



Via email and certified mail

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Reference No.: ES-14-072

June 23, 2014

San Francisco Bay Regional Water Quality Control Board
1515 Clay Street, Suite 1400
Oakland, CA 94612
Attn: Cecil Felix

**Subject: Lawrence Berkeley National Laboratory Stormwater Annual Report for 2013-2014,
Waste Discharge Identification Number 2 011002421**

Mr. Felix,

In accordance with the California Industrial Stormwater General Permit Order 97-03-DWQ (General Industrial Permit), enclosed please find Lawrence Berkeley National Laboratory's (LBNL) Stormwater Annual Report for 2013-2014. The General Industrial Permit requires the submission of an annual report by July 1 of each year.

The report includes a summary and evaluation of visual observations and sampling results, laboratory analysis reports, and the completed Annual Comprehensive Site Compliance Evaluation form. This annual report is also available for review online at the following LBNL website:
<http://www.lbl.gov/ehs/esg/Reports/tableforreports.shtml>.

If you have any questions, please contact Brendan Mulholland at bjmulholland@lbl.gov or (510) 486-5284, or me at ROPauer@lbl.gov or (510) 486-7614.

Sincerely,

A handwritten signature in blue ink that reads "Ron Pauer".

Ron Pauer
Environmental Manager

enclosure:

Stormwater Annual Report for 2013-2014

cc via email w/enclosure:

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Stormwater Annual Report for 2013-2014

Prepared by:
Lawrence Berkeley National Laboratory
Environmental Services Group
WDID 2 01 I002421

June 2014



Ernest Orlando Lawrence Berkeley National Laboratory
Berkeley, CA 94720

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Introduction

This *Annual Report* has been prepared for the Lawrence Berkeley National Laboratory (Berkeley Lab or LBNL) located at 1 Cyclotron Road in Berkeley, Alameda County, California (Figure 1-1). The Annual Report was compiled pursuant to the requirements of the California State Water Resources Control Board Industrial General Permit (IGP, Order No. 97-03-DWQ) [1].

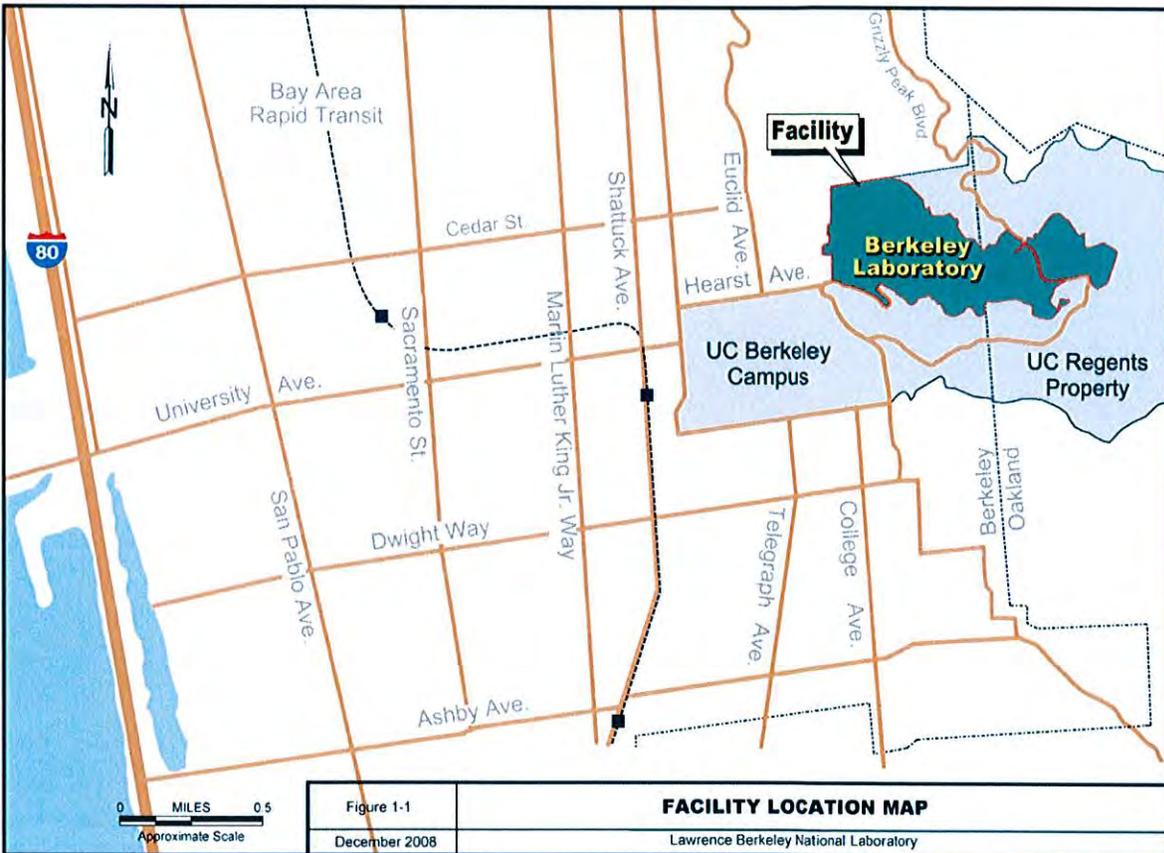


Figure 1-1 Facility Location Map

The Annual Report, in conjunction with LBNL's *Stormwater Pollution Prevention Plan (SWPPP)* [2] and the *Alternative Stormwater Monitoring Plan (ASWMP)* [3], provides the basis for improved management of stormwater to reduce the potential for release of harmful contaminants to surface water. This report includes supporting information, as required, to the *2013-2014 Annual Report for Storm Water Discharges Associated with Industrial Activities* (Appendix A). In addition, per the Industrial General Permit (IGP), a copy of this Annual Report will be maintained at the facility.

2 Background

Berkeley Lab is a member of the national laboratory system supported by the U.S. Department of Energy through its Office of Science. It is managed by the University of California (UC) and conducts unclassified research across a wide range of scientific disciplines. The facility occupies approximately 200 acres within the Cities of Berkeley and Oakland, both of which are located in Alameda County. Roughly one-half of the site is within Strawberry Canyon and has a south-facing orientation; the balance is within Blackberry Canyon and is oriented toward the west. Approximately 80 permanent buildings and approximately 100 trailers and temporary structures are located at the facility. About 110 acres are undeveloped with vegetated steep slopes. A facility map with major buildings and surrounding creeks is shown on Figure 2-1.

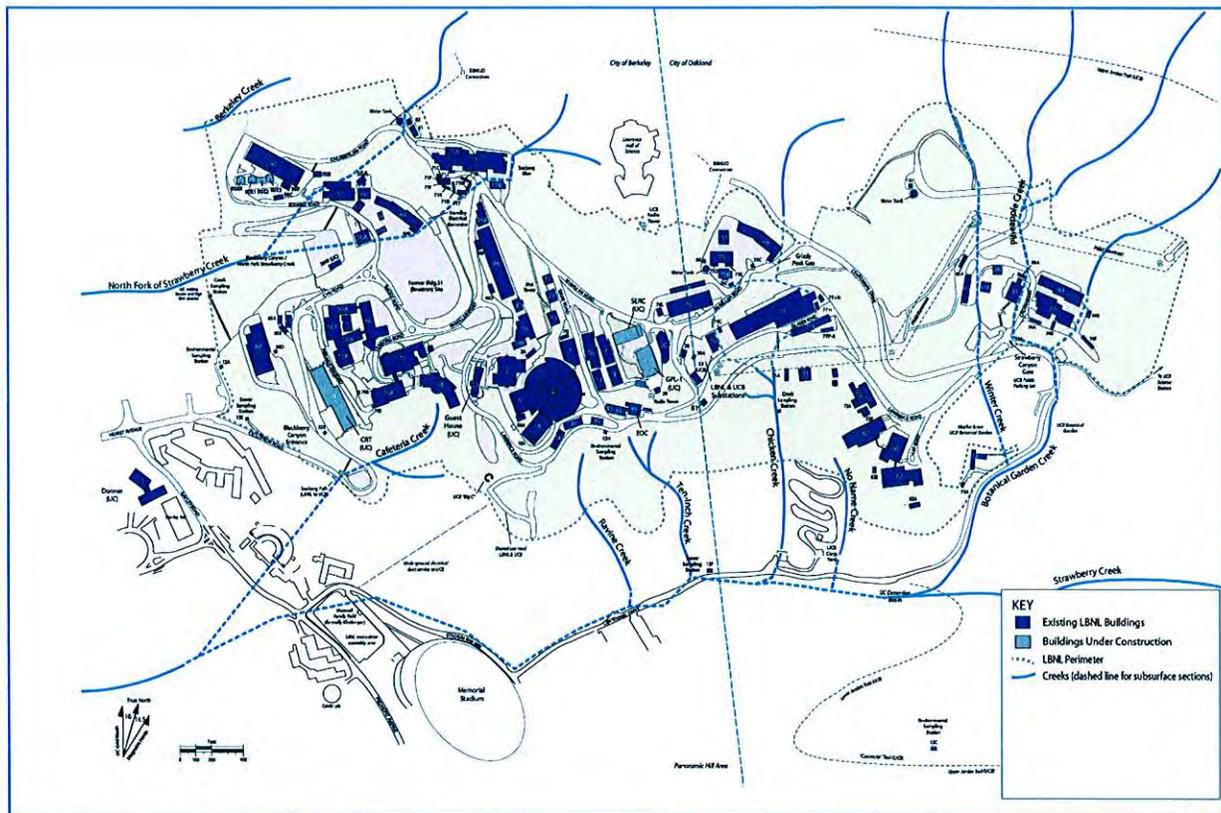


Figure 2-1 Facility Map

LBNL's stormwater discharges are regulated by the IGP based on operations that fall within the following Standard Industrial Classification (SIC) codes:

- 4173 – Terminal and Service Facilities for Motor Vehicle Passenger Transportation
- 3499 – Fabricated Metal Products, Not Elsewhere Classified
- 4953 – Hazardous Waste Treatment Storage or Disposal Facilities
- 5093 – Scrap Recycling Facilities

A Notice of Intent for coverage under the Industrial General Permit was submitted to the San Francisco Bay Regional Water Quality Control Board (RWQCB) on April 1, 1992. The Waste Discharge Identification number issued by RWQCB for the facility is 2 01 I002421.

Historically the LBNL Stormwater Monitoring Plan [4] focused on larger drainage areas within the site where stormwater discharges have commingled with stormwater from areas with little or no industrial activity. In 2008, LBNL proposed modifying the Stormwater Monitoring Plan so that the focus would be on areas of industrial activity that are specifically regulated by the Industrial General Permit, as these have the most potential to contribute stormwater pollutants. Alternative stormwater monitoring locations were proposed and presented to the RWQCB in December 2008. The alternative monitoring locations provided discharge data for pollutants closer to potential sources. This allowed for improved evaluation of the specific potential source areas and assessment of additional Best Management Practices (BMPs) to control contributions of pollutants from potential source areas. An Alternative Stormwater Monitoring Plan (ASWMP) was developed and implemented in February 2009 and updated again in September 2009.

LBNL has identified five permit-regulated industrial areas where stormwater discharges come in contact with industrial activities:

1. Parking and storage at the Blackberry Parking Lot
2. Fuel dispensing at the Building 76 Vehicle Fueling Station
3. Metal fabrication, storage, and scrap recycling area between Buildings 77 and 79
4. Hazardous waste treatment, storage, and disposal at the Building 85 Hazardous Waste Handling Facility
5. Bus parking in front of Building 64

A SWPPP has been developed and maintained for the site. It identifies the BMPs that must be implemented to reduce stormwater pollution. It also establishes an annual stormwater inspection program to evaluate areas associated with industrial activity that have a potential to contribute a stormwater discharge, and the effectiveness of the BMPs to reduce pollutant discharges.

The most recent SWPPP was prepared in April 2014, and has incorporated additional BMPs related to fire hydrant, sprinkler and standpipe flushing. The SWPPP revision also includes specific references to required BMPs.

Storm Event Sampling and Analysis

3.1 General Sampling Information

As required by the IGP and LBNL's ASWMP, samples from two rainfall events that resulted in stormwater discharges were collected during the 2013-2014 wet-weather season; the first sampling took place on November 19, 2013 and the second on February 26, 2014. All stormwater samples were collected under the following IGP-required conditions:

- Runoff occurred during normal business operating hours;
- The sample was collected within the first hour of discharge from the site; and
- Rainfall had not been measured at the facility within three working days prior to the sampling event.

For both sampling events, the stormwater discharge locations were sampled in accordance with the LBNL's ASWMP. Figure 3-1 shows the six monitored industrial areas as follows:

1. MP-1: Blackberry Parking Lot
2. MP-2: Building 76 Vehicle Fueling Station
3. MP-3: Building 77/79 Metal Fabrication, Storage and Scrap Recycling Area
4. MP-4: Building 85 Hazardous Waste Handling Facility, Upper Yard
5. MP-5: Building 85 Hazardous Waste Handling Facility, Lower Yard
6. MP-6: Building 64 Bus Parking Lot

For all rainfall sampling events, surface water samples were collected and placed into sample containers prepared by the analytical laboratory following ESG standard operating procedures: *Surface Water Monitoring Procedure*, Procedure 263 [5] and *Data Quality Objectives and Assessment*, Procedure 252 [6]. Analytical laboratories contracted by LBNL for stormwater sample analysis are Curtis & Tompkins (C&T) Analytical Laboratory of Berkeley, California and BC Laboratories, Inc. of Bakersfield, California.

All stormwater samples were analyzed for the standard analytical parameters as stipulated in the IGP and included:

- Total Suspended Solids (TSS) as required by United States Environmental Protection Agency (USEPA) Method SM-2540D
- pH by testing with a calibrated temperature-compensating pH tester
- Specific conductance using USEPA Method SM-2510B or 120.1
- Total oil and grease using USEPA Method 1664 (HEM-SGT)

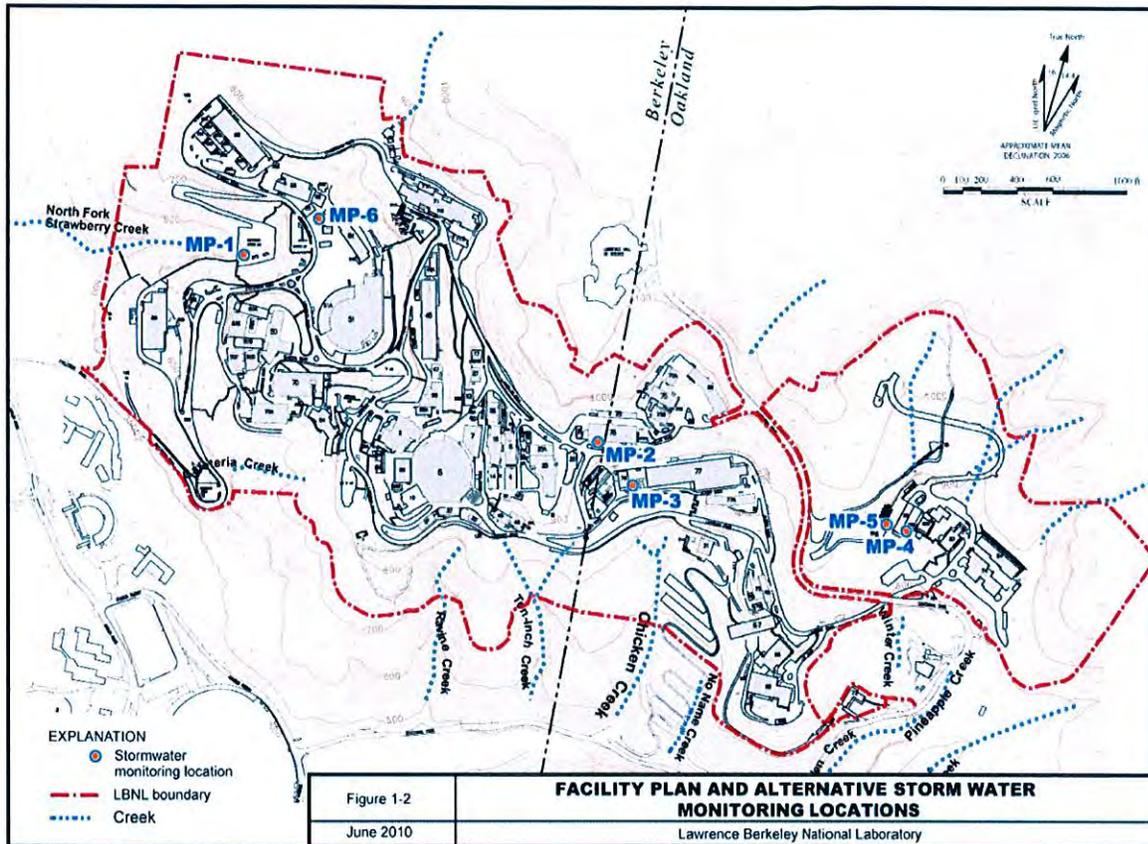


Figure 3-1 Monitoring Locations

Based on SIC 3499 – Fabricated Metal Products and on SIC 5093 – Scrap Recycling Facility, samples from the Building 77/79 metal fabrication, storage and scrap recycling area were also analyzed for the following sector parameters:

- Nitrite and nitrate (as nitrogen) using USEPA Method 300.0 or 353.2
- Total aluminum, total iron and total zinc using USEPA 200.7 or 200.8
- Chemical Oxygen Demand (COD) using USEPA 410.4
- Total aluminum, total copper, total iron, total lead, and total zinc using USEPA 200.7 or 200.8.

Based on SIC 4953 – Hazardous Waste Treatment Storage or Disposal Facilities, samples from the Building 85 Hazardous Waste Handling Facility were also analyzed for the following sector parameters:

- Ammonia as nitrogen using SM-4500 or USEPA 350.1
- Total magnesium using USEPA 200.7
- Chemical Oxygen Demand (COD) using USEPA 410.4
- Total arsenic using USEPA 200.7 or 200.8
- Total cadmium using USEPA 200.7 or 200.8
- Total cyanide using USEPA 335.4
- Total lead using USEPA 200.7 or 200.8

- Total mercury using USEPA 245.1
- Total selenium using USEPA 200.7 or 200.8
- Total silver using USEPA 200.7 or 200.8

The complete set of sample analytical results is found in Attachment A, Form 1. Results were compared to the applicable parameter benchmark values established by the USEPA [7].

3.2 November 19, 2013 Storm Event

Stormwater samples were collected during a rain event on November 19, 2013 in accordance with the California Water Board's IGP and LBNL's ASWMP. The sampling results showed that LBNL's stormwater BMPs provide adequate control for stormwater discharges at 5 of 6 designated industrial locations with the exception of the Building 77/79 Metal Fabrication, Storage and Scrap Recycling Area.

At the Building 77/79 Metal Fabrication, Storage and Scrap Recycling Yard, several analytical results exceeded their corresponding benchmark values including; TSS at 230 mg/l, nitrate plus nitrite at 1.2 mg/l, aluminum, iron, zinc, copper, and lead at 5.8 mg/l, 12 mg/l, 2.7 mg/l, 0.31 mg/l and 0.11 mg/l, respectively. Also, chemical oxygen demand level was 300 mg/l, exceeding the benchmark goal of 120 mg/l.

On January 15, 2014 a letter was sent to the San Francisco Bay Regional Water Quality Control Board describing these exceedances and the subsequent corrective actions implemented to reduce and/or eliminate them in the future. A copy of the letter (ES-14-032 Stormwater Monitoring Report for Lawrence Berkeley national Laboratory (LBNL)) is provided in Appendix B, which also includes the following November 19, 2013 storm event sampling documents:

- Curtis and Tompkins Analytical Laboratories Report
- LBNL Sample Collection Form
- pH Calibration and Measurement Worksheet
- Turbidity Calibration and Measurement Worksheet

In addition, the benchmark goal for magnesium at the Building 85 Hazardous Waste Handling Facility's Lower and Upper Yards was exceeded; however, a source study in 2009 had determined that the elevated level of magnesium is from aerial deposition of naturally occurring magnesium in the soil surrounding both yards and not from waste management activities at the facility. As a result, no additional BMPs are warranted.

The Technical Memorandum on the Hazardous Waste Handling Facility Investigative Studies was submitted to the RWQCB with the 2009/10 Annual Stormwater Report and is included as Appendix D of this report.

The Stormwater Pollution Prevention Plan was revised in April 2014 to incorporate improvements in BMPs and implemented within 90 days in accordance with the Industrial General Permit requirements. It is understood that any revisions to an existing BMP may require modification by Regional Water Quality Control Board.

3.3 February 26, 2014 Storm Event

Stormwater samples were collected on February 26, 2014 in accordance with the California Water Board's IGP and the LBNL ASWMP. The sampling results determined that LBNL's existing and improved stormwater BMPs provide adequate control for stormwater discharges at 5 of 6 designated industrial locations, except at the Building 77/79 Metal Fabrication, Storage and Scrap Recycling Area.

At the Building 77/79 Metal Fabrication, Storage and Scrap Recycling Area only one analyte was detected above benchmark goal. Zinc was detected at 0.49 mg/l which exceeded the benchmark goal of 0.117 mg/l.

On March 24, 2014 a letter was sent to the San Francisco Bay Regional Water Quality Control Board describing the exceedance and the subsequent corrective actions implemented to reduce and/or eliminate in the future. A copy of the letter (ES-14-057 Stormwater Monitoring Report for Lawrence Berkeley national Laboratory (LBNL)) is provided in Appendix C, which also includes the following February 26, 2014 storm event sampling documents:

- Curtis and Tompkins Analytical Laboratories Report
- LBNL Sample Collection Form
- pH Calibration and Measurement Worksheet
- Turbidity Calibration and Measurement Worksheet

As referenced in Section 3.2, the benchmark goal for magnesium at the Building 85 Hazardous Waste Handling Facility's Lower and Upper Yards was exceeded; however, a source study in 2009 had determined that the elevated level of magnesium is due to aerial deposition of naturally occurring magnesium in the soil surrounding both yards and not from waste management activities at the facility. As a result, no additional BMPs are warranted.

The Technical Memorandum on the Hazardous Waste Handling Facility Investigative Studies was submitted to the RWQCB with the 2009/2010 Annual Stormwater Report and is included as Appendix D of this report.

The Stormwater Pollution Prevention Plan was revised in April 2014 to incorporate improvements in BMPs and implemented within 90 days in accordance with the Industrial General Permit requirements. It is understood that any revisions to an existing BMP may require modification by Regional Water Quality Control Board.

4

Visual Observations of Non-Stormwater and Stormwater Discharges

4.1 Observations of Authorized Non-Stormwater Discharges

Quarterly visual observations conducted during the 2013-2014 season included the following authorized non-stormwater discharges:

- Groundwater discharges from hydraugers
- Retaining wall weep holes
- Discharges of condensate from air conditioning units
- Fire suppression system tests
- Creek flow
- Accumulated rainwater

Visual observations revealed no odor, cloudiness or turbidity, discoloring, staining, floating objects, or oil sheen in these discharges.

During the 2013-2014 season visual observations of the following discharges were also performed:

- On February 5 and 20, 2014 visual observations were made at the Building 75 water tower. The water tower has ongoing (intermittent) overflows due to a malfunctioning overflow shutoff switch and repairs are in progress. Anti-chloramine tablets are placed as a preventative measure and will remain in place until the overflow shutoff switch is repaired or replaced. Visual observations revealed no odor, cloudiness or turbidity, discoloring, staining, floating objects, or oil sheen in these discharges.
- On May 27, 2014 a water supply line break near Building 6 was observed and the leak was stopped by closing valves within 30 minutes of discovery. Anti-chloramine tablets were placed as a preventative measure and visual observations at the North Fork of Strawberry Creek revealed no evidence of turbidity or increased flow. The water line was repaired and returned to operation on May 31, 2014.

A summary of the authorized non-stormwater quarterly visual observations is included in Appendix A, Form 2. The detailed inspection forms are provided in Appendix E.

4.2 Observations of Unauthorized Non-Stormwater Discharges

Quarterly visual observations were conducted on potentially unauthorized non-stormwater discharges on:

- August 22, 2013
- November 13, 2013
- February 25, 2014
- May 5, 2014

No indications of prior unauthorized non-stormwater discharges or evidence of unauthorized discharges were observed during the 2013-2014 wet season. However, additional visual observations were performed on the following un-authorized non-stormwater discharge:

- On May 13, 2014 approximately 20 gallons of low conductivity water (LCW) was released to the curb gutter and discharged to the storm drain system near Buildings 7 and 16. Dechlorination tablets were placed at the source. There was no observed impact to the watershed; however, the potential toxicity associated with LBNL's LCW will be investigated.

A summary of the unauthorized non-stormwater quarterly visual observations is included in Form 3 of Appendix A. The detailed inspection forms are provided in Appendix E.

4.3 Monthly Wet Season Observations

Monthly visual observations were conducted during the 2013-2014 wet weather season between October 2013 and May 2014. The monthly observations did reveal some areas of dark brown color, turbidity, floatables, and/or sheen at the stormwater discharges from the North Fork of Strawberry Creek, Chicken Creek, East Canyon Outfall, Winter Creek and Pineapple Creek effluent and influent location as well as certain selected industrial areas.

Turbidity was probably caused by remobilization due to high flow rates within the creek, and the floatables are due to intense stormwater run-off from impervious surfaces such as roads and parking lots. Foam was also visible, and was most likely the result of decomposing plants and animals releasing fatty acids, which act as a surface tension reducing agent.

The monthly observations from November 2013 and January through April 2014 indicated oil sheen in the following locations:

- At the Blackberry Parking Lot oil sheen was observed during the November 2013 inspection and during inspections conducted in the months of February, March and April 2013.
- An oil sheen was present at the Building 76 Vehicle Fueling Station during the November 2013 inspection and during monthly inspections in March and April 2014.
- At the Building 77/79 Metal Fabrication, Storage and Scrap Recycling Area, an oil sheen was observed during monthly inspections conducted in November 2013 and January 2014.
- At the Building 64 Bus Parking Area oil sheen was observed during the monthly inspection in November 2013. The sheen is attributable to dripping oil/ gasoline from personal vehicles.

All of these locations are now equipped with oil absorbent pads in the storm drain inlets. This BMP appears to be effective; since the 2013-14 wet season stormwater monitoring events show that all the Oil and Grease data was below the stormwater benchmark of 15 mg/l.

Turbidity and cloudiness was observed at the Blackberry Parking Lot during the November 2013 inspection. This may be attributable to detached soil particles from aerial deposition or from contractor and personally owned vehicles.

A summary of the wet weather monthly visual observations is presented in Appendix A, Form 4. The detailed inspection forms are provided in Appendix E.

5 References

- [1] California State Water Resources Control Board, "National Pollutant Discharge Elimination System (NPDES) General Permit No. CAS000001 State General Permit for Stormwater Discharges Associated with Industrial Activities," Water Quality Order 97-03-DWQ, April 1997.
- [2] Lawrence Berkeley National Laboratory, "Stormwater Pollution Prevention Plan," Revision 14, Environmental Services Group, April 2014.
- [3] Lawrence Berkeley National Laboratory, "Alternative Stormwater Monitoring Program," Environmental Services Group, September 2009.
- [4] Lawrence Berkeley National Laboratory, "Stormwater Monitoring Plan," Environmental Services Group, November 2005.
- [5] Lawrence Berkeley National Laboratory, "Surface Water Monitoring Procedure, Procedure 263," Environmental Services Group, June 29, 2012.
- [6] Lawrence Berkeley National Laboratory, "Data Quality Objectives and Assesment, Procedure 252," Environmental Services Group, April 15, 2010.
- [7] United States Environmental Protection Agency (USEPA), "Final Modification of the National Pollutant Discharge Elimination System (NDPES) Stormwater Multi-Sector General Permit for Industrial Activities, Termination of the EPA NPDES Storm Water Baseline Industrial General Permit," September 30, 1998, Washington D.C. Federal Register.

Appendix A

2013-2014 Annual Report

State Water Resources Control Board

To Interested Parties:

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

Attached is the 2013-2014 annual report that must be mailed to your Regional Board office by July 1, 2014. Dischargers within the Los Angeles Regional Board are required to electronically submit their annual reports via the Storm Water Multi-Application Reporting and Tracking System (SMARTS), email with a PDF attachment(s) to losangeles@waterboards.ca.gov, or mail a disk. Although electronic submittals are not mandatory for dischargers in other regions, we encourage all dischargers to register and use SMARTS. We anticipate that a new Industrial General Permit (IGP) will be adopted sometime next year that will mandate electronic reporting for future reporting years.

To register to use SMARTS please visit: <https://smarts.waterboards.ca.gov> and download the SMARTS LRP registration form and instructions. Please fill out the form and mail it back to: SMARTS Registration, P.O. Box 1977, Sacramento, CA 95812. Once a complete registration form is received, a login name and password will be emailed to you.

For SMARTS registration questions or information please contact the SMARTS help center at 1-866-563-3107 or by email at stormwater@waterboards.ca.gov.

To receive email updates on Storm Water Industrial permitting issues including updates on the IGP reissuance process (hearings, workshops, schedules, etc.), please sign up at http://www.waterboards.ca.gov/resources/email_subscriptions/swrcb_subscribe.shtml The Storm Water program currently maintains five email lists:

- Storm Water Database Issues
- Storm Water Construction Permitting Issues
- Storm Water Industrial Permitting Issues
- Storm Water Municipal Permitting Issues
- Sustainable Development

Sincerely,

Storm Water Section



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 office addresses can be found at <http://www.waterboards.ca.gov/stormwtr/contact.html>. To find your Regional Board information, match the first digit of your WDID number with the corresponding number that appears in parenthesis on the first line of each Regional Board office.

GENERAL INFORMATION:

Facility WDID No: 2 011002421

A. Facility Information:

Facility Business: Lawrence Berkeley National Laboratory Contact Person: Ron Pauer

Physical Address: 1 Cyclotron Road e-mail: ROPauer@lbl.gov

City: Berkeley State: California Zip: 94720 Phone: (510) 486-7614

Standard Industrial Classification (SIC) Code(s): 3499, 4173, 4953, 5093

B. Facility Operator Information:

Operator Name: Lawrence Berkeley National Laboratory Contact Person: Ron Pauer

Mailing Address: 1 Cyclotron Road MS75B0101 e-mail: ROPauer@lbl.gov

City: Berkeley State: California Zip: 94720 Phone: (510) 486-7614

C. Facility Billing Information:

Operator Name: Lawrence Berkeley National Laboratory Contact Person: Ron Pauer

Mailing Address: 1 Cyclotron Road MS75B0101 e-mail: ROPauer@lbl.gov

City: Berkeley State: California Zip: 94720 Phone: (510) 486-7614

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 **Certification 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? 6 monitored industry specific sampling locations

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4. For each storm event sampled, did you collect and analyze a sample from each of the facility's 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 storm water 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

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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.

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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	<input checked="" type="checkbox"/>	<input type="checkbox"/>	February	<input checked="" type="checkbox"/>	<input type="checkbox"/>
November	<input checked="" type="checkbox"/>	<input type="checkbox"/>	March	<input checked="" type="checkbox"/>	<input type="checkbox"/>
December	<input checked="" type="checkbox"/>	<input type="checkbox"/>	April	<input checked="" type="checkbox"/>	<input type="checkbox"/>
January	<input checked="" type="checkbox"/>	<input type="checkbox"/>	May	<input checked="" type="checkbox"/>	<input type="checkbox"/>

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

- date, time, and location of observation
- name and title of observer
- characteristics of the discharge (i.e., odor, color, etc.) and source of any pollutants observed
- 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:
- | | |
|--|--|
| <ul style="list-style-type: none"> • areas where spills and leaks have occurred 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 | <ul style="list-style-type: none"> • 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
- | | |
|--|--|
| <ul style="list-style-type: none"> • facility boundaries • outline of all storm water drainage areas • areas impacted by run-on • storm water discharges locations | <ul style="list-style-type: none"> • storm water collection and conveyance system • structural control measures such as catch basins, berms, containment areas, oil/water separators, etc. |
|--|--|

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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.

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ATTACHMENT SUMMARY

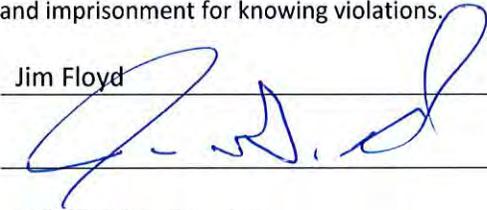
Answer the questions below to help you determine what should be attached to this annual report. Answer NA (Not Applicable) to questions 2-4 if you are not required to provide those attachments.

1. Have you attached Forms 1,2,3,4, and 5 or their equivalent? YES (Mandatory)
2. If you conducted sampling and analysis, have you attached the laboratory analytical reports? 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 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? 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: Jim Floyd

Signature: 

Date: 5-27-14

Title: EHS Division Director

DESCRIPTION OF BASIC ANALYTICAL PARAMETERS

The Industrial Activities Storm Water General Permit (General Permit) requires you to analyze storm water samples for at least four parameters. These are pH, Total Suspended Solids (TSS), Specific Conductance (SC), and Total Organic Carbon (TOC). Oil and Grease (O&G) may be substituted for TOC. In addition, you must monitor for any other pollutants which you believe to be present in your storm water discharge as a result of industrial activity and analytical parameters listed in Table D of the General Permit. There are no numeric limitations for the parameters you test for.

The four parameters which the General Permit requires to be tested are considered *indicator* parameters. In other words, regardless of what type of facility you operate, these parameters are nonspecific and general enough to usually provide some indication whether pollutants are present in your storm water discharge. The following briefly explains what each of these parameters mean:

pH is a numeric measure of the hydrogen-ion concentration. The neutral, or acceptable, range is within 6.5 to 8.5. At values less than 6.5, the water is considered acidic; above 8.5 it is considered alkaline or basic. An example of an acidic substance is vinegar, and a alkaline or basic substance is liquid antacid. Pure rainfall tends to have a pH of a little less than 7. There may be sources of materials or industrial activities which could increase or decrease the pH of your storm water discharge. If the pH levels of your storm water discharge are high or low, you should conduct a thorough evaluation of all potential pollutant sources at your site.

