPA 3510C
		Method:	EPA 8081A
Project: 2013-2014 Annual Storm Water Sampling / 426-1966.13			Page 1 of 2

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-12-529-683	**LCS**	**Aqueous**	**GC 51**	**02/07/14**	**02/10/14 11:54**	**140207L01**
099-12-529-683	**LCSD**	**Aqueous**	**GC 51**	**02/07/14**	**02/10/14 12:09**	**140207L01**

Parameter	Spike Added	LCS Conc.	LCS %Rec.	LCSD Conc.	LCSD %Rec.	%Rec. CL	ME CL	RPD	RPD CL	Qualifiers
Alpha-BHC	0.5000	0.4881	98	0.5342	107	50-135	36-149	9	0-25	
Gamma-BHC	0.5000	0.4914	98	0.5384	108	50-135	36-149	9	0-25	
Beta-BHC	0.5000	0.5943	119	0.5690	114	50-135	36-149	4	0-25	
Heptachlor	0.5000	0.5078	102	0.5325	106	50-135	36-149	5	0-25	
Delta-BHC	0.5000	0.5166	103	0.5277	106	50-135	36-149	2	0-25	
Aldrin	0.5000	0.4770	95	0.4832	97	50-135	36-149	1	0-25	
Heptachlor Epoxide	0.5000	0.5255	105	0.5316	106	50-135	36-149	1	0-25	
Endosulfan I	0.5000	0.5247	105	0.5292	106	50-135	36-149	1	0-25	
Dieldrin	0.5000	0.5194	104	0.5261	105	50-135	36-149	1	0-25	
4,4'-DDE	0.5000	0.5336	107	0.5404	108	50-135	36-149	1	0-25	
Endrin	0.5000	0.5006	100	0.5421	108	50-135	36-149	8	0-25	
Endrin Aldehyde	0.5000	0.4800	96	0.4726	95	50-135	36-149	2	0-25	
4,4'-DDD	0.5000	0.5204	104	0.5243	105	50-135	36-149	1	0-25	
Endosulfan II	0.5000	0.5486	110	0.5523	110	50-135	36-149	1	0-25	
4,4'-DDT	0.5000	0.5693	114	0.5849	117	50-135	36-149	3	0-25	
Endosulfan Sulfate	0.5000	0.5392	108	0.5500	110	50-135	36-149	2	0-25	
Methoxychlor	0.5000	0.5487	110	0.5599	112	50-135	36-149	2	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

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RPD: Relative Percent Difference. CL: Control Limits

Calscience Environmental Laboratories, Inc.

Quality Control - LCS/LCSD

Weiss Associates		Date Received:	02/07/14
2200 Powell Street, Suite 925		Work Order:	14-02-0399
Emeryville, CA 94608-1879		Preparation:	EPA 3510C
		Method:	EPA 8081A
Project: 2013-2014 Annual Storm Water Sampling / 426-1966.13			Page 2 of 2

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-16-036-2	**LCS**	**Aqueous**	**GC 44**	**02/10/14**	**02/13/14 16:41**	**140210L17**
099-16-036-2	**LCSD**	**Aqueous**	**GC 44**	**02/10/14**	**02/13/14 16:55**	**140210L17**

Parameter	Spike Added	LCS Conc.	LCS %Rec.	LCSD Conc.	LCSD %Rec.	%Rec. CL	ME CL	RPD	RPD CL	Qualifiers
Aldrin	50.00	37.50	75	31.74	63	50-150	33-167	17	0-25	
4,4'-DDD	50.00	40.06	80	45.98	92	50-150	33-167	14	0-25	
4,4'-DDE	50.00	41.95	84	46.59	93	50-150	33-167	10	0-25	
4,4'-DDT	50.00	41.14	82	47.78	96	50-150	33-167	15	0-25	
Alpha Chlordane	50.00	38.77	78	43.26	87	50-150	33-167	11	0-25	
Dieldrin	50.00	42.01	84	48.12	96	50-150	33-167	14	0-25	
Gamma Chlordane	50.00	41.07	82	45.06	90	50-150	33-167	9	0-25	
Endrin	50.00	41.42	83	48.99	98	50-150	33-167	17	0-25	
Gamma-BHC	50.00	41.56	83	48.34	97	50-150	33-167	15	0-25	
Heptachlor	50.00	39.06	78	35.77	72	50-150	33-167	9	0-25	
Heptachlor Epoxide	50.00	39.52	79	45.88	92	50-150	33-167	15	0-25	

Total number of LCS compounds: 11
Total number of ME compounds: 0
Total number of ME compounds allowed: 1
LCS ME CL validation result: Pass

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RPD: Relative Percent Difference. CL: Control Limits

Calscience Environmental Laboratories, Inc.

Sample Analysis Summary Report

Work Order: 14-02-0399

Method	Extraction	Chemist ID	Instrument	Analytical Location
EPA 8081A	EPA 3510C	500	GC 51	1
EPA 8081A	EPA 3510C	842	GC 44	1

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Calscience Environmental Laboratories, Inc.

Glossary of Terms and Qualifiers

Work Order: 14-02-0399

Qualifiers	Definition
*	See applicable analysis comment.
<	Less than the indicated value.
>	Greater than the indicated value.
1	Surrogate compound recovery was out of control due to a required sample dilution. Therefore, the sample data was reported without further clarification.
2	Surrogate compound recovery was out of control due to matrix interference. The associated method blank surrogate spike compound was in control and, therefore, the sample data was reported without further clarification.
3	Recovery of the Matrix Spike (MS) or Matrix Spike Duplicate (MSD) compound was out of control due to 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.

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Chain of Custody Record

Calscience Environmental Lab
5063 Commercial Circle, Suite H
Concord, CA 94520
Phone: 925-689-9022 925-786-8606

Please send analytic results, electronic deliverables and the original chain-of-custody form to:
labresults@weiss.com
gch@weiss.com
sab@weiss.com

INSTRUCTIONS FOR LAB PERSONNEL:
GeoTracker EDF required? ☐ Yes ☒ No
Equis 4-file EDWEDD required? ☒ Yes ☐ No
Specify analytic/prep method and detection limit in report.
Notify us of any anomalous peaks in GC or other scans.
Call immediately with any questions or problems.

14-02-0399

Client Contact		Project Manager: Scott Bourne				Protocol ID/path: J:\Levin Richmond\03b_Sampling																COC Number:
Weiss Associates		Project ID: 426-1966.13																				
2200 Powell Street, Suite 925		Sampled by: GCH																				Page 1 of 1
Emeryville, CA 94608		Sample date(s): 2/6/14																				
(510) 450-6000	Phone	Analysis Turnaround Time:																				SDG number:
(510) 547-5043	FAX																					
Job Name: 2013-2014 Annual Storm Water Sampling		Standard																				
Address: Levin Richmond Terminal, 402 Wright Avenue, Richmond, CA 94804		(Specify Days or Hours)																				
Lab ID	Sample Identification	Sample Date	Sample Time	Sample Matrix	# of Cont.	Analyte (Method ID)	pH (EPA 9040B)	Specific Conductance (SM 2510B)	Total Suspended Solids (SM 2540D)	Oil & Grease (EPA 1664A SGT-HEM)	Total Metals- Al, Fe, Pb, Zn (EPA 200.8)	Pesticides (EPA 8081A)	BTEX (EPA 8021B)									Sample Specific Notes:
1	SW-3	2/6/14	1040	WT	2							X										
2	SW-5	2/6/14	0835	WT	2							X										
3	SW-5-D	2/6/14	0840	WT	2							X										
4	SW-6	2/6/14	0910	WT	2							X										
5	SW-7	2/6/14	1125	WT	2							X										
						Field Filtered (X):																
Preservation Used: 1= Ice, 2= HCl; 3= H_2SO_4; 4=HNO_3; 5=NaOH; 6= Other _____							1	1	1	1, 2	1, 4	1	1,2	1	1	1	1	1	1	1	1	

Special Instructions/QC Requirements & Comments: Level II Report. Report with reporting limit and method detection limit. Analyze and report pesticides listed in email to Virendra Patel on January 28, 2014.

Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
[signature] ☒	Weiss Associates	2/6/14 1438	[signature] CEL ✓	CEL	2/6/14 1438
[signature] ☒	CEL	2/6/14 1730	[signature] ○	CEL	2/7/14 0930
Relinquished by: ☐	Company:	Date/Time:	Received by: ○	Company:	Date/Time:

☒ = Samples released to a secured, locked area.

● = Samples received from a secured, locked area

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GSO

< WebShip > > > > >

800-322-5555 www.gso.com

0394

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

Tracking #: 523861972

NPS

ORC

A

GARDEN GROVE

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

D92843A

COD:
$0.00

20972230

Reference:
WEISS

Delivery Instructions:

Signature Type:
SIGNATURE REQUIRED

Print Date : 02/06/14 15:39 PM

Package 1 of 1

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

LABEL INSTRUCTIONS:

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

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

STEP 2 - Fold this page in half.

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

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

ADDITIONAL OPTIONS:

Send Label Via Email | Create Return Label

TERMS AND CONDITIONS:

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

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Calscience Environmental Laboratories, Inc.