Total Suspended Solids (TSS) is a measure of the undissolved solids that are present in your storm water discharge. Sources of TSS include sediment from erosion of exposed land, and dirt from impervious (i.e. paved) areas. Sediment by itself can be very toxic to aquatic life because it covers feeding and breeding grounds, and can smother organisms living on the bottom of a water body. Toxic chemicals and other pollutants also adhere to sediment particles. This provides a medium by which toxic or other pollutants end up in our water ways and ultimately in human and aquatic life. TSS levels vary in runoff from undisturbed land. It has been shown that TSS levels increase significantly due to land development.

Specific Conductance (SC) is a numerical expression of the ability of the water to carry an electric current. SC can be used to assess the degree of mineralization, salinity, or estimate the total dissolved solids concentration of a water sample. Because of air pollution, most rain water has a SC a little above zero. A high SC could affect the usability of waters for drinking, irrigation, and other commercial or industrial use.

Total Organic Carbon (TOC) is a measure of the total organic matter present in water. (All organic matter contains carbon) This test is sensitive and able to detect small concentrations of organic matter. Organic matter is naturally occurring in animals, plants, and man. Organic matter may also be man made (so called synthetic organics). Synthetic organics include pesticides, fuels, solvents, and paints. Natural organic matter utilizes the oxygen in a receiving water to biodegrade. Too much organic matter could place a significant oxygen demand on the water, and possibly impact its quality. Synthetic organics either do not biodegrade or biodegrade very slowly. Synthetic organics are a source of toxic chemicals that can have adverse affects at very low concentrations. Some of these chemicals bioaccumulate in aquatic life. If your levels of TOC are high, you should evaluate all sources of natural or synthetic organics you may use at your site.

Oil and Grease (O&G) is a measure of the amount of oil and grease present in your storm water discharge. At very low concentrations, O&G can cause a sheen (that floating "rainbow") on the surface of water (1 qt. of oil can pollute 250,000 gallons of water). O&G can adversely affect aquatic life and create unsightly floating material and film on water, thus making it undrinkable. Sources of O&G include maintenance shops, vehicles, machines and roadways.

If you have any questions regarding whether or not your constituent concentrations are too high, please contact your local Regional Board office. The United States Environmental Protection Agency (USEPA) has published stormwater discharge benchmarks for a number of parameters. These benchmarks may be helpful when evaluating whether additional BMPs are appropriate. These benchmarks can be accessed at our website at <http://www.waterboards.ca.gov>. It is contained in the Sampling and Analysis Reduction Certification.

See Storm Water Contacts at

http://www.waterboards.ca.gov/water_issues/programs/stormwater/contact.shtml

FORM 1-SAMPLING AND ANALYSIS RESULTS FOR 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): John Jelinski TITLE: Quality Coordinator SIGNATURE: 

NAME OF PERSON COLLECTING SAMPLE(S): Tim Bauters TITLE: Program Manager SIGNATURE: 

DESCRIBE DISCHARGE LOCATION	DATE / TIME OF SAMPLE LOCATION		TIME DISCHARGE STARTED	BASIC PARAMETERS			Nitrate+ Nitrite (as N)	Al Fe Zn	Cu	Pb	COD	As Cd Cn	Mg Hg Se Ag	NH ₃ (as N)
	DATE	TIME		pH	SC	TSS								
MP-1	11/19/2013		11/19/2013											
	12:30	<input type="checkbox"/> AM <input checked="" type="checkbox"/> PM	12:30	240	83	ND	NR	NR	NR	NR	NR	NR	NR	NR
MP-2	11/19/2013		11/19/2013											
	13:30	<input type="checkbox"/> AM <input checked="" type="checkbox"/> PM	12:30	250	19	ND	NR	NR	NR	NR	NR	NR	NR	NR
MP-3	11/19/2013		11/19/2013											
	12:55	<input type="checkbox"/> AM <input checked="" type="checkbox"/> PM	12:30	240	230	11.6	5.8 12 2.7	0.31	0.11	300	NR	NR	NR	NR
MP-4	11/19/2013		11/19/2013											
	13:20	<input type="checkbox"/> AM <input checked="" type="checkbox"/> PM	12:30	89	12	ND	NR	NR	ND	44	ND	ND	1.60 ND ND ND	0.56
MP-5	11/19/2013		11/19/2013											
	13:15	<input type="checkbox"/> AM <input checked="" type="checkbox"/> PM	12:30	54	8	ND	NR	NR	ND	41	ND	ND	1.10 ND ND ND	0.55
MP-6	11/19/2013		11/19/2013											
	12:40	<input type="checkbox"/> AM <input checked="" type="checkbox"/> PM	12:30	190	96	ND	NR	NR	NR	NR	NR	NR	NR	NR
TEST REPORTING UNITS:				pH Units	µmhos/cm	mg/L	mg/L	mg/L	mg/L	mg O/L	mg/L	mg/L	mg/L	mg/L
TEST METHOD DETECTION LIMIT:				0.01	1.0	1.0	5.0	0.1	0.05	0.001	10	0.01-0.05	0.0002-0.1	0.1
TEST METHOD USED:				SM 4500 HB	USEPA 120.1 or SM 2510B	SM 2540D	USEPA 1664	USEPA 300.0 or 353.2	USEPA 200.7	USEPA 200.7	USEPA 410.4	USEPA 200.7 335.4	USEPA 245.1 200.7	USEPA 353.2
ANALYZED BY (SELF/LAB):				SELF	LAB	LAB	LAB	LAB	LAB	LAB	LAB	LAB	LAB	LAB

Notes: TSS = Total Suspended Solids; SC = Specific Conductance; O&G = Oil & Grease; ND = Not Detected; N = Nitrogen; NR = Not Required; Al = Aluminum; Fe = Iron; Zn = Zinc; Cu = copper; Pb = Lead; COD = Chemical Oxygen Demand; As = Arsenic; Cd = Cadmium; Cn = Cyanide; Mg = Magnesium; Hg = Mercury; Se = Selenium; Ag = Silver; NH₃ = Ammonia.

FORM 1-SAMPLING AND ANALYSIS RESULTS FOR 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: <0.05)
- 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.

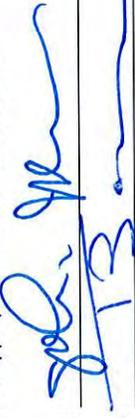
NAME OF PERSON COLLECTING SAMPLE(S):

John Jelinski

TITLE:

Quality Coordinator

SIGNATURE:



NAME OF PERSON COLLECTING SAMPLE(S):

Tim Bauters

TITLE:

Program Manager

SIGNATURE:

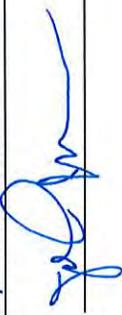


DESCRIBE DISCHARGE LOCATION	DATE / TIME OF SAMPLE LOCATION	TIME DISCHARGE STARTED	BASIC PARAMETERS			Nitrate+ Nitrite (as N)	Al Fe Zn	Cu	Pb	COD	As Cd Cn	Mg Hg Se Ag	NH ₃ (as N)
			pH	SC	TSS								
MP-1	02/26/2014 08:38 <input checked="" type="checkbox"/> AM <input type="checkbox"/> PM	02/26/2014 07:15 <input checked="" type="checkbox"/> AM 07:45 <input type="checkbox"/> PM	7.24	78	51	9.29	NR	NR	NR	NR	NR	NR	NR
			7.2	140	27	ND	NR	NR	NR	NR	NR	NR	NR
MP-2	02/26/2014 08:12 <input checked="" type="checkbox"/> AM <input type="checkbox"/> PM	02/26/2014 07:15 <input checked="" type="checkbox"/> AM 07:45 <input type="checkbox"/> PM	7.27	71	39	ND	0.35 0.56 0.49	0.046	0.015	83	NR	NR	NR
			7.19	40	14	ND	NR	NR	NR	NR	23	ND ND ND	0.46 ND ND ND
MP-3	02/26/2014 08:50 <input checked="" type="checkbox"/> AM 11:05 <input type="checkbox"/> PM	02/26/2014 07:15 <input checked="" type="checkbox"/> AM 07:45 <input type="checkbox"/> PM	6.91	38	9	ND	NR	NR	NR	11	ND ND ND	0.54 ND ND ND	0.24
			7.20	92	24	ND	NR	NR	NR	NR	NR	NR	NR
MP-4	02/26/2014 08:45 <input checked="" type="checkbox"/> AM 11:00 <input type="checkbox"/> PM	02/26/2014 07:15 <input checked="" type="checkbox"/> AM 07:45 <input type="checkbox"/> PM											
MP-5	02/26/2014 08:31 <input checked="" type="checkbox"/> AM <input type="checkbox"/> PM	02/26/2014 07:15 <input checked="" type="checkbox"/> AM 07:45 <input type="checkbox"/> PM											
TEST REPORTING UNITS:			pH Units	µmhos/cm	mg/L	mg/L	mg/L	mg/L	mg/L	mg O/L	mg/L	mg/L	mg/L
TEST METHOD DETECTION LIMIT:			0.01	1.0	1.0	5.0	0.05	0.005	0.001	10	0.01-0.05	0.0002-0.1	0.1
TEST METHOD USED:			SM 4500 HB	USEPA 120.1 or SM 2540D	SM 2540D	USEPA 1664	USEPA 200.7	USEPA 200.7	USEPA 200.7	USEPA 410.4	USEPA 200.7 335.4	USEPA 245.1 200.7	USEPA 353.2
ANALYZED BY (SELF/LAB):			SELF	LAB	LAB	LAB	LAB	LAB	LAB	LAB	LAB	LAB	LAB

Notes: TSS = Total Suspended Solids; SC = Specific Conductance; O&G = Oil & Grease; ND = Not Detected; N = Nitrogen; NR = Not Required; Al = Aluminum; Fe = Iron; Zn = Zinc; Cu = copper; Pb = Lead; COD = Chemical Oxygen Demand; As = Arsenic; Cd = Cadmium; Cn = Cyanide; Mg = Magnesium; Hg = Mercury; Se = Selenium; Ag = Silver; NH₃ = Ammonia.

FORM 2-QUARTERLY VISUAL OBSERVATIONS OF AUTHORIZED NON-STORM WATER DISCHARGES (NSWDs)

- * Quarterly dry weather visual observations are required of each authorized NSWD.
- Observe each authorized NSWD source, impacted drainage area, and discharge location.
- Authorized NSWDs must meet the conditions provided in Section D (pages 5-6), of the General Permit.
- Make additional copies of this form as necessary.

<p>QUARTER: JULY - SEPTEMBER</p> <p>DATE: August 22, 2013</p>	<p>Observers Name: <u>John Jelinski</u></p> <p>Title: <u>Quality Coordinator</u></p> <p>Signature: </p>	<p><input checked="" type="checkbox"/> YES <input type="checkbox"/> NO</p> <p>WERE ANY AUTHORIZED NSWD'S DISCHARGED DURING THIS QUARTER?</p> <p>The SWPPP includes a number of possible authorized NSWDs. Several were observed at this time</p> <p>If YES, Complete the reverse side of this form</p>
<p>QUARTER: OCTOBER - DECEMBER</p> <p>DATE: November 13, 2013</p>	<p>Observers Name: <u>John Jelinski</u></p> <p>Title: <u>Quality Coordinator</u></p> <p>Signature: </p>	<p><input checked="" type="checkbox"/> YES <input type="checkbox"/> NO</p> <p>WERE ANY AUTHORIZED NSWD'S DISCHARGED DURING THIS QUARTER?</p> <p>The SWPPP includes a number of possible authorized NSWDs. Several were observed at this time</p> <p>If YES, Complete the reverse side of this form</p>
<p>QUARTER: JANUARY - MARCH</p> <p>DATE: February 25, 2014</p>	<p>Observers Name: <u>John Jelinski</u></p> <p>Title: <u>Quality Coordinator</u></p> <p>Signature: </p>	<p><input checked="" type="checkbox"/> YES <input type="checkbox"/> NO</p> <p>WERE ANY AUTHORIZED NSWD'S DISCHARGED DURING THIS QUARTER?</p> <p>The SWPPP includes a number of possible authorized NSWDs. Several were observed at this time</p> <p>If YES, Complete the reverse side of this form</p>
<p>QUARTER: APRIL - JUNE</p> <p>DATE: May 5, 2014 (May 27, 2014)*</p>	<p>Observers Name: <u>John Jelinski</u></p> <p>Title: <u>Quality Coordinator</u></p> <p>Signature: </p>	<p><input checked="" type="checkbox"/> YES <input type="checkbox"/> NO</p> <p>WERE ANY AUTHORIZED NSWD'S DISCHARGED DURING THIS QUARTER?</p> <p>The SWPPP includes a number of possible authorized NSWDs. Several were observed at this time</p> <p>If YES, Complete the reverse side of this form</p>

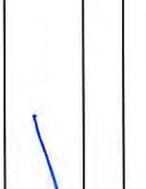
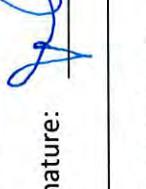
* Additional Authorized NSWD observed.

FORM 2-QUARTERLY VISUAL OBSERVATIONS OF AUTHORIZED NON-STORM WATER DISCHARGES (Continued)

DATE /TIME OF OBSERVATION	NAME OF AUTHORIZED NSWD EXAMPLE: AC Condensate	SOURCE AND LOCATION OF AUTHORIZED NSWD EXAMPLE: Groundwater	DESCRIBE AUTHORIZED NSWD CHARACTERISTICS Indicate whether unauthorized NSWD is clear, cloudy, discolored, causing stains; contains floating objects or an oil sheen, has odors, etc.		DESCRIBE ANY REVISED OR NEW BMPs AND PROVIDE THEIR IMPLEMENTATION DATE
			AT THE NSWD SOURCE	AT THE NSWD AREA & DISCHARGE LOCATION	
08/22/2013 10:45 <input checked="" type="checkbox"/> AM 12:10 <input checked="" type="checkbox"/> PM	Hydrauger discharge Hillside seepage Creek flow Cooling System Condensate Accumulated Rainwater	Groundwater Groundwater Groundwater Atmospheric condensate B85 containment pump out	Clear, no staining, no floating objects, no oil sheen, no odor	Clear, no staining, no floating objects, no oil sheen, no odor	No new or revised BMP's necessary
11/13/2013 11:10 <input checked="" type="checkbox"/> AM 12:30 <input checked="" type="checkbox"/> PM	Hydrauger discharge Hillside seepage Creek flow Cooling System Condensate	Groundwater Groundwater Groundwater Atmospheric condensate	Clear, no staining, no floating objects, no oil sheen, no odor	Clear, no staining, no floating objects, no oil sheen, no odor	No new or revised BMP's necessary
02/25/2014 11:10 <input checked="" type="checkbox"/> AM 12:05 <input checked="" type="checkbox"/> PM	Hydrauger discharge Hillside seepage Creek flow	Groundwater Groundwater Groundwater	Clear, no staining, no floating objects, no oil sheen, no odor	Clear, no staining, no floating objects, no oil sheen, no odor	No new or revised BMP's necessary. B75 water tower overflow is ongoing; Facilities repairs in progress
05/05/2014 10:30 <input checked="" type="checkbox"/> AM 13:00 <input checked="" type="checkbox"/> PM	Hydrauger discharge Hillside seepage Creek flow Cooling system condensate B17 fire suppression runoff	Groundwater Groundwater Groundwater Atmospheric condensate Fire suppression Run-off	Clear, no staining, no floating objects, no oil sheen, no odor	Clear, no staining, no floating objects, no oil sheen, no odor	No new or revised BMP's necessary
05/27/2014 16:45 <input type="checkbox"/> AM 17:35 <input checked="" type="checkbox"/> PM	Water line break at ALS (B6)	Water line break	Presence of mud & landscaping chips in & around storm drain inlet, no oil sheen, no odor	Presence of mud & landscaping chips in & around storm drain inlet, no oil sheen, no odor	No new or revised BMP's necessary. Dechlorination tablets were immediately placed at the source of the leak & all storm drain inlets. Facilities responded within 30 minutes & shut-off the main water supply. There was no evidence of turbidity or increased flow in N.F. Strawberry creek.
Ongoing <input type="checkbox"/> AM <input type="checkbox"/> PM	Fire suppression system runoff & 75 water tower (observed 02/05/2014 & 02/20/2014)	Fire suppression Run-off	Clear, no staining, no floating objects, no oil sheen, no odor	Clear, no staining, no floating objects, no oil sheen, no odor	No new or revised BMP's necessary. B75 water tower overflow is ongoing; Facilities repairs in progress

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 cannot 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.

<p>QUARTER: JULY - SEPTEMBER</p> <p>Date/Time of Observations 08/22/2013 10:45 AM <input checked="" type="checkbox"/> 12:10 PM <input checked="" type="checkbox"/></p>	<p>Observers Name: <u>John Jelinski</u></p> <p>Title: <u>Quality Coordinator</u></p> <p>Signature: </p>	<p>WERE UNAUTHORIZED NSWD'S OBSERVED? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO</p> <p>WERE THERE INDICATIONS OF PRIOR UNAUTHORIZED NSWD'S? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO</p> <p>If YES to either question, complete the reverse side of this form</p>
<p>QUARTER: OCTOBER - DECEMBER</p> <p>Date/Time of Observations 11/13/2013 11:10 AM <input checked="" type="checkbox"/> 12:30 PM <input checked="" type="checkbox"/></p>	<p>Observers Name: <u>John Jelinski</u></p> <p>Title: <u>Quality Coordinator</u></p> <p>Signature: </p>	<p>WERE UNAUTHORIZED NSWD'S OBSERVED? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO</p> <p>WERE THERE INDICATIONS OF PRIOR UNAUTHORIZED NSWD'S? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO</p> <p>If YES to either question, complete the reverse side of this form</p>
<p>QUARTER: JANUARY - MARCH</p> <p>Date/Time of Observations 02/25/2014 11:10 AM <input checked="" type="checkbox"/> 12:05 PM <input checked="" type="checkbox"/></p>	<p>Observers Name: <u>John Jelinski</u></p> <p>Title: <u>Quality Coordinator</u></p> <p>Signature: </p>	<p>WERE UNAUTHORIZED NSWD'S OBSERVED? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO</p> <p>WERE THERE INDICATIONS OF PRIOR UNAUTHORIZED NSWD'S? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO</p> <p>If YES to either question, complete the reverse side of this form</p>
<p>QUARTER: APRIL - JUNE</p> <p>Date/Time of Observations 05/05/2014 10:30 AM <input checked="" type="checkbox"/> 05/13/2014* 13:00 PM <input checked="" type="checkbox"/></p>	<p>Observers Name: <u>John Jelinski</u></p> <p>Title: <u>Quality Coordinator</u></p> <p>Signature: </p>	<p>WERE UNAUTHORIZED NSWD'S OBSERVED? <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO</p> <p>WERE THERE INDICATIONS OF PRIOR UNAUTHORIZED NSWD'S? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO</p> <p>If YES to either question, complete the reverse side of this form</p>

* Additional Unauthorized NSWD observed.

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

DATE /TIME OF OBSERVATION (FROM REVERSE SIDE)	NAME OF UN-AUTHORIZED NSWD EXAMPLE: AC Condensate	SOURCE AND LOCATION OF UN-AUTHORIZED NSWD EXAMPLE: Groundwater	DESCRIBE UN-AUTHORIZED NSWD CHARACTERISTICS Indicate whether unauthorized NSWD is clear, cloudy, discolored, causing stains; contains floating objects or an oil sheen, has odors, etc. AT THE NSWD SOURCE AT THE NSWD AREA & DISCHARGE LOCATION	DESCRIBE CORRECTIVE ACTIONS TO ELIMINATE UNAUTHORIZED NSWD AND TO CLEAN IMPACTED DRAINAGE AREAS. PROVIDE UNAUTHORIZED NSWD ELIMINATION DATE.
05/13/2014 15:00 <input type="checkbox"/> AM <input checked="" type="checkbox"/> PM	Low Conductivity Water (LCW) LCW Cooling Water	B7/B16 Road	NA NA	Approximately 20 gal of LCW collected by Facilities was released to curb gutter and discharged into a storm drain. Dechlorination tablets were placed at source. No apparent impact to watershed, however Corrective Action is to investigate toxicity/hazard associated with LBNL's LCW.
<input type="checkbox"/> AM <input type="checkbox"/> PM				
<input type="checkbox"/> AM <input type="checkbox"/> PM				
<input type="checkbox"/> AM <input type="checkbox"/> PM				

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.

OBSERVATION DATE:	Drainage Location Description	North Fork Strawberry Creek Drainage Area	Chicken Creek Drainage Area	Winter & Pineapple Creek Drainage Areas	Storm Water Sampling Sites (MP1-MP6)
October 31, 2013	Observation Time	10/31/2013 <input checked="" type="checkbox"/> AM 10:25-11:15 <input type="checkbox"/> PM	10/31/2013 <input checked="" type="checkbox"/> AM 10:25-11:15 <input type="checkbox"/> PM	10/31/2013 <input checked="" type="checkbox"/> AM 10:25-11:15 <input type="checkbox"/> PM	10/31/2013 <input checked="" type="checkbox"/> AM 10:25-11:15 <input type="checkbox"/> PM
Observer Name: John Jelinski	Time Storm Event and/or Discharge Began	No Storm Events For October-2013 <input type="checkbox"/> AM For October-2013 <input type="checkbox"/> PM	No Storm Events For October-2013 <input type="checkbox"/> AM For October-2013 <input type="checkbox"/> PM	No Storm Events For October-2013 <input type="checkbox"/> AM For October-2013 <input type="checkbox"/> PM	No Storm Events For October-2013 <input type="checkbox"/> AM For October-2013 <input type="checkbox"/> PM
Title: Quality Coordinator	Were Pollutants observed (if YES, complete reverse side)	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO			
Signature: 	Drainage Location Description	North Fork Strawberry Creek Drainage Area	Chicken Creek Drainage Area	Winter & Pineapple Creek Drainage Areas	Storm Water Sampling Sites (MP1-MP6)
November 19, 2013	Observation Time	11/19/2013 <input type="checkbox"/> AM 12:30-13:30 <input checked="" type="checkbox"/> PM	11/19/2013 <input type="checkbox"/> AM 12:30-13:30 <input checked="" type="checkbox"/> PM	11/19/2013 <input type="checkbox"/> AM 12:30-13:30 <input checked="" type="checkbox"/> PM	11/19/2013 <input type="checkbox"/> AM 12:30-13:30 <input checked="" type="checkbox"/> PM
Observer Name: John Jelinski	Time Storm Event and/or Discharge Began	11/19/2013 <input type="checkbox"/> AM 12:30 <input checked="" type="checkbox"/> PM	11/19/2013 <input type="checkbox"/> AM 12:30 <input checked="" type="checkbox"/> PM	11/19/2013 <input type="checkbox"/> AM 12:30 <input checked="" type="checkbox"/> PM	11/19/2013 <input type="checkbox"/> AM 12:30 <input checked="" type="checkbox"/> PM
Title: Quality Coordinator	Were Pollutants observed (if YES, complete reverse side)	<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO			
Signature: 	Drainage Location Description	North Fork Strawberry Creek Drainage Area	Chicken Creek Drainage Area	Winter & Pineapple Creek Drainage Areas	Storm Water Sampling Sites (MP1-MP6)
December 18, 2013	Observation Time	12/18/2013 <input type="checkbox"/> AM 12:15-12:55 <input checked="" type="checkbox"/> PM	12/18/2013 <input type="checkbox"/> AM 12:15-12:55 <input checked="" type="checkbox"/> PM	12/18/2013 <input type="checkbox"/> AM 12:15-12:55 <input checked="" type="checkbox"/> PM	12/18/2013 <input type="checkbox"/> AM 12:15-12:55 <input checked="" type="checkbox"/> PM
Observer Name: John Jelinski	Time Storm Event and/or Discharge Began	No Storm Events For December-2013 <input type="checkbox"/> AM For December-2013 <input type="checkbox"/> PM	No Storm Events For December-2013 <input type="checkbox"/> AM For December-2013 <input type="checkbox"/> PM	No Storm Events For December-2013 <input type="checkbox"/> AM For December-2013 <input type="checkbox"/> PM	No Storm Events For December-2013 <input type="checkbox"/> AM For December-2013 <input type="checkbox"/> PM
Title: Quality Coordinator	Were Pollutants observed (if YES, complete reverse side)	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO			
Signature: 	Drainage Location Description	North Fork Strawberry Creek Drainage Area	Chicken Creek Drainage Area	Winter & Pineapple Creek Drainage Areas	Storm Water Sampling Sites (MP1-MP6)
January 29, 2014	Observation Time	01/29/2014 <input checked="" type="checkbox"/> AM 08:30-09:20 <input type="checkbox"/> PM	01/29/2014 <input checked="" type="checkbox"/> AM 08:30-09:20 <input type="checkbox"/> PM	01/29/2014 <input checked="" type="checkbox"/> AM 08:30-09:20 <input type="checkbox"/> PM	01/29/2014 <input type="checkbox"/> AM 08:30-09:20 <input type="checkbox"/> PM
Observer Name: John Jelinski	Time Storm Event and/or Discharge Began	No Storm Events For January-2013 <input type="checkbox"/> AM For January-2013 <input type="checkbox"/> PM	No Storm Events For January-2013 <input type="checkbox"/> AM For January-2013 <input type="checkbox"/> PM	No Storm Events For January-2013 <input type="checkbox"/> AM For January-2013 <input type="checkbox"/> PM	No Storm Events For January-2013 <input type="checkbox"/> AM For January-2013 <input type="checkbox"/> PM
Title: Quality Coordinator	Were Pollutants observed (if YES, complete reverse side)	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO			
Signature: 	Drainage Location Description	North Fork Strawberry Creek Drainage Area	Chicken Creek Drainage Area	Winter & Pineapple Creek Drainage Areas	Storm Water Sampling Sites (MP1-MP6)

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

DATE/TIME OF OBSERVATION (From Reverse Side)	DRAINAGE AREA DESCRIPTION EXAMPLE: Discharge from material storage Area #2	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 EXAMPLE: Oil sheen caused by oil dripped by trucks in vehicle maintenance area.	DESCRIBE ANY REVISED OR NEW BMPs AND THEIR DATE OF IMPLEMENTATION
10/31/2013 10:25 <input checked="" type="checkbox"/> AM 11:15 <input type="checkbox"/> PM	N/A		N/A	No new or revised BMP's necessary
11/19/2013 12:30 <input type="checkbox"/> AM 13:30 <input checked="" type="checkbox"/> PM	1-MP1, MP3,Chicken, NF Strawberry & Winters 2-MP3 3- MP1-3, MP4,Chicken, NF Strawberry & Winters 4- Chicken & NF Strawberry	1-Turbidity & color observed 2-Oil sheen & odor observed 3-Floatables observed 4-Foam observed	1-Turbidity & color caused by hillside runoff/ debris in parking lots 2-Oil sheen & odor from parking lot area runoff 3-Floatables from hillside runoff 4-Foam from dead organic matter	No new or revised BMP's necessary : 1. Turbidity and color are typical for the first flush event at the facility. 2. At the respective drain inlets, oil absorbent filters are present to capture the oily run-off. 3. & 4. Floatables are typically leaves and dead organic matter (DOM) is observed during first flush events.
12/18/2013 12:15 <input type="checkbox"/> AM 12:55 <input checked="" type="checkbox"/> PM	N/A		N/A	No new or revised BMP's necessary
01/29/2014 08:30 <input checked="" type="checkbox"/> AM 09:20 <input type="checkbox"/> PM	MP3 (Note there was no storm water discharge, however puddles were present throughout the yard).	1-Color observed 2-Sheen observed 3-Stains observed	1-Color caused by dirt/debris in yard 2-Oil sheen from Facilities vehicles 3-Oil stains observed around metal bins	No new or revised BMP's necessary : Oil stains were present from oil spill that occurred on 01/22/2014. Absorbent was placed around spill area & no product made it into the storm drains. Additional BMP's include implementation of monthly power washing throughout yard beginning April-2014

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

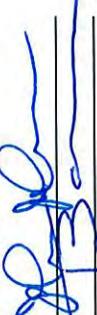
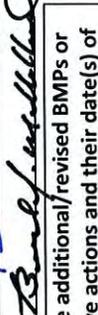
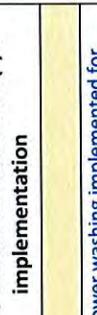
- Storm water discharge visual observations are required for at least one storm event per month between October 1 and May 31.
- Visual observations must be conducted during the first hour of discharge at all discharge locations.
- Discharges of temporarily stored or contained storm water must be observed 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.

OBSERVATION DATE:	Drainage Location Description	North Fork Strawberry Creek Drainage Area	Chicken Creek Drainage Area	Winter & Pineapple Creek Drainage Areas	Storm Water Sampling Sites (MP1-MP6)
February 26, 2014	Observation Time	<input checked="" type="checkbox"/> 02/26/2014 AM <input type="checkbox"/> 08:12-08:50 PM	<input checked="" type="checkbox"/> 02/26/2014 AM <input type="checkbox"/> 08:12-08:50 PM	<input checked="" type="checkbox"/> 02/26/2014 AM <input type="checkbox"/> 08:12-08:50 PM	<input checked="" type="checkbox"/> 02/26/2014 AM <input type="checkbox"/> 08:12-08:50 PM
Observer Name: Tim Bauters, PhD, PE	Time Storm Event and/or Discharge Began	<input checked="" type="checkbox"/> 02/26/2014 AM <input type="checkbox"/> 07:15-07:45 PM	<input checked="" type="checkbox"/> 02/26/2014 AM <input type="checkbox"/> 07:15-07:45 PM	<input checked="" type="checkbox"/> 02/26/2014 AM <input type="checkbox"/> 07:15-07:45 PM	<input checked="" type="checkbox"/> 02/26/2014 AM <input type="checkbox"/> 07:15-07:45 PM
Title: Program Manager	Were Pollutants observed (if YES, complete reverse side)	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO
Signature: 					
OBSERVATION DATE: March 25, 2014	Drainage Location Description	North Fork Strawberry Creek Drainage Area	Chicken Creek Drainage Area	Winter & Pineapple Creek Drainage Areas	Storm Water Sampling Sites (MP1-MP6)
Observer Name: John Jelinski	Observation Time	<input type="checkbox"/> 03/25/2014 AM <input checked="" type="checkbox"/> 14:10-15:20 PM	<input type="checkbox"/> 03/25/2014 AM <input checked="" type="checkbox"/> 14:10-15:20 PM	<input type="checkbox"/> 03/25/2014 AM <input checked="" type="checkbox"/> 14:10-15:20 PM	<input type="checkbox"/> 03/25/2014 AM <input checked="" type="checkbox"/> 14:10-15:20 PM
Title: Quality Coordinator	Time Storm Event and/or Discharge Began	<input type="checkbox"/> 03/25/2014 AM <input checked="" type="checkbox"/> 14:20 PM	<input type="checkbox"/> 03/25/2014 AM <input checked="" type="checkbox"/> 14:20 PM	<input type="checkbox"/> 03/25/2014 AM <input checked="" type="checkbox"/> 14:20 PM	<input type="checkbox"/> 03/25/2014 AM <input checked="" type="checkbox"/> 14:20 PM
Signature: 	Were Pollutants observed (if YES, complete reverse side)	<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO
OBSERVATION DATE: April 25, 2014	Drainage Location Description	North Fork Strawberry Creek Drainage Area	Chicken Creek Drainage Area	Winter & Pineapple Creek Drainage Areas	Storm Water Sampling Sites (MP1-MP6)
Observer Name: John Jelinski	Observation Time	<input type="checkbox"/> 04/25/2014 AM <input checked="" type="checkbox"/> 07:50-08:40 PM	<input type="checkbox"/> 04/25/2014 AM <input checked="" type="checkbox"/> 07:50-08:40 PM	<input type="checkbox"/> 04/25/2014 AM <input checked="" type="checkbox"/> 07:50-08:40 PM	<input type="checkbox"/> 04/25/2014 AM <input checked="" type="checkbox"/> 07:50-08:40 PM
Title: Quality coordinator	Time Storm Event and/or Discharge Began	<input type="checkbox"/> 04/25/2014 AM <input checked="" type="checkbox"/> 05:30-06:30 PM	<input type="checkbox"/> 04/25/2014 AM <input checked="" type="checkbox"/> 05:30-06:30 PM	<input type="checkbox"/> 04/25/2014 AM <input checked="" type="checkbox"/> 05:30-06:30 PM	<input type="checkbox"/> 04/25/2014 AM <input checked="" type="checkbox"/> 05:30-06:30 PM
Signature: 	Were Pollutants observed (if YES, complete reverse side)	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO
OBSERVATION DATE: May 09, 2014	Drainage Location Description	North Fork Strawberry Creek Drainage Area	Chicken Creek Drainage Area	Winter & Pineapple Creek Drainage Areas	Storm Water Sampling Sites (MP1-MP6)
Observer Name: John Jelinski	Observation Time	<input type="checkbox"/> 05/09/2014 AM <input checked="" type="checkbox"/> 08:30-09:30 PM	<input type="checkbox"/> 05/09/2014 AM <input checked="" type="checkbox"/> 08:30-09:30 PM	<input type="checkbox"/> 05/09/2014 AM <input checked="" type="checkbox"/> 08:30-09:30 PM	<input type="checkbox"/> 05/09/2014 AM <input checked="" type="checkbox"/> 08:30-09:30 PM
Title: Quality Coordinator	Time Storm Event and/or Discharge Began	<input type="checkbox"/> 05/08/2014 AM <input checked="" type="checkbox"/> 20:30 PM	<input type="checkbox"/> 05/08/2014 AM <input checked="" type="checkbox"/> 20:30 PM	<input type="checkbox"/> 05/08/2014 AM <input checked="" type="checkbox"/> 20:30 PM	<input type="checkbox"/> 05/08/2014 AM <input checked="" type="checkbox"/> 20:30 PM
Signature: 	Were Pollutants observed (if YES, complete reverse side)	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO			

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

DATE/TIME OF OBSERVATION (From Reverse Side)	DRAINAGE AREA DESCRIPTION EXAMPLE: Discharge from material storage Area #2	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 EXAMPLE: Oil sheen caused by oil dripped by trucks in vehicle maintenance area.	DESCRIBE ANY REVISED OR NEW BMPs AND THEIR DATE OF IMPLEMENTATION
02/26/2014 08:12 <input checked="" type="checkbox"/> AM 08:50 <input type="checkbox"/> AM	MP1	Sheen observed	Oil sheen & odor from parking lot area runoff	No new or revised BMP's necessary
03/25/2014 14:10 <input type="checkbox"/> PM 15:20 <input checked="" type="checkbox"/> PM	1-NF Strawberry & Chicken Creek 2-MP1-MP3 3-MP1-MP2	1-Turbidity & color observed 2-Floatables observed 3-Oil sheen observed	1-Turbidity & color caused by hillside runoff/ debris in parking lots 2-Floatables from hillside runoff 3-Oil sheen from parking lot area runoff	No new or revised BMP's necessary
04/25/2014 07:50 <input checked="" type="checkbox"/> AM 08:40 <input type="checkbox"/> AM	MP1 & MP2	Sheen observed	Oil sheen from parking lot area runoff	No new or revised BMP's necessary
05/09/2014 08:30 <input type="checkbox"/> AM 09:30 <input checked="" type="checkbox"/> AM	NA	NA	NA	NA

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

EVALUATION DATE: May 07, 2014 INSPECTOR NAME: John Jelinski TITLE: Quality Coordinator SIGNATURE: 
 INSPECTOR NAME: Tim Bauters TITLE: Program Leader SIGNATURE: 
 INSPECTOR NAME: Brendan Mulholland TITLE: Program Leader SIGNATURE: 

Potential Pollutant Source/Industrial Activity Area	BMP Implementation				Describe deficiencies in BMPs or BMP implementation	Describe additional/ revised BMPs or corrective actions and their date(s) of implementation
	If YES to either question, complete the next two columns of this form.					
Loading & Unloading Areas						
Industrial Activity Areas (B76, B77, B79, B85-HWHF)	Have Any BMPs not been Fully Implemented?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No		Housekeeping issues at B77-79 yard including presence of metal chips on yard. South DI inlet requires cleaning.	Monthly power washing implemented for entire yard (04/24/14). Facilities moved south most metal bin into B79 yard (05/08/14).
	Are Additional/ revised BMPs Necessary?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No			
Non-Industrial Activity Areas (B69, Site-wide)	Have Any BMPs not been Fully Implemented?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No		55gal drum @ B88 loading dock partially filled with water. Uncovered scrap drum in B90 loading dock area	Building Manager was notified on May 12 regarding accumulated waters and uncovered scrap drum near B90; accumulated waters and drum removed by May 30
	Are Additional/ revised BMPs Necessary?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No			
Waste Accumulation Areas (Site-wide)	Have Any BMPs not been Fully Implemented?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No		NA	NA
	Are Additional/ revised BMPs Necessary?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No		NA	NA
Fixed Treatment Units (B70A, B77)	Have Any BMPs not been Fully Implemented?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No		Open trash bins, inadequate 2 nd containment for oil & multiple stains at storm drain inlet.	Contacted facilities and will retrain the entire cafeteria staff regarding stormwater regulations and BMPs.
	Are Additional/ revised BMPs Necessary?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No			
Cafeteria (B54)	Have Any BMPs not been Fully Implemented?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No			
	Are Additional/ revised BMPs Necessary?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No			
Vehicle Washing & Parking Areas						
Fueling Station/Motor-pool (B76)	Have Any BMPs not been Fully Implemented?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No		Filter fabric & absorbent appeared to be saturated & catch basins require clean out.	Facilities notified on May 7 and the catch basin and appropriate filter fabric and absorbent was replaced on May 10, 2014
	Are Additional/ revised BMPs Necessary?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No			
Fire Station (48)	Have Any BMPs not been Fully Implemented?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No		NA	NA
	Are Additional/ revised BMPs Necessary?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No		NA	NA
Parking Areas (Site-wide)	Have Any BMPs not been Fully Implemented?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No			
	Are Additional/ revised BMPs Necessary?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No			
Construction & Maintenance Areas (Under NPDES General Industrial Permit)						
Erosion Control Measures (Site Wide)	Have Any BMPs not been Fully Implemented?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No		NA	NA
	Are Additional/ revised BMPs Necessary?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No			

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

Potential Pollutant Source/Industrial Activity Area	BMP Implementation If YES to either question, complete the next two columns of this form.		Describe deficiencies in BMPs or BMP implementation	Describe additional/ revised BMPs or corrective actions and their date(s) of implementation
	Have Any BMPs not been Fully Implemented?	Are Additional/ revised BMPs Necessary?		
Material & Storage Use Areas				
Industrial Activity Areas (B76, B77, B79, B85-HWHF)	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	Exposed metal at both east & west ends of B77	Monthly power washing implemented for entire yard (04/24/14). Facilities moved south most metal bin into B79 yard (05/08/14).
Non-Industrial Activity Areas (B69, Site-wide)	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	NA	NA
WAA & DSA's (Site-wide)	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	NA	NA
Secondary Containment (Site-wide)	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	NA	NA
Above Ground Storage Tanks (B25, B70A, B77)	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	NA	NA
Metal & Trash Bins (Site-wide)	<input checked="" type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	Site wide there are numerous trash bins with open or damaged lids & open metal bins (B77-79)	Building Manager / custodian notified May 7-8; confirmed B79 bins were closed at the end of business day and during rain event.
Outdoor Equipment-GWTS, generators, Cooling Towers	<input checked="" type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	Diesel backup generators at B75 & B85 had accumulated rainwater in 2 nd containment.	Contacted Preventative Maintenance technicians and the secondary containments were pumped out on May 10, 2014
Spills & Leaks				
B77-79 Metal Bin Oil spill (01/22/2014)	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Sorbent & liners immediately applied to spill which did not enter storm drain system.	Corrective Action-Facilities will conduct monthly pressure washing at this location
SSO (Lawrence & Glaser Rd) (02/12/2014)	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Dechlorination tablets immediately placed at source of spill & all affected storm drain inlets.	Corrective Action-LBNL Facilities inspected sewer pipe & found leak. Sewer line has been temporarily re-routed & LBNL Facilities is in the process of replacing the sewer line
SSO (Lawrence & Glaser Rd) (02/15/2014)	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Dechlorination tablets immediately placed at source of spill & all affected storm drain inlets.	
B71 Storm Drain Inlet Oil Sheen (04/01/2014)	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	ESG immediately notified & collected samples for analysis. DI pump was turned off & all water was collected into 55gal drums for disposal by WM	Corrective Action-B71 Storm drain inlet put on monthly inspection and cleanup schedule.
B37 Fire suppression system Overflow (04/08/2014)	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Dechlorination tablets immediately placed at source of spill & all affected storm drain inlets	NA

Appendix B

Sampling Report for November 19, 2013 Storm Event



Via email and certified mail

Receipt No. 7011 2970 0003 2882 6602

Reference No.: ES-14-032

January 15, 2014

San Francisco Bay Regional Water Quality Control Board
1515 Clay Street, Suite 1400
Oakland, California 94612
Attn: Cecil Felix

Subject: Stormwater Monitoring Report for Lawrence Berkeley National Laboratory (LBNL)

Mr. Felix,

In accordance with the General Permit for Stormwater Discharges Associated with Industrial Activities and the LBNL Alternative Stormwater Monitoring Plan, stormwater samples were collected on November 19, 2013 and analyzed in accordance with the current edition of "Standard Methods for the Examination of Water and Wastewater," American Public Health Association. The attached results show LBNL's stormwater Best Management Practices (BMPs) provide adequate control for stormwater discharges at all designated industrial locations except the Building 77/79 Metal Fabrication and Scrap Recycling Yard.

The Building 77/79 results exceeding stormwater benchmarks are summarized below:

Analyte	Result milligrams per liter (mg/l)	Benchmark Goal mg/l
Total Suspended Solids (TSS)	230	100
Nitrate and Nitrite (as Total N)	1.2	0.68
Chemical Oxygen Demand (COD)	300	120
Aluminum	5.8	0.75
Copper	0.31	0.0636
Iron	12	1.0
Lead	0.11	0.08
Zinc	2.7	0.117

A visual inspection was conducted after these results were received, and revealed that a stormwater bypass had likely occurred in the primary filter, resulting in these elevated values. The primary filter was immediately reoriented in order to secure its position within the collection trench to reduce the risk of bypasses. In addition, a second filter will be added in the trench to further reduce the possibility of future bypasses and create a more robust filter system.

The Stormwater Pollution Prevention Plan will be revised within 90 days to reflect these filter BMP changes, in accordance with Industrial General Permit requirements. It is understood that any revisions to an existing BMP may require modification by the Regional Water Quality Control Board.

In addition, the benchmark goal for magnesium at the Building 85 Hazardous Waste Handling Facility's Lower and Upper Yards was exceeded; however, a source study in 2009 had determined that the elevated level of magnesium is due to aerial deposition of naturally occurring magnesium in the soil surrounding both yards and not from waste management activities at the facility. As a result, no additional BMPs are warranted. The study report was submitted to the Regional Water Quality Control Board with the 2009/2010 Annual Stormwater Report.

If you have any questions, please contact Tim Bauters (twbauters@lbl.gov) at 510-486-5831 or me (ROPauer@lbl.gov) at 510-486-7614.

Sincerely,



Ron Pauer
Environmental Manager

Enclosures:

1. LBNL Sample Collection Form for Collection #7562
2. LBNL Worksheets for Collection #7562
 - a. pH Calibration & Measurement
 - b. Turbidity Calibration & Measurement
 - c. Specific Conductance Calibration & Measurement
3. Curtis & Tompkins Analytical Report, Job Number 250926

cc via email w/enclosures:

Kim Abbott (kvabbott@lbl.gov)
Jim Floyd (JGFloyd@lbl.gov)
David Kestell (djkestell@lbl.gov)
Jack Salazar (jjsalazar@lbl.gov)
John Jelinski (jajelinski@lbl.gov)
Tim Bauters (twbauters@lbl.gov)
Roshan Shadlou (r_shadlou@lbl.gov)
Nancy Ware (nmware@lbl.gov)

1. LBNL Sample Collection Form for Collection #7562

ESG Sample Collection Form

U.C. Lawrence Berkeley National Laboratory
 1 Cyclotron Road
 Berkeley CA 94720

Surface Water Monitoring
 ASWMP Sampling
 Collection:

Sample Data										
Sample ID	Location	SampleType	QC Type	Coll Type	Lab/Analysis	Date/time	Container(s)	Presv Amount	Depth ft	Sample Notes
71736	MP1	Aqueous Sample Collected: <input type="text" value="Yes"/>	Sample	Grab	CURTISTOMP E120.1, TSS:SM2540D	11/19/2013 12:30:00 PM	1-1 Liter PE	None	1 L	
71737	MP1	Aqueous Sample Collected: <input type="text" value="Yes"/>	Sample	Grab	CURTISTOMP E1664	11/19/2013 12:30:00 PM	1-1 Liter AG	HCL	1 L	
71738	MP1	Aqueous Sample Collected: <input type="text" value="Yes"/>	Sample	Grab	pH-aq:SM4500H+B	11/19/2013 12:30:00 PM	1-250 ml PE	None	0.25 L	In house measurement not send to lab
71739	MP2	Aqueous Sample Collected: <input type="text" value="Yes"/>	Sample	Grab	CURTISTOMP E120.1, TSS:SM2540D	11/19/2013 1:30:00 PM	1-1 Liter PE	None	1 L	
71740	MP2	Aqueous Sample Collected: <input type="text" value="Yes"/>	Sample	Grab	CURTISTOMP E1664	11/19/2013 1:30:00 PM	1-1 Liter AG	HCL	1 L	
71741	MP2	Aqueous Sample Collected: <input type="text" value="Yes"/>	Sample	Grab	pH-aq:SM4500H+B	11/19/2013 1:30:00 PM	1-250 ml PE	None	0.25 L	In house measurement not send to lab
71742	MP3	Aqueous Sample Collected: <input type="text" value="Yes"/>	Sample	Grab	CURTISTOMP E120.1, TSS:SM2540D, NO3+NO2(asN):MU LT	11/19/2013 12:55:00 PM	1-1 Liter PE	None	1 L	
71743	MP3	Aqueous Sample Collected: <input type="text" value="Yes"/>	Sample	Grab	CURTISTOMP E1664	11/19/2013 12:55:00 PM	1-1 Liter AG	HCL	1 L	
71744	MP3	Aqueous Sample Collected: <input type="text" value="Yes"/>	Sample	Grab	CURTISTOMP E410.4	11/19/2013 12:55:00 PM	1-500 ml PE	H2SO 4	0.5 L	

Sample Data

Sample ID	Location	Sample Type	QC Type	Coll Type	Lab/Analysis	Date/time	Container(s)	Presv	Amount	Depth ft	Sample Notes
71745	MP3	Aqueous	Sample Collected: Yes	Grab	CURTISTOMP STORMMET- ASWMP-77	11/19/2013 12:55:00 PM	1-500 ml PE	HNO3	0.5 L		
71746	MP3	Aqueous	Sample Collected: Yes	Grab	pH-aq:SM4500H+B	11/19/2013 12:55:00 PM	1-250 ml PE	None	0.25 L		In house measurement not send to lab
71747	MP3	Aqueous	Dup Sample Collected: Yes	Grab	BCLABS-BAK E120.1, TSS:SM2540D	11/19/2013 12:55:00 PM	1-1 Liter PE	None	1 L		
71748	MP3	Aqueous	Dup Sample Collected: Yes	Grab	BCLABS-BAK E1664	11/19/2013 12:55:00 PM	1-1 Liter AG	HCL	1 L		
71749	MP3	Aqueous	Dup Sample Collected: Yes	Grab	BCLABS-BAK NO3+NO2(asN):MU LT, E410.4	11/19/2013 12:55:00 PM	1-500 ml PE	H2SO 4	0.5 L		
71750	MP3	Aqueous	Dup Sample Collected: Yes	Grab	BCLABS-BAK STORMMET- ASWMP-77	11/19/2013 12:55:00 PM	1-500 ml PE	HNO3	0.5 L		
71751	MP3	Aqueous	Dup Sample Collected: Yes	Grab	pH-aq:SM4500H+B	11/19/2013 12:55:00 PM	1-250 ml PE	None	0.25 L		In house measurement not send to lab
71752	MP4	Aqueous	Sample Collected: Yes	Grab	CURTISTOMP E120.1, TSS:SM2540D	11/19/2013 1:20:00 PM	1-1 Liter PE	None	1 L		
71753	MP4	Aqueous	Sample Collected: Yes	Grab	CURTISTOMP E1664	11/19/2013 1:20:00 PM	1-1 Liter AG	HCL	1 L		
71754	MP4	Aqueous	Sample Collected: Yes	Grab	CURTISTOMP Ammonia(asN):MUL T, E410.4	11/19/2013 1:20:00 PM	1-500 ml PE	H2SO 4	0.5 L		
71755	MP4	Aqueous	Sample Collected: Yes	Grab	CURTISTOMP STORMMET- ASWMP-85	11/19/2013 1:20:00 PM	2-500 ml PE	HNO3 or NaOH	1 L		

Sample Data

Sample ID	Location	Sample Type	QC Type	Coll Type	Lab/Analysis	Date/time	Container(s)	Presv	Amount	Depth ft	Sample Notes
71756	MP4	Aqueous Sample Collected: Yes	Sample Grab	Grab	pH-aq:SM4500H+B	11/19/2013 1:20:00 PM	1-250 ml PE	None	0.25 L		In house measurement not send to lab
71757	MP5	Aqueous Sample Collected: Yes	Sample Grab	Grab	CURTISTOMP E120.1, TSS:SM2540D	11/19/2013 1:15:00 PM	1-1 Liter PE	None	1 L		
71758	MP5	Aqueous Sample Collected: Yes	Sample Grab	Grab	CURTISTOMP E1664	11/19/2013 1:15:00 PM	1-1 Liter AG	HCL	1 L		
71759	MP5	Aqueous Sample Collected: Yes	Sample Grab	Grab	CURTISTOMP Ammonia(asN):MUL T, E410.4	11/19/2013 1:15:00 PM	1-500 ml PE	H2SO 4	0.5 L		
71760	MP5	Aqueous Sample Collected: Yes	Sample Grab	Grab	CURTISTOMP STORMMET- ASWMP-85	11/19/2013 1:15:00 PM	2-500 ml PE	HNO3 or NaOH	1 L		
71761	MP5	Aqueous Sample Collected: Yes	Sample Grab	Grab	pH-aq:SM4500H+B	11/19/2013 1:15:00 PM	1-250 ml PE	None	0.25 L		In house measurement not send to lab
71762	MP6	Aqueous Sample Collected: Yes	Sample Grab	Grab	CURTISTOMP E120.1, TSS:SM2540D	11/19/2013 12:40:00 PM	1-1 Liter PE	None	1 L		
71763	MP6	Aqueous Sample Collected: Yes	Sample Grab	Grab	CURTISTOMP E1664	11/19/2013 12:40:00 PM	1-1 Liter AG	HCL	1 L		
71764	MP6	Aqueous Sample Collected: Yes	Sample Grab	Grab	pH-aq:SM4500H+B	11/19/2013 12:40:00 PM	1-250 ml PE	None	0.25 L		In house measurement not send to lab
71765	TRAVEL BLANK	Aqueous Sample Collected: Yes	Blank Grab	Grab	CURTISTOMP STORMMET- ASWMP-77	11/19/2013 1:55:00 PM	1-500 ml PE	HNO3	0.5 L		
71766	TRAVEL BLANK	Aqueous Sample Collected: Yes	Blank Grab	Grab	BCLABS-BAK STORMMET- ASWMP-77	11/19/2013 1:55:00 PM	1-500 ml PE	HNO3	0.5 L		

2. LBNL Worksheets for Collection #7562



Environmental Services Group pH Calibration & Measurement Worksheet

Analytical Method: Standard Method 4500H+B
 Instrument ID: EXTECH Serial # 78528
 Analyst: John Jelinski

Analysis Date: November 19, 2013
 Time of Analysis: 16:00 to 17:00
 Analysis Units: Standard Units

Program Name: Surface Water Monitoring-ASWMP Sampling Collection # 7562

Calibration Standard Measurement and Analysis Results

Standard	Manufacturer	Lot #	Exp. Date	Value (as found)	Calibration Value	Value (as left)	+/- 0.5 pH units	Pass/Fail
4.00 pH	LaMotte	51211218	06/30/14	4.03	4.00	4.00	0.00	PASS
7.00 pH	LaMotte	29241221	02/28/14	7.01	7.00	7.01	0.01	PASS
10.00 pH	LaMotte	16211228	02/28/15	9.95	10.00	10.00	0.00	PASS

Measurement Results

Sample ID	Location	Sample Date	Result (pH)	Comments
71738	MP1	11/19/13 12:30	7.10	
71741	MP2	11/19/13 13:30	7.29	
71746	MP3	11/19/13 12:55	7.32	
71756	MP4	11/19/13 13:20	7.68	
71761	MP5	11/19/13 13:15	7.45	
71764	MP6	11/19/13 12:40	7.50	
71751	MP3 (Field Duplicate)	11/19/13 12:55	7.42	
DUP-PH111913	MP3 (Internal Duplicate)	11/19/13 12:55	7.37	
LCS-PH111913	LCS	11/19/13 16:00	7.05	

Quality Assurance Quality Control Analysis Results

QAQC	Sample Result / ID	Duplicate Result / ID	RPD	Pass/Fail	Comments
Internal Dup QAQC	7.32 71746	7.37 DUP-PH111913	0.01	PASS	
Field Dup QAQC	7.32 71746	7.42 71751	0.01	PASS	
QAQC	Spike Amount	Spike Sample Result / ID	RPD	% Recovery	Pass/Fail
LCS	7.00	7.05 LCS-PH111913	0.01	99.3%	PASS
LCS Manufacturer: LabChem			LCS Lot # C031-10		Exp. Date February 28, 2015

Notes:

- RPD = (Sample Result - Dup Result) / (Mean of Result Pair). RPD (intra-laboratory) must be less than 0.3 to pass QAQC criteria
- % Error = Calibration Value - Value (as left). The "as left" pH value must be within 0.5 pH units of the Calibration Value in order to pass.
- % Recovery = (Spike Result / Result) * 100. % Recovery must be between 90 to 110 % to pass QAQC criteria

11/20/2013 11/20/2013

X *Tim Bauters*

Tim Bauters
QAQC Reviewer
Signed by: Tim W. Bauters

X *John Jelinski*

John Jelinski
Analyst
Signed by: John Jelinski



Environmental Services Group Turbidity Calibration & Measurement Worksheet

Analytical Method: Standard Method 2130 B
 Instrument ID: Oakton T-100 Serial # 540388
 Analyst: John Jelinski

Analysis Date: November 19, 2013
 Time of Analysis: 16:00 to 17:00
 Analysis Units: Nephelometric Turbidity Units (NTU)

Program Name: Surface Water Monitoring-ASWMP Sampling Collection # 7562

Calibration Standard Measurement and Analysis Results

Standard	Manufacturer	Lot #	Exp. Date	Value (as found)	Calibration Value	Value (as left)	% Error	Pass/Fail
800 NTU	Oakton	C254894	Nov/2014	822.00	800.00	800.00	0.00%	PASS
100 NTU	Oakton	C254200	Nov/2014	100.00	100.00	100.00	0.00%	PASS
20 NTU	Oakton	C254883	Nov/2014	20.00	20.00	20.00	0.00%	PASS
0.02 NTU	Oakton	C254873	Nov/2014	0.02	0.02	0.02	0.00%	PASS

Measurement Results

Sample ID	Location	Sample Date	Result (Turbidity)	Comments
71738	MP1	11/19/13 12:30	142.00	
71741	MP2	11/19/13 13:30	21.00	
71746	MP3	11/19/13 12:55	90.30	
71756	MP4	11/19/13 13:20	29.20	
71761	MP5	11/19/13 13:15	27.00	
71764	MP6	11/19/13 12:40	32.00	
71751	MP3 (Field Duplicate)	11/19/13 12:55	91.00	
DUP-T111913	MP3 (Internal Duplicate)	11/19/13 12:55	90.40	
LCS-T111913	LCS	11/19/13 16:15	99.00	

Quality Assurance Quality Control Analysis Results

QAQC	Sample Result / ID	Duplicate Result / ID	RPD	Pass/Fail	Comments
Internal Dup QAQC	90.30 71746	90.40 DUP-T111913	0.00	PASS	
Field Dup QAQC	90.30 71746	91.00 71751	0.01	PASS	
QAQC	Spike Amount	Spike Sample Result / ID	% Recovery	Pass/Fail	Comments
LCS	100.00	99.00 LCS-T111913	101.0%	PASS	
LCS Manufacturer: Oakton		LCS Lot #	C254200	Exp. Date	Nov/2014

Notes:

- RPD = (Sample Result - Dup Result) / (Mean of Result Pair). RPD (intra-laboratory) must be less than 0.3 to pass QAQC criteria
- % Error = Calibration Value - Value (as left). The "as left" pH value must be within 0.5 pH units of the Calibration Value in order to pass.
- % Recovery = (Spike Result / Result) * 100. % Recovery must be between 90 to 110 % to pass QAQC criteria

X *[Signature]*

Tim Bauters
QAQC Reviewer
Signed by: Tim W. Bauters

X *[Signature]*

John Jelinski
Analyst
Signed by: John Jelinski

11/20/2013

11/20/2013



Environmental Services Group Specific Conductance Calibration & Measurement Worksheet

Analytical Method: Standard Method 2510 B
 Instrument ID: Extech Serial # 138991
 Analyst: John Jelinski

Analysis Date: November 19, 2013
 Time of Analysis: 16:00 to 17:00
 Analysis Units: uS/cm

Program Name: Surface Water Monitoring-ASWMP Sampling

Collection # 7562

Calibration Standard Measurement and Analysis Results

Standard	Manufacturer	Lot #	Exp. Date	Value (as found)	Calibration Value	Value (as left)	% Error	Pass/Fail
84 uS/cm	LabChem	B319-10	11/30/14	54.2	84.0	84.0	0.0%	PASS
1,413 uS/cm	Hanna	1534	04/30/14	1403.0	1413.0	1413.0	0.0%	PASS

Measurement Results

Sample ID	Location	Sample Date	Result (uS/cm)	Comments
71738	MP1	11/19/13 12:30	238.0	
71741	MP2	11/19/13 13:30	245.0	
71746	MP3	11/19/13 12:55	236.0	
71756	MP4	11/19/13 13:20	90.5	
71761	MP5	11/19/13 13:15	53.2	
71764	MP6	11/19/13 12:40	189.0	
71751	MP3 (Field Duplicate)	11/19/13 12:55	237.0	
DUP-SC111913	MP3 (Internal Duplicate)	11/19/13 12:55	231.0	
LCS-SC111913	LCS	11/19/13 16:30	84.0	

Quality Assurance Quality Control Analysis Results

QAQC	Sample Result / ID	Duplicate Result / ID	RPD	Pass/Fail	Comments
Internal Dup QAQC	236.0 71746	231.0 DUP-SC111913	0.02	PASS	
Field Dup QAQC	236.00 71746	237.00 71751	0.00	PASS	
QAQC	Spike Amount	Spike Sample Result / ID	RPD	% Recovery	Pass/Fail
LCS	84.0	84.00 LCS-SC111913	0.00	100.0%	PASS
LCS Manufacturer: LaMotte			LCS Lot #	343919	Exp. Date
					March 31, 2016

Notes:

- RPD = (Sample Result - Dup Result) / (Mean of Result Pair). RPD (intra-laboratory) must be less than 0.3 to pass QAQC criteria
- % Error = Calibration Value - Value (as left). The "as left" pH value must be within 0.5 pH units of the Calibration Value in order to pass.
- % Recovery = (Spike Result / Result) * 100. % Recovery must be between 90 to 110 % to pass QAQC criteria

11/20/2013

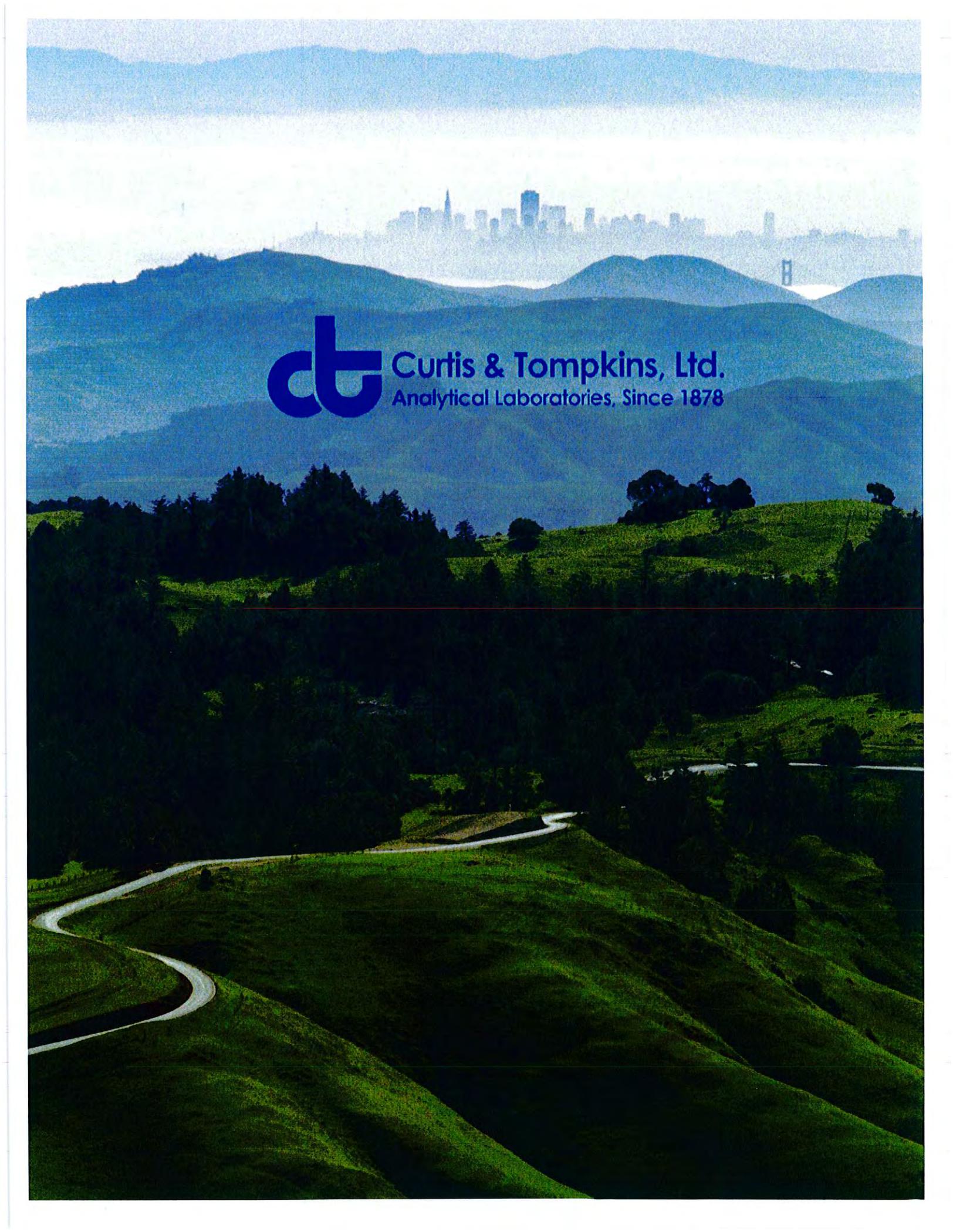
X *Tim Bauters*

Tim Bauters
QAQC Reviewer
Signed by: Tim W. Bauters

X *John Jelinski*

John Jelinski
Analyst
Signed by: John Jelinski

3. Curtis & Tompkins Analytical Report



ct Curtis & Tompkins, Ltd.
Analytical Laboratories, Since 1878



Curtis & Tompkins, Ltd., Analytical Laboratories, Since 1878

2323 Fifth Street, Berkeley, CA 94710, Phone (510) 486-0900

Laboratory Job Number 250926
ANALYTICAL REPORT

Lawrence Berkeley National Lab
1 Cyclotron Road
Berkeley, CA 94720
Project : STANDARD
Location : SWMP - ASWMP Sampling
Level : II

Table with 2 columns: Sample ID and Lab ID. Lists sample numbers 71736-71765 and corresponding lab IDs 250926-001-250926-019.

This data package has been reviewed for technical correctness and completeness. Release of this data has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature. The results contained in this report meet all requirements of NELAC and pertain only to those samples which were submitted for analysis. This report may be reproduced only in its entirety.

Signature: Isabelle Choy
Isabelle Choy
Project Manager
isabelle.choy@ctberk.com

Date: 12/05/2013

NELAP # 01107CA

CASE NARRATIVE

Laboratory number: 250926
Client: Lawrence Berkeley National Lab
Location: SWMP - ASWMP Sampling
Request Date: 11/19/13
Samples Received: 11/19/13

This data package contains sample and QC results for nineteen water samples, requested for the above referenced project on 11/19/13. The samples were received on ice and intact, directly from the field. All holding times and calibration criteria were met.

Metals (EPA 200.8 and EPA 245.1):

No analytical problems were encountered.

Ion Chromatography (EPA 300.0 and EPA 300.0):

No analytical problems were encountered.

Conductivity (SM2510B):

No analytical problems were encountered.

Total Cyanide (SM4500CN-E):

No analytical problems were encountered.

Ammonia Nitrogen (SM4500NH3-D):

No analytical problems were encountered.

Total Oil & Grease (HEM) (EPA 1664A):

Matrix spikes were not performed for this analysis due to insufficient sample volume. No analytical problems were encountered.

Total Suspended Solids (TSS) (SM2540D):

High RPD was observed for total suspended solids in the BS/BSD for batch 205445. High RPD was observed for total suspended solids in the MS/MSD for batch 205445; the parent sample was not a project sample. No other analytical problems were encountered.

Chemical Oxygen Demand (SM5220D):

No analytical problems were encountered.

250926

U.C. Lawrence Berkeley National Laboratory
 1 Cyclotron Road
 Berkeley CA 94720

LBNL ENVIRONMENTAL SERVICES GROUP
 Chain of Custody

COC No.: **07983**
 Release Number / Document Control No.: **ESG-07983**
 Collection(s): **7562**

Send final reports to: **Suying Xu, Mailstop 75R0123**
 For questions contact **John Jelinski, e-mail: JAJelinski@lbl.gov**
 Phone: **510-486-7616** Fax: **510-486-7034**
 Purpose: **Surface Water Monitoring Program - ASWMP Sampling**

ID	Date/Time	Action	Volume	Container	Notes
71736	11/19/2013 12:30	Grab	1 Liter PE	E120.1	
	11/19/2013 12:30	Grab	1 Liter PE	TSS:SM2540D	
71737	11/19/2013 12:30	Grab	1 Liter AG	E1664	
71739	11/19/2013 13:30	Grab	1 Liter PE	E120.1	
	11/19/2013 13:30	Grab	1 Liter PE	TSS:SM2540D	
71740	11/19/2013 13:30	Grab	1 Liter AG	E1664	
71742	11/19/2013 12:55	Grab	1 Liter PE	E120.1	
	11/19/2013 12:55	Grab	1 Liter PE	NO3+NO2(asN):MULT	
	11/19/2013 12:55	Grab	1 Liter PE	TSS:SM2540D	
71743	11/19/2013 12:55	Grab	1 Liter AG	E1664	
71744	11/19/2013 12:55	Grab	500 ml PE	H2SO4	
71745	11/19/2013 12:55	Grab	500 ml PE	HNO3	STORMMET-ASWMP-77

Total No. of Containers: 21

Shipping Document ID: hand carry

Turnaround Time: 20 days

Lab Name: CURTISTOMP

Sampled by: 

Special Instructions/Comments:

Relinquished By	Signature	Time
	Printed Name	Date
	Company	
Received By	Signature	Time
	Printed Name	Date
	Company	

Relinquished By	Signature	Time
	Printed Name	Date
	Company	
Received By	Signature	Time
	Printed Name	Date
	Company	

Relinquished By	Signature	Time
	Printed Name	Date
	Company	
Received By	Signature	Time
	Printed Name	Date
	Company	

*REFERENCE DATE/TIME: Use this value for decay calculations in radiological analyses when applicable **Container Codes: AG = amber glass CG = clear glass PE = polyethylene VV = VOA vial
 *** Field Sample ID: If present, use this information as the sample identifier in hard-copy reports (please include Sample Location information in the notes). If blank, and in electronic deliverable files,
 use Sample Location as the identifier. **** Listed turnaround time is for reporting and is in work days, as defined in the Joint LBNL/LLNL Analytical Services blanket order.