WORK ORDER #: 14-02-0399

SAMPLE RECEIPT FORM

Cooler 1 of 1

CLIENT: Weiss Associates

DATE: 02/07/14

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:** 836

CUSTODY SEALS INTACT:

☑ Cooler ☐_____ ☐ No (Not Intact) ☐ Not Present ☐ N/A **Checked by:** 836

☐ Sample ☐_____ ☐ No (Not Intact) ☑ Not Present **Checked by:** 688

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

CONTAINER TYPE:

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

Aqueous: ☐VOA ☐VOA**h** ☐VOA**na$_2$** ☐125AGB ☐125AGB**h** ☐125AGB**p** ☑1AGB ☐1AGB**na$_2$** ☐1AGB**s**

☐500AGB ☐500AGJ ☐500AGJ**s** ☐250AGB ☐250CGB ☐250CGB**s** ☐1PB ☐1PB**na** ☐500PB

☐250PB ☐250PB**n** ☐125PB ☐125PB**znna** ☐100PJ ☐100PJ**na$_2$** ☐_____ ☐_____ ☐_____

Air: ☐Tedlar® ☐Canister **Other:** ☐_____ **Trip Blank Lot#:**_____ **Labeled/Checked by:** 688

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

Preservative: h: HCL **n:** HNO_3 **na$_2$:** $Na_2S_2O_3$ **na:** NaOH **p:** H_3PO_4 **s:** H_2SO_4 **u:** Ultra-pure **znna:** $ZnAc_2$+NaOH **f:** Filtered **Scanned by:** SR

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Calscience Environmental Laboratories, Inc.

CALSCIENCE

WORK ORDER NUMBER: 14-02-0659

The difference is service

AIR | SOIL | WATER | MARINE CHEMISTRY

Analytical Report For

Client: Weiss Associates

Client Project Name: 2013-2014 Annual Storm Water Sampling / 426-1966.13

Attention: Scott Bourne
2200 Powell Street
Suite 925
Emeryville, CA 94608-1879

Approved for release on 02/20/2014 by:
Virendra Patel
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.

Calscience Environmental Laboratories, Inc.

Contents

Client Project Name: 2013-2014 Annual Storm Water Sampling / 426-1966.13
Work Order Number: 14-02-0659

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Calscience Environmental Laboratories, Inc.

Work Order Narrative

Work Order: 14-02-0659 Page 1 of 1

Condition Upon Receipt:

Samples were received under Chain of Custody (COC) on 02/11/14. They were assigned to Work Order 14-02-0659.

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 <= 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

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.

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Calscience Environmental Laboratories, Inc.

Sample Summary

Client:	Weiss Associates 2200 Powell Street, Suite 925 Emeryville, CA 94608-1879	Work Order:	14-02-0659
		Project Name:	2013-2014 Annual Storm Water Sampling / 426-1966.13
		PO Number:	
		Date/Time Received:	02/11/14 09:50
		Number of Containers:	2
Attn:	Scott Bourne		

Sample Identification	Lab Number	Collection Date and Time	Number of Containers	Matrix
SW-4	14-02-0659-1	02/07/14 16:25	2	Aqueous

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Calscience Environmental Laboratories, Inc.

Detections Summary

Client:	Weiss Associates 2200 Powell Street, Suite 925 Emeryville, CA 94608-1879	Work Order:	14-02-0659
		Project Name:	2013-2014 Annual Storm Water Sampling / 426-1966.13
		Received:	02/11/14
Attn:	Scott Bourne		Page 1 of 1

Client SampleID

Analyte	Result	Qualifiers	RL	Units	Method	Extraction
SW-4 (14-02-0659-1)						
4,4'-DDD	24		2.1	ng/L	EPA 8081A	EPA 3510C
4,4'-DDE	14		2.1	ng/L	EPA 8081A	EPA 3510C
4,4'-DDT	57		2.1	ng/L	EPA 8081A	EPA 3510C
Endosulfan I	0.077	J	0.031*	ug/L	EPA 8081A	EPA 3510C

Subcontracted analyses, if any, are not included in this summary.

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* MDL is shown

Calscience Environmental Laboratories, Inc.

Analytical Report

Weiss Associates		Date Received:	02/11/14
2200 Powell Street, Suite 925		Work Order:	14-02-0659
Emeryville, CA 94608-1879		Preparation:	EPA 3510C
		Method:	EPA 8081A
		Units:	ug/L
Project: 2013-2014 Annual Storm Water Sampling / 426-1966.13			Page 1 of 1

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SW-4	**14-02-0659-1-A**	**02/07/14 16:25**	**Aqueous**	**GC 51**	**02/13/14**	**02/15/14 15:03**	**140213L14**

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	0.11	0.031	1	
Beta-BHC	ND	0.11	0.033	1	
Delta-BHC	ND	0.11	0.032	1	
Endosulfan I	0.077	0.11	0.031	1	J
Endrin Aldehyde	ND	0.11	0.029	1	
Endosulfan II	ND	0.11	0.030	1	
Endosulfan Sulfate	ND	0.11	0.032	1	
Methoxychlor	ND	0.11	0.028	1	
Chlordane	ND	1.1	0.37	1	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Decachlorobiphenyl	103	50-135	
2,4,5,6-Tetrachloro-m-Xylene	112	50-135	

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	
Beta-BHC	ND	0.10	0.030	1	
Delta-BHC	ND	0.10	0.029	1	
Endosulfan I	ND	0.10	0.028	1	
Endrin Aldehyde	ND	0.10	0.026	1	
Endosulfan II	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	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Decachlorobiphenyl	102	50-135	
2,4,5,6-Tetrachloro-m-Xylene	120	50-135	

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

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Calscience Environmental Laboratories, Inc.

Analytical Report

Weiss Associates		Date Received:	02/11/14
2200 Powell Street, Suite 925		Work Order:	14-02-0659
Emeryville, CA 94608-1879		Preparation:	EPA 3510C
		Method:	EPA 8081A
		Units:	ng/L
Project: 2013-2014 Annual Storm Water Sampling / 426-1966.13			Page 1 of 2

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SW-4	**14-02-0659-1-B**	**02/07/14 16:25**	**Aqueous**	**GC 44**	**02/13/14**	**02/19/14 16:47**	**140213L03**

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
Aldrin	ND	2.1	0.35	1	
4,4'-DDD	24	2.1	0.58	1	
4,4'-DDE	14	2.1	0.51	1	
4,4'-DDT	57	2.1	0.58	1	
Alpha Chlordane	ND	2.1	0.52	1	
Dieldrin	ND	2.1	0.58	1	
Gamma Chlordane	ND	2.1	0.52	1	
Toxaphene	ND	26	8.7	1	
Endrin	ND	2.1	0.33	1	
Gamma-BHC	ND	2.1	0.49	1	
Heptachlor	ND	2.1	0.38	1	
Heptachlor Epoxide	ND	2.1	0.36	1	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Decachlorobiphenyl	76	50-150	
2,4,5,6-Tetrachloro-m-Xylene	74	50-150	

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

Calscience Environmental Laboratories, Inc.

Analytical Report

Weiss Associates		Date Received:	02/11/14
2200 Powell Street, Suite 925		Work Order:	14-02-0659
Emeryville, CA 94608-1879		Preparation:	EPA 3510C
		Method:	EPA 8081A
		Units:	ng/L
Project: 2013-2014 Annual Storm Water Sampling / 426-1966.13			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	**099-16-036-3**	**N/A**	**Aqueous**	**GC 44**	**02/13/14**	**02/19/14 16:04**	**140213L03**

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
Aldrin	ND	2.0	0.33	1	
4,4'-DDD	ND	2.0	0.55	1	
4,4'-DDE	ND	2.0	0.48	1	
4,4'-DDT	ND	2.0	0.55	1	
Alpha Chlordane	ND	2.0	0.49	1	
Dieldrin	ND	2.0	0.55	1	
Gamma Chlordane	ND	2.0	0.49	1	
Toxaphene	ND	25	8.2	1	
Endrin	ND	2.0	0.31	1	
Gamma-BHC	ND	2.0	0.46	1	
Heptachlor	ND	2.0	0.36	1	
Heptachlor Epoxide	ND	2.0	0.34	1	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Decachlorobiphenyl	134	50-150	
2,4,5,6-Tetrachloro-m-Xylene	132	50-150	

Return to Contents

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

Calscience Environmental Laboratories, Inc.