4 → 23 → 45 → 67 8

U.C. Lawrence Berkeley National Laboratory
 1 Cyclotron Road
 Berkeley CA 94720

250926

LBNL ENVIRONMENTAL SERVICES GROUP
Chain of Custody

Send final reports to: Suying Xu, Mailstop 75R0123

For questions contact John Jelinski, e-mail: JAJelinski@lbl.gov

Phone: 510-486-7616 Fax: 510-486-7034

COC No.: 07983

Release Number / Document Control No.: ESG-07983

Collection(s): 7562

Purpose: Surface Water Monitoring Program - ASWMP Sampling

Sample ID	Date/Time	Container	Volume	Matrix	Analysis	Remarks
71752	11/19/2013 13:20	Grab	1 Liter PE	1 None	E120.1	
	11/19/2013 13:20	Grab	1 Liter PE	1 None	TSS:SM2540D	
71753	11/19/2013 13:20	Grab	1 Liter AG	1 HCL	E1664	
71754	11/19/2013 13:20	Grab	500 ml PE	1 H2SO4	Ammonia(asN):MULT	
	11/19/2013 13:20	Grab	500 ml PE	1 H2SO4	E410.4	
71755	11/19/2013 13:20	Grab	500 ml PE	2 HNO3 or NaOH	STORMMET-ASWMP-85	
71757	11/19/2013 13:15	Grab	1 Liter PE	1 None	E120.1	
	11/19/2013 13:15	Grab	1 Liter PE	1 None	TSS:SM2540D	
71758	11/19/2013 13:15	Grab	1 Liter AG	1 HCL	E1664	
71759	11/19/2013 13:15	Grab	500 ml PE	1 H2SO4	Ammonia(asN):MULT	
	11/19/2013 13:15	Grab	500 ml PE	1 H2SO4	E410.4	
71760	11/19/2013 13:15	Grab	500 ml PE	2 HNO3 or NaOH	STORMMET-ASWMP-85	

91
 10
 11
 12
 13
 14
 15
 16

Total No. of Containers: 21	Relinquished By (Sampler) Signature: [Signature] Time: 15:20	Relinquished By Signature: [Signature] Time: [] Printed Name: [] Date: [] Company: []
Shipping Document ID: hand carry	Turnaround Time****: 20 days	Received By Signature: [Signature] Time: [] Printed Name: [] Date: [] Company: []
Lab Name: CURTISTOMP	Sampled by: [Signature]	Received By Signature: [Signature] Time: [] Printed Name: [] Date: [] Company: []
Special Instructions/Comments:		

*REFERENCE DATE/TIME: Use this value for decay calculations in radiological analyses when applicable **Container Codes: AG = amber glass CG = clear glass PE = polyethylene VV = VOA vial
 *** Field Sample ID: If present, use this information as the sample identifier in hard-copy reports (please include Sample Location information in the notes). If blank, and in electronic deliverable files, use Sample Location as the identifier. ****Listed turnaround time is for reporting and is in work days, as defined in the Joint LBNL/LLNL Analytical Services blanket order.

250926

U.C. Lawrence Berkeley National Laboratory
1 Cyclotron Road
Berkeley CA 94720

LBNL ENVIRONMENTAL SERVICES GROUP
Chain of Custody

Send final reports to: **Suying Xu, Mailstop 75R0123**

For questions contact **John Jelinski, e-mail: JAJelinski@lbl.gov**

Phone: **510-486-7616** Fax: **510-486-7034**

Purpose: Surface Water Monitoring Program - ASWMP Sampling

COC No.: 07983

Page 3 of 3

Release Number / Document Control No.: ESG-07983

Collection(s): 7562

71762	11/19/2013 12:40	11/19/2013 12:40	Grab	Aqueous	1 Liter PE	1	None	E120.1
	11/19/2013 12:40	11/19/2013 12:40	Grab	Aqueous	1 Liter PE	1	None	TSS:SM2540D
71763	11/19/2013 12:40	11/19/2013 12:40	Grab	Aqueous	1 Liter AG	1	HCL	E 1664
71765	11/19/2013 13:55	11/19/2013 13:55	Grab	Aqueous	500 ml PE	1	HNO3	STORMMET-ASWMP-77

47
48
49

Total No. of Containers: 21

Shipping Document ID: hand carry

Turnaround Time**:** 20 days

Lab Name: CURTISTOMP

Sampled by: *JD*

Special Instructions/Comments:

Relinquished By (Sampler)

Signature: *[Signature]* Time: 1520

Printed Name: Jelinski Date: 11/19/13

Company: LBNL

Received By

Signature: *[Signature]* Time: 1520

Printed Name: Gonzalez Date: 11/19/13

Company: CAT

Relinquished By

Signature _____ Time _____

Printed Name _____ Date _____

Company _____

Received By

Signature _____ Time _____

Printed Name _____ Date _____

Company _____

Relinquished By

Signature _____ Time _____

Printed Name _____ Date _____

Company _____

Received By

Signature _____ Time _____

Printed Name _____ Date _____

Company _____

*REFERENCE DATE/TIME: Use this value for decay calculations in radiological analyses when applicable **Container Codes: AG = amber glass CG = clear glass PE = polyethylene VV = VOA vial
 *** Field Sample ID: If present, use this information as the sample identifier in hard-copy reports (please include Sample Location information in the notes). If blank, and in electronic deliverable files, use Sample Location as the identifier. ****Listed turnaround time is for reporting and is in work days, as defined in the Joint LBNL/LLNL Analytical Services blanket order.

COOLER RECEIPT CHECKLIST



Curtis & Tompkins, Ltd.

Login # 250926 Date Received 11/19/13 Number of coolers 2
Client LBNL Project SURFACE WATER MONITORING PROGRAM - ASWMP SAMPLING
Date Opened 11/19/13 By (print) JR (sign) JmgRauka
Date Logged in By (print) (sign)

1. Did cooler come with a shipping slip (airbill, etc) YES (NO)
Shipping info

2A. Were custody seals present? ... [X] YES (circle) on cooler (on samples) [] NO
How many 21 Name Date

2B. Were custody seals intact upon arrival? YES (NO) N/A

3. Were custody papers dry and intact when received? YES (NO)

4. Were custody papers filled out properly (ink, signed, etc)? YES (NO)

5. Is the project identifiable from custody papers? (If so fill out top of form) YES (NO)

6. Indicate the packing in cooler: (if other, describe)

- [X] Bubble Wrap [] Foam blocks [] Bags [] None
[] Cloth material [] Cardboard [] Styrofoam [] Paper towels

7. Temperature documentation: * Notify PM if temperature exceeds 6°C

Type of ice used: [X] Wet [] Blue/Gel [] None Temp(°C)

[X] Samples Received on ice & cold without a temperature blank; temp. taken with IR gun

[X] Samples received on ice directly from the field. Cooling process had begun

8. Were Method 5035 sampling containers present? YES (NO)
If YES, what time were they transferred to freezer?

9. Did all bottles arrive unbroken/unopened? YES (NO)

10. Are there any missing / extra samples? YES (NO)

11. Are samples in the appropriate containers for indicated tests? YES (NO)

12. Are sample labels present, in good condition and complete? YES (NO)

13. Do the sample labels agree with custody papers? YES (NO)

14. Was sufficient amount of sample sent for tests requested? YES (NO)

15. Are the samples appropriately preserved? YES (NO) N/A

16. Did you check preservatives for all bottles for each sample? YES (NO) N/A

17. Did you document your preservative check? YES (NO) N/A

18. Did you change the hold time in LIMS for unpreserved VOAs? YES (NO) N/A

19. Did you change the hold time in LIMS for preserved terracores? YES (NO) N/A

20. Are bubbles > 6mm absent in VOA samples? YES (NO) N/A

21. Was the client contacted concerning this sample delivery? YES (NO)

If YES, Who was called? By Date:

COMMENTS

Blank lines for handwritten comments.

Curtis & Tompkins Sample Preservation for 250926

Sample	pH: <2	>9	>12	Other
-001a	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
-002a	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
-003a	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
-004a	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
-005a	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
-006a	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
-007a	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
-008a	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
-009a	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
-010a	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
-011a	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
-012a	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
b	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	_____
-013a	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
-014a	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
-015a	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
-016a	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
b	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	_____
-017a	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
-018a	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
-019a	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	_____

TR

Analyst: TR
 Date: 9/19/13
 Page 1 of 1

Metals Analytical Report

Lab #: 250926	Cert #: 01107CA
Client: Lawrence Berkeley National Lab	Prep: EPA 200.8
Project#: STANDARD	Analysis: EPA 200.8
Location: SWMP - ASWMP Sampling	
COC #: 07983	Instrument: MET26
Requested: STORMMET-ASWMP-77	Chemist: NT
Matrix: Water	Received: 11/19/13
Units: mg/L	Prepared: 11/26/13 15:20
Batch#: 205522	

Field ID: 71745 Lab ID: 250926-008
 Type: SAMPLE Sampled: 11/19/13 12:55

Analyte	Code	Result	RL	Diln Fac	Analyzed
Aluminum	0313	5.8	0.050	5.000	11/27/13 16:50
Copper	2800	0.31	0.0050	5.000	11/27/13 16:50
Iron	5350	12	0.071	5.000	11/27/13 16:50
Lead	5450	0.11	0.0050	5.000	11/27/13 16:50
Zinc	9050	2.7	0.16	50.00	12/02/13 14:33

Field ID: 71765 Diln Fac: 5.000
 Type: SAMPLE Sampled: 11/19/13 13:55
 Lab ID: 250926-019 Analyzed: 11/27/13 17:12

Analyte	Code	Result	RL
Aluminum	0313	ND	0.050
Copper	2800	ND	0.0050
Iron	5350	ND	0.071
Lead	5450	ND	0.0050
Zinc	9050	ND	0.050

Type: BLANK Diln Fac: 5.000
 Lab ID: QC717927 Analyzed: 11/27/13 16:41

Analyte	Code	Result	RL
Aluminum	0313	ND	0.050
Copper	2800	ND	0.0050
Iron	5350	ND	0.071
Lead	5450	ND	0.0050
Zinc	9050	ND	0.050

ND= Not Detected
 RL= Reporting Limit
 Page 1 of 1

Batch QC Report

Metals Analytical Report			
Lab #:	250926	Cert #:	01107CA
Client:	Lawrence Berkeley National Lab	Prep:	EPA 200.8
Project#:	STANDARD	Analysis:	EPA 200.8
Location: SWMP - ASWMP Sampling			
Requested:	STORMMET-ASWMP-77	Batch#:	205522
Type:	LCS	Instrument:	MET26
Lab ID:	QC717928	Chemist:	NT
Matrix:	Water	Prepared:	11/26/13 15:20
Units:	mg/L	Analyzed:	11/27/13 16:45
Diln Fac:	5.000		

Analyte	Code	Spiked	Result	%REC	Limits
Aluminum	0313	10.00	11.04	110	72-122
Copper	2800	0.1000	0.1100	110	72-120
Iron	5350	10.00	11.31	113	72-123
Lead	5450	0.1000	0.1034	103	78-120
Zinc	9050	0.1000	0.1166	117	74-124

Batch QC Report

Metals Analytical Report

Lab #:	250926	Cert #:	01107CA
Client:	Lawrence Berkeley National Lab	Prep:	EPA 200.8
Project#:	STANDARD	Analysis:	EPA 200.8
Location: SWMP - ASWMP Sampling			
Requested:	STORMMET-ASWMP-85	Batch#:	205522
Type:	LCS	Instrument:	MET26
Lab ID:	QC717928	Chemist:	NT
Matrix:	Water	Prepared:	11/26/13 15:20
Units:	mg/L	Analyzed:	11/27/13 16:45
Diln Fac:	5.000		

Analyte	Code	Spiked	Result	%REC	Limits
Arsenic	0450	0.1000	0.1092	109	78-120
Cadmium	1650	0.1000	0.1098	110	76-120
Lead	5450	0.1000	0.1034	103	78-120
Magnesium	5500	10.00	11.10	111	68-123
Selenium	7600	0.1000	0.1122	112	79-120
Silver	7800	0.1000	0.09610	96	80-120

Batch QC Report

Metals Analytical Report			
Lab #:	250926	Cert #:	01107CA
Client:	Lawrence Berkeley National Lab	Prep:	EPA 200.8
Project#:	STANDARD	Analysis:	EPA 200.8
Location: SWMP - ASWMP Sampling			
Requested:	STORMMET-ASWMP-77	Batch#:	205522
Field ID:	71745	Instrument:	MET26
MSS Lab ID:	250926-008	Chemist:	NT
Matrix:	Water	Sampled:	11/19/13 12:55
Units:	mg/L	Received:	11/19/13
Diln Fac:	5.000	Prepared:	11/26/13 15:20

Type: MS Analyzed: 11/27/13 16:54
 Lab ID: QC717929

Analyte	Code	MSS Result	Spiked	Result	%REC	Limits
Aluminum	0313	5.810	10.00	15.42	96	66-123
Copper	2800	0.3122	0.1000	0.3931	81	63-120
Iron	5350	12.04	10.00	19.36	73	66-123
Lead	5450	0.1082	0.1000	0.1986	90	73-120
Zinc	9050	2.717	0.1000	2.469 >LR	-248 NM	61-125

Type: MSD Analyzed: 11/27/13 16:59
 Lab ID: QC717930

Analyte	Code	Spiked	Result	%REC	Limits	RPD	Lim
Aluminum	0313	10.00	16.13	103	66-123	5	23
Copper	2800	0.1000	0.3951	83	63-120	0	31
Iron	5350	10.00	21.02	90	66-123	8	35
Lead	5450	0.1000	0.2002	92	73-120	1	23
Zinc	9050	0.1000	2.469 >LR	-248 NM	61-125	NC	37

NC= Not Calculated
 NM= Not Meaningful: Sample concentration > 4X spike concentration
 >LR= Response exceeds instrument's linear range
 RPD= Relative Percent Difference

Batch QC Report

Metals Analytical Report			
Lab #:	250926	Cert #:	01107CA
Client:	Lawrence Berkeley National Lab	Prep:	EPA 200.8
Project#:	STANDARD	Analysis:	EPA 200.8
Location: SWMP - ASWMP Sampling			
Requested:	STORMMET-ASWMP-85	Batch#:	205522
Field ID:	71745	Instrument:	MET26
MSS Lab ID:	250926-008	Chemist:	NT
Matrix:	Water	Sampled:	11/19/13 12:55
Units:	mg/L	Received:	11/19/13
Diln Fac:	5.000	Prepared:	11/26/13 15:20

Type: MS Analyzed: 11/27/13 16:54
 Lab ID: QC717929

Analyte	Code	MSS Result	Spiked	Result	%REC	Limits
Arsenic	0450	0.003787	0.1000	0.1110	107	72-120
Cadmium	1650	0.01289	0.1000	0.1211	108	71-120
Lead	5450	0.1082	0.1000	0.1986	90	73-120
Magnesium	5500	5.635	10.00	15.54	99	54-132
Selenium	7600	0.001282	0.1000	0.1117	110	70-120
Silver	7800	0.001329	0.1000	0.09365	92	73-120

Type: MSD Analyzed: 11/27/13 16:59
 Lab ID: QC717930

Analyte	Code	Spiked	Result	%REC	Limits	RPD	Lim
Arsenic	0450	0.1000	0.1125	109	72-120	1	29
Cadmium	1650	0.1000	0.1223	109	71-120	1	32
Lead	5450	0.1000	0.2002	92	73-120	1	23
Magnesium	5500	10.00	15.93	103	54-132	2	34
Selenium	7600	0.1000	0.1118	111	70-120	0	27
Silver	7800	0.1000	0.09570	94	73-120	2	22

RPD= Relative Percent Difference

Batch QC Report

Metals Analytical Report			
Lab #:	250926	Cert #:	01107CA
Client:	Lawrence Berkeley National Lab	Prep:	METHOD
Project#:	STANDARD	Analysis:	EPA 245.1
Location: SWMP - ASWMP Sampling			
Analyte:	Mercury	Diln Fac:	1.000
Code:	5600	Batch#:	205688
Requested:	STORMMET-ASWMP-85	Instrument:	MET34
Type:	LCS	Chemist:	MRN
Lab ID:	QC718584	Prepared:	12/03/13 08:00
Matrix:	Water	Analyzed:	12/03/13 12:03
Units:	mg/L		

Spiked	Result	%REC	Limits
0.002500	0.002540	102	80-120

Batch QC Report

Metals Analytical Report			
Lab #:	250926	Cert #:	01107CA
Client:	Lawrence Berkeley National Lab	Prep:	METHOD
Project#:	STANDARD	Analysis:	EPA 245.1
Location: SWMP - ASWMP Sampling			
Analyte:	Mercury	Diln Fac:	1.000
Code:	5600	Batch#:	205688
Requested:	STORMMET-ASWMP-85	Instrument:	MET34
Field ID:	71755	Chemist:	MRN
MSS Lab ID:	250926-012	Sampled:	11/19/13 13:20
Matrix:	Water	Received:	11/19/13
Units:	mg/L	Prepared:	12/03/13 08:00

Type	Lab ID	MSS Result	Spiked	Result	%REC	Limits RPD	Lim	Analyzed
MS	QC718585	0.00005540	0.002500	0.002563	100	57-127		12/03/13 12:05
MSD	QC718586		0.002500	0.002547	100	57-127 1	42	12/03/13 12:07

RPD= Relative Percent Difference

Nitrate/Nitrite Nitrogen			
Lab #:	250926	Cert #:	01107CA
Client:	Lawrence Berkeley National Lab	Prep:	METHOD
Project#:	STANDARD	Analysis:	EPA 300.0
Location: SWMP - ASWMP Sampling			
Code:	5950	Diln Fac:	1.000
COC #:	07983	Batch#:	205238
Requested:	NO3+NO2 (asN) :MULT	Instrument:	IC03
Field ID:	71742	Chemist:	VQ
Matrix:	Water	Sampled:	11/19/13 12:55
Units:	mg/L	Received:	11/19/13

Type: SAMPLE Analyzed: 11/19/13 15:32
 Lab ID: 250926-005

Analyte	Result	RL
Nitrogen, Nitrate/Nitrite	1.2	0.10

Type: BLANK Analyzed: 11/19/13 10:28
 Lab ID: QC716832

Analyte	Result	RL
Nitrogen, Nitrate/Nitrite	ND	0.10

ND= Not Detected
 RL= Reporting Limit
 Page 1 of 1

Batch QC Report

Nitrate/Nitrite Nitrogen			
Lab #:	250926	Cert #:	01107CA
Client:	Lawrence Berkeley National Lab	Prep:	METHOD
Project#:	STANDARD	Analysis:	EPA 300.0
Location:	SWMP - ASWMP Sampling		
Requested:	NO3+NO2 (asN):MULT	Diln Fac:	1.000
Type:	LCS	Batch#:	205238
Lab ID:	QC716833	Instrument:	IC03
Matrix:	Water	Chemist:	VQ
Units:	mg/L	Analyzed:	11/19/13 10:45

Analyte	Code	Spiked	Result	%REC	Limits
Nitrogen, Nitrite	5960	1.000	1.003	100	80-120
Nitrogen, Nitrate	5945	1.000	0.9790	98	80-120

Batch QC Report

Nitrate/Nitrite Nitrogen			
Lab #:	250926	Cert #:	01107CA
Client:	Lawrence Berkeley National Lab	Prep:	METHOD
Project#:	STANDARD	Analysis:	EPA 300.0
Location: SWMP - ASWMP Sampling			
Code:	5950	Diln Fac:	500.0
Requested:	NO3+NO2 (asN) :MULT	Batch#:	205238
Field ID:	ZZZZZZZZZZ	Instrument:	IC03
Type:	SDUP	Chemist:	VQ
MSS Lab ID:	250939-004	Sampled:	11/19/13 14:55
Lab ID:	QC716894	Received:	11/19/13
Matrix:	Water	Analyzed:	11/19/13 21:09
Units:	mg/L		

Analyte	Result	RL	Lim
Nitrogen, Nitrate/Nitrite	ND	50.00	20

Batch QC Report

Nitrate/Nitrite Nitrogen			
Lab #:	250926	Cert #:	01107CA
Client:	Lawrence Berkeley National Lab	Prep:	METHOD
Project#:	STANDARD	Analysis:	EPA 300.0
Location: SWMP - ASWMP Sampling			
Requested:	NO3+NO2 (asN):MULT	Batch#:	205238
Field ID:	ZZZZZZZZZZ	Instrument:	IC03
MSS Lab ID:	250939-004	Chemist:	VQ
Matrix:	Water	Sampled:	11/19/13 14:55
Units:	mg/L	Received:	11/19/13
Diln Fac:	500.0		

Type: MS Analyzed: 11/19/13 21:26
 Lab ID: QC716895

Analyte	Code	MSS Result	Spiked	Result	%REC	Limits
Nitrogen, Nitrite	5960	<0.2574	250.0	262.3	105	80-120
Nitrogen, Nitrate	5945	<0.2255	250.0	238.0	95	80-120

Type: MSD Analyzed: 11/19/13 21:44
 Lab ID: QC716896

Analyte	Code	Spiked	Result	%REC	Limits	RPD	Lim
Nitrogen, Nitrite	5960	250.0	264.3	106	80-120	1	23
Nitrogen, Nitrate	5945	250.0	235.3	94	80-120	1	20

RPD= Relative Percent Difference

Total Oil & Grease (HEM)

Lab #:	250926	Cert #:	01107CA
Client:	Lawrence Berkeley National Lab	Prep:	METHOD
Project#:	STANDARD	Analysis:	EPA 1664A
Location:	SWMP - ASWMP Sampling		
Analyte:	Oil & Grease (HEM)	Batch#:	205544
Code:	6325	Instrument:	H3000
COC #:	07983	Chemist:	NJT
Requested:	E1664	Received:	11/19/13
Matrix:	Water	Analyzed:	11/26/13 00:00
Units:	mg/L		

Field ID	Type	Lab ID	Result	RL	Diln Fac	Sampled
71737	SAMPLE	250926-002	ND	5.10	1.020	11/19/13 12:30
71740	SAMPLE	250926-004	ND	5.10	1.020	11/19/13 13:30
71743	SAMPLE	250926-006	11.6	5.10	1.020	11/19/13 12:55
71753	SAMPLE	250926-010	ND	5.10	1.020	11/19/13 13:20
71758	SAMPLE	250926-014	ND	5.10	1.020	11/19/13 13:15
71763	SAMPLE	250926-018	ND	5.00	1.000	11/19/13 12:40
	BLANK	QC718017	ND	5.00	1.000	

ND= Not Detected
 RL= Reporting Limit

Batch QC Report

Total Oil & Grease (HEM)			
Lab #:	250926	Cert #:	01107CA
Client:	Lawrence Berkeley National Lab	Prep:	METHOD
Project#:	STANDARD	Analysis:	EPA 1664A
Location:	SWMP - ASWMP Sampling		
Analyte:	Oil & Grease (HEM)	Diln Fac:	1.000
Code:	6325	Batch#:	205544
Requested:	E1664	Instrument:	H3000
Matrix:	Water	Chemist:	NJT
Units:	mg/L	Analyzed:	11/26/13 00:00

Type	Lab ID	Spiked	Result	%REC	Limits	RPD	Lim
BS	QC718018	40.00	37.90	95	78-114		
BSD	QC718019	40.00	36.60	91	78-114	3	18

RPD= Relative Percent Difference

Ammonia Nitrogen

Lab #:	250926	Cert #:	01107CA
Client:	Lawrence Berkeley National Lab	Prep:	SM4500NH3-B
Project#:	STANDARD	Analysis:	SM4500NH3-D
Location: SWMP - ASWMP Sampling			
Analyte:	Ammonia-N	Diln Fac:	1.000
Code:	0325	Batch#:	205561
COC #:	07983	Instrument:	OR_NH3
Requested:	Ammonia(asN):MULT	Chemist:	NJT
Matrix:	Water	Received:	11/19/13
Units:	mg/L	Analyzed:	11/26/13 16:30

Field ID	Type	Lab ID	Result	RL	Sampled
71754	SAMPLE	250926-011	0.56	0.10	11/19/13 13:20
71759	SAMPLE	250926-015	0.55	0.10	11/19/13 13:15
	BLANK	QC718069	ND	0.10	

ND= Not Detected
 RL= Reporting Limit
 Page 1 of 1

Batch QC Report

Ammonia Nitrogen			
Lab #:	250926	Cert #:	01107CA
Client:	Lawrence Berkeley National Lab	Prep:	SM4500NH3-B
Project#:	STANDARD	Analysis:	SM4500NH3-D
Location: SWMP - ASWMP Sampling			
Analyte:	Ammonia-N	Diln Fac:	1.000
Code:	0325	Batch#:	205561
Requested:	Ammonia (asN) :MULT	Instrument:	OR_NH3
Field ID:	71754	Chemist:	NJT
MSS Lab ID:	250926-011	Sampled:	11/19/13 13:20
Matrix:	Water	Received:	11/19/13
Units:	mg/L	Analyzed:	11/26/13 16:30

Type	Lab ID	MSS Result	Spiked	Result	%REC	Limits	RPD	Lim
LCS	QC718070		5.000	5.200	104	80-120		
MS	QC718071	0.5600	5.000	5.500	99	71-123		
MSD	QC718072		5.000	5.600	101	71-123	2	20

RPD= Relative Percent Difference

Chemical Oxygen Demand

Lab #:	250926	Cert #:	01107CA
Client:	Lawrence Berkeley National Lab	Prep:	METHOD
Project#:	STANDARD	Analysis:	SM5220D
Location: SWMP - ASWMP Sampling			
Analyte:	Chemical Oxygen Demand	Batch#:	205490
Code:	1875	Instrument:	DR2800
COC #:	07983	Chemist:	NJT
Requested:	E410.4	Received:	11/19/13
Matrix:	Water	Prepared:	11/25/13 13:40
Units:	mg/L	Analyzed:	11/25/13 15:00

Field ID	Type	Lab ID	Result	RL	Diln Fac	Sampled
71744	SAMPLE	250926-007	300	40	4.000	11/19/13 12:55
71754	SAMPLE	250926-011	44	10	1.000	11/19/13 13:20
71759	SAMPLE	250926-015	41	10	1.000	11/19/13 13:15
	BLANK	QC717803	ND	10	1.000	

ND= Not Detected
 RL= Reporting Limit
 Page 1 of 1

Batch QC Report

Chemical Oxygen Demand			
Lab #:	250926	Cert #:	01107CA
Client:	Lawrence Berkeley National Lab	Prep:	METHOD
Project#:	STANDARD	Analysis:	SM5220D
Location: SWMP - ASWMP Sampling			
Analyte:	Chemical Oxygen Demand	Batch#:	205490
Code:	1875	Instrument:	DR2800
Requested:	E410.4	Chemist:	NJT
Field ID:	71754	Sampled:	11/19/13 13:20
MSS Lab ID:	250926-011	Received:	11/19/13
Matrix:	Water	Prepared:	11/25/13 13:40
Units:	mg/L	Analyzed:	11/25/13 15:00
Diln Fac:	1.000		

Type	Lab ID	MSS Result	Spiked	Result	%REC	Limits	RPD	Lim
LCS	QC717804		75.00	71.25	95	90-110		
MS	QC717805	44.30	300.0	314.0	90	78-120		
MSD	QC717806		300.0	312.0	89	78-120	1	20

RPD= Relative Percent Difference

Total Cyanide

Lab #:	250926	Cert #:	01107CA
Client:	Lawrence Berkeley National Lab	Prep:	METHOD
Project#:	STANDARD	Analysis:	SM4500CN-E
Location: SWMP - ASWMP Sampling			
Analyte:	Cyanide	Diln Fac:	1.000
Code:	2850	Batch#:	205385
COC #:	07983	Instrument:	LAMBDA
Requested:	MET-Cn:MULT	Chemist:	DM
Matrix:	Water	Received:	11/19/13
Units:	mg/L	Analyzed:	11/22/13 00:00

Field ID	Type	Lab ID	Result	RL	Sampled
71755	SAMPLE	250926-012	ND	0.02	11/19/13 13:20
71760	SAMPLE	250926-016	ND	0.02	11/19/13 13:15
	BLANK	QC717385	ND	0.02	

Batch QC Report

Total Cyanide			
Lab #:	250926	Cert #:	01107CA
Client:	Lawrence Berkeley National Lab	Prep:	METHOD
Project#:	STANDARD	Analysis:	SM4500CN-E
Location: SWMP - ASWMP Sampling			
Analyte:	Cyanide	Diln Fac:	1.000
Code:	2850	Batch#:	205385
Requested:	MET-Cn:MULT	Instrument:	LAMBDA
Field ID:	71755	Chemist:	DM
MSS Lab ID:	250926-012	Sampled:	11/19/13 13:20
Matrix:	Water	Received:	11/19/13
Units:	mg/L	Analyzed:	11/22/13 00:00

Type	Lab ID	MSS Result	Spiked	Result	%REC	Limits	RPD	Lim
MS	QC717386	<0.02000	0.2000	0.1734	87	68-120		
MSD	QC717387		0.2000	0.1749	87	68-120	1	40
LCS	QC717388		0.2000	0.1709	85	75-120		

RPD= Relative Percent Difference

Conductivity

Lab #: 250926	Cert #: 01107CA	01107CA
Client: Lawrence Berkeley National Lab	Prep: METHOD	
Project#: STANDARD	Analysis: SM2510B	
Location: SWMP - ASWMP Sampling		

Analyte: Specific Conductance	Diln Fac: 1.000	1.000
Code: 8000	Batch#: 205442	205442
COC #: 07983	Instrument: VWR_EC	VWR_EC
Requested: E120.1	Chemist: KR	KR
Matrix: Water	Received: 11/19/13	11/19/13
Units: umhos/cm	Analyzed: 11/24/13 07:49	11/24/13 07:49

Field ID	Type	Lab ID	Result	RL	Sampled
71736	SAMPLE	250926-001	240	1.0	11/19/13 12:30
71739	SAMPLE	250926-003	250	1.0	11/19/13 13:30
71742	SAMPLE	250926-005	240	1.0	11/19/13 12:55
71752	SAMPLE	250926-009	89	1.0	11/19/13 13:20
71757	SAMPLE	250926-013	54	1.0	11/19/13 13:15
71762	SAMPLE	250926-017	190	1.0	11/19/13 12:40
	BLANK	QC717608	ND	1.0	

ND= Not Detected
 RL= Reporting Limit
 Page 1 of 1

Batch QC Report

Conductivity			
Lab #:	250926	Cert #:	01107CA
Client:	Lawrence Berkeley National Lab	Prep:	METHOD
Project#:	STANDARD	Analysis:	SM2510B
Location: SWMP - ASWMP Sampling			
Analyte:	Specific Conductance	Diln Fac:	1.000
Code:	8000	Batch#:	205442
Requested:	E120.1	Instrument:	VWR_EC
Field ID:	ZZZZZZZZZZ	Chemist:	KR
MSS Lab ID:	250954-002	Sampled:	11/20/13 09:45
Matrix:	Water	Received:	11/20/13
Units:	umhos/cm	Analyzed:	11/24/13 07:49

Type	Lab ID	MSS Result	Spiked	Result	RL	%REC	Limits	RPD	Lim
LCS	QC717609		1,000	947.0		95	90-110		
SDUP	QC717610	526.0		523.0	1.000			1	20

RL= Reporting Limit
 RPD= Relative Percent Difference

Total Suspended Solids (TSS)

Lab #:	250926	Cert #:	01107CA
Client:	Lawrence Berkeley National Lab	Prep:	METHOD
Project#:	STANDARD	Analysis:	SM2540D
Location: SWMP - ASWMP Sampling			
Analyte:	Total Suspended Solids	Batch#:	205445
Code:	7450	Instrument:	SCALE
COC #:	07983	Chemist:	KR
Requested:	TSS:SM2540D	Received:	11/19/13
Matrix:	Water	Prepared:	11/24/13 00:00
Units:	mg/L	Analyzed:	11/25/13 00:00

Field ID	Type	Lab ID	Result	RL	Diln Fac	Sampled
71736	SAMPLE	250926-001	83	0.7	0.6670	11/19/13 12:30
71739	SAMPLE	250926-003	19	0.2	0.2220	11/19/13 13:30
71742	SAMPLE	250926-005	230	0.7	0.6670	11/19/13 12:55
71752	SAMPLE	250926-009	12	0.2	0.2000	11/19/13 13:20
71757	SAMPLE	250926-013	8	0.2	0.2000	11/19/13 13:15
71762	SAMPLE	250926-017	96	0.4	0.4000	11/19/13 12:40
	BLANK	QC717625	ND	5	1.000	

ND= Not Detected
 RL= Reporting Limit
 Page 1 of 1

Batch QC Report

Total Suspended Solids (TSS)			
Lab #:	250926	Cert #:	01107CA
Client:	Lawrence Berkeley National Lab	Prep:	METHOD
Project#:	STANDARD	Analysis:	SM2540D
Location: SWMP - ASWMP Sampling			
Analyte:	Total Suspended Solids	Batch#:	205445
Code:	7450	Instrument:	SCALE
Requested:	TSS:SM2540D	Chemist:	KR
Field ID:	ZZZZZZZZZZ	Sampled:	11/19/13 14:30
MSS Lab ID:	251014-001	Received:	11/20/13
Matrix:	Water	Prepared:	11/24/13 00:00
Units:	mg/L	Analyzed:	11/25/13 00:00
Diln Fac:	1.000		

Type	Lab ID	MSS Result	Spiked	Result	%REC	Limits	RPD	Lim
BS	QC717626		50.00	51.00	102	80-120		
BSD	QC717627		50.00	45.00	90	80-120	13 *	5
MS	QC717628	7.000	50.00	47.00	80	52-132		
MSD	QC717629		50.00	50.00	86	52-132	6 *	5

*= Value outside of QC limits; see narrative
 RPD= Relative Percent Difference

Appendix C

Sampling Report for February 26, 2014 Storm Event



Via email and certified mail

Receipt No. 7012 1010 0000 9090 1186

Reference No.: ES-14-057

March 24, 2014

San Francisco Bay Regional Water Quality Control Board
1515 Clay Street, Suite 1400
Oakland, California 94612
Attn: Cecil Felix

Subject: Stormwater Sampling Event on February 26, 2014 at Lawrence Berkeley National Laboratory

Mr. Felix,

On February 26, 2014, stormwater samples were collected as required by the General Permit for Stormwater Discharges Associated with Industrial Activities and the Lawrence Berkeley National Laboratory (LBNL) Alternative Stormwater Monitoring Plan. The attached results show LBNL's stormwater Best Management Practices (BMPs) provide adequate control for stormwater discharges at five of six designated industrial locations. The single exception was the Building 77/79 Metal Fabrication and Scrap Recycling Yard, where the zinc result of 0.49 milligrams per liter (mg/L) exceeded the stormwater benchmark of 0.117 mg/L. In order to reduce the zinc levels in stormwater runoff from the yard area, the frequency of cleaning and of filter changout will be increased. Also, LBNL's Stormwater Pollution Prevention Plan will be revised within 90 days to reflect these modifications, in accordance with Industrial General Permit requirements.