Quality Control - LCS/LCSD

Weiss Associates		Date Received:	02/11/14
2200 Powell Street, Suite 925		Work Order:	14-02-0659
Emeryville, CA 94608-1879		Preparation:	EPA 3510C
		Method:	EPA 8081A
Project: 2013-2014 Annual Storm Water Sampling / 426-1966.13			Page 1 of 2

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-12-529-684	**LCS**	**Aqueous**	**GC 51**	**02/13/14**	**02/15/14 15:25**	**140213L14**
099-12-529-684	**LCSD**	**Aqueous**	**GC 51**	**02/13/14**	**02/15/14 15:39**	**140213L14**

Parameter	Spike Added	LCS Conc.	LCS %Rec.	LCSD Conc.	LCSD %Rec.	%Rec. CL	ME CL	RPD	RPD CL	Qualifiers
Alpha-BHC	0.5000	0.5034	101	0.4854	97	50-135	36-149	4	0-25	
Gamma-BHC	0.5000	0.5014	100	0.4842	97	50-135	36-149	3	0-25	
Beta-BHC	0.5000	0.4283	86	0.4695	94	50-135	36-149	9	0-25	
Heptachlor	0.5000	0.4836	97	0.4709	94	50-135	36-149	3	0-25	
Delta-BHC	0.5000	0.4951	99	0.4875	98	50-135	36-149	2	0-25	
Aldrin	0.5000	0.4620	92	0.4721	94	50-135	36-149	2	0-25	
Heptachlor Epoxide	0.5000	0.4612	92	0.4702	94	50-135	36-149	2	0-25	
Endosulfan I	0.5000	0.4687	94	0.4800	96	50-135	36-149	2	0-25	
Dieldrin	0.5000	0.4637	93	0.4708	94	50-135	36-149	2	0-25	
4,4'-DDE	0.5000	0.4730	95	0.4800	96	50-135	36-149	1	0-25	
Endrin	0.5000	0.5105	102	0.4937	99	50-135	36-149	3	0-25	
Endrin Aldehyde	0.5000	0.5077	102	0.5099	102	50-135	36-149	0	0-25	
4,4'-DDD	0.5000	0.4607	92	0.4702	94	50-135	36-149	2	0-25	
Endosulfan II	0.5000	0.4770	95	0.4820	96	50-135	36-149	1	0-25	
4,4'-DDT	0.5000	0.4992	100	0.4881	98	50-135	36-149	2	0-25	
Endosulfan Sulfate	0.5000	0.4644	93	0.4667	93	50-135	36-149	0	0-25	
Methoxychlor	0.5000	0.4806	96	0.4829	97	50-135	36-149	0	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

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RPD: Relative Percent Difference. CL: Control Limits

Calscience Environmental Laboratories, Inc.

Quality Control - LCS/LCSD

Weiss Associates		Date Received:	02/11/14
2200 Powell Street, Suite 925		Work Order:	14-02-0659
Emeryville, CA 94608-1879		Preparation:	EPA 3510C
		Method:	EPA 8081A
Project: 2013-2014 Annual Storm Water Sampling / 426-1966.13			Page 2 of 2

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-16-036-3	**LCS**	**Aqueous**	**GC 44**	**02/13/14**	**02/19/14 16:19**	**140213L03**
099-16-036-3	**LCSD**	**Aqueous**	**GC 44**	**02/13/14**	**02/19/14 16:33**	**140213L03**

Parameter	Spike Added	LCS Conc.	LCS %Rec.	LCSD Conc.	LCSD %Rec.	%Rec. CL	ME CL	RPD	RPD CL	Qualifiers
Aldrin	50.00	54.42	109	51.57	103	50-150	33-167	5	0-25	
4,4'-DDD	50.00	59.28	119	56.12	112	50-150	33-167	5	0-25	
4,4'-DDE	50.00	58.79	118	55.79	112	50-150	33-167	5	0-25	
4,4'-DDT	50.00	56.99	114	54.06	108	50-150	33-167	5	0-25	
Alpha Chlordane	50.00	55.98	112	53.14	106	50-150	33-167	5	0-25	
Dieldrin	50.00	59.86	120	56.68	113	50-150	33-167	5	0-25	
Gamma Chlordane	50.00	57.48	115	54.40	109	50-150	33-167	6	0-25	
Endrin	50.00	63.50	127	60.24	120	50-150	33-167	5	0-25	
Gamma-BHC	50.00	58.54	117	55.41	111	50-150	33-167	5	0-25	
Heptachlor	50.00	57.33	115	54.31	109	50-150	33-167	5	0-25	
Heptachlor Epoxide	50.00	56.62	113	53.69	107	50-150	33-167	5	0-25	

Total number of LCS compounds: 11
Total number of ME compounds: 0
Total number of ME compounds allowed: 1
LCS ME CL validation result: Pass

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RPD: Relative Percent Difference. CL: Control Limits

Calscience Environmental Laboratories, Inc.

Sample Analysis Summary Report

Work Order: 14-02-0659

Method	Extraction	Chemist ID	Instrument	Analytical Location
EPA 8081A	EPA 3510C	500	GC 51	1
EPA 8081A	EPA 3510C	842	GC 44	1

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Calscience Environmental Laboratories, Inc.

Glossary of Terms and Qualifiers

Work Order: 14-02-0659

Qualifiers	Definition
*	See applicable analysis comment.
<	Less than the indicated value.
>	Greater than the indicated value.
1	Surrogate compound recovery was out of control due to a required sample dilution. Therefore, the sample data was reported without further clarification.
2	Surrogate compound recovery was out of control due to matrix interference. The associated method blank surrogate spike compound was in control and, therefore, the sample data was reported without further clarification.
3	Recovery of the Matrix Spike (MS) or Matrix Spike Duplicate (MSD) compound was out of control due to 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.

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Chain of Custody Record

Calscience Environmental Lab
5063 Commercial Circle, Suite H
Concord, CA 94520
Phone: 925-689-9022

Please send analytic results, electronic deliverables and the original chain-of-custody form to:
labresults@weiss.com
gch@weiss.com
sab@weiss.com

INSTRUCTIONS FOR LAB PERSONNEL:
GeoTracker EDF required? ☐ Yes ☒ No
Equis 4-file EDWEDD required? ☒ Yes ☐ No
Specify analytic/prep method and detection limit in report.
Notify us of any anomalous peaks in GC or other scans.
Call immediately with any questions or problems.

Client Contact		Project Manager: Scott Bourne	Protocol ID/path: J:\Levin Richmond\03b_Sampling	COC Number:
Weiss Associates		Project ID: 426-1966.13		
2200 Powell Street, Suite 925		Sampled by: GCH - Greg Hallwood		Page 1 of 1
Emeryville, CA 94608		Sample date(s): 2/7/14		
(510) 450-6000	Phone	Analysis Turnaround Time:		SDG number:
(510) 547-5043	FAX			14-02-0659
Job Name: 2013-2014 Annual Storm Water Sampling		Standard		
Address: Levin Richmond Terminal, 402 Wright Avenue, Richmond, CA 94804		(Specify Days or Hours)		Sample Specific Notes:

Lab ID	Sample Identification	Sample Date	Sample Time	Sample Matrix	# of Cont.	pH (EPA 9040B)	Specific Conductance (SM 2510B)	Total Suspended Solids (SM 2540D)	Oil & Grease (EPA 1664A SGT-HEM)	Total Metals- Al, Fe, Pb, Zn (EPA 200.8)	Pesticides (EPA 8081A)	BTEX (EPA 8021B)									
1	SW-4	2/7/14	1625	WT	2						X										
Field Filtered (X):																					
Preservation Used: 1= Ice, 2= HCl; 3= H_2SO_4; 4=HNO_3; 5=NaOH; 6= Other						1	1	1	1, 2	1, 4	1	1,2	1	1	1	1	1	1	1	1	1

Special Instructions/QC Requirements & Comments: Level II Report. Report with reporting limit and method detection limit. Analyze and report pesticides listed in email to Virendra Patel on January 28, 2014.

Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
[signature]	Weiss Assoc.	2/7/14 1900	Tim Utterback	Weiss	2-10-14 11:40
Tim Utterback	Weiss	2-10-14 11:40	[signature]	CEL	2/10/14 1140
[signature] TO GSD	CEL	2/10/14 1730	[signature]	CEL	2/11/14 0950

☒ = Samples released to a secured, locked area.
● = Samples received from a secured, locked area

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GSO GOLDEN STATE OVERNIGHT

WebShip > > > > >

800-322-5555 www.gso.com

0659

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

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

COD:
$0.00

Reference:
WEISS

Delivery Instructions:

Signature Type:
SIGNATURE REQUIRED

Tracking #: 523884131

NPS

ORC

A

GARDEN GROVE

D92843A

21064669

Print Date: 02/10/14 15:47 PM

Package 1 of 2

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

LABEL INSTRUCTIONS:

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

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

STEP 2 - Fold this page in half.

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

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

ADDITIONAL OPTIONS:

Send Label Via Email | Create Return Label

TERMS AND CONDITIONS:

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

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Calscience Environmental Laboratories, Inc.

WORK ORDER #: 14-02-0659

SAMPLE RECEIPT FORM

Cooler 1 of 1

CLIENT: Weiss Associates

DATE: 02/11/14

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: 836

CUSTODY SEALS INTACT:

☑ Cooler ☐_____ ☐ No (Not Intact) ☐ Not Present ☐ N/A Checked by: 836

☐ Sample ☐_____ ☐ No (Not Intact) ☑ Not Present Checked by: 836

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

CONTAINER TYPE:

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

Aqueous: ☐VOA ☐VOA**h** ☐VOA**na$_2$** ☐125AGB ☐125AGB**h** ☐125AGB**p** ☑1AGB (2) ☐1AGB**na$_2$** ☐1AGB**s**

☐500AGB ☐500AGJ ☐500AGJ**s** ☐250AGB ☐250CGB ☐250CGB**s** ☐1PB ☐1PB**na** ☐500PB

☐250PB ☐250PB**n** ☐125PB ☐125PB**znna** ☐100PJ ☐100PJ**na$_2$** ☐_____ ☐_____ ☐_____

Air: ☐Tedlar® ☐Canister **Other:** ☐_____ **Trip Blank Lot#:**_____ **Labeled/Checked by:** 836

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

Preservative: **h:** HCL **n:** HNO_3 **na$_2$:** $Na_2S_2O_3$ **na:** NaOH **p:** H_3PO_4 **s:** H_2SO_4 **u:** Ultra-pure **znna:** $ZnAc_2$+NaOH **f:** Filtered **Scanned by:** WD

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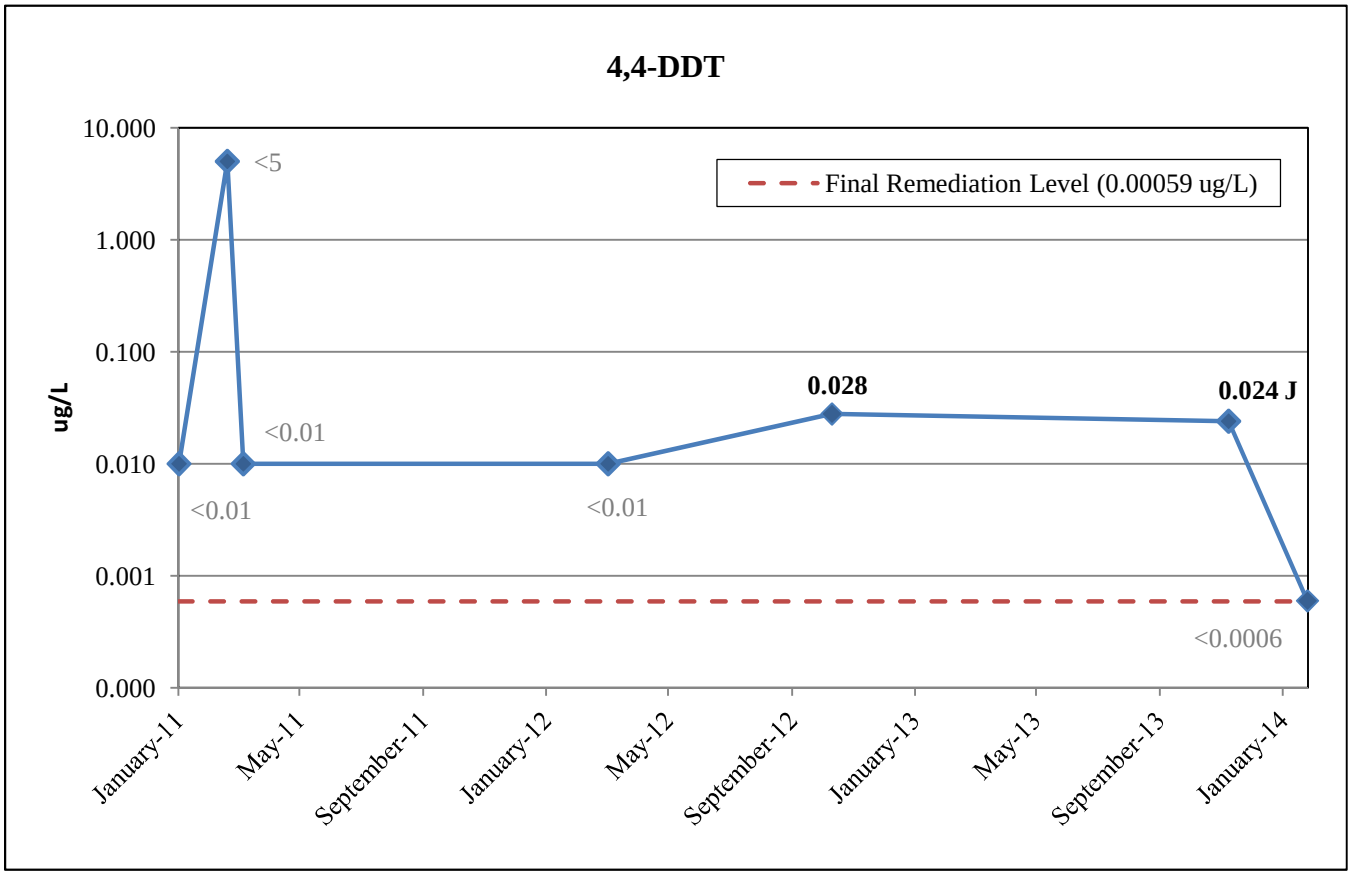
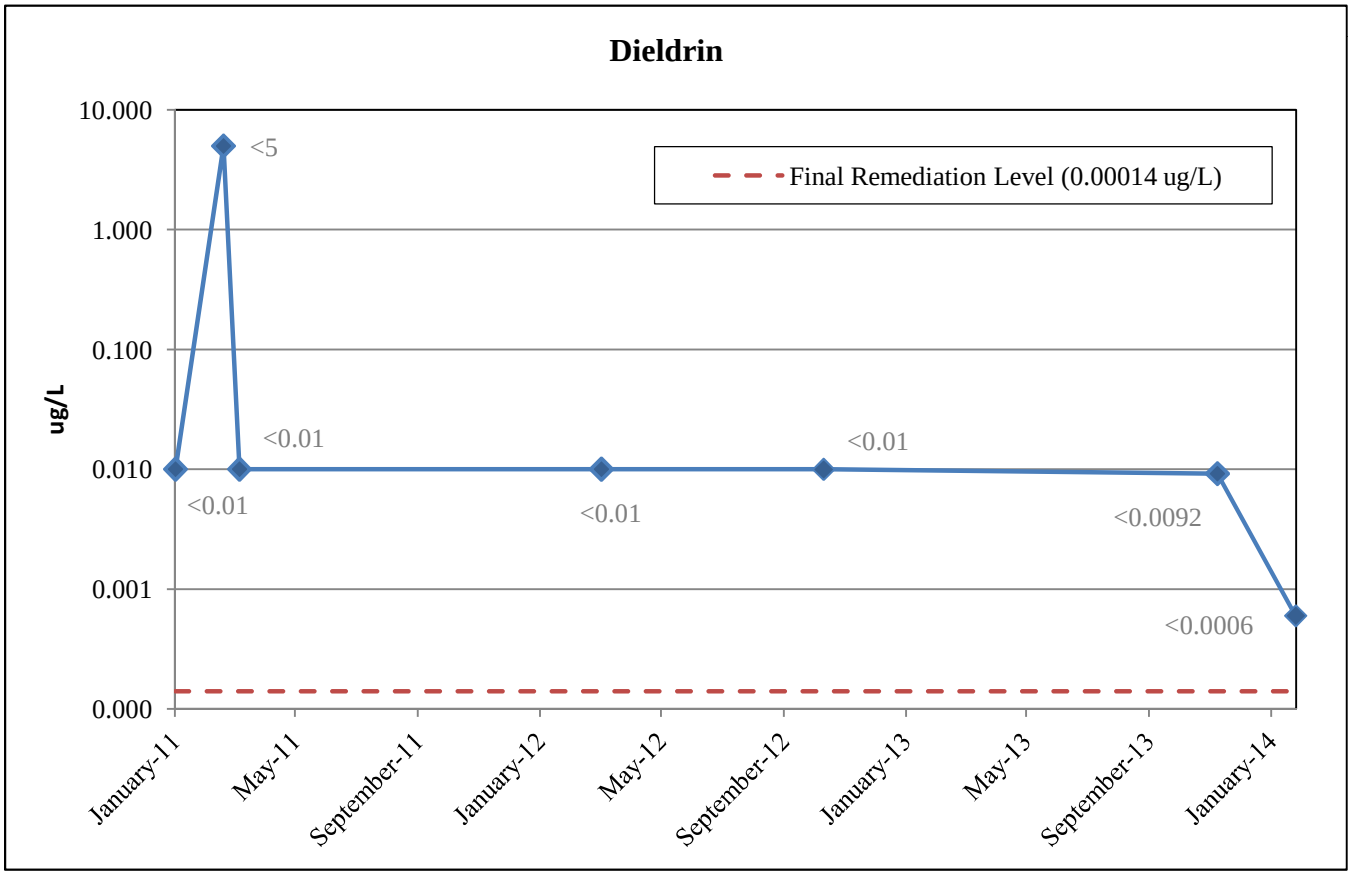
APPENDIX D