With regard to the elevated levels of magnesium in the yards at the Building 85 Hazardous Waste Handling Facility, it has been determined that this occurs as a result of aerial deposition of naturally occurring magnesium from surrounding soil. A study report that supports this conclusion was submitted to the Regional Water Quality Control Board with the 2009/2010 Annual Stormwater Report.

If you have any questions, please contact Tim Bauters (twbauters@lbl.gov) at 510-486-5831 or me (ROPauer@lbl.gov) at 510-486-7614.

Sincerely,

Ron Pauer
Environmental Manager

enclosures:

1. ESG Sample Collection Form, Collection 7587
2. Environmental Services Group pH Calibration & Measurement Worksheet for Collection 7587
3. Curtis & Tompkins Analytical Report, Job Number 253778

cc via email w/enclosures:

Kim Abbott (kvabbott@lbl.gov)
Jim Floyd (JGFloyd@lbl.gov)
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Jack Salazar (jjsalazar@lbl.gov)
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Marshall Granados (mgranados@lbl.gov)

1. ESG Sample Collection Form for Collection #7587

ESG Sample Collection Form

U.C. Lawrence Berkeley National Laboratory
 1 Cyclotron Road
 Berkeley CA 94720

Surface Water Monitoring
 ASW/MP Sampling
 Collection: 7587

Sample Data										
Sample ID	Location	Sample Type	QC Type	Coll Type	Lab/Analysis	Date/time	Container(s)	Presv Amount	Depth ft	Sample Notes
72475	MP1	Aqueous	Sample Collected: <input checked="" type="checkbox"/> Yes	Grab	CURTISTOMP E120.1, TSS:SM2540D	2/26/2014 8:38:00 AM	1-1 Liter PE	None	1 L	Sampled with scoop pH = 7.24
72476	MP1	Aqueous	Sample Collected: <input checked="" type="checkbox"/> Yes	Grab	CURTISTOMP E1664	2/26/2014 8:38:00 AM	1-1 Liter AG	HCL	1 L	Sampled with scoop
72477	MP1	Aqueous	Sample Collected: <input checked="" type="checkbox"/> Yes	Grab	pH-aq:SM4500H+B	2/26/2014 8:38:00 AM	1-250 ml PE	None	0.25 L	In house measurement not send to lab
72478	MP2	Aqueous	Sample Collected: <input checked="" type="checkbox"/> Yes	Grab	CURTISTOMP E120.1, TSS:SM2540D	2/26/2014 8:12:00 AM	1-1 Liter PE	None	1 L	Sampled with bailer pH = 7.20
72479	MP2	Aqueous	Sample Collected: <input checked="" type="checkbox"/> Yes	Grab	CURTISTOMP E1664	2/26/2014 8:12:00 AM	1-1 Liter AG	HCL	1 L	Sampled with bailer
72480	MP2	Aqueous	Sample Collected: <input checked="" type="checkbox"/> Yes	Grab	pH-aq:SM4500H+B	2/26/2014 8:12:00 AM	1-250 ml PE	None	0.25 L	In house measurement not send to lab
72481	MP3	Aqueous	Sample Collected: <input checked="" type="checkbox"/> Yes	Grab	CURTISTOMP E120.1, TSS:SM2540D, NO3+NO2(asN):MU LT	2/26/2014 8:22:00 AM	1-1 Liter PE	None	1 L	Sampled with scoop pH = 7.27
72482	MP3	Aqueous	Sample Collected: <input checked="" type="checkbox"/> Yes	Grab	CURTISTOMP E1664	2/26/2014 8:22:00 AM	1-1 Liter AG	HCL	1 L	Sampled with scoop
72483	MP3	Aqueous	Sample Collected: <input checked="" type="checkbox"/> Yes	Grab	CURTISTOMP E410.4	2/26/2014 8:22:00 AM	1-500 ml PE	H2SO 4	0.5 L	Sampled with scoop

Sample Data

Sample ID	Location	Sample Type	QC Type	Coll Type	Lab/Analysis	Date/time	Container(s)	Presv	Amount	Depth ft	Sample Notes
72484	MP3	Aqueous	Sample Collected: Yes	Grab	CURTISTOMP STORMMET- ASWMP-77	2/26/2014 8:22:00 AM	1-500 ml PE	HNO3	0.5 L		Sampled with scoop
72485	MP3	Aqueous	Sample Collected: Yes	Grab	pH-aq:SM4500H+B	2/26/2014 8:22:00 AM	1-250 ml PE	None	0.25 L		In house measurement not send to lab
72490	MP3	Aqueous	Dup Sample Collected: Yes	Grab	pH-aq:SM4500H+B	2/26/2014 8:22:00 AM	1-250 ml PE	None	0.25 L		In house measurement not send to lab
72491	MP4	Aqueous	Sample Collected: Yes	Grab	CURTISTOMP E120.1, TSS:SM2540D	2/26/2014 8:50:00 AM	1-1 Liter PE	None	1 L		Sampled with bailer pH = 7.19
72492	MP4	Aqueous	Sample Collected: Yes	Grab	CURTISTOMP E1664	2/26/2014 8:50:00 AM	1-1 Liter AG	HCL	1 L		Sampled with bailer
72493	MP4	Aqueous	Sample Collected: Yes	Grab	CURTISTOMP Ammonia(asN):MUL T, E410.4	2/26/2014 11:05:00 AM	1-500 ml PE	H2SO 4	0.5 L		Sampled with bailer
72494	MP4	Aqueous	Sample Collected: Yes	Grab	CURTISTOMP STORMMET- ASWMP-85	2/26/2014 8:50:00 AM	2-500 ml PE	HNO3 or NaOH	1 L		Sampled with bailer
72495	MP4	Aqueous	Sample Collected: Yes	Grab	pH-aq:SM4500H+B	2/26/2014 8:50:00 AM	1-250 ml PE	None	0.25 L		In house measurement not send to lab
72496	MP5	Aqueous	Sample Collected: Yes	Grab	CURTISTOMP E120.1, TSS:SM2540D	2/26/2014 8:45:00 AM	1-1 Liter PE	None	1 L		Sampled with bailer pH = 6.91
72497	MP5	Aqueous	Sample Collected: Yes	Grab	CURTISTOMP E1664	2/26/2014 8:45:00 AM	1-1 Liter AG	HCL	1 L		Sampled with bailer
72498	MP5	Aqueous	Sample Collected: Yes	Grab	CURTISTOMP Ammonia(asN):MUL T, E410.4	2/26/2014 11:00:00 AM	1-500 ml PE	H2SO 4	0.5 L		Sampled with bailer

Sample Data

Sample ID	Location	Sample Type	QC Type	Coll Type	Lab/Analysis	Date/time	Container(s)	Presv	Amount	Depth	ft	Sample Notes
72499	MP5	Aqueous Sample Collected: Yes	Sample	Grab	CURTISTOMP STORMMET- ASWMP-85	2/26/2014 8:45:00 AM	2-500 ml PE	HNO3 or NaOH	1 L			Sampled with bailer
72500	MP5	Aqueous Sample Collected: Yes	Sample	Grab	pH-aq:SM4500H+B	2/26/2014 8:45:00 AM	1-250 ml PE	None	0.25 L			In house measurement not send to lab
72501	MP6	Aqueous Sample Collected: Yes	Sample	Grab	CURTISTOMP E120.1, TSS:SM2540D	2/26/2014 8:31:00 AM	1-1 Liter PE	None	1 L			Sampled with scoop pH = 7.20
72502	MP6	Aqueous Sample Collected: Yes	Sample	Grab	CURTISTOMP E1664	2/26/2014 8:31:00 AM	1-1 Liter AG	HCL	1 L			Sampled with scoop
72503	MP6	Aqueous Sample Collected: Yes	Sample	Grab	pH-aq:SM4500H+B	2/26/2014 8:31:00 AM	1-250 ml PE	None	0.25 L			In house measurement not send to lab

**2. Environmental Services Group
pH & Measurement Worksheets
for Collection #7587**



Environmental Services Group pH Calibration & Measurement Worksheet

Analytical Method: Standard Method 4500H+B
 Instrument ID: EXTECH Serial # 78528
 Analyst: John Jelinski

Analysis Date: February 26, 2014
 Time of Analysis: 10:00 to 11:00
 Analysis Units: Standard Units

Program Name: Surface Water Monitoring - ASWMP Sampling

Collection # 7587

Calibration Standard Measurement and Analysis Results

Standard	Manufacturer	Lot #	Exp. Date	Value (as found)	Calibration Value	Value (as left)	+/- 0.5 pH units	Pass/Fail
4.00 pH	LaMotte	51211218	06/30/14	4.06	4.00	3.99	0.01	PASS
7.00 pH	LaMotte	29241221	04/30/14	6.91	7.00	7.02	0.02	PASS
10.00 pH	LaMotte	16211228	02/28/15	9.96	10.00	10.06	0.06	PASS

Measurement Results

Sample ID	Location	Sample Date	Result (SU)	Comments
72477	MP1	2/26/14 8:38	7.24	
72480	MP2	2/26/14 8:12	7.20	
72485	MP3	2/26/14 8:22	7.27	
72495	MP4	2/26/14 8:50	7.19	
72500	MP5	2/26/14 8:45	6.91	
72503	MP6	2/26/14 8:31	7.20	
72490	MP3 (Field duplicate)	2/26/14 8:22	7.25	
DUP-PH022614	MP1 (Internal Duplicate)	2/26/14 8:38	7.26	
LCS-PH022614	LCS	2/26/14 10:45	7.09	

Quality Assurance Quality Control Analysis Results

QAQC	Sample Result / ID	Duplicate Result / ID	RPD	Pass/Fail	Comments
Internal Dup QAQC	7.24 72477	7.26 DUP-PH022614	0.00	PASS	
Field Dup QAQC	7.27 72485	7.25 72490	0.00	PASS	
QAQC	Spike Amount	Spike Sample Result / ID	RPD	% Recovery	Pass/Fail
LCS	7.00	7.09 LCS-PH022614	0.01	98.7%	PASS
LCS Manufacture: LabChem			LCS Lot #		
			February 28, 2015		

Notes:

- RPD = (Sample Result - Dup Result) / (Mean of Result Pair). RPD (intra-laboratory) must be less than 0.3 to pass QAQC criteria
- % Error = Calibration Value - Value (as left). The "as left" pH value must be within 0.5 pH units of the Calibration Value in order to pass.
- % Recovery = (Spike Result / Result)*100. % Recovery must be between 90 to 110 % to pass QAQC criteria

2/26/2014

2/26/2014

X *John Jelinski*

X *Tim Bauters*

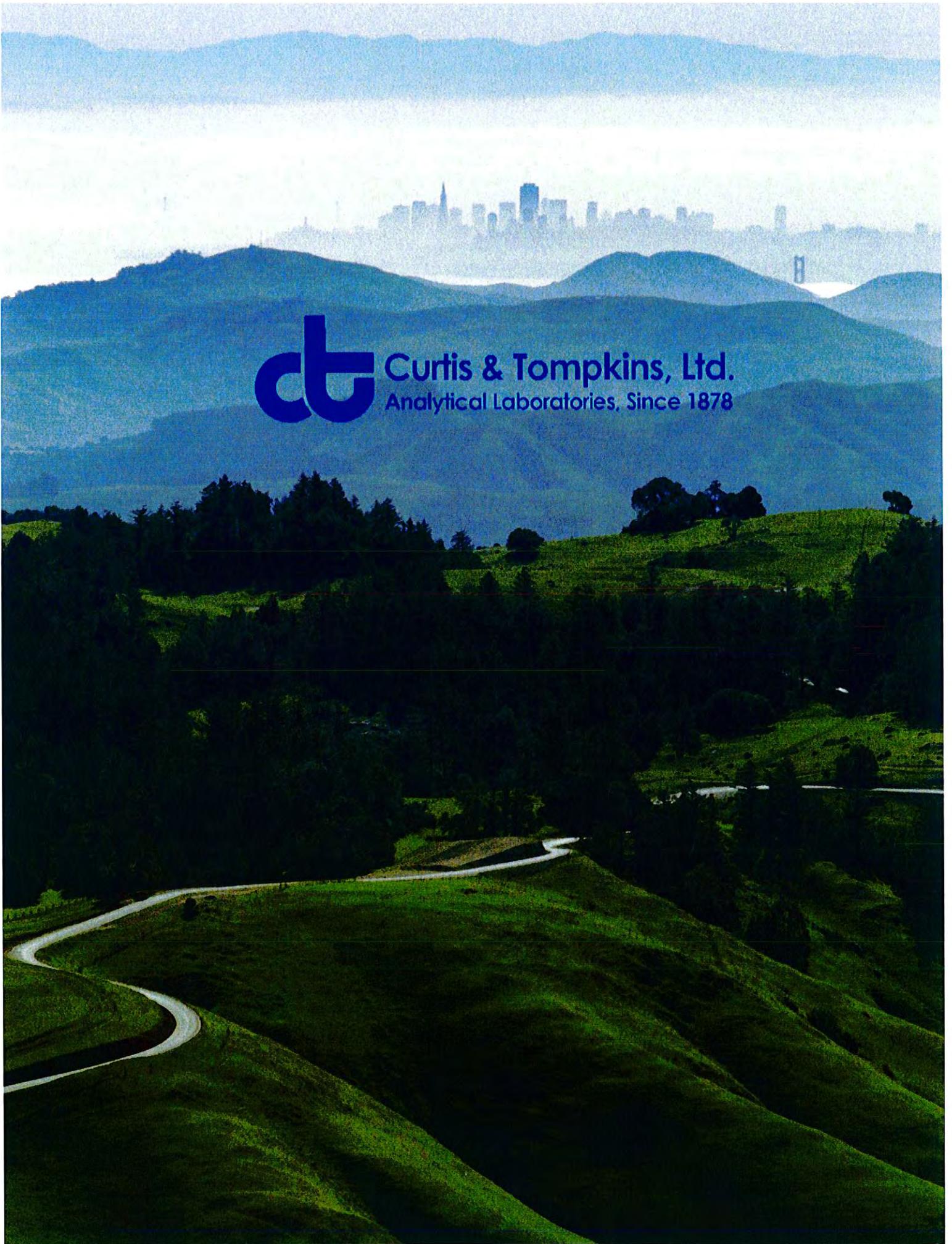
John Jelinski
Analyst
Signed by: John Jelinski

Tim Bauters
QA Reviewer
Signed by: Tim W. Bauters

**3. Curtis & Tompkins Analytical Report,
Job Number 253778**



Curtis & Tompkins, Ltd.
Analytical Laboratories. Since 1878





Curtis & Tompkins, Ltd., Analytical Laboratories, Since 1878

2323 Fifth Street, Berkeley, CA 94710, Phone (510) 486-0900

Laboratory Job Number 253778
ANALYTICAL REPORT

Lawrence Berkeley National Lab
1 Cyclotron Road
Berkeley, CA 94720
Project : STANDARD
Location : SWMP - ASWMP Sampling
Level : II

Table with 2 columns: Sample ID and Lab ID. Lists sample IDs from 72475 to 72502 and corresponding Lab IDs from 253778-001 to 253778-018.

This data package has been reviewed for technical correctness and completeness. Release of this data has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature. The results contained in this report meet all requirements of NELAC and pertain only to those samples which were submitted for analysis. This report may be reproduced only in its entirety.

Signature: Isabelle Choy
Isabelle Choy
Project Manager
isabelle.choy@ctberk.com

Date: 03/10/2014

CA ELAP# 2896, NELAP# 4044-001

CASE NARRATIVE

Laboratory number: 253778
Client: Lawrence Berkeley National Lab
Location: SWMP - ASWMP Sampling
Request Date: 02/26/14
Samples Received: 02/26/14

This data package contains sample and QC results for eighteen water samples, requested for the above referenced project on 02/26/14. The samples were received on ice and intact, directly from the field. All holding times and calibration criteria were met.

Metals (EPA 200.8 and EPA 245.1):

No analytical problems were encountered.

Ion Chromatography (EPA 300.0 and EPA 300.0):

No analytical problems were encountered.

Conductivity (SM2510B):

No analytical problems were encountered.

Total Cyanide (SM4500CN-E):

No analytical problems were encountered.

Ammonia Nitrogen (SM4500NH3-D):

No analytical problems were encountered.

Total Oil & Grease (HEM) (EPA 1664A):

Matrix spikes were not performed for this analysis due to insufficient sample volume. No analytical problems were encountered.

Total Suspended Solids (TSS) (SM2540D):

High RPD was observed for total suspended solids in the BS/BSD for batch 208571. High RPD was observed for total suspended solids in the MS/MSD for batch 208571; the parent sample was not a project sample. No other analytical problems were encountered.

Chemical Oxygen Demand (SM5220D):

No analytical problems were encountered.

LBNL ENVIRONMENTAL SERVICES GROUP
Chain of Custody

U.C. Lawrence Berkeley National Laboratory
1 Cyclotron Road
Berkeley CA 94720

COC No.: 08043 Page 1 of 3
Release Number / Document Control No.: ESG-08043
Collection(s): 7587

Send final reports to: Suying Xu, Mailstop 75B0101
For questions contact John Jelinski, e-mail: JAJelinski@lbl.gov
Phone: 510-486-7616 Fax: 510-486-7034
Purpose: Surface Water Monitoring Program - ASWMP Sampling

ID	Date/Time	Sample Type	Volume	Container	Notes
72475	2/26/2014 8:38	Grab	1 Liter PE	None	E120.1
	2/26/2014 8:38	Grab	1 Liter PE	None	TSS:SM2540D
72476	2/26/2014 8:38	Grab	1 Liter AG	HCL	E1664
72478	2/26/2014 8:12	Grab	1 Liter PE	None	E120.1
	2/26/2014 8:12	Grab	1 Liter PE	None	TSS:SM2540D
72479	2/26/2014 8:12	Grab	1 Liter AG	HCL	E1664
72481	2/26/2014 8:22	Grab	1 Liter PE	None	E120.1
	2/26/2014 8:22	Grab	1 Liter PE	None	NO3+NO2(asN):MULT
	2/26/2014 8:22	Grab	1 Liter PE	None	TSS:SM2540D
72482	2/26/2014 8:22	Grab	1 Liter AG	HCL	E1664
72483	2/26/2014 8:22	Grab	500 ml PE	H2SO4	E410.4
72484	2/26/2014 8:22	Grab	500 ml PE	HNO3	STORMMET-ASWMP-77

Total No. of Containers: 20 Shipping Document ID: Turnaround Time:***: 20 days Lab Name: CURTISTOMP Sampled by: T B	Relinquished By (Sampler) Signature: <i>[Signature]</i> Printed Name: Jelinski Company: LBNL Received By: <i>[Signature]</i> Signature: <i>[Signature]</i> Printed Name: Pat Gonzalez Company: CET	Relinquished By Signature: _____ Printed Name: _____ Company: _____ Received By Signature: _____ Printed Name: _____ Company: _____	Relinquished By Signature: _____ Printed Name: _____ Company: _____ Received By Signature: _____ Printed Name: _____ Company: _____
--	--	--	--

*REFERENCE DATE/TIME: Use this value for decay calculations in radiological analyses when applicable **Container Codes: AG = amber glass CG = clear glass PE = polyethylene VW = VOA vial
 *** Field Sample ID: If present, use this information as the sample identifier in hard-copy reports (please include Sample Location information in the notes). If blank, and in electronic deliverable files, use Sample Location as the identifier. ****Listed turnaround time is for reporting and is in work days, as defined in the Joint LBNL/LLNL Analytical Services blanket order.

253770

U.C. Lawrence Berkeley National Laboratory
1 Cyclotron Road
Berkeley CA 94720

LBNL ENVIRONMENTAL SERVICES GROUP
Chain of Custody

Page 2 of 3

COC No.: 08043

Release Number / Document Control No.: ESG-08043

Collection(s): 7587

Send final reports to: Suying Xu, Mailstop 75B0101

For questions contact John Jelinski, e-mail: JAJelinski@lbl.gov

Phone: 510-486-7616 Fax: 510-486-7034

Purpose: Surface Water Monitoring Program - ASWMP Sampling

72491	2/26/2014 8:50	2/26/2014 8:50	Grab	Aqueous	1 Liter PE	1	None	E120.1
	2/26/2014 8:50	2/26/2014 8:50	Grab	Aqueous	1 Liter PE	1	None	TSS:SM2540D
72492	2/26/2014 8:50	2/26/2014 8:50	Grab	Aqueous	1 Liter AG	1	HCL	E1664
72493	2/26/2014 8:50	2/26/2014 8:50	Grab	Aqueous	500 ml PE	1	H2SO4	Ammonia(asN):MULT
	2/26/2014 8:50	2/26/2014 8:50	Grab	Aqueous	500 ml PE	1	H2SO4	E410.4
72494	2/26/2014 8:50	2/26/2014 8:50	Grab	Aqueous	500 ml PE	2	HNO3 or NaOH	STORMMET-ASWMP-85
72496	2/26/2014 8:45	2/26/2014 8:45	Grab	Aqueous	1 Liter PE	1	None	E120.1
	2/26/2014 8:45	2/26/2014 8:45	Grab	Aqueous	1 Liter PE	1	None	TSS:SM2540D
72497	2/26/2014 8:45	2/26/2014 8:45	Grab	Aqueous	1 Liter AG	1	HCL	E1664
72498	2/26/2014 8:45	2/26/2014 8:45	Grab	Aqueous	500 ml PE	1	H2SO4	Ammonia(asN):MULT
	2/26/2014 8:45	2/26/2014 8:45	Grab	Aqueous	500 ml PE	1	H2SO4	E410.4
72499	2/26/2014 8:45	2/26/2014 8:45	Grab	Aqueous	500 ml PE	2	HNO3 or NaOH	STORMMET-ASWMP-85

Total No. of Containers: 20

Shipping Document ID:

Turnaround Time****: 20 days

Lab Name: CURTISTOMP

Sampled by: *TPB*

Special Instructions/Comments:

Relinquished By (Sampler)

Signature: *JAJelinski*
Printed Name: Jelinski
Company: LBNL

Time: 12:25
Date: 2/26/14

Received By

Signature: *Pat Gonzalez*
Printed Name: Pat Gonzalez
Company: CDT

Time: 12:25
Date: 2/26/14

Relinquished By

Signature _____
Printed Name _____
Company _____

Received By

Signature _____
Printed Name _____
Company _____

Relinquished By

Signature _____
Printed Name _____
Company _____

Received By

Signature _____
Printed Name _____
Company _____

*REFERENCE DATE/TIME: Use this value for decay calculations in radiological analyses when applicable **Container Codes: AG = amber glass PE = polyethylene VV = VOA vial
 **** Field Sample ID: if present, use this information as the sample identifier in hard-copy reports (please include Sample Location information in the notes). If blank, and in electronic deliverable files,
 use Sample Location as the identifier. *****Listed turnaround time is for reporting and is in work days, as defined in the Joint LBNL/LLNL Analytical Services blanket order.

253772

U.C. Lawrence Berkeley National Laboratory
1 Cyclotron Road
Berkeley CA 94720

LBNL ENVIRONMENTAL SERVICES GROUP Chain of Custody

Send final reports to: **Suying Xu, Mailstop 75B0101**
For questions contact **John Jelinski, e-mail: JAJelinski@lbl.gov**
Phone: **510-486-7616** Fax: **510-486-7034**
Purpose: **Surface Water Monitoring Program - ASWMP Sampling**

COC No.: **08043**
Release Number / Document Control No.: **ESG-08043**
Collection(s): **7587**

72501	2/26/2014 8:31	2/26/2014 8:31	Grab	Aqueous	1 Liter PE	1	None	E120.1
	2/26/2014 8:31	2/26/2014 8:31	Grab	Aqueous	1 Liter PE	1	None	TSS:SM2540D
72502	2/26/2014 8:31	2/26/2014 8:31	Grab	Aqueous	1 Liter AG	1	HCL	E1664

Total No. of Containers: 20
 Shipping Document ID:
 Turnaround Time***: 20 days
 Lab Name: CURTISTOMP
 Sampled by: 

Relinquished By (Sampler)
 Signature: 
 Printed Name: **John Jelinski**
 Company: **UCRL**
 Time: **12:25**
 Date: **2/24/14**

Received By
 Signature: 
 Printed Name: **Pat Conrads**
 Company: **CCT**
 Time: **12:25**
 Date: **2/26/14**

Relinquished By
 Signature _____
 Printed Name _____
 Company _____
 Time _____
 Date _____

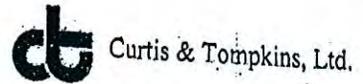
Received By
 Signature _____
 Printed Name _____
 Company _____
 Time _____
 Date _____

Relinquished By
 Signature _____
 Printed Name _____
 Company _____
 Time _____
 Date _____

Received By
 Signature _____
 Printed Name _____
 Company _____
 Time _____
 Date _____

*REFERENCE DATE/TIME: Use this value for decay calculations in radiological analyses when applicable **Container Codes: AG = amber glass CG = clear glass PE = polyethylene W = VOA vial
 *** Field Sample ID: if present, use this information as the sample identifier in hard-copy reports (please include Sample Location information in the notes). If blank, and in electronic deliverable files, use Sample Location as the identifier. ****Listed turnaround time is for reporting and is in work days, as defined in the Joint LBNL/LLNL Analytical Services blanket order.

COOLER RECEIPT CHECKLIST



Login # 253778 Date Received 2/26/11 Number of coolers 2
 Client LBV Project Swamp - ASUMP Sampling

Date Opened 2/26 By (print) me (sign) [Signature]
 Date Logged in 6 By (print) 6 (sign) [Signature]

1. Did cooler come with a shipping slip (airbill, etc) _____ YES NO

2A. Were custody seals present? YES (circle) on cooler _____ on samples _____ NO ^{me 2/26}
 How many 1 on each sample Name _____ Date _____

2B. Were custody seals intact upon arrival? _____ YES NO N/A

3. Were custody papers dry and intact when received? _____ YES NO

4. Were custody papers filled out properly (ink, signed, etc)? _____ YES NO

5. Is the project identifiable from custody papers? (If so fill out top of form) _____ YES NO

6. Indicate the packing in cooler: (if other, describe) _____

- Bubble Wrap
- Cloth material
- Foam blocks
- Cardboard
- Bags
- Styrofoam
- None
- Paper towels

7. Temperature documentation: * Notify PM if temperature exceeds 6°C

Type of ice used: Wet Blue/Gel None Temp(°C) _____

Samples Received on ice & cold without a temperature blank; temp. taken with IR gun

Samples received on ice directly from the field. Cooling process had begun

8. Were Method 5035 sampling containers present? _____ YES NO

If YES, what time were they transferred to freezer? _____

9. Did all bottles arrive unbroken/unopened? _____ YES NO

10. Are there any missing / extra samples? _____ YES NO

11. Are samples in the appropriate containers for indicated tests? _____ YES NO

12. Are sample labels present, in good condition and complete? _____ YES NO

13. Do the sample labels agree with custody papers? _____ YES NO

14. Was sufficient amount of sample sent for tests requested? _____ YES NO

15. Are the samples appropriately preserved? _____ YES NO N/A

16. Did you check preservatives for all bottles for each sample? _____ YES NO N/A

17. Did you document your preservative check? _____ YES NO N/A

18. Did you change the hold time in LIMS for unpreserved VOAs? _____ YES NO N/A

19. Did you change the hold time in LIMS for preserved terracores? _____ YES NO N/A

20. Are bubbles > 6mm absent in VOA samples? _____ YES NO N/A

21. Was the client contacted concerning this sample delivery? _____ YES NO
 If YES, Who was called? _____ By _____ Date: _____

COMMENTS

Sample rec'd w/ pH 7.12, added NaOH to pH 7.12 (Lot 229303) @ 1500 on 2/26/11

Curtis & Tompkins Sample Preservation for 253778

Sample	pH: <2	>9	>12	Other
-001a	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
-002a	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
-003a	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
-004a	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
-005a	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
-006a	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
-007a	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
-008a	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
-009a	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
-010a	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
-011a	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
-012a	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
b	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	_____
-013a	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
-014a	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
-015a	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
-016a	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
b	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	_____
-017a	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
-018a	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____

Analyst: mh
 Date: 2/26/14
 Page 1 of 1

Metals Analytical Report

Lab #: 253778	Cert #: CA ELAP# 2896, NELAP# 4044-001
Client: Lawrence Berkeley National Lab	Prep: EPA 200.8
Project#: STANDARD	Analysis: EPA 200.8
Location: SWMP - ASWMP Sampling	
COC #: 08043	Batch#: 208648
Requested: STORMMET-ASWMP-77	Instrument: MET26
Field ID: 72484	Chemist: CRT
Matrix: Water	Sampled: 02/26/14 08:22
Units: mg/L	Received: 02/26/14
Diln Fac: 5.000	Prepared: 03/06/14 13:30

Type: SAMPLE Lab ID: 253778-008

Analyte	Code	Result	RL	Analyzed
Aluminum	0313	0.35	0.050	03/06/14 16:13
Copper	2800	0.046	0.0050	03/06/14 16:13
Iron	5350	0.56	0.071	03/06/14 16:13
Lead	5450	0.015	0.0050	03/06/14 16:13
Zinc	9050	0.49	0.050	03/07/14 11:22

Type: BLANK Lab ID: QC730368

Analyte	Code	Result	RL	Analyzed
Aluminum	0313	ND	0.050	03/06/14 14:36
Copper	2800	ND	0.0050	03/06/14 14:36
Iron	5350	ND	0.071	03/06/14 14:36
Lead	5450	ND	0.0050	03/06/14 14:36
Zinc	9050	ND	0.050	03/07/14 10:22

Batch QC Report

Metals Analytical Report

Lab #:	253778	Cert #:	CA ELAP# 2896, NELAP# 4044-001
Client:	Lawrence Berkeley National Lab	Prep:	EPA 200.8
Project#:	STANDARD	Analysis:	EPA 200.8
Location:	SWMP - ASWMP Sampling		
Requested:	STORMMET-ASWMP-77	Diln Fac:	5.000
Type:	LCS	Batch#:	208648
Lab ID:	QC730369	Instrument:	MET26
Matrix:	Water	Chemist:	CRT
Units:	mg/L	Prepared:	03/06/14 13:30

Analyte	Code	Spiked	Result	%REC	Limits	Analyzed
Aluminum	0313	10.00	10.34	103	72-122	03/06/14 14:40
Copper	2800	0.1000	0.09350	94	72-120	03/06/14 14:40
Iron	5350	10.00	10.54	105	72-123	03/07/14 10:26
Lead	5450	0.1000	0.09825	98	78-120	03/06/14 14:40
Zinc	9050	0.1000	0.1151	115	74-124	03/07/14 10:26

Batch QC Report

Metals Analytical Report

Lab #:	253778	Cert #:	CA ELAP# 2896, NELAP# 4044-001
Client:	Lawrence Berkeley National Lab	Prep:	EPA 200.8
Project#:	STANDARD	Analysis:	EPA 200.8
Location:	SWMP - ASWMP Sampling		
Requested:	STORMMET-ASWMP-85	Diln Fac:	5.000
Type:	LCS	Batch#:	208648
Lab ID:	QC730369	Instrument:	MET26
Matrix:	Water	Chemist:	CRT
Units:	mg/L	Prepared:	03/06/14 13:30

Analyte	Code	Spiked	Result	%REC	Limits	Analyzed
Arsenic	0450	0.1000	0.1011	101	78-120	03/06/14 14:40
Cadmium	1650	0.1000	0.1030	103	76-120	03/06/14 14:40
Lead	5450	0.1000	0.09825	98	78-120	03/06/14 14:40
Magnesium	5500	10.00	10.30	103	68-123	03/07/14 10:26
Selenium	7600	0.1000	0.1055	106	79-120	03/06/14 14:40
Silver	7800	0.1000	0.09940	99	80-120	03/06/14 14:40

Batch QC Report

Metals Analytical Report			
Lab #:	253778	Cert #:	CA ELAP# 2896, NELAP# 4044-001
Client:	Lawrence Berkeley National Lab	Prep:	EPA 200.8
Project#:	STANDARD	Analysis:	EPA 200.8
Location: SWMP - ASWMP Sampling			
Requested:	STORMMET-ASWMP-77	Batch#:	208648
Field ID:	ZZZZZZZZZZ	Instrument:	MET26
MSS Lab ID:	253611-001	Chemist:	CRT
Matrix:	Water	Sampled:	02/21/14 12:30
Units:	mg/L	Received:	02/21/14
Diln Fac:	5.000	Prepared:	03/06/14 13:30