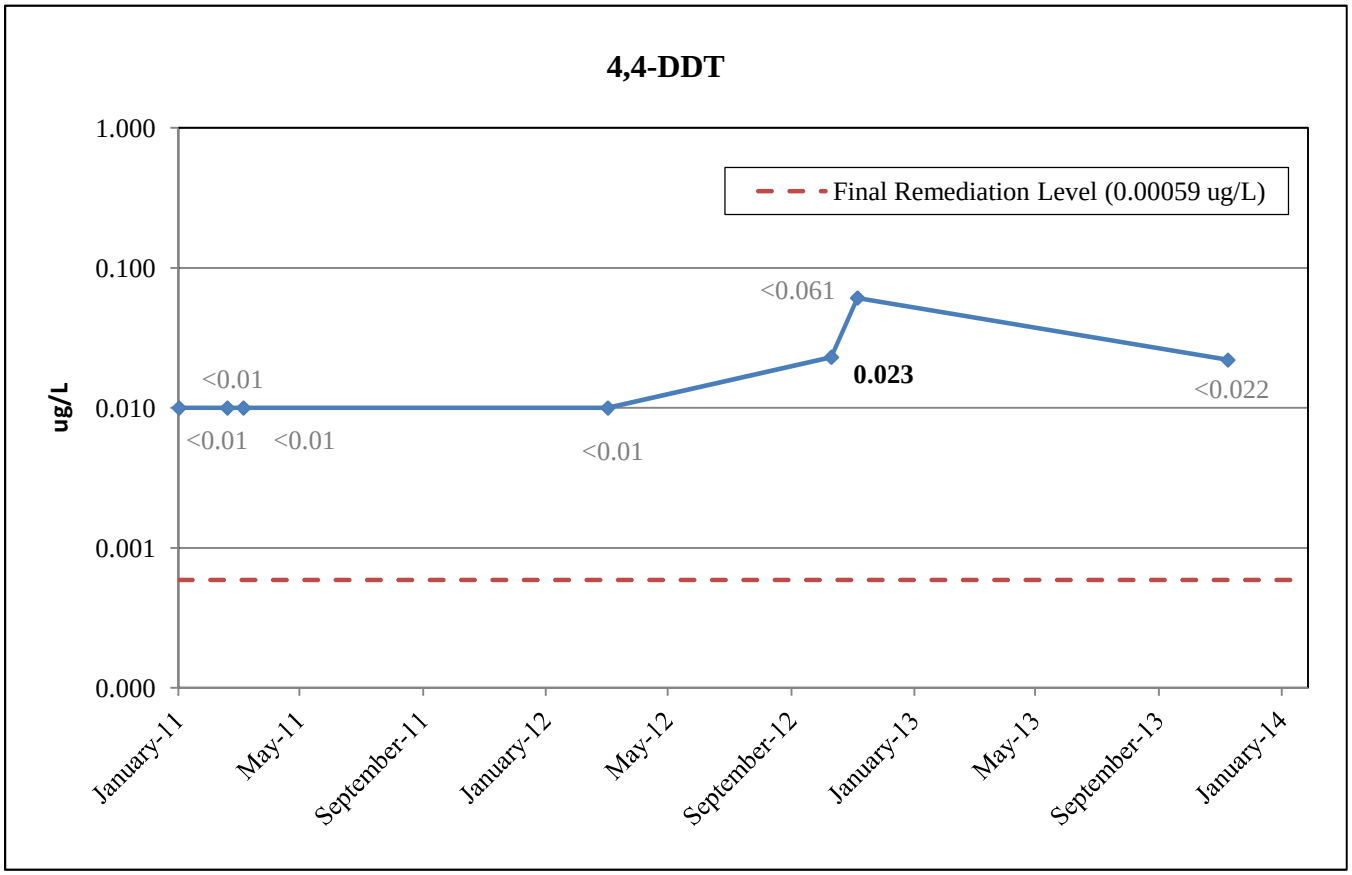
STORM WATER PESTICIDE CONCENTRATION
TREND CHARTS (DDT, DIELDRIN)

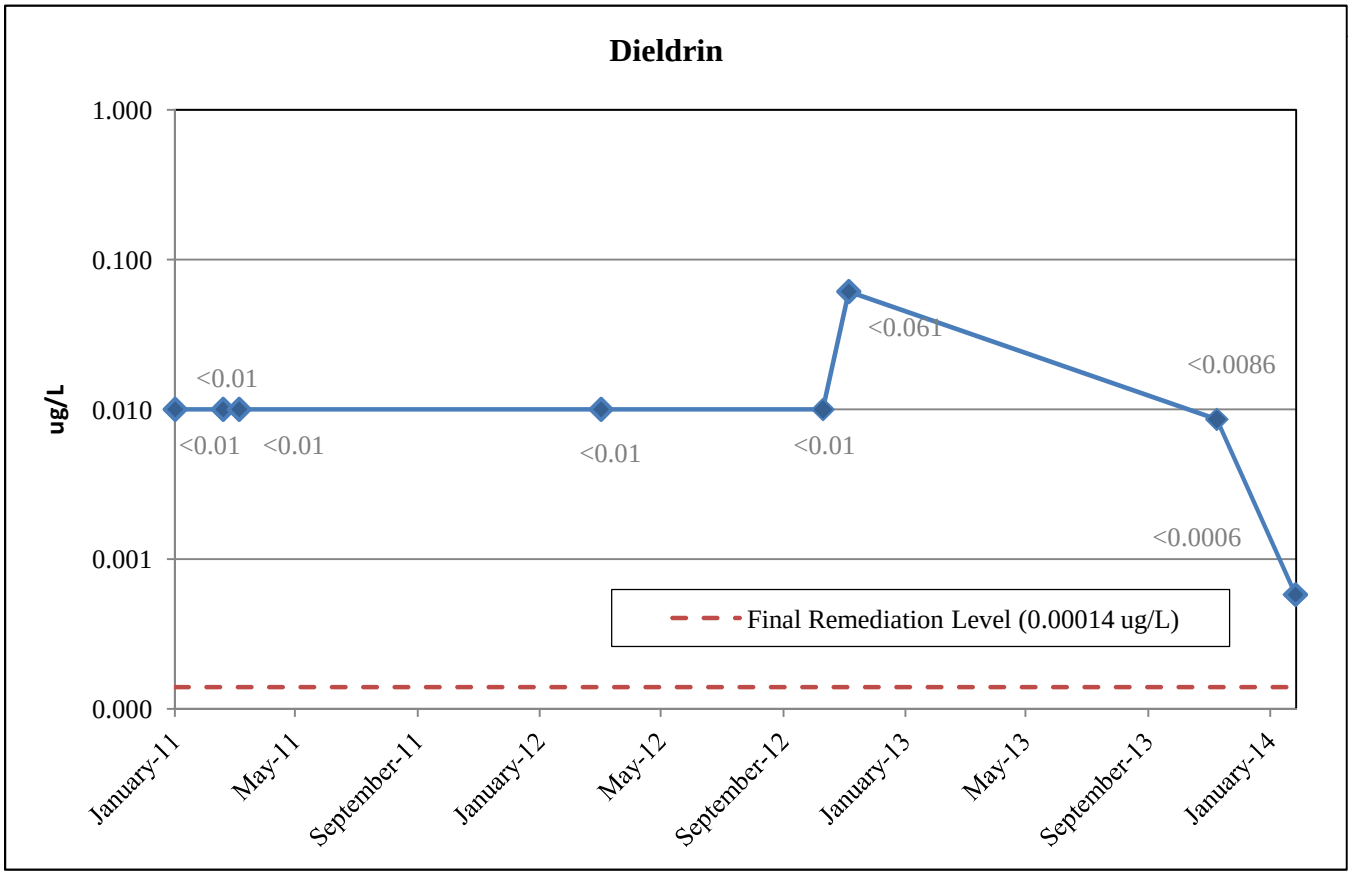
SW-3 Pesticide Concentration Trend Charts
2011-2014



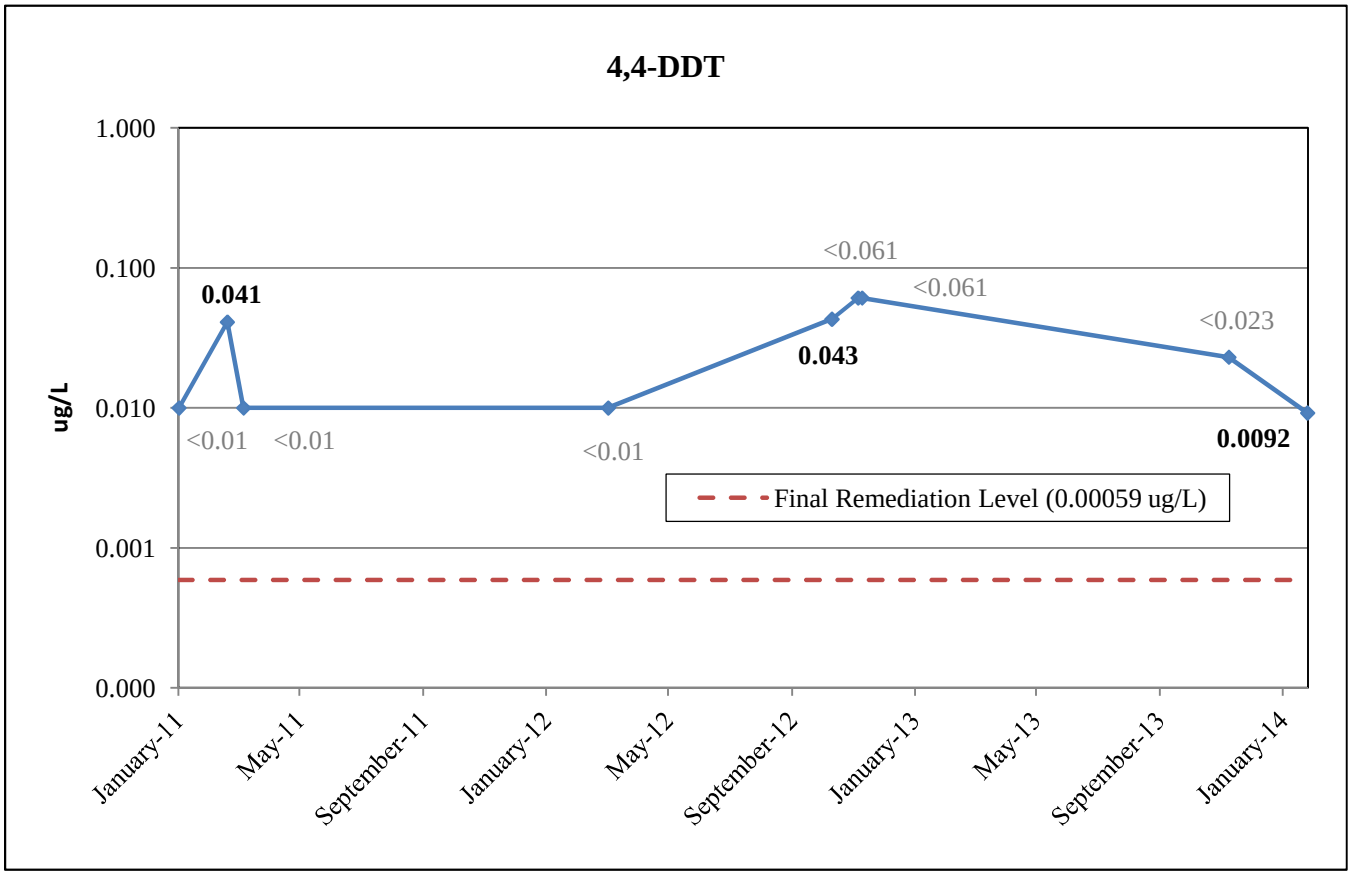


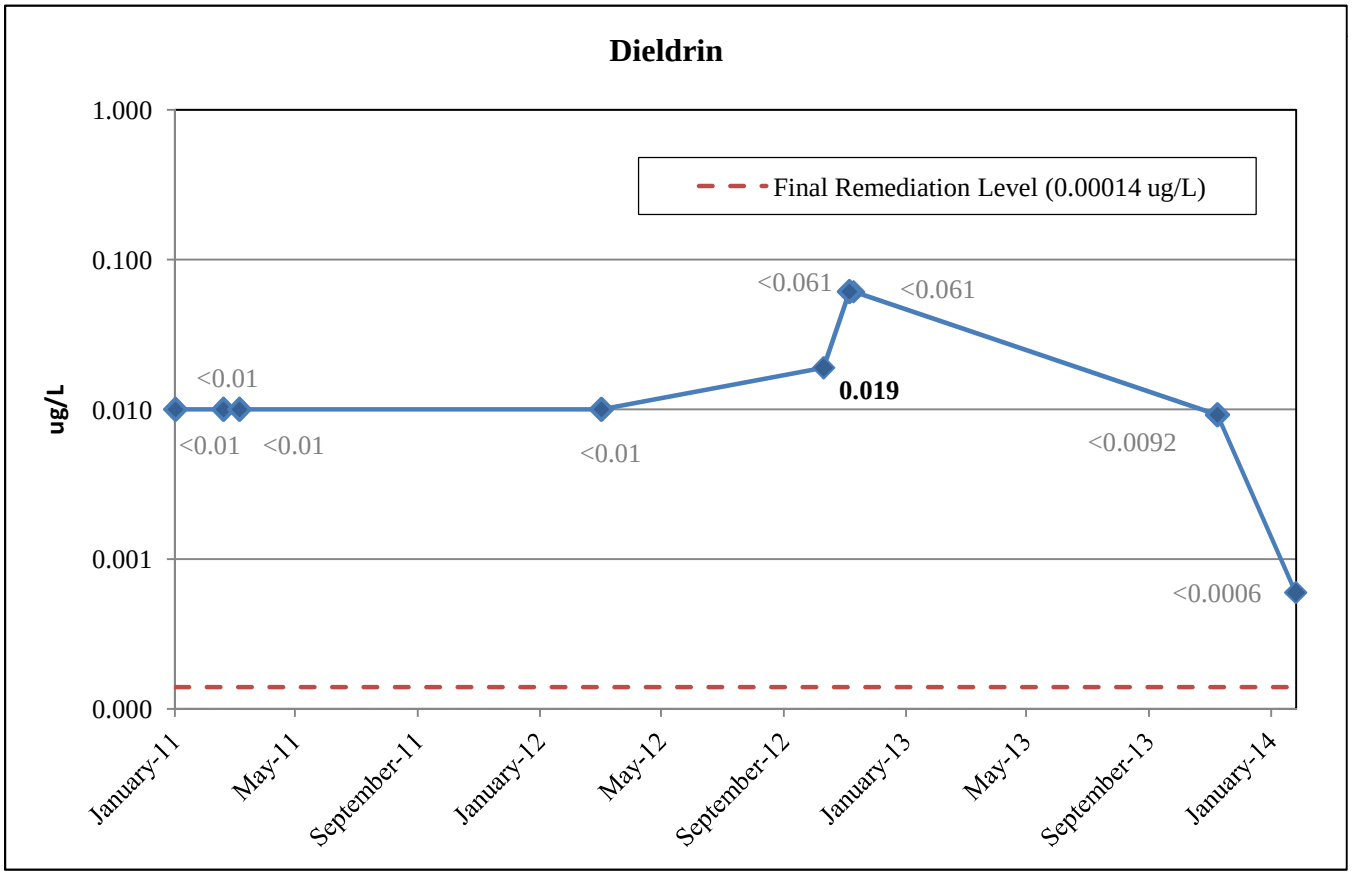
SW-4 Pesticide Concentration Trend Charts
2011-2014