Type: MS Lab ID: QC730370

Analyte	Code	MSS Result	Spiked	Result	%REC	Limits	Analyzed
Aluminum	0313	<0.01402	10.00	10.20	102	66-123	03/06/14 14:49
Copper	2800	<0.0002827	0.1000	0.09045	90	63-120	03/06/14 14:49
Iron	5350	0.04064	10.00	10.70	107	66-123	03/07/14 10:36
Lead	5450	0.0007090	0.1000	0.09715	96	73-120	03/06/14 14:49
Zinc	9050	0.01218	0.1000	0.1223	110	61-125	03/07/14 10:36

Type: MSD Lab ID: QC730371

Analyte	Code	Spiked	Result	%REC	Limits	RPD	Lim	Analyzed
Aluminum	0313	10.00	10.54	105	66-123	3	23	03/06/14 14:54
Copper	2800	0.1000	0.09195	92	63-120	2	31	03/06/14 14:54
Iron	5350	10.00	11.19	111	66-123	5	35	03/07/14 10:41
Lead	5450	0.1000	0.1006	100	73-120	3	23	03/06/14 14:54
Zinc	9050	0.1000	0.1280	116	61-125	5	37	03/07/14 10:41

RPD= Relative Percent Difference

Batch QC Report

Metals Analytical Report			
Lab #:	253778	Cert #:	CA ELAP# 2896, NELAP# 4044-001
Client:	Lawrence Berkeley National Lab	Prep:	EPA 200.8
Project#:	STANDARD	Analysis:	EPA 200.8
Location:	SWMP - ASWMP Sampling		
Requested:	STORMMET-ASWMP-85	Batch#:	208648
Field ID:	ZZZZZZZZZZ	Instrument:	MET26
MSS Lab ID:	253611-001	Chemist:	CRT
Matrix:	Water	Sampled:	02/21/14 12:30
Units:	mg/L	Received:	02/21/14
Diln Fac:	5.000	Prepared:	03/06/14 13:30

Type: MS Lab ID: QC730370

Analyte	Code	MSS Result	Spiked	Result	%REC	Limits	Analyzed
Arsenic	0450	0.002935	0.1000	0.1023	99	72-120	03/06/14 14:49
Cadmium	1650	<0.0004354	0.1000	0.1020	102	71-120	03/06/14 14:49
Lead	5450	0.0007090	0.1000	0.09715	96	73-120	03/06/14 14:49
Magnesium	5500	18.74	10.00	28.66	99	54-132	03/07/14 10:36
Selenium	7600	0.0002875	0.1000	0.1037	103	70-120	03/06/14 14:49
Silver	7800	<0.0001039	0.1000	0.09825	98	73-120	03/06/14 14:49

Type: MSD Lab ID: QC730371

Analyte	Code	Spiked	Result	%REC	Limits	RPD	Lim	Analyzed
Arsenic	0450	0.1000	0.1070	104	72-120	5	29	03/06/14 14:54
Cadmium	1650	0.1000	0.1053	105	71-120	3	32	03/06/14 14:54
Lead	5450	0.1000	0.1006	100	73-120	3	23	03/06/14 14:54
Magnesium	5500	10.00	29.28	105	54-132	2	34	03/07/14 10:41
Selenium	7600	0.1000	0.1071	107	70-120	3	27	03/06/14 14:54
Silver	7800	0.1000	0.1024	102	73-120	4	22	03/06/14 14:54

Batch QC Report

Metals Analytical Report			
Lab #:	253778	Cert #:	CA ELAP# 2896, NELAP# 4044-001
Client:	Lawrence Berkeley National Lab	Prep:	METHOD
Project#:	STANDARD	Analysis:	EPA 245.1
Location:	SWMP - ASWMP Sampling		
Analyte:	Mercury	Diln Fac:	1.000
Code:	5600	Batch#:	208662
Requested:	STORMMET-ASWMP-85	Instrument:	MET34
Field ID:	ZZZZZZZZZZ	Chemist:	MRN
MSS Lab ID:	254010-001	Sampled:	03/03/14 22:00
Matrix:	Water	Received:	03/04/14
Units:	mg/L	Prepared:	03/06/14 12:00

Type	Lab ID	MSS Result	Spiked	Result	%REC	Limits	RPD	Lim	Analyzed
MS	QC730441	0.00006880	0.002500	0.002654	103	57-127			03/06/14 17:52
MSD	QC730442		0.002500	0.002624	102	57-127	1	42	03/06/14 17:54

RPD= Relative Percent Difference

Batch QC Report

Metals Analytical Report

Lab #:	253778	Cert #:	CA ELAP# 2896, NELAP# 4044-001
Client:	Lawrence Berkeley National Lab	Prep:	METHOD
Project#:	STANDARD	Analysis:	EPA 245.1
Location:	SWMP - ASWMP Sampling		
Analyte:	Mercury	Diln Fac:	1.000
Code:	5600	Batch#:	208662
Requested:	STORMMET-ASWMP-85	Instrument:	MET34
Type:	LCS	Chemist:	MRN
Lab ID:	QC730443	Prepared:	03/06/14 12:00
Matrix:	Water	Analyzed:	03/06/14 17:48
Units:	mg/L		

Spiked	Result	%REC	Limits
0.002500	0.002318	93	80-120

Nitrate/Nitrite Nitrogen

Lab #: 253778	Cert #: CA ELAP# 2896, NELAP# 4044-001
Client: Lawrence Berkeley National Lab	Prep: METHOD
Project#: STANDARD	Analysis: EPA 300.0
Location: SWMP - ASWMP Sampling	
COC #: 08043	Batch#: 208359
Requested: NO3+NO2 (asN):MULT	Instrument: IC03
Field ID: 72481	Chemist: VQ
Matrix: Water	Sampled: 02/26/14 08:22
Units: mg/L	Received: 02/26/14
Diln Fac: 1.000	

Type: SAMPLE Analyzed: 02/26/14 13:09
 Lab ID: 253778-005

Analyte	Code	Result	RL
Nitrogen, Nitrite	5960	ND	0.10
Nitrogen, Nitrate	5945	0.61	0.10
Nitrogen, Nitrate/Nitrite	5950	0.61	0.10

Type: BLANK Analyzed: 02/26/14 10:07
 Lab ID: QC729202

Analyte	Code	Result	RL
Nitrogen, Nitrite	5960	ND	0.10
Nitrogen, Nitrate	5945	ND	0.10
Nitrogen, Nitrate/Nitrite	5950	ND	0.10

Batch QC Report

Nitrate/Nitrite Nitrogen					
Lab #:	253778	Cert #:	CA ELAP# 2896, NELAP# 4044-001		
Client:	Lawrence Berkeley National Lab	Prep:	METHOD		
Project#:	STANDARD	Analysis:	EPA 300.0		
Location:	SWMP - ASWMP Sampling				
Requested:	NO3+NO2 (asN):MULT	Diln Fac:	1.000		
Type:	LCS	Batch#:	208359		
Lab ID:	QC729203	Instrument:	IC03		
Matrix:	Water	Chemist:	VQ		
Units:	mg/L	Analyzed:	02/26/14 10:25		

Analyte	Code	Spiked	Result	%REC	Limits
Nitrogen, Nitrite	5960	1.000	1.011	101	80-120
Nitrogen, Nitrate	5945	1.000	1.091	109	80-120

Batch QC Report

Nitrate/Nitrite Nitrogen			
Lab #:	253778	Cert #:	CA ELAP# 2896, NELAP# 4044-001
Client:	Lawrence Berkeley National Lab	Prep:	METHOD
Project#:	STANDARD	Analysis:	EPA 300.0
Location: SWMP - ASWMP Sampling			
Requested:	NO3+NO2 (asN):MULT	Batch#:	208359
Field ID:	ZZZZZZZZZZ	Instrument:	IC03
MSS Lab ID:	253849-001	Chemist:	VQ
Matrix:	Water	Sampled:	02/25/14 09:27
Units:	mg/L	Received:	02/26/14
Diln Fac:	50.00		

Type: MS Analyzed: 02/26/14 21:06
 Lab ID: QC729293

Analyte	Code	MSS Result	Spiked	Result	%REC	Limits
Nitrogen, Nitrite	5960	<0.01287	25.00	25.14	101	80-120
Nitrogen, Nitrate	5945	24.95	25.00	51.62	107	80-120

Type: MSD Analyzed: 02/26/14 21:23
 Lab ID: QC729294

Analyte	Code	Spiked	Result	%REC	Limits	RPD	Lim
Nitrogen, Nitrite	5960	25.00	25.91	104	80-120	3	23
Nitrogen, Nitrate	5945	25.00	51.69	107	80-120	0	20

Total Oil & Grease (HEM)

Lab #: 253778	Cert #: CA ELAP# 2896, NELAP# 4044-001
Client: Lawrence Berkeley National Lab	Prep: METHOD
Project#: STANDARD	Analysis: EPA 1664A
Location: SWMP - ASWMP Sampling	

Analyte: Oil & Grease (HEM)	Batch#: 208683
Code: 6325	Instrument: H3000
COC #: 08043	Chemist: NJT
Requested: E1664	Received: 02/26/14
Matrix: Water	Analyzed: 03/06/14 00:00
Units: mg/L	

Field ID	Type	Lab ID	Result	RL	Diln Fac	Sampled
72476	SAMPLE	253778-002	9.29	5.05	1.010	02/26/14 08:38
72479	SAMPLE	253778-004	ND	5.05	1.010	02/26/14 08:12
72482	SAMPLE	253778-006	ND	5.05	1.010	02/26/14 08:22
72492	SAMPLE	253778-010	ND	5.10	1.020	02/26/14 08:50
72497	SAMPLE	253778-014	ND	5.10	1.020	02/26/14 08:45
72502	SAMPLE	253778-018	ND	5.05	1.010	02/26/14 08:31
	BLANK	QC730523	ND	5.00	1.000	

ND= Not Detected
 RL= Reporting Limit
 Page 1 of 1

Batch QC Report

Total Oil & Grease (HEM)			
Lab #:	253778	Cert #:	CA ELAP# 2896, NELAP# 4044-001
Client:	Lawrence Berkeley National Lab	Prep:	METHOD
Project#:	STANDARD	Analysis:	EPA 1664A
Location:	SWMP - ASWMP Sampling		
Analyte:	Oil & Grease (HEM)	Diln Fac:	1.000
Code:	6325	Batch#:	208683
Requested:	E1664	Instrument:	H3000
Matrix:	Water	Chemist:	NJT
Units:	mg/L	Analyzed:	03/06/14 00:00

Type	Lab ID	Spiked	Result	%REC	Limits	RPD	Lim
BS	QC730524	40.00	37.70	94	78-114		
BSD	QC730525	40.00	37.90	95	78-114	1	18

RPD= Relative Percent Difference

Ammonia Nitrogen

Lab #:	253778	Cert #:	CA ELAP# 2896, NELAP# 4044-001
Client:	Lawrence Berkeley National Lab	Prep:	SM4500NH3-B
Project#:	STANDARD	Analysis:	SM4500NH3-D
Location:	SWMP - ASWMP Sampling		
Analyte:	Ammonia-N	Diln Fac:	1.000
Code:	0325	Batch#:	208369
COC #:	08043	Instrument:	OR_NH3
Requested:	Ammonia(asN):MULT	Chemist:	NJT
Matrix:	Water	Received:	02/26/14
Units:	mg/L	Analyzed:	02/26/14 13:10

Field ID	Type	Lab ID	Result	RL	Sampled
72493	SAMPLE	253778-011	0.27	0.10	02/26/14 11:05
72498	SAMPLE	253778-015	0.24	0.10	02/26/14 11:00
	BLANK	QC729246	ND	0.10	

Batch QC Report

Ammonia Nitrogen			
Lab #:	253778	Cert #:	CA ELAP# 2896, NELAP# 4044-001
Client:	Lawrence Berkeley National Lab	Prep:	SM4500NH3-B
Project#:	STANDARD	Analysis:	SM4500NH3-D
Location:	SWMP - ASWMP Sampling		
Analyte:	Ammonia-N	Diln Fac:	1.000
Code:	0325	Batch#:	208369
Requested:	Ammonia (asN) :MULT	Instrument:	OR_NH3
Field ID:	ZZZZZZZZZZ	Chemist:	NJT
MSS Lab ID:	253550-001	Sampled:	02/19/14 09:42
Matrix:	Water	Received:	02/20/14
Units:	mg/L	Analyzed:	02/26/14 13:10

Type	Lab ID	MSS Result	Spiked	Result	%REC	Limits	RPD	Lim
LCS	QC729247		5.000	4.500	90	80-120		
MS	QC729248	0.2100	5.000	5.000	96	71-123		
MSD	QC729249		5.000	5.100	98	71-123	2	20

RPD= Relative Percent Difference

Chemical Oxygen Demand

Lab #:	253778	Cert #:	CA ELAP# 2896, NELAP# 4044-001
Client:	Lawrence Berkeley National Lab	Prep:	METHOD
Project#:	STANDARD	Analysis:	SM5220D
Location:	SWMP - ASWMP Sampling		

Analyte:	Chemical Oxygen Demand	Batch#:	208456
Code:	1875	Instrument:	DR2800
COC #:	08043	Chemist:	NJT
Requested:	E410.4	Received:	02/26/14
Matrix:	Water	Prepared:	02/28/14 14:50
Units:	mg/L	Analyzed:	02/28/14 15:50
Diln Fac:	1.000		

Field ID	Type	Lab ID	Result	RL	Sampled
72483	SAMPLE	253778-007	83	10	02/26/14 08:22
72493	SAMPLE	253778-011	23	10	02/26/14 11:05
72498	SAMPLE	253778-015	11	10	02/26/14 11:00
	BLANK	QC729615	ND	10	

Batch QC Report

Chemical Oxygen Demand			
Lab #:	253778	Cert #:	CA ELAP# 2896, NELAP# 4044-001
Client:	Lawrence Berkeley National Lab	Prep:	METHOD
Project#:	STANDARD	Analysis:	SM5220D
Location:	SWMP - ASWMP Sampling		
Analyte:	Chemical Oxygen Demand	Batch#:	208456
Code:	1875	Instrument:	DR2800
Requested:	E410.4	Chemist:	NJT
Field ID:	ZZZZZZZZZZ	Sampled:	02/26/14 15:44
MSS Lab ID:	253856-003	Received:	02/26/14
Matrix:	Water	Prepared:	02/28/14 14:50
Units:	mg/L	Analyzed:	02/28/14 15:50
Diln Fac:	1.000		

Type	Lab ID	MSS Result	Spiked	Result	%REC	Limits	RPD	Lim
LCS	QC729616		75.00	71.54	95	90-110		
MS	QC729617	29.71	300.0	301.8	91	78-120		
MSD	QC729618		300.0	283.8	85	78-120	6	20

RPD= Relative Percent Difference

Total Cyanide

Lab #:	253778	Cert #:	CA ELAP# 2896, NELAP# 4044-001
Client:	Lawrence Berkeley National Lab	Prep:	METHOD
Project#:	STANDARD	Analysis:	SM4500CN-E
Location:	SWMP - ASWMP Sampling		
Analyte:	Cyanide	Batch#:	208376
Code:	2850	Instrument:	LAMBDA
COC #:	08043	Chemist:	DM
Requested:	MET-Cn:MULT	Received:	02/26/14
Matrix:	Water	Prepared:	02/27/14 08:15
Units:	mg/L	Analyzed:	02/27/14 11:05
Diln Fac:	1.000		

Field ID	Type	Lab ID	Result	RL	Sampled
72494	SAMPLE	253778-012	ND	0.02	02/26/14 08:50
72499	SAMPLE	253778-016	ND	0.02	02/26/14 08:45
	BLANK	QC729279	ND	0.01	

Batch QC Report

Total Cyanide

Lab #:	253778	Cert #:	CA ELAP# 2896, NELAP# 4044-001
Client:	Lawrence Berkeley National Lab	Prep:	METHOD
Project#:	STANDARD	Analysis:	SM4500CN-E
Location:	SWMP - ASWMP Sampling		
Analyte:	Cyanide	Batch#:	208376
Code:	2850	Instrument:	LAMBDA
Requested:	MET-Cn:MULT	Chemist:	DM
Field ID:	ZZZZZZZZZZ	Sampled:	02/19/14 10:48
MSS Lab ID:	253550-002	Received:	02/20/14
Matrix:	Water	Prepared:	02/27/14 08:15
Units:	mg/L	Analyzed:	02/27/14 11:05
Diln Fac:	1.000		

Type	Lab ID	MSS Result	Spiked	Result	%REC	Limits	RPD	Lim
MS	QC729280	<0.01000	0.2000	0.1683	84	68-120		
MSD	QC729281		0.2000	0.1829	91	68-120	8	40
LCS	QC729282		0.2000	0.1852	93	75-120		

RPD= Relative Percent Difference

Conductivity

Lab #: 253778	Cert #: CA ELAP# 2896, NELAP# 4044-001
Client: Lawrence Berkeley National Lab	Prep: METHOD
Project#: STANDARD	Analysis: SM2510B
Location: SWMP - ASWMP Sampling	
Analyte: Specific Conductance	Diln Fac: 1.000
Code: 8000	Batch#: 208574
COC #: 08043	Instrument: VWR_EC
Requested: E120.1	Chemist: KR
Matrix: Water	Received: 02/26/14
Units: umhos/cm	Analyzed: 03/04/14 18:30

Field ID	Type	Lab ID	Result	RL	Sampled
72475	SAMPLE	253778-001	78	1.0	02/26/14 08:38
72478	SAMPLE	253778-003	140	1.0	02/26/14 08:12
72481	SAMPLE	253778-005	71	1.0	02/26/14 08:22
72491	SAMPLE	253778-009	40	1.0	02/26/14 08:50
72496	SAMPLE	253778-013	38	1.0	02/26/14 08:45
72501	SAMPLE	253778-017	92	1.0	02/26/14 08:31
	BLANK	QC730073	ND	1.0	

ND= Not Detected
 RL= Reporting Limit
 Page 1 of 1

Batch QC Report
Conductivity

Lab #:	253778	Cert #:	CA ELAP# 2896, NELAP# 4044-001
Client:	Lawrence Berkeley National Lab	Prep:	METHOD
Project#:	STANDARD	Analysis:	SM2510B
Location:	SWMP - ASWMP Sampling		
Analyte:	Specific Conductance	Diln Fac:	1.000
Code:	8000	Batch#:	208574
Requested:	E120.1	Instrument:	VWR_EC
Field ID:	ZZZZZZZZZZ	Chemist:	KR
MSS Lab ID:	253895-001	Sampled:	02/26/14 15:10
Matrix:	Water	Received:	02/27/14
Units:	umhos/cm	Analyzed:	03/04/14 18:30

Type	Lab ID	MSS Result	Spiked	Result	RL	%REC	Limits	RPD	Lim
LCS	QC730074		1,000	991.0		99	90-110		
SDUP	QC730075	152.0		152.6	1.000			0	20

RL= Reporting Limit
 RPD= Relative Percent Difference
 Page 1 of 1

Total Suspended Solids (TSS)

Lab #: 253778	Cert #: CA ELAP# 2896, NELAP# 4044-001
Client: Lawrence Berkeley National Lab	Prep: METHOD
Project#: STANDARD	Analysis: SM2540D
Location: SWMP - ASWMP Sampling	
Analyte: Total Suspended Solids	Batch#: 208571
Code: 7450	Instrument: SCALE
COC #: 08043	Chemist: KR
Requested: TSS:SM2540D	Received: 02/26/14
Matrix: Water	Prepared: 03/04/14 00:00
Units: mg/L	Analyzed: 03/05/14 00:00

Field ID	Type	Lab ID	Result	RL	Diln Fac	Sampled
72475	SAMPLE	253778-001	51	0.5	0.5000	02/26/14 08:38
72478	SAMPLE	253778-003	27	0.3	0.2860	02/26/14 08:12
72481	SAMPLE	253778-005	39	0.3	0.2500	02/26/14 08:22
72491	SAMPLE	253778-009	14	0.2	0.2000	02/26/14 08:50
72496	SAMPLE	253778-013	9	0.2	0.2000	02/26/14 08:45
72501	SAMPLE	253778-017	24	0.2	0.2000	02/26/14 08:31
	BLANK	QC730055	ND	1	0.2000	

Batch QC Report

Total Suspended Solids (TSS)			
Lab #:	253778	Cert #:	CA ELAP# 2896, NELAP# 4044-001
Client:	Lawrence Berkeley National Lab	Prep:	METHOD
Project#:	STANDARD	Analysis:	SM2540D
Location:	SWMP - ASWMP Sampling		
Analyte:	Total Suspended Solids	Batch#:	208571
Code:	7450	Instrument:	SCALE
Requested:	TSS:SM2540D	Chemist:	KR
Field ID:	ZZZZZZZZZZ	Sampled:	02/26/14 15:10
MSS Lab ID:	253895-001	Received:	02/27/14
Matrix:	Water	Prepared:	03/04/14 00:00
Units:	mg/L	Analyzed:	03/05/14 00:00
Diln Fac:	1.000		

Type	Lab ID	MSS Result	Spiked	Result	%REC	Limits	RPD	Lim
BS	QC730056		50.00	53.00	106	80-120		
BSD	QC730057		50.00	57.00	114	80-120	7 *	5
MS	QC730058	70.00	50.00	110.0	80	52-132		
MSD	QC730059		50.00	103.0	66	52-132	7 *	5

*= Value outside of QC limits; see narrative

RPD= Relative Percent Difference

Appendix D

Technical Memorandum: Hazardous Waste Handling Facility Investigative Studies



Environment, Safety, and Health Division
Environmental Services Group

Technical Memorandum

Date: 4/30/2010

To: San Francisco Regional Water Control Board

From: Tim Bauters, Stormwater Program Manager

Subject: Technical Memorandum Lawrence Berkeley National Laboratory Hazardous Waste Handling Facility Investigative Studies

Introduction

In 2009, Lawrence Berkeley National Laboratory (LBNL) implemented an *Alternative Stormwater Monitoring Plan* ("ASWMP"). The ASWMP fulfills the monitoring requirements and monitoring program objectives of California State Water Resources Control Board (SWRCB) Order No. 97-03-DWQ *National Pollutant Discharge Elimination System (NPDES) General Permit No. CAS000001 (General Permit), Waste Discharge Requirements (WDRs) for the Discharge of StormWater Associated with Industrial Activities Excluding Construction Activities* ("General Permit").

The ASWMP was prepared to provide a more industrial activity-specific indicator of pollutant contributions from regulated industrial activities at LBNL and thus a more reliable basis for evaluating the performance and effectiveness of Best Management Practices (BMPs) as described in the *Stormwater Pollution Prevention Plan* for the Facility (SWPPP; ESG, 2009). The specific industrial sites targeted in the ASWMP are shown on the following Figure 1 and include:

1. Storage at the Blackberry Canyon parking lot (stormwater sample location MP-1);
2. Fueling area at Building 76 (stormwater sample location MP-2);
3. Metal fabrication, storage, and recycling at Building 77 and 79 (stormwater sample location MP-3);
4. Hazardous waste storage and handling at Building 85 (stormwater sample locations MP-4 and MP-5);
and,
5. Bus transportation and parking in front of Building 64 (stormwater sample location MP-6).

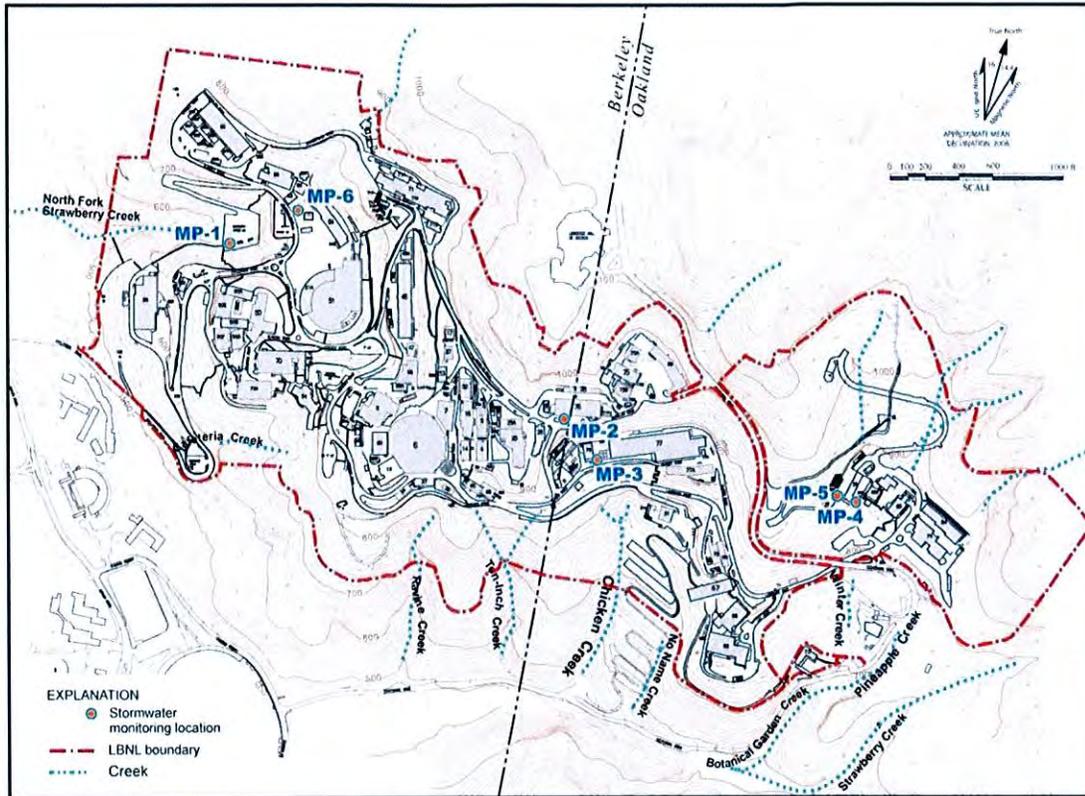


Figure 1. LBNL Facility Plan with Buildings, Topography, and Stormwater Monitoring Locations

During the 2009/2010 storm season, stormwater samples MP-4 and MP-5 collected at the hazardous waste storage and handling area (Building 85 or B85) exceeded the bench mark values included in the ASWMP for chemical oxygen demand (COD) and Magnesium (Mg). In response, LBNL conducted an investigative study to identify the potential sources of these constituents in the B85 upper and lower yard. The 2009/2010 stormwater sample results are summarized in Table 1 along with the ASWMP benchmarks for these constituents. A schematic overview for the B85 area is shown on [Figure 2](#).

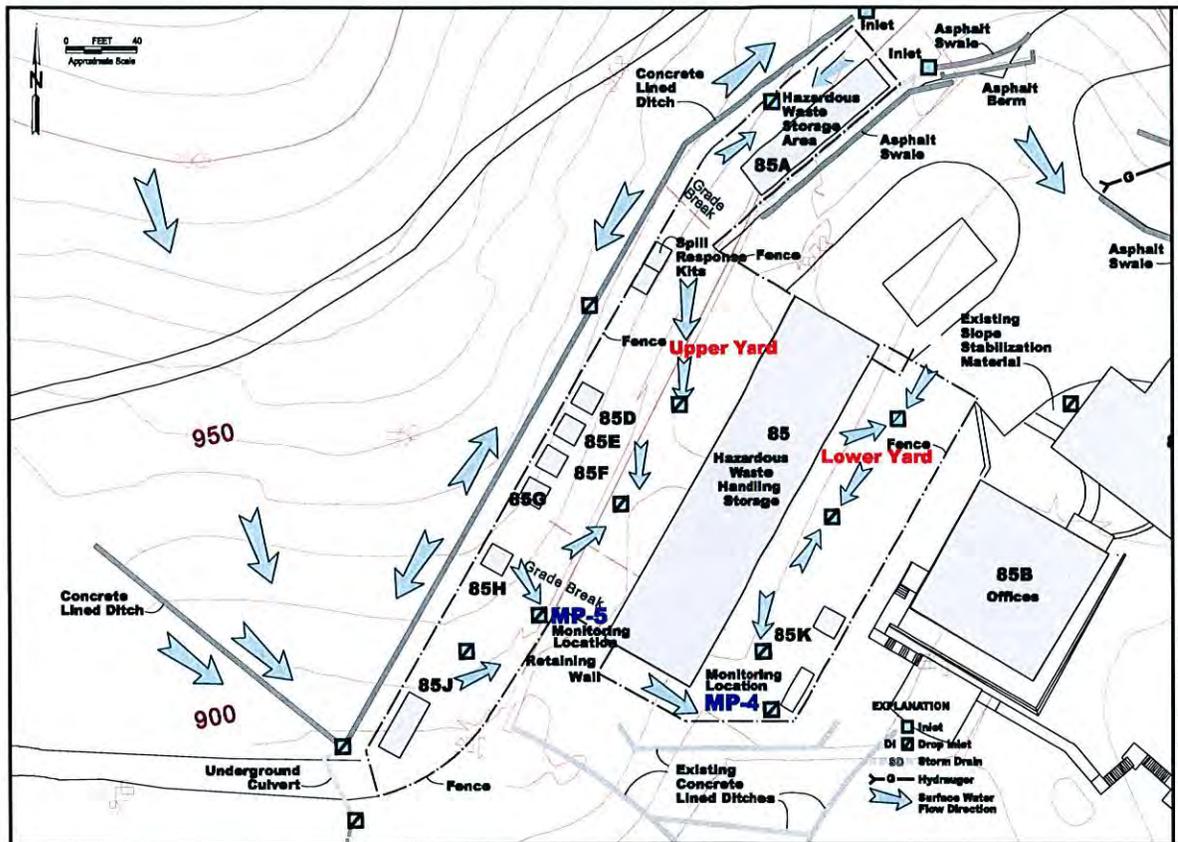


Figure 2. Schematic Overview of the Hazardous Waste Handling Facility, Building 85

The investigative studies are described in the following sections and the results are then compared and evaluated to generate proposed new benchmarks for these constituents.

Investigative Studies

In August through October 2009, LBNL performed three investigative studies to identify potential sources of COD and Mg at B85. The investigative studies targeted three potential sources of COD and Mg; 1) coated concrete surfaces, 2) the underground drainage system and 3) atmospheric deposition. The following sections include descriptions of the procedures used in performing the studies, the results of the studies, and conclusions based on the study results.

Concrete Surface and Underground Drainage System Investigation

LBNL performed this study on August 5, 2009. The B85 area is shown on Figure 2. LBNL selected the lower yard for this study since there is less motor vehicle traffic compared to the upper yard (safety concerns) and the stormwater monitoring in the upper and lower yards yielded similar results (Table 1).

In addition to the coated concrete surfaces and the underground drainage system, stormwater run-on and spills from the hazardous waste storage and handling activities conducted at B85 are also potential stormwater pollutant sources. LBNL eliminated these two potential sources from consideration for the following reasons:

- LBNL did not consider stormwater run-on as a potential source during this investigation because the potential for stormwater run-on to be the source was previously eliminated from consideration. Between the February 6 and May 1, 2009 stormwater sampling events LBNL eliminated stormwater run-on at B85 through the implementation of BMPs. As shown in Table 1, by comparison, the COD and Mg concentrations actually increased during the May 2009 stormwater monitoring event indicating that stormwater run-on was not the source of COD or Mg at B85.
- LBNL did not consider accidental spills as a potential pollutant source since the hazardous waste handling facility at B85 keeps very detailed records of any potential spills, and no spills were recorded during the entire time period of this investigation.

Therefore, during this investigation, LBNL specifically targeted the coated concrete surface of the B85 yards and the underground drainage system beneath the B85 yards. The procedures employed by LBNL during this study include: target constituents, quality assurance, target locations, water used during the tests, and procedural details.

Procedures

The first study included using deionized (DI) water as a surrogate for rainwater to assess which portion of the drainage system might be contributing COD or Mg to the stormwater. LBNL acquired the DI from Curtis & Tompkins Laboratories of Berkeley, California (C&T).

LBNL performed the following activities and sample collection:

- LBNL sampled with a pre-cleaned bailer the accumulated waters in the MP-4 drain inlet sump before the study. The sump is an approximately 5-foot deep concrete structure measuring about 3 feet wide and 6 ft long. The sump contained about 6 inches of standing water with no visible sediments. Using these dimensions, LBNL estimates approximately 67 gallons of water was present in the sump prior to the study. This sample is referred to as “Sump Before Study”.
- LBNL poured approximately 5 gallons of DI water into the easternmost drain inlet of the lower yard (Figure 2). LBNL contained the water within the next drain inlet by temporarily plugging the downstream pipe using an acid-washed, modified 5 gallon bucket and collected a sample of this retained water using a pre-cleaned, acid-washed scoop. This sample is referred to as “Drain Pipe”.
- LBNL poured approximately 5 gallons of DI water onto the surface of the concrete yard allowing the DI water to travel over the concrete coating. LBNL then collected a sample of this water at the entrance of the middle yard drain inlet (Figure 2) using a pre-cleaned, acid-washed scoop. This sample is referred to as “Concrete Surface”.
- LBNL sampled the accumulated waters in the MP-4 drain inlet sump at the end of the study that included the water initially present plus approximately 10 gallons of DI water that LBNL added to the drainage system during the study. This sample is referred to as “Sump After Study”.

LBNL submitted the water samples to C&T for the following analyses:

- COD by United States Environmental Agency (USEPA) Method 410.4; and,
- Mg by USEPA Method 200.7;

LBNL collected an equipment blank to assure the pre-cleaned, acid-washed sampling equipment was not contributing COD or Mg to the samples.

Results and Discussion

Analytical results from the samples collected during this study are summarized in Table 2. The Drain Pipe sample contained 220 mg/ L of COD and 2.6 mg/L of Mg. The Concrete Surface sample contained 290 mg/L COD and 2.6 mg/L Mg. During this study, COD and Mg were detected in the Concrete Surface and Drain Pipe samples at similar concentrations to what were detected as what we had measured during the prior stormwater sampling event on May 1 2009 (250 mg/ L COD and 2.2 mg/L Mg, (Table 1)). It should be noted that the equipment method blank for this investigative study was non-detect for Mg (<0.05 mg/L).

The MP-4 Sump Before Study sample contained 54 mg/L COD and 2.3 mg/L Mg. After the study, the Sump After Study sample contained a slightly higher concentration of COD consistent with what would be expected but Mg decreased. We are uncertain as to why the Mg concentration decreased.

These results indicate that the concrete surface and the drain pipe could be potential sources of the COD and Mg; however, it is also possible that COD and Mg accumulating on the concrete surface end up in the subsurface drainage system. In addition, since the Drain Pipe and Concrete Surface samples collected during the study contained concentrations of COD and Mg similar to the storm water samples collected during storm water sampling, it appears that the deionized (DI) water was an effective surrogate for rainwater.

If the concrete surface sample did not contain COD or Mg that would indicate that the drain pipe was the source. The similarities between the concrete surface, drain pipe, and May 1, 2009 stormwater samples indicates that the COD and Mg in the drain pipe could likely be from water contacting the concrete surface and flowing into the drain pipe. These results created the aerial deposition hypothesis, in summary the hypothesis assumes that COD and Mg are potentially "aerially" deposited via soil or dust particles deposited over surfaces at the facility. Hence aerial deposition on a variety of surfaces and locations were evaluated as described in the following sections.

Assessing Aerial Deposition Investigative studies

LBNL conducted two more investigative studies to assess whether or not the COD and Mg are aerially deposited on the coated concrete surface at B85. Given that the aerial deposition of those constituents should show similar COD and magnesium levels at non-industrial areas at the facility; another location beyond the B85 yards was also selected to verify the aerial deposition hypothesis. The soils in the Eastern portions of LBNL have Mg concentrations ranging from 7,400 to 12,000 mg/kg based on the last 5 years of annual soil data (available upon request).

The lower yard of B85 was again selected for the Aerial Deposition investigative study and the asphalt pad near the upper water tower was selected as a non-industrial location. The rationale for the other location or control location was to verify the aerial deposition hypothesis. In other words, if the COD and Mg are potentially aerially deposited at the facility, it should be deposited everywhere.

The asphalt pad near the upper water tower has similar topography (nearby steep hillsides) to the B85 lower

yard and can be easily blocked from traffic that could potentially disturb the ongoing study. Unfortunately, at the upper water reservoir, the asphalt pad could cause interference, thus a brand new sheet of 15' x 25' plastic (held down with traffic cones, see photo 1 below) was deployed and left exposed for a time period of about 14 day (dust/ soil aerial deposition period). Information and analytical data gathered at the upper water tower could be used to support the aerial deposition hypothesis for those 2 constituents at the facility.

Procedures

The September Aerial Deposition study used again deionized (DI) water as a surrogate for rainwater to assess if surface/dust particles might be contributing COD or Mg to the stormwater. LBNL acquired the DI from C&T.

LBNL performed the following activities and sample collection methods:

- LBNL poured approximately 5 gallons of DI water onto the surface of the concrete yard allowing the DI water to travel over the concrete coating. LBNL then collected a sample of this water at the entrance of the eastern most yard drain inlet (Figure 2) using a pre-cleaned, acid-washed scoop. This sample is referred to as "Before Cleaning Concrete Surface".
- Next step was to clean the tested area above; in addition 2 ft surrounding each side was cleaned as well with DI water and a "clean" scrub brush to remove potential surface contamination. Once the surface was deemed "clean" (by visual observation of the rinse waters), the area was rinsed with DI water again, scrubbed some more, rinsed again and again for a total of 3 rinses. During the last rinse, rinse waters were collected to check for any remaining COD and Mg. This sample is referred to as "After Cleaning Concrete Surface".
- At the upper water tower, 14 days prior to sample collection a brand new sheet of 15' x 25' plastic held down with traffic cones was deployed and left exposed for a time period of about 14 days. LBNL poured approximately 5 gallons of DI water onto the surface of the plastic sheet allowing the DI water to travel over the plastic sheet. LBNL then collected a sample of this water by lifting the plastic sheet off the ground and collecting rinse waters using a pre-cleaned, acid-washed scoop. This sample is referred to as "Plastic Sheet at Upper Water Tower".

LBNL submitted the water samples to C&T for the same above referenced analyses.

LBNL collected an equipment blank to assure the pre-cleaned, acid-washed sampling equipment was not contributing COD or Mg to the samples.



Photo 1. Deployed plastic at the upper water tower

The Repeat Aerial Deposition study (October) was very similar in procedural setup to the September Aerial Deposition study. The Repeat Aerial Deposition study differs in the following aspects:

- It was cut one day short because of an anticipated rain event on October 13, 2009. The dust/ soil aerial deposition period was 13 days instead of 14 days.
- Another area at the B85 lower yard was selected to prevent interference caused by the previous investigative studies.
- The plastic used at the upper tower area was replaced with a brand new piece of plastic for this Repeat Aerial Deposition study.

Discussion of the Aerial Deposition Investigative Study Results:

Analytical results from samples collected are summarized in Table 2. For the aerial deposition investigative study, the “before cleaning concrete surface” sample collected before cleaning contained 150 mg/L COD and 2.9 mg/L Mg. The “After Cleaning Concrete Surface” sample did not contain detectable COD or Mg. During the Repeat Aerial Deposition Study (October), the concrete surface sample contained 45 mg/L COD and 1.6 mg/L Mg. Again the “After Cleaning Concrete Surface” rinse water sample did not contain any detectable COD or Mg (<25 mg/L COD and <0.05 mg/L Mg).

The plastic liner results for COD at the upper water tower were 230 mg/L during the Aerial Deposition Investigative Study and a non-detect value (a value less than the laboratory reporting limit or method detection

limit) in the Repeat Aerial Deposition Study. For Magnesium at the upper water tower we achieved 2.1 mg/L and 0.46 mg/L, respectively for the Aerial Deposition Study in September and the Repeat Aerial Deposition Study in October. It should be noted that results during the Aerial Deposition Study in September study were very similar to the values that were monitored on the surface at the B85 yards during the last stormwater monitoring performed on May 1, 2009 (Table 1).

For the Repeat Aerial Deposition Study in October it is noted that aerial deposits on the concrete surface and plastic liner were less than that during the prior investigative studies as shown in the results. It should be noted that a different drain inlet was selected during the October Repeat Aerial Deposition investigative study than the one selected during the September study to exclude any prior cleaning history; thus by the best of our knowledge that area did not receive any washing or cleaning in between the 2 studies. Given that a brand new plastic was put out each time at the upper water tower for the Aerial Deposition Studies, and we measured reductions in concentration there as well; lesser aerial deposition during that time period could be possible. Specifically COD in the Before Cleaning Concrete Surface sample resulted in 45 mg/L which is significantly less than in prior studies, and could potentially explain why COD was not detected on top of the plastic surface (<25 mg/L, see Table 2) .

It should also be noted that all equipment method blanks were non-detect for Mg (<0.05 mg/L) for all three of the investigative studies.

Upper Confidence Limit Calculation

Table 3 presents the results from the B85 surface samples before any cleaning took place, the single-sided 95% upper confidence limit (95% UCL) was determined per Student T-test for those three samples, analysis was completed for COD and Mg.

- COD concentrations ranged from 45 to 290 mg/L, with an average of 161.7 mg/L and a calculated 95% UCL of **415 mg/L**.
- Mg concentrations ranged from 1.6 to 2.9 mg/L, with an average of 2.4 mg/L and a calculated 95% UCL of **3.8 mg/L**.

All COD and Mg concentrations measured during stormwater monitoring were below the calculated 95% UCL concentrations for the respective constituents as determined during the above described investigative studies. The UCL concentrations of 415 mg/L and 3.8 mg/L for COD and Mg; respectively, will be the UCL of the baseline or background concentrations for those constituents for future stormwater monitoring at the B85 yards.

Conclusion

A series of investigative studies were completed at the Building 85, Hazardous Waste Handling Facility (HWHF), outdoor yards to identify key sources of elevated COD and Mg, measured during the bi-annual stormwater monitoring events. Setup of the three investigative studies and their analytical results are described in detail in this Technical Memorandum.

Based on the results achieved in the August investigative study, a hypothesis was created in which we assumed that COD and Mg are "aerially" deposited with small soil particles over surfaces at the facility. To test this hypothesis, scrubbing/cleaning of the B85 surface yard and another location was added to the investigative study setup. The selection of another location was also added to the study in order to understand further if non-

industrial areas at the facility also showed similar COD and Mg concentrations as what was witnessed at the B85 yards.

Results from the September investigative study did support an aerial deposition hypothesis for those 2 analytes at the facility. To verify this hypothesis, the September investigative study was repeated in October, with similar results but with lower concentrations in general.

Finally upper level confidence limits (UCL) were calculated from the sampling results for COD and Mg from the surface collections using statistical calculations (Student's t-test as shown in Table 3). The resulting UCLs will serve as the baseline or background concentration levels for future stormwater monitoring. In other words, if during future stormwater monitoring sampling those Upper Confidence Limits were exceeded, additional investigative studies will be performed; thus the UCL basically serves as a proposed new benchmark for that stormwater sampling location and those constituents.

Tables

Table 1: Summary of the B85 Stormwater Monitoring Data

Table 2: Summary of the B85 Investigative Studies

Table 3: Student's T-Test Calculation

References

U.S. EPA. SW-846, Test Methods for Evaluating Solid Waste, Physical/Chemical Methods, third edition.

Lawrence Berkeley National Laboratory

Table 1

Summary of the B85 Stormwater Monitoring Data

Constituent	Units	Lab Primary/QAGC	Reporting Limit	Benchmark (2000 MSGP)	MP4 (B85 Lower Yard)			MP5 (B85 Upper Yard)		
					1st Storm	2nd Storm	3rd storm	1st Storm	2nd Storm	3rd Storm
pH		in house	0.01	6.00-9.00	7.75	6.74	8.65	7.63	6.89	9.39
Conductivity	umhos/cm	BC/C-T	1	NA	23	131	13.5	31.2	88.3	14.6
TSS	mg/l	BC/C-T	1	100	3	70	14	30	54	45
Oil & Grease	mg/l	BC/C-T	5	15	ND	ND	ND	ND	ND	ND
Ammonia (NH3)	mg/l	BC/C-T	0.05	19.00	0.13	1.6	ND	0.11	1.3	0.13
COD	mg/l	BC/C-T	25	120	ND	250	25	ND	190	46
Arsenic	mg/l	BC/C-T	0.05	0.1685	ND	ND	ND	ND	ND	ND
Cadmium	mg/l	BC/C-T	0.01	0.0159	ND	ND	ND	ND	ND	ND
Cyanide	mg/l	BC/C-T	0.005	0.0636	ND	ND	ND	ND	ND	ND
Lead	mg/l	BC/C-T	0.05	0.0816	ND	ND	0.0032	ND	ND	0.0077
Magnesium	mg/l	BC/C-T	0.05	0.0636	0.084	2.2	0.21	0.25	1.9	0.49
Mercury	mg/l	BC/C-T	0.0002	0.0024	ND	ND	ND	ND	ND	ND
Selenium	mg/l	BC/C-T	0.10	0.2385	ND	ND	ND	ND	ND	ND
Silver	mg/l	BC/C-T	0.01	0.0318	ND	ND	ND	ND	ND	ND

Notes:

Results shown in red exceed benchmark values
 Multi-sector General Permit, United States Environmental Protection Agency (USEPA), Final Modification of the National Pollutant Discharge Elimination Systems (NDPES) Storm Water Multi-Sector General Permit for Industrial Activities; Termination of the EPA NPDES Storm Water Baseline Industrial General Permit, Washington D.C Federal Register, September 30, 1998 (USEPA, 1998).

umhos/cm
 mg/l
 NA
 micro mhos per centimeter
 milligrams per liter
 not available

Table 2

Summary of the B85 Investigative Studies

Constituent	Units	Lab Primary/QAC	Reporting Limit	Benchmark (2000 MSQP)		Concrete Surface and Underground Drainage System Investigation (August 2009) ¹			Aerial Deposition Investigative Study (September 2009) ²			Repeat Aerial Deposition Investigative Study (October 2009) ³		
				mg/l	mg/l	Sump Before Study	Drain Pipe	Concrete Surface	Sump After Study	Before Cleaning Concrete Surface	After Cleaning Concrete Surface	Plastic Sheet at Upper Water Tower	Before Cleaning Concrete Surface	After Cleaning Concrete Surface
COD	mg/l	BC/C-T	25	120	54	220	290	76	150	ND	230	45	ND	ND
Magnesium	mg/l	BC/C-T	0.05	0.0636	2.3	2.6	2.6	2.1	2.9	ND	2.1	1.6	ND	0.46
						August 5 2009			September 8 2009			October 12 2009		

- Notes:
- 1 For the Concrete Surface and Underground Drainage System Investigation in August 2009 we poured laboratory DI water onto the yard to mimic rainwater at strategic locations on the yard.
 - 2 For the Aerial Deposition investigative study, we used the same concept as in August study but focused specifically on the surfaces. Cleaning of the coated concrete yard was done with Laboratory DI water. Plastic was put out on August 24 and left exposed at the upper water tower for about 14 days.
 - 3 For the Repeat Aerial Deposition Investigative study in October we used the same concept as in September. Plastic was put out on September 30 and left exposed at the upper water tower for about 13 days.

Table 3

Student's T-test Calculation

Constituent	Units	Lab Primary/QAC	Concrete Surface and Underground Drainage System Investigation (August 2009)		Aerial Deposition Investigative Study (September 2009)		Aerial Deposition Investigative Study (October 2009)		Upper 95% Confidence Limit Calculation ¹	
			Concrete Surface	Concrete Surface	Before Cleaning Concrete Surface	Before Cleaning Concrete Surface	Before Cleaning Concrete Surface	October 12 2009	Average	Standard Deviation
COD	mg/l	BC/C-T	290	290	150	150	45	161.7	122.9	415
Magnesium	mg/l	BC/C-T	2.6	2.6	2.9	2.9	1.6	2.4	0.7	3.8

Note 1. Upper 95% Confidence Limit (UCL) as determined in U.S. EPA. SW-846, Test Methods for Evaluating Solid Waste, Physical/Chemical Methods, third edition

Appendix E

Monthly and Quarterly Observations and Annual Inspection Forms

**Lawrence Berkeley National Laboratory
Environmental Services Group, Storm Water Monitoring Program**

Observer: **John Jelinski**
Observation Month: **October 31, 2013**

Monthly Visual Observations of Storm Water Discharges (SWD) - Monthly Form

Date & Time	Site visited	General Conditions & Observations (e.g. weather, housecleaning)	Specific Visual Observations (enter Yes or No for each; use notes to explain)							Comments			
			Runoff	Color	Floatables	Odor	Sheen	Stain	Turbidity		Other		
October 31, 2013 10:30	N.F. Strawberry Crk Drainage Area	Sunny & clear. BMP's in good condition.	No	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
October 31, 2013 10:45	Chicken Crk Drainage Area	Sunny & clear. BMP's in good condition.	No	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
October 31, 2013 10:50	Winter & Pineapple Crk Discharge Areas	Sunny & clear. BMP's in good condition.	No	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
October 31, 2013 11:15	Winter & Pineapple Crk Influent Areas	Sunny & clear. BMP's in good condition.	No	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
October 31, 2013 10:25	MP 1 Sampling Sites	Sunny & clear. BMP's in good condition.	No	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
October 31, 2013 10:40	MP 2 Sampling Sites	Sunny & clear. BMP's in good condition.	No	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
October 31, 2013 10:55	MP 3 Sampling Sites	Sunny & clear. BMP's in good condition.	No	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
October 31, 2013 11:05	MP 4 Sampling Sites	Sunny & clear. BMP's in good condition.	No	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
October 31, 2013 11:10	MP 5 Sampling Sites	Sunny & clear. BMP's in good condition.	No	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
October 31, 2013 10:35	MP 6 Sampling Sites	Sunny & clear. BMP's in good condition.	No	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

* = Little but not significant amount observed

11/13/2013 11/13/2013

Approximate Start of Rain Event: **NA (No storm events in October-2013)**
Approximate Start of Significant Discharge: **NA (No storm events in October-2013)**

X Tim Bauters
Tim Bauters
LENL Stormwater Program Manager
Signed by: Tim W. Bauters

X John Jelinski
John Jelinski
LENL Stormwater Inspection Technician
Signed by: John Jelinski

Additional Comments

There were no rain events for the month of October-2013. Monthly inspections were conducted to meet permit requirements.

**Lawrence Berkeley National Laboratory
Environmental Services Group, Storm Water Monitoring Program**

Observer: **John Jelinski**
Observation Month: **November 19, 2013**

Monthly Visual Observations of Storm Water Discharges (SWD) - Monthly Form

Date & Time	Site visited	General Conditions & Observations (e.g. weather, housecleaning)	Specific Visual Observations (enter Yes or No for each; use notes to explain)							Comments	
			Runoff	Color	Floatables	Odor	Sheen	Stain	Turbidity		Other
November 19, 2013 12:35	N.F. Strawberry Crk Drainage Area	Light rain. BMP's in good condition.	Yes	No	No	No	Yes	NA	Yes	Yes	Presence of white foam (dead organic matter) in creek. Light flow. Oil sheen and turbidity present.
November 19, 2013 13:00	Chicken Crk Drainage Area	Light rain. BMP's in good condition.	Yes	No	No	No	Yes	NA	Yes	Yes	Presence of white foam (dead organic matter) in creek. Light flow. Oil sheen and turbidity present.
November 19, 2013 13:05	Winter & Pineapple Crk Discharge Areas	Light rain. BMP's in good condition.	Yes	No	No	No	Yes	NA	Yes	NA	Light flow. Oil sheen and turbidity present.
November 19, 2013 13:10	Winter & Pineapple Crk Influent Areas	Light rain. BMP's in good condition.	No	NA	NA	NA	NA	No	NA	NA	NA
November 19, 2013 12:30	MP 1 Sampling Sites	Light rain. BMP's in good condition. Filters in storm drain inlet clean & in good condition.	Yes	No	No	No	Yes	NA	Yes	NA	Trickle flow into storm drain. Oil sheen and turbidity present.
November 19, 2013 13:30	MP 2 Sampling Sites	Light rain. BMP's in good condition. Filters in oil/water separator clean & in good condition.	Yes	No	No	No	Yes	NA	No	NA	Trickle flow into storm drain. Oil sheen present.
November 19, 2013 12:55	MP 3 Sampling Sites	Light rain. BMP's in good condition. Filters in 77/79 storm drain channel clean & in good condition.	Yes	Yes	No	No	Yes	NA	Yes	NA	Trickle flow into storm drain channel. Oil sheen, dark color and slight turbidity present.
November 19, 2013 13:20	MP 4 Sampling Sites	Light rain. BMP's in good condition.	Yes	No	No	No	No	NA	No	NA	Light flow into storm drains. Catch basin about 2/3rds full.
November 19, 2013 13:15	MP 5 Sampling Sites	Light rain. BMP's in good condition.	Yes	No	No	No	No	NA	No	NA	Light flow into storm drains. Catch basin about 2/3rds full.
November 19, 2013 12:40	MP 6 Sampling Sites	Light rain. BMP's in good condition.	Yes	No	No	No	Yes	NA	No	NA	Trickle flow into storm drain. Oil sheen present.

* = Little but not significant amount observed

11/20/2013

Approximate Start of Rain Event	November 19, 2013 11:30 AM
Approximate Start of Significant Discharge	November 19, 2013 12:30 PM

X

11/20/2013
John Jelinski
John Jelinski
Stormwater Inspection Technician

Tim Beuters
LBNL Stormwater Program Manager
Signed by: Tim W. Beuters

Additional Comments:
This storm event qualifies as a permit applicable observation
Overall BMP's in good condition. All filters at sampling sites were recently replaced and in good condition. B77-79 yard was clean with all metal bins.

**Lawrence Berkeley National Laboratory
Environmental Services Group , Storm Water Monitoring Program**

Observer: **John Jelinski**
Observation Month: **December 18, 2013**

Monthly Visual Observations of Storm Water Discharges (SWD) - Monthly Form

Date & Time	Site visited	General Conditions & Observations (e.g. weather, housecleaning)	Specific Visual Observations (enter Yes or No for each; use notes to explain)							Comments	
			Runoff	Color	Foatables	Odor	Sheen	Stain	Turbidity		Other
December 18, 2013 12:20	N.F. Strawberry Crk Drainage Area	Sunny. BMP in good condition	Yes	No	No	No	No	No	No	No	Light flow in Creek
December 18, 2013 12:35	Chicken Crk Drainage Area	Sunny. BMP in good condition	Yes	No	No	No	No	No	No	No	Light flow in Creek
December 18, 2013 12:40	Winter & Pineapple Crk Discharge Areas	Sunny. BMP in good condition	Yes	No	No	No	No	No	No	No	Light flow in Creek
December 18, 2013 12:55	Winter & Pineapple Crk Influent Areas	Sunny. BMP in good condition	No	NA	NA	NA	NA	NA	NA	NA	NA
December 18, 2013 12:20	MP 1 Sampling Sites	Sunny. BMP in ok condition. Filter in storm drain inlet requires cleaning	No	NA	NA	NA	NA	NA	NA	NA	NA
December 18, 2013 12:15	MP 2 Sampling Sites	Sunny. BMP in ok condition. Filter in storm drain inlet requires cleaning	No	NA	NA	NA	NA	NA	NA	NA	NA
December 18, 2013 12:30	MP 3 Sampling Sites	Sunny. BMP in good condition. FYI - Forklift parked directly over storm drain inlet.	No	NA	NA	NA	NA	NA	NA	NA	NA
December 18, 2013 12:45	MP 4 Sampling Sites	Sunny. BMP in good condition	No	NA	NA	NA	NA	NA	NA	NA	NA
December 18, 2013 12:50	MP 5 Sampling Sites	Sunny. BMP in good condition	No	NA	NA	NA	NA	NA	NA	NA	NA
December 18, 2013 12:25	MP 6 Sampling Sites	Sunny. BMP in good condition	No	NA	NA	NA	NA	NA	NA	NA	NA

* = Little but not significant amount observed

1/8/2014

1/8/2014

Approximate Start of Rain Event	NA
Approximate Start of Significant Discharge	NA

X 
John Jelinski
LBNL Stormwater Inspection Technician
Signed by: John Jelinski

X 
Tim Bauters
LBNL Stormwater Program Manager
Signed by: Tim W. Bauters

Additional Comments

No applicable storm events for December-2013, however, inspection was conducted on 12/18/2013 to fulfill permit requirements.

**Lawrence Berkeley National Laboratory
Environmental Services Group, Storm Water Monitoring Program**

Observer: **John Jelinski**
Observation Month: **January 29, 2014**

Monthly Visual Observations of Storm Water Discharges (SWD) - Monthly Form

Date & Time	Site visited	General Conditions & Observations (e.g. weather, housecleaning)	Specific Visual Observations (enter Yes or No for each; use notes to explain)							Comments	
			Runoff	Color	Floatables	Odor	Sheen	Stain	Turbidity		Other
January 29, 2014 08:30	N.F. Strawberry Crk Drainage Area	Cloudy, drizzling. BMP in good condition	Yes	No	No	No	No	No	No	No	Light flow in Creek
January 29, 2014 08:45	Chicken Crk Drainage Area	Cloudy, drizzling. BMP in good condition	Yes	No	No	No	No	No	No	No	Light flow in Creek
January 29, 2014 08:50	Winter & Pineapple Crk Discharge Areas	Cloudy, drizzling. BMP in good condition	No	No	No	No	No	No	No	No	NA
January 29, 2014 09:05	Winter & Pineapple Crk Influent Areas	Cloudy, drizzling. BMP in good condition	No	NA	NA	NA	NA	NA	NA	NA	NA
January 29, 2014 08:30	MP 1 Sampling Sites	Cloudy, drizzling. BMP in good condition	No	NA	NA	NA	NA	NA	NA	NA	NA
January 29, 2014 08:40	MP 2 Sampling Sites	Cloudy, drizzling. BMP in good condition	No	NA	NA	NA	NA	NA	NA	NA	NA
January 29, 2014 09:20	MP 3 Sampling Sites	Cloudy, drizzling. BMP in poor condition. 3 open metal bins, presence of oil stains @ 1 metal bin, noticeable sheen coming from 2 bins, observed dirt & debris on roadway	No*	Yes	NA	NA	Yes	Yes	NA	NA	While there was no runoff into any storm drain, the lot was wet with puddles of water.
January 29, 2014 08:55	MP 4 Sampling Sites	Cloudy, drizzling. BMP in good condition	No	NA	NA	NA	NA	NA	NA	NA	NA
January 29, 2014 08:55	MP 5 Sampling Sites	Cloudy, drizzling. BMP in good condition	No	NA	NA	NA	NA	NA	NA	NA	NA
January 29, 2014 08:35	MP 6 Sampling Sites	Cloudy, drizzling. BMP in good condition	No	NA	NA	NA	NA	NA	NA	NA	NA

* = Little but not significant amount observed

Approximate Start of Rain Event	NA
Approximate Start of Significant Discharge	NA

2/12/2014
 Tim Buters
 LBNL Stormwater Program Manager
 Signed by: Tim W. Buters

2/10/2014
 John Jelinski
 LBNL Stormwater Inspection Technician
 Signed by: John A. Jelinski

Additional Comments

No applicable storm events for January-2014, however, inspection was conducted on 01/29/2014 to fulfill permit requirements.

*Note there were drizzling condition on 01/29/2014 (Wednesday) beginning around 5 am, however, no significant discharge occurred.

**Lawrence Berkeley National Laboratory
Environmental Services Group, Storm Water Monitoring Program**

Observer: **Tim Bauters and John Jelinski**
Observation Month: **February 26, 2014**

Monthly Visual Observations of Storm Water Discharges (SWD) - Monthly Form

Date & Time	Site visited	General Conditions & Observations (e.g. weather, housecleaning)	Specific Visual Observations (enter Yes or No for each; use notes to explain)							Comments	
			Runoff	Color	Floatables	Odor	Sheen	Stain	Turbidity		Other
February 26, 2014 08:40	N.F. Strawberry Crk Drainage Area	Cloudy, drizzling. BMP in good condition	Yes	No	No	No	No	No	No	No	Light flow in Creek. Inspection done by Tim Bauters
February 26, 2014 08:45	Chicken Crk Drainage Area	Cloudy, drizzling. BMP in good condition	Yes	No	No	No	No	No	No	No	Light flow in Creek. Inspection done by J. Jelinski
February 26, 2014 08:35	Winter & Pineapple Crk Discharge Areas	Cloudy, drizzling. BMP in good condition	Yes	No	No	No	No	No	No	No	Light flow in East Canyon Outfall. Inspection done by J. Jelinski
February 26, 2014 08:40	Winter & Pineapple Crk Influent Areas	Cloudy, drizzling. BMP in good condition	No	NA	NA	NA	NA	NA	NA	NA	NA - No creek flow. Inspection done by J. Jelinski
February 26, 2014 08:38	MP 1 Sampling Sites	Cloudy, drizzling. BMP in good condition	Yes	No	No	No	Yes	No	No	No	Inspection done by Tim Bauters
February 26, 2014 08:12	MP 2 Sampling Sites	Cloudy, drizzling. BMP in good condition	Yes	No	No	No	No	No	No	No	Inspection done by Tim Bauters
February 26, 2014 08:22	MP 3 Sampling Sites	Cloudy, drizzling. BMP in ok condition. Presence of oil stains around 2 metal bins.	Yes	No	No	No	No	No	No	No	Inspection done by Tim Bauters
February 26, 2014 08:50	MP 4 Sampling Sites	Cloudy, drizzling. BMP in good condition	Yes	No	No	No	No	No	No	No	Inspection done by Tim Bauters
February 26, 2014 08:45	MP 5 Sampling Sites	Cloudy, drizzling. BMP in good condition	Yes	No	No	No	No	No	No	No	Inspection done by Tim Bauters
February 26, 2014 08:31	MP 6 Sampling Sites	Cloudy, drizzling. BMP in good condition	Yes	No	No	No	No	No	No	No	Inspection done by Tim Bauters

* = Little but not significant amount observed

Approximate Start of Rain Event
Approximate Start of Significant Discharge

February 26, 2014 6:45 AM
February 26, 2014 07:15 AM to 07:45 AM

3/5/2014

3/5/2014

[Signature]
Jelinski
Stormwater Inspection Technician

[Signature]
Bauters
Stormwater Program Manager

Tim Bauters
LBNL Stormwater Program Manager
Signed by: Tim W. Bauters

Additional Comments
This was a permit applicable storm event

**Lawrence Berkeley National Laboratory
Environmental Services Group, Storm Water Monitoring Program**

Observer: **John Jelinski & Robert Fox**
Observation Month: **March 25, 2014**

Monthly Visual Observations of Storm Water Discharges (SWD) - Monthly Form

Date & Time	Site visited	General Conditions & Observations (e.g. weather, housecleaning)	Specific Visual Observations (enter Yes or No for each; use notes to explain)							Comments	
			Runoff	Color	Foatables	Odor	Sheen	Stain	Turbidity		Other
March 25, 2014 14:45	N.F. Strawberry Crk Drainage Area	Cloudy, drizzling. BMP in good condition	Yes	No	No	No	No	No	YES	YES	Moderate flow in Creek. Presence of foam & very slight turbidity in Creek.
March 25, 2014 15:20	Chicken Crk Drainage Area	Cloudy, drizzling. BMP in good condition	Yes	No	No	No	No	No	YES	YES	Light to moderate flow in Creek. Presence of foam & very slight turbidity in Creek.
March 25, 2014 15:15	Winter & Pineapple Crk Discharge Areas	Cloudy, drizzling. BMP in good condition	Yes	No	No	No	No	No	NA	NA	Trickle to light flow in East Canyon Outfall.
March 25, 2014 15:00	Winter & Pineapple Crk Influent Areas	Cloudy, drizzling. BMP in good condition	No	NA	NA	NA	NA	NA	NA	NA	NA - No creek flow.
March 25, 2014 14:45	MP 1 Sampling Sites	Cloudy, drizzling. BMP in good condition	Yes	No	Yes	No	No	No	NA	NA	Light flow. Approx 2ft X 4ft oil stain in P-lot next to containers causing noticeable oil slick into storm drains
March 25, 2014 14:30	MP 2 Sampling Sites	Cloudy, drizzling. BMP in good condition	Yes	No	Yes	No	No	No	NA	NA	Light flow. Small amount of floatables & light oil sheen flowing into storm drain.
March 25, 2014 14:55	MP 3 Sampling Sites	Cloudy, drizzling. BMP in ok condition. Presence of metal chips in yard (B77 side).	Yes	No	Yes	No	No	No	NA	NA	light flow. A few floatables in trench. No oil sheen but lots of metal chips & debris caught on filter fabric
March 25, 2014 15:05	MP 4 Sampling Sites	Cloudy, drizzling. BMP in good condition	Yes	No	No	No	No	No	NA	NA	Light flow.
March 25, 2014 14:10	MP 5 Sampling Sites	Cloudy, drizzling. BMP in good condition	Yes	No	No	No	No	No	NA	NA	Light flow.
March 25, 2014 14:40	MP 6 Sampling Sites	Cloudy, drizzling. BMP in good condition	Yes	No	No	No	No	No	NA	NA	Light flow.

* = little but not significant amount observed

3/26/2014

3/25/2014

Approximate Start of Rain Event: **March 25, 2014 12:00 PM**
Approximate Start of Significant Discharge: **March 25, 2014 2:20 PM**

X
Tim Bauters
LBNL Stormwater Program Manager
Signed by: Tim W. Bauters

X
John Jelinski
LBNL Stormwater Inspection Technician
Signed by: John A. Jelinski

Additional Comments:
This was a permit applicable storm event

**Lawrence Berkeley National Laboratory
Environmental Services Group , Storm Water Monitoring Program**

Observer: **John Jelinski**
Observation Month: **April 25, 2014**

Monthly Visual Observations of Storm Water Discharges (SWD) - Monthly Form

Date & Time	Site visited	General Conditions & Observations (e.g. weather, housecleaning)	Specific Visual Observations (enter Yes or No for each; use notes to explain)							Comments	
			Runoff	Color	Floatables	Odor	Sheen	Stain	Turbidity		Other
April 25, 2014 08:40	N.F. Strawberry Crk Drainage Area	Cloudy & raining. BMP in good condition.	Yes	No	No	No	No	No	No	Yes	Low flow in Creek. Small amount of foam sen in creek most likely DOM.
April 25, 2014 08:15	Chicken Crk Drainage Area	Cloudy & raining. BMP in good condition.	Yes	No	No	No	No	No	No	Yes	Low flow in Creek. Small amount of foam sen in creek most likely DOM.
April 25, 2014 07:50	Winter & Pineapple Crk Discharge Areas	Cloudy & raining. BMP in good condition.	Yes	No	No	No	No	No	No	NA	Low flow in East Canyon Outfall.
April 25, 2014 08:10	Winter & Pineapple Crk Influent Areas	Cloudy & raining. BMP in good condition.	No	NA	NA	No	NA	NA	NA	NA	NA - No creek flow.
April 25, 2014 08:35	MP 1 Sampling Sites	Cloudy & raining. BMP in good condition.	Yes	No	No	No	Yes	No	No	NA	Small amount of shen present in discharge.
April 25, 2014 08:30	MP 2 Sampling Sites	Cloudy & raining. BMP in por condition. See notes below.	Yes	No	No	No	Yes	No	No	NA	Small amount of shen present in discharge.
April 25, 2014 08:20	MP 3 Sampling Sites	Cloudy & raining. BMP in ok condition. Metal chips present on B79 side of yard 4/22/14. See notes below.	Yes	No	No	No	No	No	No	NA	Discharge clear.
April 25, 2014 08:00	MP 4 Sampling Sites	Cloudy & raining. BMP in good condition.	Yes	No	No	No	No	No	No	NA	Discharge clear.
April 25, 2014 08:05	MP 5 Sampling Sites	Cloudy & raining. BMP in good condition.	Yes	No	No	No	No	No	No	NA	Discharge clear.
April 25, 2014 08:25	MP 6 Sampling Sites	Cloudy & raining. BMP in good condition.	Yes	No	No	No	No	No	No	NA	Discharge clear.

4/30/2014 4/25/2014

Tim Bauters
 LBNL Stormwater Program Manager
 Signed by: Tim W. Bauters

John Jelinski
 LBNL Stormwater Inspection Technician
 Signed by: John A. Jelinski

Approximate Start of Rain Event
April 25, 2014 05:30-06:30 AM

Approximate Start of Significant Discharge
April 24, 2014 07:30-08:00 AM

Additional Comments

This was a permit applicable storm event.

At MP2, B76 fueling area , dirt/debris buildup in 1st catch basin which is overflowing into final catch basin. Needs to be cleaned.

At MP3, B77-79 yard, dirt/debris buildup on filter fabric in trench & small amount of discharge is flowing over, not thru, fabric.

**Lawrence Berkeley National Laboratory
Environmental Services Group, Storm Water Monitoring Program**

Observer: **John Jelinski**
Observation Month: **May 9, 2014**

Monthly Visual Observations of Storm Water Discharges (SWD) - Monthly Form

Date & Time	Site visited	General Conditions & Observations (e.g. weather, housecleaning)	Specific Visual Observations (enter Yes or No for each; use notes to explain)							Comments	
			Runoff	Color	Floatables	Odor	Sheen	Stain	Turbidity		Other
May 9, 2014 09:30	N.F. Strawberry Crk Drainage Area	Partly Cloudy, no rain. BMP's in good condition.	Yes	No	No	No	No	No	No	No	Low flow from creek.
May 9, 2014 08:50	Chicken Crk Drainage Area	Partly Cloudy, no rain. BMP's in good condition.	Yes	No	No	No	No	No	No	No	Low flow from creek.
May 9, 2014 08:30	Winter & Pineapple Crk Discharge Areas	Partly Cloudy, no rain. BMP's in good condition.	Yes	No	No	No	No	No	No	No	Trickle flow from creek.
May 9, 2014 08:45	Winter & Pineapple Crk Influent Areas	Partly Cloudy, no rain. BMP's in good condition.	Yes	No	No	No	No	No	No	No	Trickle flow from creek.
May 9, 2014 09:20	MP 1 Sampling Sites	Partly Cloudy, no rain. BMP's in good condition.	No	NA	NA	NA	NA	No	No	NA	Small amount of dirt/debris in filter bags, however, should not affect function.
May 9, 2014 09:05	MP 2 Sampling Sites	Partly Cloudy, no rain. BMP's in good condition.	No	NA	NA	NA	NA	No	No	NA	Filter & absorbent in catch basins filled with dirt/debris. Require replacement & cleaning.
May 9, 2014 09:00	MP 3 Sampling Sites	Partly Cloudy, no rain. BMP's in good condition.	No	NA	NA	NA	NA	No	No	NA	Red metal bin at south side of yard & trash bin @ north/west end of yard switches. Area under metal bins swept & look good.
May 9, 2014 08:35	MP 4 Sampling Sites	Partly Cloudy, no rain. BMP's in good condition.	No	NA	NA	NA	NA	No	No	NA	NA
May 9, 2014 08:40	MP 5 Sampling Sites	Partly Cloudy, no rain. BMP's in good condition.	No	NA	NA	NA	NA	No	No	NA	NA
May 9, 2014 09:10	MP 6 Sampling Sites	Partly Cloudy, no rain. BMP's in good condition.	No	NA	NA	NA	NA	No	No	NA	NA

* = little but not significant amount observed

5/19/2014
5/9/2014

X Tim Bauters
LENL Stormwater Program Manager
Signed by: Tim W. Bauters

X John Jelinski
LENL Stormwater Inspection Technician
Signed by: John A. Jelinski

Approximate Start of Rain Event: **May 08, 2014 8:30 PM**

Approximate Start of Significant Discharge: **NA**

Additional Comments

Not a permit applicable storm event, however, no permit applicable storm events occurred during the month of May, 2014.

Significant improvement at MP3 from prior inspection on 05/07/2014. Area under metal bins swept with no visible chips, south end metal bins moved into yard. South end storm drain inlet still requires cleaning.

**Lawrence Berkeley National Laboratory
Environmental Services Group, Storm Water Monitoring Program**

Observer: **John Jelinski**
Quarterly Period: **July-September 2013**

Quarterly Visual Observations of Non-Storm Water Discharges (NSWD) - General Form

Date & Time	Site visited	General Conditions & Observations (e.g. weather, housecleaning)	NSWD Observed (Y or N)*	Authorized Type (Y, N, or NA)	Notes, Including Indications of Prior Unauthorized NSWD and Any Actions Taken
August 22, 2013 12:00	North Fork Strawberry Creek Drainage Area	Sunny & Clear. BMP's in good condition.	Yes	Authorized	NF Strawberry Creek lite flow
August 22, 2013 10:50	Chicken Creek Drainage Area	Sunny & Clear. BMP's in good condition.	Yes	Authorized	Chicken Creek lite flow
August 22, 2013 10:55	East Canyon & Winters Crk Drainage Areas	Sunny & Clear. BMP's in good condition.	Yes	Authorized	Winter Creek influent no flow. East Canyon discharge no flow but puddles of water were present.
August 22, 2013 10:45-12:10	MP1-MP6 Sampling Sites	Sunny & Clear. BMP's in ok condition. Filters @ MP1 require cleaning & area requires sweeping. Open metal bins and metal shavings & MP3	Yes	Authorized	MP5 authorized discharge of water collected on 2nd containment pallet
August 22, 2013 11:55	Area I (Bids 65, 88)	Sunny & Clear. BMP's in good condition.	No	NA	NA
August 22, 2013 12:10	Area II (Bids 50, 54, 70, 70A)	Sunny & Clear. BMP's in good condition.	Yes	Authorized	Cooling system condensate B70
August 22, 2013 11:45	Area III (Bids 51, 55, 64, 90)	Sunny & Clear. BMP's in ok condition. Open trash bin & B90	Yes	Authorized	B85, 55A & B64 hydraugers, cooling system condensate
August 22, 2013 11:25	Area IV (Bid 71)	Sunny & Clear. BMP's in good condition	No	NA	NA
August 22, 2013 11:15	Area V (Bids 2, 46, 58)	Sunny & Clear. BMP's require attention. See "Additional Comments" note below	Yes	Authorized	Condensate from cooling system @ B2
August 22, 2013 11:05	Area VI (Bids 6, 7, 10, 17, 37, 80)	Sunny & Clear. BMP's in ok condition - 2 open trash bins at B6	Yes	Authorized	B37 hydrauger
August 22, 2013 11:10	Area VII (Bids 4, 5, 14, 16, 45, 48, 52)	Sunny & Clear. BMP's in good condition.	No	NA	NA
August 22, 2013 10:45	Area VIII (Bids 69, 75, 76)	Sunny & Clear. BMP's in good condition.	No	NA	NA
August 22, 2013 11:00	Area IX (Bid 77-79)	Sunny & Clear. BMP's in ok condition. Lots of metal chips on road and 2 open metal bins.	Yes	Authorized	B77 hydraugers
August 22, 2013 10:50	Area X (Bids 31, 62, 66, 67, 72)	Sunny & Clear. BMP's in ok condition. Open trash bin @ B67, overfilled metal bins @ B62.	Yes	Authorized	B31 hydraugers AC Condensate from cooling system @ B77
August 22, 2013 10:55	Area XI (Bids 74, 83, 84, 85)	Sunny & Clear. BMP's in ok condition. Borrow Pit area has some missing tarps & housekeeping issues.	Yes	Authorized	B84 roadside hydrauger, B74 hydrauger

Additional Comments: At B58, several pieces of equipment with exposed oiled parts were placed outside uncovered next to the storm drain. There were also housekeeping issues (trash under stairs, overfilled metal bins, open trash bins)

8/26/2013
8/22/2013

Tm Bauters
LBNL Stormwater Program Manager
Signed by: Tm W. Bauters

John Jelinski
LBNL Stormwater Inspection Technician
Signed by: John Jelinski

Currently Authorized NSWDs: Atmospheric condensates, fire hydrant and sprinkler flushing, fire suppression runoff, groundwater reaching the surface, landscape watering, low conductivity cooling water, safety shower/eyewash testing and operation, utility vault pump-outs, and water line breaks.

*If NSWD was observed, complete appropriate *Authorized* or *Unauthorized* details form.

**Lawrence Berkeley National Laboratory
Environmental Services Group, Storm Water Monitoring Program**

Observer: **John Jelinski**
Quarterly Period: **October-December 2013**

Quarterly Visual Observations of AUTHORIZED Non-Storm Water Discharges (NSWD) - Detailed Form

Date (See general form for time)	Name of Authorized NSWD (see note below table)	Source and Location Of Authorized NSWD (use extra rows if necessary)	Specific Visual Observations (enter Y or N for each; use notes to explain)							Notes, Including Corrective actions Taken	
			Color	Floatables	Odor	Sheen	Stain	Turbidity	Other		
November 13, 2013 11:10 - 12:30	Hydraugers Hillside Seepage	Groundwater Buildings 31 37 55A 64 74 77 84	Source	N	N	N	N	N	N	NA	NA
			Area	N	N	N	N	N	N	NA	
November 13, 2013 11:10 - 12:30	Creek Flow	Groundwater NF Strawberry & Chicken Creeks	Source	N	N	N	N	N	N	N	NA
			Area	N	N	N	N	N	N	NA	
November 13, 2013 11:10 - 12:30	Cooling System Condensate	Atmospheric Condensate Buildings 2	Source	N	N	N	N	N	N	N	NA
			Area	N	N	N	N	N	N	NA	
			Source								
			Area								
			Source								
			Area								
			Source								
			Area								
			Source								
			Area								
			Source								
			Area								

Additional Comments

11/13/2013

11/13/2013

X

John Jelinski
LENL Stormwater Inspection Technician
Signed by: John Jelinski

X

Tim Bauters
LENL Stormwater Program Manager
Signed by: Tim W. Bauters

Currently Authorized NSWDs: Atmospheric condensates, fire hydrant and sprinkler flushing, fire suppression runoff, groundwater reaching the surface, landscape watering, low conductivity cooling water, safety shower/eyewash testing and operation, utility vault pump-outs, and water line breaks.

**Lawrence Berkeley National Laboratory
Environmental Services Group, Storm Water Monitoring Program**

Observer: **John Jelinski**
Quarterly Period: **October-December 2013**

Quarterly Visual Observations of Non-Storm Water Discharges (NSWD) - General Form

Date & Time	Site visited	General Conditions & Observations (e.g. weather, housecleaning)	NSWD Observed (Y or N)*	Authorized Type (Y, N, or NA)	Notes, Including Indications of Prior Unauthorized NSWD and Any Actions Taken
November 13, 2013 11:35	North Fork Strawberry Creek Drainage Area	Sunny & Clear. BMP's in good condition.	Yes	Authorized	NF Strawberry Creek trickle flow
November 13, 2013 12:15	Chicken Creek Drainage Area	Sunny & Clear. BMP's in good condition.	Yes	Authorized	Chicken Creek trickle flow
November 13, 2013 12:10	East Canyon & Winters Crk Drainage Areas	Sunny & Clear. BMP's in good condition.	No	NA	Winter Creek Inflow & East Canyon outfall no flow.
November 13, 2013 11:10 - 12:30	MP1-MP6 Sampling Sites	Sunny & Clear. BMP's in good condition.	No	NA	NA
November 13, 2013 11:40	Area I (Bids 65, 88)	Sunny & Clear. BMP's in good condition.	No	NA	NA
November 13, 2013 11:20	Area II (Bids 50, 54, 70, 70A)	Sunny & Clear. BMP's in poor condition. Open bins, trash in loading dock & general housekeeping issues	No	NA	CERC construction area under separate Construction Permit.
November 13, 2013 11:30	Area III (Bids 51, 55, 64, 90)	Sunny & Clear. BMP's in good condition.	Yes	Authorized	B55A & B64 hydraugers
November 13, 2013 11:55	Area IV (Bid 71)	Sunny & Clear. BMP's in good condition	No	NA	NA
November 13, 2013 11:50	Area V (Bids 2, 46, 58)	Sunny & Clear. BMP's in good condition.	Yes	Authorized	Condensate from cooling system @ B2
November 13, 2013 11:45	Area VI (Bids 6, 7, 10, 17, 37, 80)	Sunny & Clear. BMP's in good condition.	Yes	Authorized	B37 hydrauger B25 construction area under separate Construction Permit.
November 13, 2013 12:00	Area VII (Bids 4, 5, 14, 16, 45, 48, 52)	Sunny & Clear. BMP's in good condition.	No	NA	NA
November 13, 2013 12:30	Area VIII (Bids 69, 75, 76)	Sunny & Clear. BMP's in good condition.	No	NA	NA
November 13, 2013 12:05	Area IX (Bid 77-79)	Sunny & Clear. BMP's in ok condition. some metal chips on road and 1 open metal bin.	Yes	Authorized	B77 hydraugers
November 13, 2013 12:15	Area X (Bids 31, 62, 66, 67, 72)	Sunny & Clear. BMP's in good condition.	Yes	Authorized	B31 hydraugers
November 13, 2013 12:10	Area XI (Bids 74, 83, 84, 85)	Sunny & Clear. BMP's in ok condition. Borrow Pit area has some missing tarps & minor housekeeping issues.	Yes	Authorized	B84 roadside hydrauger, B74 hydrauger

Additional Comments

11/13/2013 X
 11/13/2013 X
 Tim Baubers
 LBNL Stormwater Program Manager
 Signed by: Tim W. Baubers
 John Jelinski
 LBNL Stormwater Inspection Technician
 Signed by: John Jelinski

Currently Authorized NSWDs : Atmospheric condensates, fire hydrant and sprinkler flushing, fire suppression runoff, groundwater reaching the surface, landscape watering, low conductivity cooling water, safety shower/eyewash testing and operation, utility vault pump-outs, and water line breaks.

*If NSWD was observed, complete appropriate *Authorized* or *Unauthorized* details form.

**Lawrence Berkeley National Laboratory
Environmental Services Group, Storm Water Monitoring Program**

Observer: **John Jelinski**
Quarterly Period: **January-March 2014**

Quarterly Visual Observations of UNAUTHORIZED Non-Storm Water Discharges (NSWD) - Detailed Form

Date (See general form for time)	Name of Unauthorized NSWD (see note below table)	Source and Location Of Unauthorized NSWD (use extra rows if necessary)	Specific Visual Observations (enter Y or N for each; use notes to explain)							Notes, Including Copies of Photographs	
			Color	Floatables	Odor	Sheen	Stain	Turbidity	Other		
February 25, 2014	No Unauthorized discharges observed	NA	Source NA	Area NA	Source NA	Area NA	Source NA	Area NA	Source NA	Area NA	NA
			Source	Area	Source	Area	Source	Area	Source	Area	NA
			Source	Area	Source	Area	Source	Area	Source	Area	NA
			Source	Area	Source	Area	Source	Area	Source	Area	NA
			Source	Area	Source	Area	Source	Area	Source	Area	NA
			Source	Area	Source	Area	Source	Area	Source	Area	NA
			Source	Area	Source	Area	Source	Area	Source	Area	NA
			Source	Area	Source	Area	Source	Area	Source	Area	NA
			Source	Area	Source	Area	Source	Area	Source	Area	NA
			Source	Area	Source	Area	Source	Area	Source	Area	NA
			Source	Area	Source	Area	Source	Area	Source	Area	NA
			Source	Area	Source	Area	Source	Area	Source	Area	NA
			Source	Area	Source	Area	Source	Area	Source	Area	NA

NO UNAUTHORIZED NSWDs WERE OBSERVED

Additional Comments: _____

_____ 2/26/2014

_____ 2/26/2014

Tim Bauters
 LBNL Stormwater Program Manager
 Signed by: Tim W. Bauters

John Jelinski
 LBNL Stormwater Inspection Technician
 Signed by: John Jelinski

Examples of Unauthorized NSWDs : Cooling tower spray, sanitary sewer breaks, vehicle washing, and small maintenance and repair work cleanup.

**Lawrence Berkeley National Laboratory
Environmental Services Group, Storm Water Monitoring Program**

Observer: **John Jelinski**
Quarterly Period: **January-March 2014**

Quarterly Visual Observations of AUTHORIZED Non-Storm Water Discharges (NSWD) - Detailed Form

Date (See general form for time)	Name of Authorized NSWD (see note below table)	Source and Location Of Authorized NSWD (use extra rows if necessary)	Specific Visual Observations (enter Y or N for each; use notes to explain)							Notes, Including Corrective actions Taken	
			Color	Floatables	Odor	Sheen	Stain	Turbidity	Other		
Ongoing 02/5/2014, 02/20/2014	B75 Water Tower Discharge	Fire Suppression Systems	Source	N	N	N	N	N	N	NA	Note: Ongoing leaks from the B75 Water tower. Dechlor tablets are in place
			Area	N	N	N	N	N	N	NA	
February 25, 2014 11:10 to 12:05	Hydraugers Hillside Seepage	Groundwater Buildings 31 37 46 55A 64 74 77 84	Source	N	N	N	N	N	N	NA	NA
			Area	N	N	N	N	N	N	NA	
February 25, 2014 11:10 to 12:05	Creek Flow	Groundwater NF Strawberry Crk, Chicken Crk, East Canyon Outfall	Source	N	N	N	N	N	N	NA	NA
			Area	N	N	N	N	N	N	NA	
			Source								
			Area								
			Source								
			Area								
			Source								
			Area								
			Source								
			Area								
			Source								
			Area								
			Source								
			Area								

Additional Comments

2/26/2014

X

X

2/26/2014

Tim Bauters
LBNL Stormwater Program Manager
Signed by: Tim W. Bauters

John Jelinski
LBNL Stormwater Inspection Technician
Signed by: John Jelinski

Currently Authorized NSWDs : Atmospheric condensates, fire hydrant and sprinkler flushing, fire suppression runoff, groundwater reaching the surface, landscape watering, low conductivity cooling water, safety shower/eyewash testing and operation, utility vault pump-outs, and water line breaks.

**Lawrence Berkeley National Laboratory
Environmental Services Group, Storm Water Monitoring Program**

Observer: **John Jelinski**
Quarterly Period: **January-March 2014**

Quarterly Visual Observations of Non-Storm Water Discharges (NSWD) - General Form

Date & Time	Site visited	General Conditions & Observations (e.g. weather, housecleaning)	NSWD Observed (Y or N)*	Authorized Type (Y, N, or NA)	Notes, Including Indications of Prior Unauthorized NSWD and Any Actions Taken
February 25, 2014 11:55	North Fork Strawberry Creek Drainage Area	Sunny with a few clouds. BMP's in good condition.	Yes	Authorized	NF Strawberry Creek trickle flow
February 25, 2014 11:25	Chicken Creek Drainage Area	Sunny with a few clouds. BMP's in good condition.	Yes	Authorized	Chicken Creek trickle flow
February 25, 2014 11:15 to 11:20	East Canyon & Winters Crk Drainage Areas	Sunny with a few clouds. BMP's in good condition.	Yes	NA	Winter Creek Inflow had no flow, East Canyon outfall had trickle flow.
February 25, 2014 11:10 to 12:05	MP1-MP6 Sampling Sites	Sunny with a few clouds. BMP's in good condition.	No	NA	NA
February 25, 2014 12:00	Area I (Bids 65, 88)	Sunny with a few clouds. BMP's in good condition.	No	NA	NA
February 25, 2014 12:05	Area II (Bids 50, 54, 70, 70A)	Sunny with a few clouds. BMP's in ok condition. Cardboard bins open @ Cafeteria	No	NA	CERC construction area under separate Construction Permit.
February 25, 2014 11:45	Area III (Bids 51, 55, 64, 90)	Sunny with a few clouds. BMP's in good condition.	Yes	Authorized	B55A & B64 hydraugers
February 25, 2014 11:40	Area IV (Bid 71)	Sunny with a few clouds. BMP's in good condition.	No	NA	NA
February 25, 2014 11:50	Area V (Bids 2, 46, 58)	Sunny with a few clouds. BMP's in good condition.	Yes	Authorized	B46 hydraugers
February 25, 2014 11:35	Area VI (Bids 6, 7, 10, 17, 37, 80)	Sunny with a few clouds. BMP's in good condition.	Yes	Authorized	B37 hydrauger B25 construction area under separate Construction Permit.
February 25, 2014 11:30	Area VII (Bids 4, 5, 14, 16, 45, 48, 52)	Sunny with a few clouds. BMP's in good condition.	No	NA	NA
February 25, 2014 11:10	Area VIII (Bids 69, 75, 76)	Sunny with a few clouds. BMP's in good condition.	No	NA	NA
February 25, 2014 11:15	Area IX (Bid 77-79)	Sunny with a few clouds. BMP's in ok condition. Both metal bins open.	Yes	Authorized	B77 hydraugers
February 25, 2014 11:25	Area X (Bids 31, 62, 66, 67, 72)	Sunny with a few clouds. BMP's in good condition.	Yes	Authorized	B31 hydraugers
February 25, 2014 11:20	Area XI (Bids 74, 83, 84, 85)	Sunny with a few clouds. BMP's in good condition.	Yes	Authorized	B84 roadside hydrauger, B74 hydrauger

Additional Comments

2/26/2014

X

2/26/2014

X

John Jelinski
LBNL Stormwater Inspection Technician
Signed by: John Jelinski

Tim Bauters
LBNL Stormwater Program Manager
Signed by: Tim W. Bauters

Currently Authorized NSWDs : Atmospheric condensates, fire hydrant and sprinkler flushing, fire suppression runoff, groundwater reaching the surface, landscape watering, low conductivity cooling water, safety shower/eyewash testing and operation, utility vault pump-outs, and water line breaks.

*If NSWD was observed, complete appropriate *Authorized* or *Unauthorized* details form.

**Lawrence Berkeley National Laboratory
Environmental Services Group, Storm Water Monitoring Program**

Observer: **John Jelinski & Brendan Mulholland**
Quarterly Period: **April to June 2014**

Quarterly Visual Observations of UNAUTHORIZED Non-Storm Water Discharges (NSWD) - Detailed Form

Date (See general form for time)	Name of Unauthorized NSWD (see note below table)	Source and Location Of Unauthorized NSWD (use extra rows if necessary)	Specific Visual Observations (enter Y or N for each; use notes to explain)							Notes, Including Copies of Photographs
			Color	Foatbles	Odor	Sheen	Stain	Turbidity	Other	
May 5, 2014 10:30-13:00	No Unauthorized discharges observed	NA	Source NA Area NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA	NA
			Source Area							
			Source Area							
			Source Area							
			Source Area							
			Source Area							
			Source Area							
			Source Area							
			Source Area							
			Source Area							

NO UNAUTHORIZED NSWDs WERE OBSERVED

5/7/2014
X
John Jelinski
LBNL Stormwater Inspection Technician
Signed by: John A. Jelinski

5/7/2014
X
Tim Bauters
LBNL Stormwater Program Manager
Signed by: Tim W. Bauters

Additional Comments
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Examples of Unauthorized NSWDs : Cooling tower spray, sanitary sewer breaks, vehicle washing, and small maintenance and repair work cleanup.

**Lawrence Berkeley National Laboratory
Environmental Services Group, Storm Water Monitoring Program**

Observer:
Quarterly Period:

John Jelinski & Brendan Mulholland
April to June 2014

Quarterly Visual Observations of Non-Storm Water Discharges (NSWD) - General Form

Date & Time	Site visited	General Conditions & Observations (e.g. weather, housecleaning)	NSWD Observed (Y or N)*	Authorized Type (Y, N, or NA)	Notes, Including Indications of Prior Unauthorized NSWD and Any Actions Taken
May 5, 2014 12:45	North Fork Strawberry Creek Drainage Area	Sunny with a few clouds. BMP's in good condition.	Yes	Authorized	NF Strawberry Creek low flow
May 5, 2014 11:35	Chicken Creek Drainage Area	Sunny with a few clouds. BMP's in good condition.	Yes	Authorized	Chicken Creek low flow
May 5, 2014 11:15	East Canyon & Winters Crk Drainage Areas	Sunny with a few clouds. BMP's in good condition.	Yes	NA	Winter Creek Influent had trickle flow. East Canyon outfall had no flow.
May 5, 2014 10:30-13:00	MP1-MP6 Sampling Sites	Sunny with a few clouds. ok good condition. Main yard & trench look good, however, south end of yard has metal chips requires cleaning.	No	NA	MP2- filter fabric & absorbent needs replacing. Containment basins should be cleaned out. MP3- South STW DI inlet did not get cleaned/replaced during the 4/24/2014 pressure washing. Metal chips on south side of yard.
May 5, 2014 12:40	Area I (Bids 65, 88)	Sunny with a few clouds. BMP's in good condition.	No	NA	NA CEIC construction area under separate Construction Permit.
May 5, 2014 13:00	Area II (Bids 50, 54, 70, 70A)	Sunny with a few clouds. BMP's in ok condition. Open bins, stains & housekeeping issues @ B54 Cafeteria LD	No	NA	Housekeeping issues at B54 Cafeteria Two overstuffed trash bins at 70-70A LD
May 5, 2014 12:20	Area III (Bids 51, 55, 64, 90)	Sunny with a few clouds. BMP's in ok condition. Open scrap dumpster @ B90	Yes	Authorized	B55A & B64 hydraugers, B55 AC condensate Presence of dirt/cement pile & Blackberry P-loc (at curve)
May 5, 2014 12:15	Area IV (Bid 71)	Sunny with a few clouds. BMP's in good condition.	No	NA	NA
May 5, 2014 12:05	Area V (Bids 2, 46, 58)	Sunny with a few clouds. BMP's in ok condition. An open trash bin with "2-3" of water @ B2.	Yes	Authorized	B46 hydrauger & B2 AC condensate
May 5, 2014 12:00	Area VI (Bids 6, 7, 10, 17, 37, 80)	Sunny with a few clouds. BMP's in good condition.	Yes	Authorized	B37 hydrauger, B7 AC condensate, Fire suppression testing @ B17 B25 construction area under separate Construction Permit.
May 5, 2014 11:55	Area VII (Bids 4, 5, 14, 16, 45, 48, 52)	Sunny with a few clouds. BMP's in good condition. Only B48 Fire Station area was inspected. All other areas under SEIC construction permit.	No	NA	B48 Fire station in good shape. B25 construction area under separate Construction Permit.
May 5, 2014 10:30	Area VIII (Bids 69, 75, 76)	Sunny with a few clouds. BMP's in ok condition. 1 open trash bin @ B76. ERP drum storage area could use some housecleaning & labelling.	No	NA	A number of drums in the ERP drum storage area did not appear to be labelled.
May 5, 2014 10:45	Area IX (Bid 77-79)	Sunny with a few clouds. BMP's in ok condition. North end of yard in good shape but metal chips present at south end of yard.	Yes	Authorized	B77 hydrauger STW DI @ south end of yard not cleaned during 4/24/14 pressure washing.
May 5, 2014 11:00	Area X (Bids 31, 62, 66, 67, 72)	Sunny with a few clouds. BMP's in good condition. Overstuffed trash bins @ B62	Yes	Authorized	B31 hydraugers & B72 AC condensate
May 5, 2014 11:20	Area XI (Bids 74, 83, 84, 85)	Sunny with a few clouds. BMP's in good condition.	Yes	Authorized	B84 roadside hydrauger, B74 hydrauger Asphalt pile near water tower uncovered

Additional Comments: Note: Fire Department/Facilities should notify ESG prior to Fire suppression testing.
 Follow-up for MP3 required-South end STW DI needs to be cleaned with filter media replaced.
 Follow-up for MP-2 required-Verify basins were cleaned & filter media replaced.
 Follow-up required for ERP drum storage housekeeping.
 Follow-up required for open dumpster @ B90 & housekeeping issues, and B54 cafeteria.

5/7/2014

 John Jelinski
 LBNL Stormwater Inspection Technician
 Signed by: John A. Jelinski

5/7/2014

 Tim Bauters
 LBNL Stormwater Program Manager
 Signed by: Tim W. Bauters

Currently Authorized NSWDs: Atmospheric condensates, fire hydrant and sprinkler flushing, fire suppression runoff, groundwater runoff, landscape watering, low conductivity cooling water, safety shower/eyewash testing and operation, utility vault pump-outs, and water line breaks.
 *If NSWD was observed, complete appropriate *Authorized* or *Unauthorized* details form.

**Lawrence Berkeley National Laboratory
Environmental Services Group, Storm Water Monitoring Program**

Inspected By: **J. Jelinski, T. Bauters, B. Mulholland**
May 7, 2014

Annual Comprehensive Site Compliance Evaluation Log

Inspection Date	Location	Inspection Criteria	Comments	Follow-Up Required
May 7, 2014	Area I (Bids 65 88)	General area (trash & metal bins)	At B88 LD, water in metal bins, open drum with water, exposed metal pipe behind N tank	Yes
		Cooling towers (88 roof)	Good	
		AST (88 roof-generator)	NA (runs on propane no 2nd containment required)	
		B88 Bank (2nd containment)	Discharge containment drum below 88-Bank needs to be pumped	Yes
		Parking area	Good	
May 7, 2014	Area II (Bids 50 54 70 70A)	Erosion control measures	Good	
		General area (trash & metal bins)	Housekeeping issues-open trash bins & oil spills at B54 LD	Yes
		Cooling towers (70, 50A-B)	Good	
		AST (50 gen, 50-70-70A AST)	B50 generator & 50-70-70A AST on rooftop, inspection not required	
		FTU (70A)	Good	
May 7, 2014	Area III (Bids 51 55 64 90)	B50, B70, B70A Banks (2nd containment)	Good	
		Parking area	Good	
		Erosion control measures	Good	
		Cafeteria loading dock	Major housekeeping issues-open trash bins, presence of water stains into storm drain	Yes
		General area (trash & metal bins)	Note-large portion of area II is under separate CRT construction permit	
May 7, 2014	Area IV (Bid 71)	Cooling towers (64)	housekeeping issue-open scrap bin @ B90	Yes
		AST (64-AST, 90-gen)	Good	
		WAA (51)	Good	
		GWTS (51FT-51MGR-51L)	Good	
		B90 Bank (2nd containment)	Good	
May 7, 2014	Area V (Bids 2 46 58)	Parking area	Good	
		Erosion control measures	Good	
		General area (trash & metal bins)	Note-large portion of area III is under separate CRT construction permit	
		AST (2, 58)	Good	
		B46 & B58 Banks (2nd containment)	Good	
May 7, 2014	Area VI (Bids 6 7 10 17 37 80)	Parking area	B58 Bank not checked (special key needed to enter)	
		Erosion control measures	Good	
		General area (trash & metal bins)	Good	
		Cooling tower (37)	Good	
		AST (37)	Good	
May 7, 2014	Area VII (Bids 6 7 10 17 37 80)	GWTS (6, 7)	Good	
		B6L, B6U, B37 Banks (2nd containment)	Good	
		Parking area	Good	
		Erosion control measures	Good	
		General area (trash & metal bins)	Good	

Annual Comprehensive Site Compliance Report Inspection (continued)

Inspection Date	Location	Inspection Criteria	Comments	Follow-Up Required
May 7, 2014	Area VII	General area (trash & metal bins)	X Good	
		GWTS (25, 25A)	X Good	
		Vehicle Washing (48)	X OK - noticed washing of fire truck, however, water was contained inside the firehouse.	
		Parking area	X Good	
May 7, 2014	Area VIII (Bids 69 75 76)	Erosion control measures	X Good	
		General area (trash & metal bins)	X Minor housekeeping issues	
		DSA-AST (75WT, 75gen, 76AST, 75A-76 DSA)	X 2nd containment issue at 75TK diesel AST. 75A DSA needs better labeling.	Yes
		FTU (76 oil-water separator)	X 76 OW separator needs to be cleaned	Yes
May 7, 2014	Area IX (Bid 77 79)	WAA (76)	X Good	
		B69 Sub (2nd containment)	X Good	
		Vehicle Washing (76)	X Good-Currently not being used	
		Parking area	X Good	
May 7, 2014	Area X (Bids 31 62 66 67 72)	Erosion control measures	X Good	
		General area (trash & metal bins)	X Housekeeping issues-metal chips on yard, water under metal bins, exposed metal @B77.	Yes
		Cooling towers (77)	X Good	
		DSA & AST (77-79)	X Good	
May 7, 2014	Area XI (Bids 74 83 84 85)	WAA (77 & 77A)	X Exposed metal in yard next to WAA	Yes
		FTU (77)	X Good	
		Bank 72 (2nd containment)	X Good	
		Parking area	X Good	
May 7, 2014	Area X	Erosion control measures	X Good	
		General area (trash & metal bins)	X Note: Storm drain inlet across from B77-79 needs to be cleaned. Metal bin needs to be moved	Yes
		Cooling tower (62 & 67)	X Good	
		AST (61, 62, 66)	X Good	
May 7, 2014	Area XI	WAA (62)	X Good	
		Parking area	X Good	
		Erosion control measures	X Good	
		General area (trash & metal bins)	X Good	
May 7, 2014	Area XI	Cooling towers (74, 84, 85)	X Good	
		DSA & AST (83, 84, 85-AST, 85-gen, 85-DSA)	X Accumulated Water in B85 UST fill cap	Yes
		WAA (85)	X Good	
		Parking area	X Good	
May 7, 2014	Construction Sites	Erosion control measures	X Good	
		SERC	X Eye wash testing performed on 5/7/14; water entered Storm DI's; however, no Dechlor tablets present. The run-off was contained within the sumps (no discharge to waters of the U.S.) Note: borrow pit tarps loose, air pipe on top of asphalt pumpings-uncovered needs to be covered and	Yes
		CRT	X Inspections performed under separate construction permit	
		UTBF	X Inspections performed under separate construction permit	
May 7, 2014	Parking Lots	General parking lot areas	X Good	

5/7/2014

5/8/2014

X  John Jelinski
Inspector
Signed by: John A. Jelinski

X  Tim Bauters
LENL Stormwater Program Manager
Signed by: Tim W. Bauters