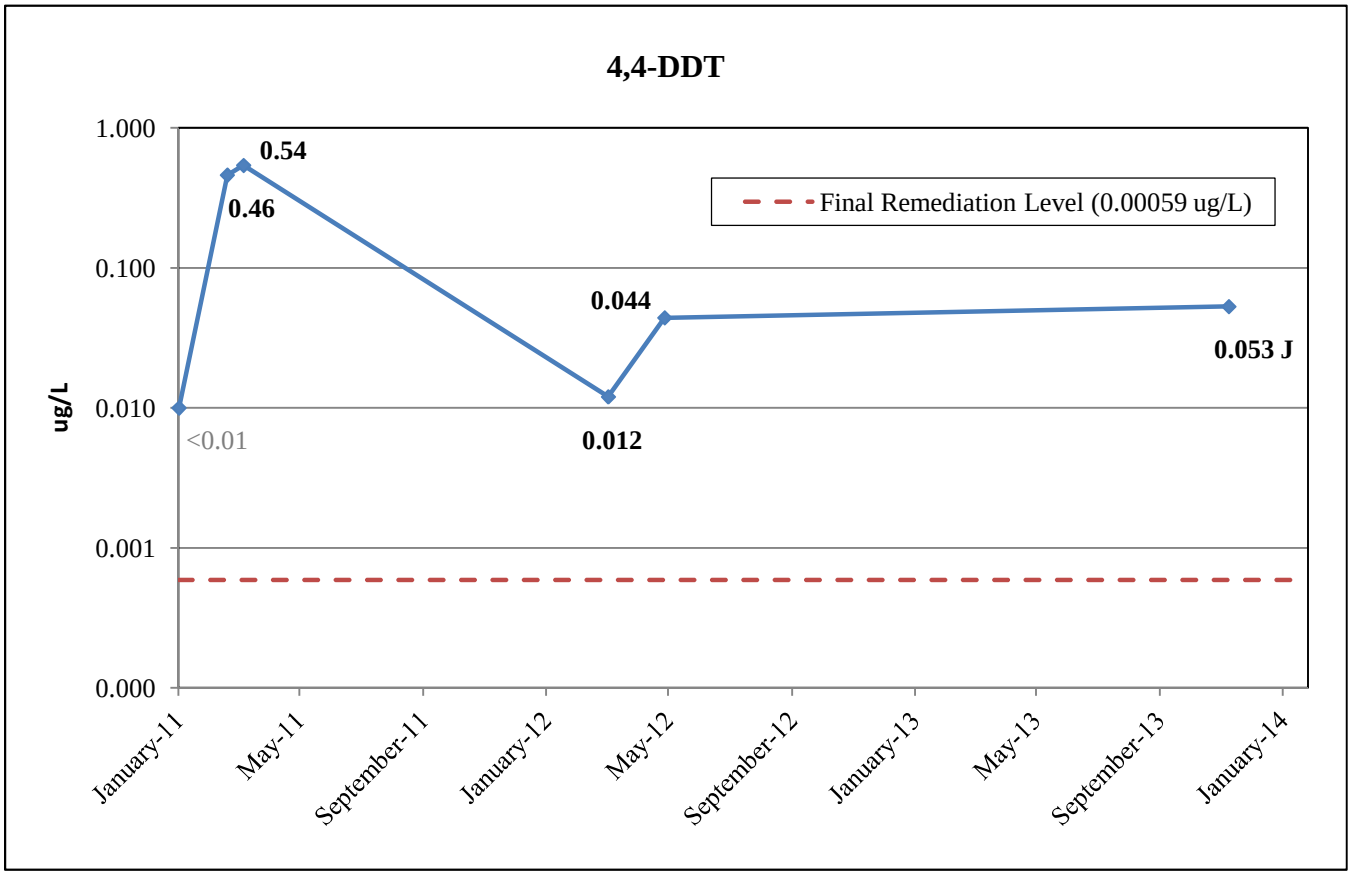


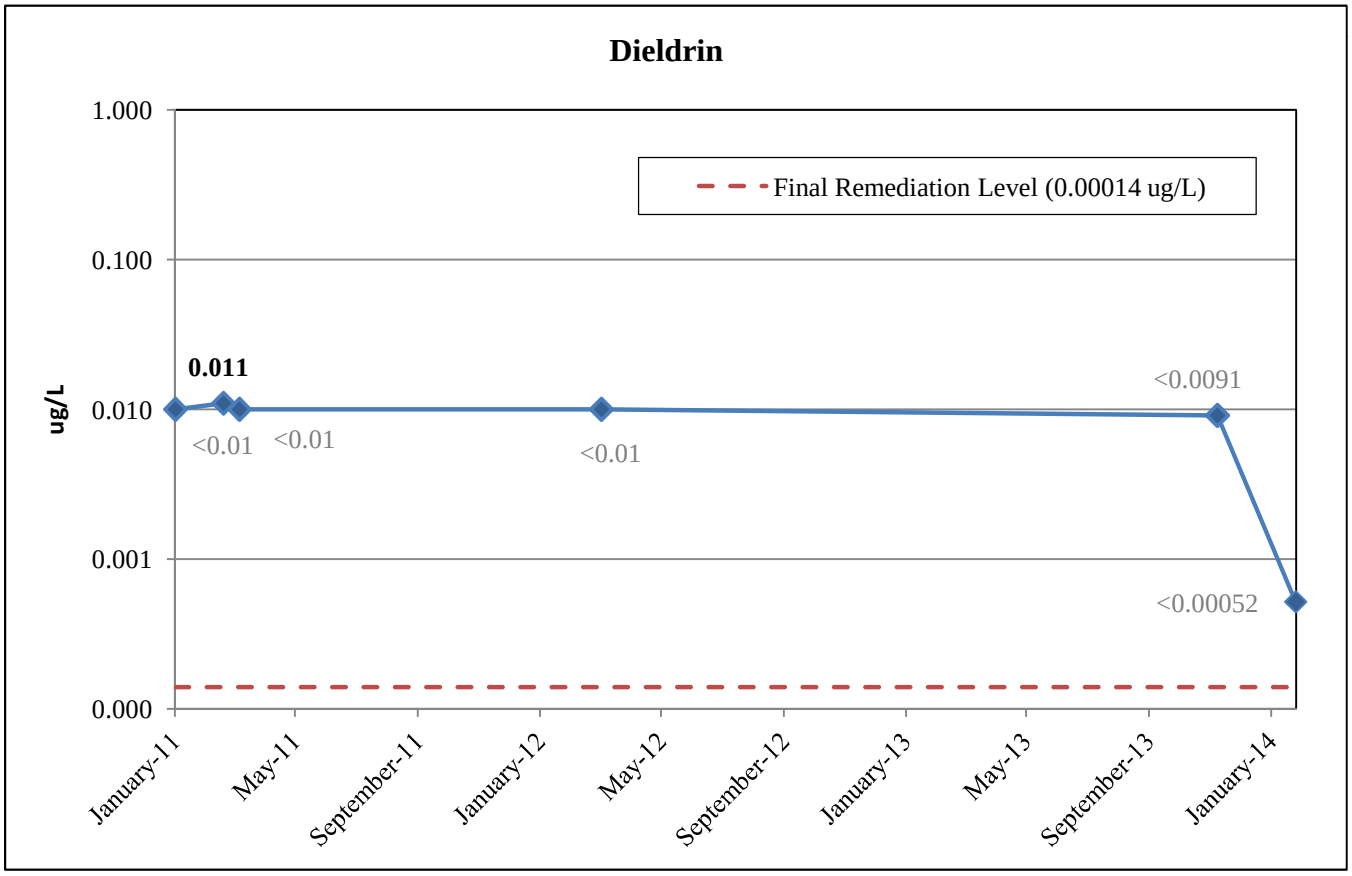
SW-5 Pesticide Concentration Trend Charts
2011-2014



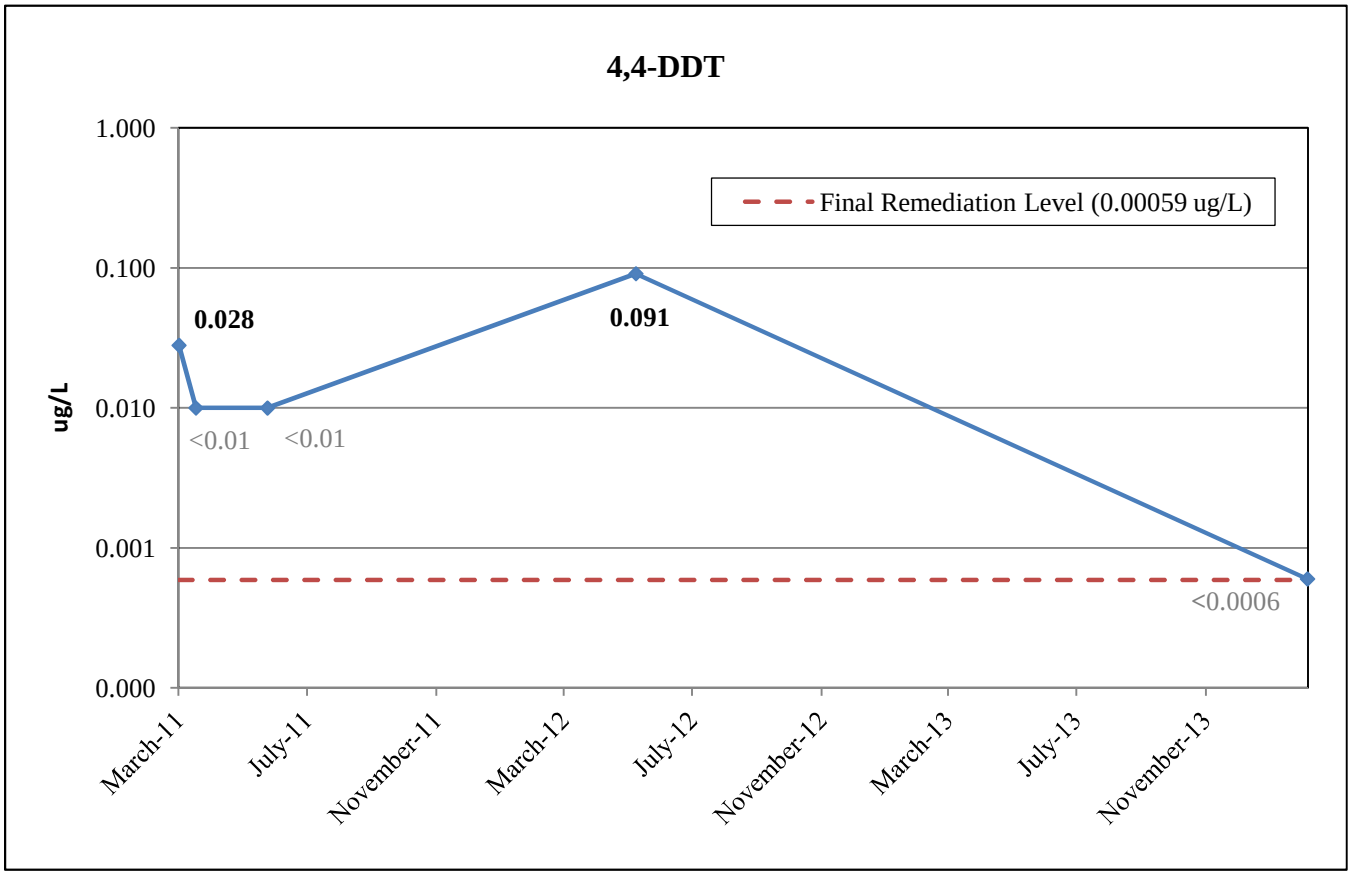


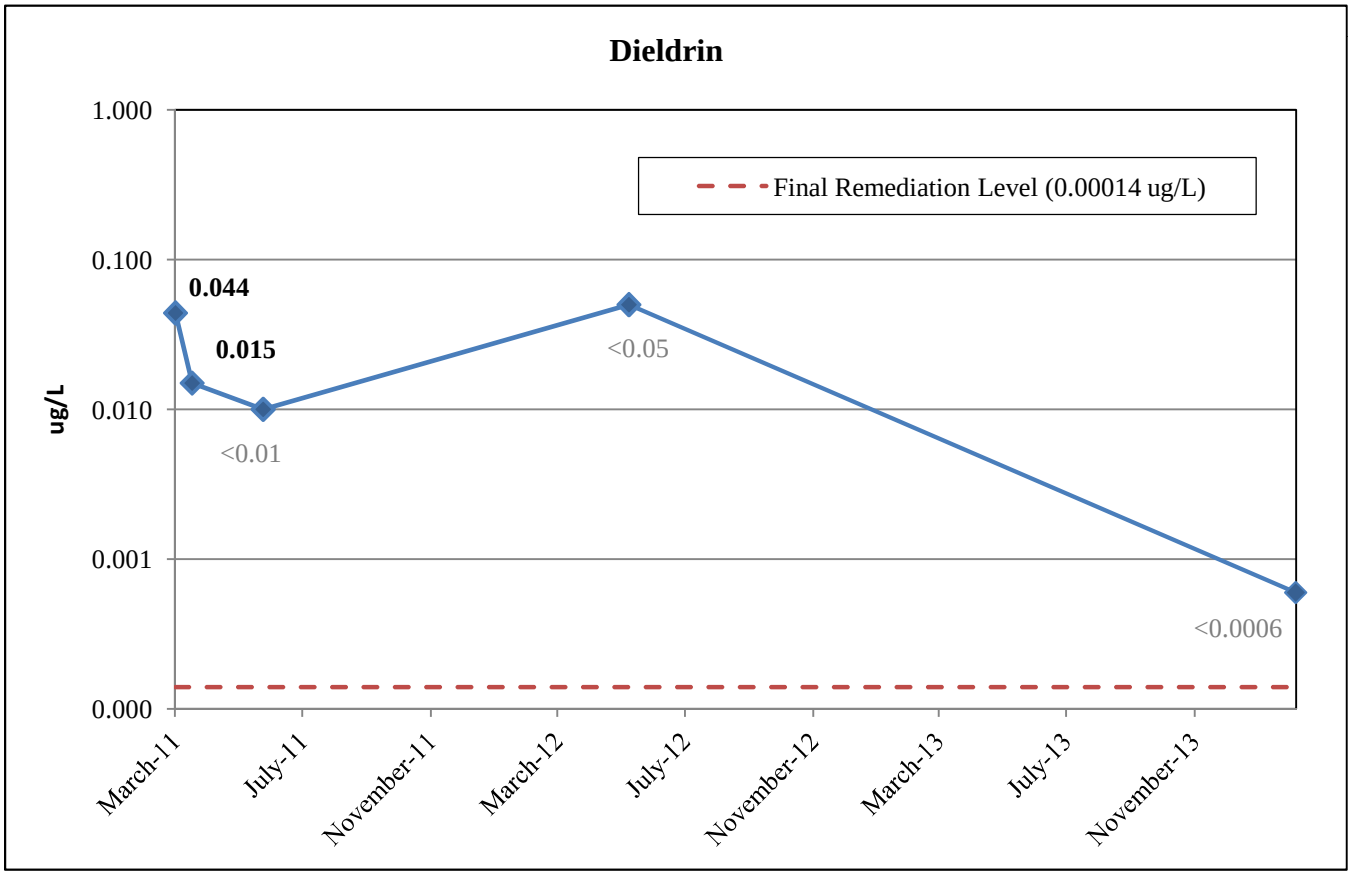
SW-6 Pesticide Concentration Trend Charts
2011-2014





SW-7 Pesticide Concentration Trend Charts
2011-2014





APPENDIX E

UPLAND CAPPING SYSTEM INSPECTION FORM

Former United Heckathorn Superfund Site Upland Capping System Inspection Form
Levin Richmond Terminal, 402 Wright Avenue, Richmond, California

I. General Information

Site: Former United Heckathorn Superfund Site, Levin Richmond Terminal
Address: 402 Wright Avenue, Richmond, CA
Inspector: Mary Cunningham, PE
Organization: Weiss Associates
Date and time of inspection: May 22, 2014; 13:15
May 28, 2014; 11:00

II. Upland Area Concrete Cap, Gravel Cover, and Drainage System Observations

Note significant cracks, holes, penetrations, damage, settlement, or any exposure of underlying soil in any component of the capping system.

North Main Terminal (SW-3)

	Yes	No	N/A	Comments
Are concrete cap surfaces in adequate condition to promote effectiveness of the cap?	X			
Are gravel cover surfaces in adequate condition to promote effectiveness of the cap?	X			
Is storm water drainage infrastructure in adequate condition to prevent exposure of underlying soil to runoff?				*Unknown; needs inspection*
Are corrective actions required?		X		
Attach a photograph of areas requiring corrective action.			X	*Photos of repair attached.*

Describe any recent repairs/maintenance:

Repairs made in the vicinity of 3-DI-11A in December 2013.

Describe conditions and locations of the capping system which require attention:

No material breach or areas with significant deterioration and a potential for exposure of the underlying sub grade were identified in this area.

Describe corrective actions required and their date(s) of implementation:

The drainage infrastructure should be cleaned, inspected, and repaired as necessary during the 2014-2015 reporting year.

Signature:

North Main Terminal/United Heckathorn (SW-4)

	Yes	No	N/A	Comments
Are concrete cap surfaces in adequate condition to promote effectiveness of the cap?	X			
Are gravel cover surfaces in adequate condition to promote effectiveness of the cap?	X			
Is storm water drainage infrastructure in adequate condition to prevent exposure of underlying soil to runoff?	X			
Are corrective actions required?		X		
Attach a photograph of areas requiring corrective action.	X			

Describe any recent repairs/maintenance:

Repairs made in the vicinity of interceptor SW-4 in December 2013.

Shotcrete was installed along the embankment to prevent erosion and animal burrowing.

Storm drain piping in SW-4 area was cleaned and inspected in June 2014.

Describe conditions and locations of the capping system which require attention:

None identified.

Describe corrective actions required and their date(s) of implementation:

The drainage infrastructure must be cleaned, reinspected, and repaired as necessary prior to the 2014-2015 wet season.

Signature:

North Main Terminal/United Heckathorn (SW-5)

	Yes	No	N/A	Comments
Are concrete cap surfaces in adequate condition to promote effectiveness of the cap?	X			
Are gravel cover surfaces in adequate condition to promote effectiveness of the cap?	X			
Is storm water drainage infrastructure in adequate condition to prevent exposure of underlying soil to runoff?		X		*See below.*
Are corrective actions required?		X		
Attach a photograph of areas requiring corrective action.	X			

Describe any recent repairs/maintenance:

Shotcrete was installed along the embankment to prevent erosion and animal burrowing.

Describe conditions and locations of the capping system which require attention:

Small plants were observed to be growing at the concrete-asphalt interface along the rail line.

The gravel cover at SW-5 contained areas of thinning, bauxite, and exposed geotextile.

The drainage infrastructure at SW-5 was cleaned and inspected in June 2014. One two-foot section of pipe under the rail (between 5DI-13A and 5DI-14A) was found to be damaged.

Describe corrective actions required and their date(s) of implementation:

Plant growth should be prevented on an ongoing basis.

Additional gravel to be added prior to 2014-2015 wet season.

The damaged drain pipe discussed above must be repaired as necessary prior to the 2014-2015 wet season.

Signature:

North Main Terminal/United Heckathorn (SW-6)

	Yes	No	N/A	Comments
Are concrete cap surfaces in adequate condition to promote effectiveness of the cap?	X			
Are gravel cover surfaces in adequate condition to promote effectiveness of the cap?	X			
Is storm water drainage infrastructure in adequate condition to prevent exposure of underlying soil to runoff?				*Unknown; needs inspection*
Are corrective actions required?		X		
Attach a photograph of areas requiring corrective action.			X	

Describe any recent repairs/maintenance:

Shotcrete was installed along the embankment to prevent erosion and animal burrowing.

Describe conditions and locations of the capping system which require attention:

None identified.

Describe corrective actions required and their date(s) of implementation:

The drainage infrastructure should be cleaned, inspected, and repaired as necessary during the 2014-2015 reporting year.

Signature:

North Main Terminal/United Heckathorn (SW-7)

	Yes	No	N/A	Comments
Are concrete cap surfaces in adequate condition to promote effectiveness of the cap?	X			
Are gravel cover surfaces in adequate condition to promote effectiveness of the cap?	X			
Is storm water drainage infrastructure in adequate condition to prevent exposure of underlying soil to runoff?				*Unknown; needs inspection*
Are corrective actions required?		X		
Attach a photograph of areas requiring corrective action.			X	

Describe any recent repairs/maintenance:

Shotcrete was installed along the embankment to prevent erosion and animal burrowing.

Describe conditions and locations of the capping system which require attention:

None identified.

Describe corrective actions required and their date(s) of implementation:

The drainage infrastructure should be cleaned, inspected, and repaired as necessary during the 2014-2015 reporting year.

Signature: