Environmental Functional Area

Water, Air, Monitoring & Analysis

UCRL-AR-144362-12

Lawrence Livermore National Laboratory Experimental Test Site

Annual Storm Water Monitoring Report for Waste Discharge Requirements 97-03-DWQ

July 2012

M. A. Revelli

Lawrence Livermore National Laboratory

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Lawrence Livermore National Laboratory Experimental Test Site Annual Storm Water Monitoring Report for Waste Discharge Requirements 97-03-DWQ

REGIONAL BOARD INFORMATION

REGION 5: CENTRAL VALLEY REGION, SACRAMENTO
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GENERAL INFORMATION

A. Facility ID No.: 5S39I021179

B. Operation:
Lawrence Livermore National Security, LLC

Contact Person
Frances Alston
Lawrence Livermore National Laboratory
P.O. Box 808, L-510
Livermore, CA 94551
(925) 422-3343

C. Facility/Site:
Site 300

Contact Person
John E. Scott
Lawrence Livermore National Laboratory
P.O. Box 808, L-871
Livermore, CA 94551
(925) 423-5026

Facility SIC Codes:

SIC Code 8733, Non-Commercial Research Organizations
SIC Code 9711, National Security
SIC Code 4953, Hazardous Waste Treatment (sector K) and Landfill and Land Application Sites (sector L)

State of California
STATE WATER RESOURCES CONTROL BOARD

2011–2012
ANNUAL REPORT
FOR
STORM WATER DISCHARGES ASSOCIATED
WITH INDUSTRIAL ACTIVITIES

Reporting Period July 1, 2011 through June 30, 2012

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:

A. Facility Information: *Facility WDID No:* **5S39I021179**

Facility Business Name: Lawrence Livermore National Laboratory
Contact Person: John E. Scott - Site Manager
Physical Address: Corral Hollow Road
e-mail: scott14@llnl.gov
City: Tracy State: CA Zip: 95376
Phone: (925) 423-5026

Standard Industrial Classification (SIC) Code(s): Facility SIC Codes 8733, Non-Commercial Research Organizations, and SIC Code 9711, National Security; and Regulated SIC Code 4953 Hazardous Waste Treatment (sector K) and Landfill and Land Application Sites (sector L)

B. Facility Operator Information:

Operator Name: Lawrence Livermore National Security, LLC
Contact Person: Frances Alston
Mailing Address: P.O. Box 808, Mail Stop L-510
e-mail: alston7@llnl.gov
City: LivermoreState: CA Zip: 94551
Phone: (925) 422-3343

C. Facility Billing Information:

Operator Name: Lawrence Livermore National Laboratory
Contact Person: Bruce Schultz
Mailing Address: P.O. Box 808, Mail Stop L-626
e-mail: schultz16@llnl.gov
City: Livermore State: CA Zip: 94551
Phone: (925) 423-3978

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? 0

   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 **(See explanation)**

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

   See explanation.

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**

    ___X___ Other. **Attach explanation – No storm events resulting in runoff occurred during working hours that were preceded by 3 working days without storm water discharges.**

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

    See explanation.

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 **See explanation.**

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

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

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

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

G. MONTHLY WET SEASON VISUAL OBSERVATIONS

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

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

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

LLNL conducted monthly wet season visual observations for storm water discharges (see explanation).

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

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

ANNUAL COMPREHENSIVE SITE COMPLIANCE EVALUATION (ACSCE)

H. ACSCE CHECKLIST

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

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

   - areas where spills and leaks have 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
   - building repair, remodeling, and construction
   - material storage areas
   - vehicle/equipment storage areas
   - truck parking and access areas
   - rooftop equipment areas
   - vehicle fueling/maintenance areas
   - non-storm water discharge generating areas

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

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

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

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

   The following records should be reviewed:

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

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

   The following SWPPP items should be reviewed:

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

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

   The following BMP categories should be reviewed:

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

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

I. ACSCE EVALUATION REPORT

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

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

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

J. ACSCE CERTIFICATION

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

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

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

ATTACHMENT SUMMARY

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

1. Have you attached Forms 1,2,3,4, and 5 or their equivalent? ☒ YES

   (Except Form 1; which is NA, since no samples were collected or analyzed.)

   See Explanations "Section E" – "Sampling and Analysis Results"

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: Frances Alston

Signature: Frances Alston Date: 6/27/12

Title: Director, Environment, Safety & Health

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

Attachment 1

Explanations
Figure 1 and Tables 1, 2 & 3

Explanations

E. SAMPLING AND ANALYSIS RESULTS

1, 2, 4-7, & 10c.

There were no qualifying storm events at Site 300 that generated runoff to be sampled during the 2011-2012 wet season. The average annual rainfall at Site 300 is 10.76 inches (27.30 cm), and the rainfall for the 2011–2012 reporting period was 7.62 inches (19.36 cm). Monthly rainfall totals are presented in **Table 1**. Qualifying storms must generate runoff during Site 300 working hours (Monday thru Thursday between 7:00am and 5:30pm) and be separated from other runoff events by at least 3 working days. Runoff at Site 300 is typically associated with ≥0.25 inches of rainfall in a 24-hour period. Rainfall that did occur during working hours that was sufficient enough to generate runoff was either part of an event that began outside of working hours or was a storm not separated by three days from a previous storm that may have occurred outside of Site 300's operating hours. **Table 2** lists the dates and rainfall totals for all 2011-2012 wet season events that generated ≥0.20 inches of precipitation, as measured at the Site 300 weather station, and a description of the rainfall event. Because no runoff samples were collected, **Form 1** is not included in this year's report.

3. **Figure 1** shows the six storm water sample locations. Two additional sample locations, labeled CARW2 and GEOCRK, represent the off-site receiving water upstream and downstream, respectively, of the Experimental Test Site (Site 300).

11. Because no runoff samples were collected, **Form 1** is not included in this year's report.

F. QUARTERLY VISUAL OBSERVATIONS

2. **Unauthorized Non-Storm Water Discharges**

   b. **Table 3** includes all unplanned non-routine releases that were not observed during visual inspections but are documented as part of the LLNL spill response procedures. Of the fifteen unplanned non-routine releases reported in **Table 3**, only two (9/9/11 & 9/10/11) reached on-site surface waters, but both discharges remained on-site and percolated into ground; neither discharge flowed off-site.

G. MONTHLY WET SEASON VISUAL OBSERVATIONS

1. Monthly wet season visual observations are reported on **Form 4**. Copies of the LLNL Observation Forms are provided in the **Supplement** submitted with this report.

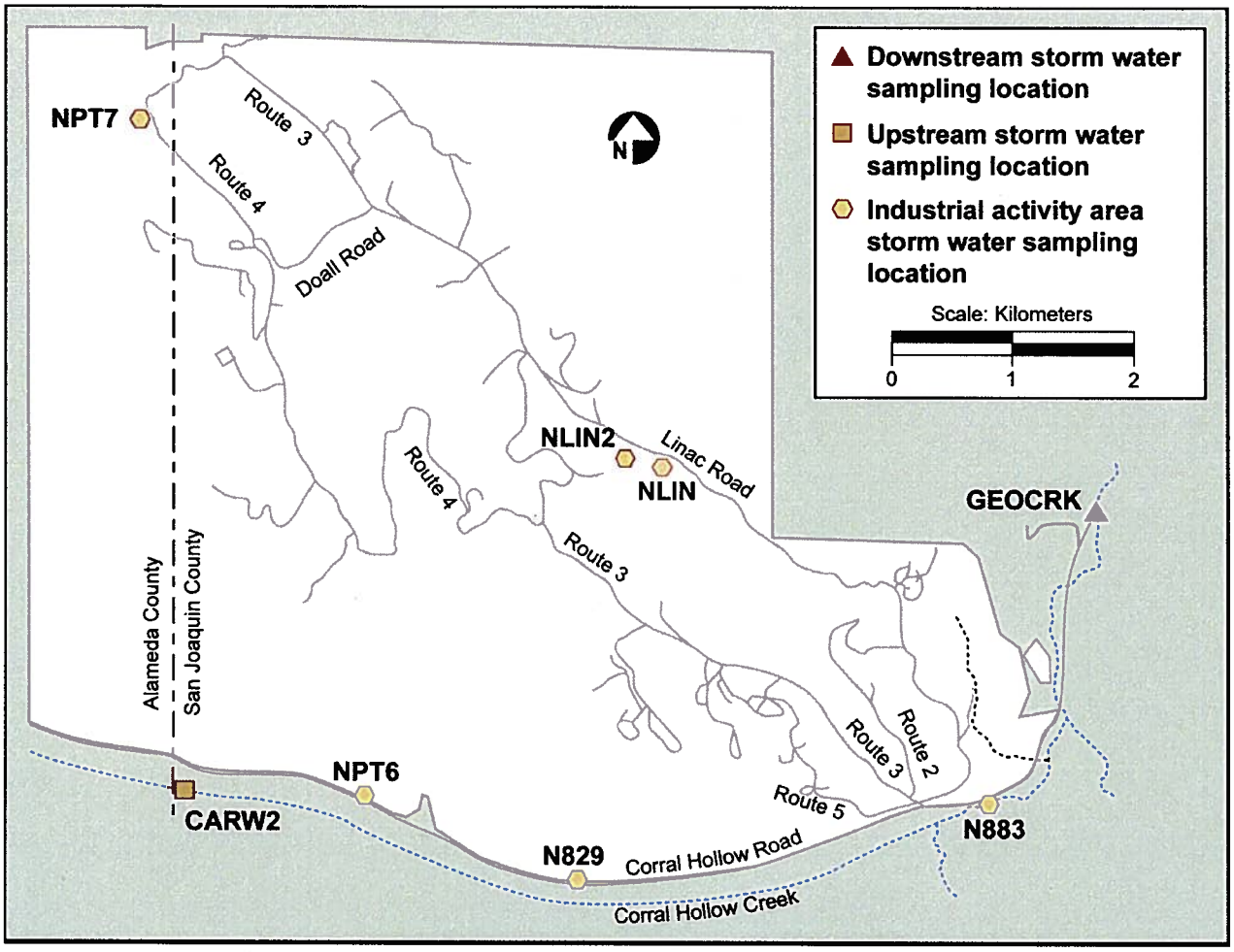

Figure 1. Storm water sampling locations at Site 300.

Table 1. Monthly rainfall totals (inches) at Site 300 weather station, June 2011 through May 2012.

Date	**Monthly Total** (in.)
June 2011	0.67
July 2011	0.00
August 2011	0.00
September 2011	0.00
October 2011	0.70
November 2011	0.62
December 2011	0.14
January 2012	1.36
February 2012	0.40
March 2012	2.18
April 2012	1.55
May 2012	0.00
Water Year TOTAL	7.62

Table 2. Daily rainfall totals (for days with >0.2 inches precipitation) at Site 300 weather station and description of rainfall event, October 2011 through May 2012.

Date	Precipitation Daily Total (Inches)	Day of Week	Description of Event	
10/5/2011	0.40	Wednesday	>0.2 by 3am	No run-off
10/6/2011	0.22	Thursday		No run-off
11/5/2011	0.34	Saturday		
1/20/2012	0.30	Friday		
1/21/2012	0.60	Saturday		
1/23/2012	0.44	Monday		No run-off*
2/29/2012	0.22	Wednesday		No run-off*
3/16/2012	0.68	Friday		
3/24/2012	0.46	Saturday		
3/25/2012	0.44	Sunday		
3/31/2012	0.31	Saturday		
4/10/2012	0.58	Tuesday	<0.2 by 5pm	
4/12/2012	0.23	Thursday	<0.1 by 5 pm	
4/13/2012	0.42	Friday		
4/25/2012	0.25	Wednesday	<0.1 by 5 pm	No run-off*

*Monthly Visual Observations **(Form 4)** noted that there was no storm water run-off during hours of operation.

Table 3. Summary of non-routine releases, June 2011 through May 2012.

Date	Location	Description
6/22/11	B-879	A fire truck, parked behind B-879, dripped fuel from one of the two wild land fire torches mounted on the bumper. An oil pan was used to contain the drips and absorbent was applied; Radioactive and Hazardous Waste Management (RHWM) provided clean up and disposal. The Fire Dept confirmed that the fuel was a mixture of diesel and gasoline, and estimated that less than 1 liter was released to the asphalt. The leaky caps on the torches have been replaced.
7/5/11	B-817	A make-up water valve malfunctioned, resulting in water being continuously added to the B-817 boiler. The boiler water discharged into a retention tank that subsequently overflowed into secondary containment. The secondary containment then overflowed to an asphalt surface and bare ground. Approximately 400 gallons of diluted boiler water combined with rainwater and potentially a small quantity of process water was released to ground. The boiler water contains a chemical additive, NexGuard (boiler water treatment). Given the continuous addition of make-up water, however, significant dilution of the chemical additive would be expected prior to discharge. The water percolated into the ground and did not discharge to surface water drainage courses or reach regulated surface waters on the site. Upon discovery the discharge was immediately stopped and water from the retention tanks was transferred to a nearby evaporation tank. The boiler make-up water valve was repaired to prevent future overflows caused by this boiler system. This release was reported to CVRWQCB.
7/22/11	B-815	A 6-inch water supply line broke near B-815, releasing a small volume of water. Water pooled up on the soil around U815 (forming a wet area 14-feet long by 2-feet wide by 1.5-inches deep) and eventually percolated into the ground. The water remained onsite; it did not enter any surface water drainage courses. The line was shut off and MUSD scheduled repair.
8/8/11	B-871 & B-879	Approximately ¼ cup of oil was released at B871, then another ¼ cup was released at B879 (Motor Pool) when the vehicle was moved for repair. At both locations, the oil dripped onto asphalt and they were cleaned up immediately. The leak was caused by a piece of barbed-wire caught in the vehicle's driveshaft seal.
8/11/11	B-873	Approximately ½ cup antifreeze leaked from a vehicle parked outside B-873. RHWM personnel immediately cleaned up the small wet stain on the concrete with absorbent. A bucket with absorbent was left under the leak until the contractor removed the vehicle from the site. Once the vehicle was removed, RHWM removed the bucket containing the absorbent/antifreeze and managed the waste.
8/16/11	Between bunkers 850 & 851	A two-inch nipple holding a venting valve broke on a six-inch water line between bunkers 850 and 851. Valves near each bunker were secured to stop the flow of water. Approximately 2,000 gallons ran down the shoulder of the road for a short distance. Due to hot, dry weather, the water soaked into the ground and did not reach any surface water drainage courses.
9/9/11	B-801	On Friday (9/9/11), S300 Maintenance Mechanics responded to a report of standing water in a remote section of Elk Ravine, near Building 801. Potable water was observed flowing from two breaks in a 6-inch water main, fed by Tanks 5 and 10 in pressure zone 3. The line was immediately secured and the discharge was stopped; repairs were completed the following day. Water had flowed approximately 10 yards down the hillside and entered the dry, surface water channel, Elk Ravine. There, the water traveled about 30 yards downstream and pooled behind a road crossing. The discharged water remained upstream of the road crossing and gradually soaked into the ground; it did not leave the site and it did not reach the off-site receiving water, Corral Hollow Creek. Water supply logs, for the week in question, indicate approximately 678,000 gallons were pumped from Well 20 into the S300 Drinking Water System. Based on historical usage data, it was estimated that approximately half this volume could have been discharged as a result of the line break. This release was reported to the CVRWQCB. -Continued on next page

Date	Location	Description
9/10/11	Tank-11	On Saturday, September 10, 2011 at approximately 10:30am, water was observed overflowing from Tank 11, located in pressure zone 1. An estimated 500 gallons of potable water was discharged to ground and traveled south along Route 1 before entering and soaking into a dry, surface water channel. The discharged water did not leave the site and it did not reach the off-site receiving water, Corral Hollow Creek. Maintenance personnel responded immediately and isolated the tank. The Tank 11 overflow appeared to be caused by a sensor failure, related to the large volumes of ground water being pumped from well W-20 into the drinking water system at Tanks 2, 8, and 11. (See above discussion.) Once line break repairs had been completed, the controls at Tank 11 were re-inspected and determined to be in working order; there have been no subsequent overflows from this location. This release was reported to the CVRWQCB.
10/12/11	B-836D	Approximately one cup of compressor oil spilled to asphalt during repair of a compressor at B-836D. RHWM responded immediately, cleaned up the spill, and managed the waste.
10/18/11	B-834A	Maintenance Mechanics responded to an alarm caused by water in a ground pit box. The source was discovered to be potable water (not sewage) from an overflowing toilet that ran into cable trenches and out to the pit box. B-834A is an office/control room with no chemicals or contamination areas. The toilet was shut off and the water was pumped from the pit box to the asphalt, where it evaporated. The release was approximately 50 gallons total. Prior to pumping, the Maintenance Mechanics checked and found no residual chlorine.
10/18/11	B-854, B-879	A John Deere Motor Grader leaked hydraulic fluid on the asphalt roadway from the intersection of Route 3 and the Guard Post (at the main S300 entrance), through the GSA to B-879. The grader was in route from B-854, were it had undergone temporary hydraulic line repairs, to the GSA for more extensive repairs. RHWM responded with absorbent material and cleaned up as much of the fluid as possible. The release was estimated to be 5-10 gallons spread over approximately a quarter to a half mile.
11/01/11	B-827E	Approximately 3,000-4,000 gallons of water was released on a hill above B- 827E, caused by a broken saddle on a six-inch line to the fire suppression system. The release was immediately secured. The water soaked into the ground and did not flow out of the 827 complex. Due to the muddy conditions, MUSD let the area dry for a day before initiating repairs. This release was reported to the CVRWQCB.
11/30/11	B-801	Approximately four ounces of diesel was released from emergency generator 801-D2A1 at B-801. The diesel was contained on the concrete pad within the generator's enclosure. The generator was in use due to a power outage caused by high winds resulting in downed power lines. RHWM responded to assist with clean up. The release did not reach the ground or storm drain system and was cleaned up immediately.
2/06/12	B-817	An estimated 500 gallons of drinking water was released over a period of 12 days from a leaking backflow device on the cooling tower at B-817. Water soaked into surrounding landscape and did not reach any surface water drainage courses. The leak was repaired on February 6.
5/15/12	B-871	Maintenance personnel secured the fire hydrant west of B-871 due to a water leak. The actual leak was not visible as it is below grade. The hydrant is located in a dirt/rock landscape area between the sidewalk and the parking area. All water soaked into the ground; there was no runoff. The total amount of water released is unknown, but is believed to be less than 3,000 gallons.

Attachment 2

Forms 2 through 5

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

SIDE A

- 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.

QUARTER: **JULY-SEPT.** DATE: 9 / 26 / 11	**Observers Name:** Karl Brunckhorst **Title:** Scientific Technologist Observations were made at the eight locations identified on Form 4.	**WERE ANY AUTHORIZED NSWDs DISCHARGED DURING THIS QUARTER?**	☐ **YES** ☒ **NO**	If **YES**, complete reverse side of this form.
QUARTER: **OCT.-DEC.** DATE: 11 / 30 / 11	**Observers Name:** Karl Brunckhorst **Title:** Scientific Technologist Observations were made at the eight locations identified on Form 4.	**WERE ANY AUTHORIZED NSWDs DISCHARGED DURING THIS QUARTER?**	☐ **YES** ☒ **NO**	If **YES**, complete reverse side of this form.
QUARTER: **JAN.-MARCH** DATE: 2 / 29 / 12	**Observers Name:** Karl Brunckhorst **Title:** Scientific Technologist Observations were made at the eight locations identified on Form 4.	**WERE ANY AUTHORIZED NSWDs DISCHARGED DURING THIS QUARTER?**	☐ **YES** ☒ **NO**	If **YES**, complete reverse side of this form.
QUARTER: **APRIL-JUNE** DATE: 5 / 24 / 12	**Observers Name:** Karl Brunckhorst **Title:** Scientific Technologist Observations were made at the eight locations identified on Form 4.	**WERE ANY AUTHORIZED NSWDs DISCHARGED DURING THIS QUARTER?**	☐ **YES** ☒ **NO**	If **YES**, complete reverse side of this form.

SIDE B

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

DATE /TIME OF OBSERVATION	SOURCE AND LOCATION OF AUTHORIZED NSWD	NAME OF AUTHORIZED NSWD	DESCRIBE AUTHORIZED NSWD CHARACTERISTICS Indicate whether authorized NSWD is clear, cloudy, or discolored, causing staining, contains floating objects or an oil sheen, has odors, etc.		DESCRIBE ANY REVISED OR NEW BMPs AND PROVIDE THEIR IMPLEMENTATION DATE
	EXAMPLE: Air conditioner Units on Building C	EXAMPLE: Air conditioner condensate	At the NSWD Source	At the NSWD Drainage Area and Discharge Location	
__/__/__ __:__ ☐AM ☐PM					
__/__/__ __:__ ☐AM ☐PM					
__/__/__ __:__ ☐AM ☐PM					
__/__/__ __:__ ☐AM ☐PM					

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

SIDE A

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

QUARTER: **JULY-SEPT.** **DATE/TIME OF OBSERVATIONS** 09/26/11 9:15 – 10:09 AM	**Observers Name:** Karl Brunckhorst **Title:** Scientific Technologist Observations were made at the eight locations identified on Form 4.	**WERE UNAUTHORIZED NSWDs OBSERVED?** **NO** **WERE THERE INDICATIONS OF PRIOR UNAUTHORIZED NSWDs?** **NO**	If **YES** to either question, complete reverse side.
QUARTER: **OCT.-DEC.** **DATE/TIME OF OBSERVATIONS** 11/30/11 09:20 – 10:20 AM	**Observers Name:** Karl Brunckhorst **Title:** Scientific Technologist Observations were made at the eight locations identified on Form 4.	**WERE UNAUTHORIZED NSWDs OBSERVED?** **NO** **WERE THERE INDICATIONS OF PRIOR UNAUTHORIZED NSWDs?** **NO**	If **YES** to either question, complete reverse side.
QUARTER: **JAN.-MARCH** **DATE/TIME OF OBSERVATIONS** 02/29/12 9:27 – 10:36 AM	**Observers Name:** Karl Brunckhorst **Title:** Scientific Technologist Observations were made at the eight locations identified on Form 4.	**WERE UNAUTHORIZED NSWDs OBSERVED?** **NO** **WERE THERE INDICATIONS OF PRIOR UNAUTHORIZED NSWDs?** **NO**	If **YES** to either question, complete reverse side.
QUARTER: **APRIL-JUNE** **DATE/TIME OF OBSERVATIONS** 05/24/12 09:20 – 10:34 AM	**Observers Name:** Karl Brunckhorst **Title:** Scientific Technologist Observations were made at the eight locations identified on Form 4.	**WERE UNAUTHORIZED NSWDs OBSERVED?** **NO** **WERE THERE INDICATIONS OF PRIOR UNAUTHORIZED NSWDs?** **NO**	If **YES** to either question, complete reverse side.

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

SIDE B

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

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FORM 4-MONTHLY VISUAL OBSERVATIONS OF STORM WATER DISCHARGES

SIDE A

- 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: October 31 2011 Observers Name Karl Brunckhorst Title Scientific Technologist	Drainage Location Description	#1- CARW2	#2 - NPT6	#3 - N829	#4 - N883
	Observation Time	09: 14 A.M.	09: 17 A.M.	09: 20 A.M.	09: 35 A.M.
	Time Discharge Began	**There was no runoff during the inspection. Based on the low rainfall and observations made, there was likely no storm water runoff in October during hours of operation.**			
	Were Pollutants Observed * (If yes, complete reverse side)	No	Yes	No	No
Observation Date: November 30 2011 Observers Name: Karl Brunckhorst Title: Scientific Technologist	Drainage Location Description	#1- CARW2	#2 - NPT6	#3 - N829	#4 - N883
	Observation Time	09 : 20 A.M.	09 : 23 A.M.	09 : 26 A.M.	09 : 30 A.M.
	Time Discharge Began	**There was no runoff during the inspection. Based on the low rainfall and observations made, there was likely no storm water runoff in November during hours of operation.**			
	Were Pollutants Observed * (If yes, complete reverse side)	No	No	Yes	Yes
Observation Date: December 21 2011 Observers Name: Karl Brunckhorst Title: Scientific Technologist	Drainage Location Description	#1- CARW2	#2 - NPT6	#3 - N829	#4 - N883
	Observation Time	09 : 34 A.M.	09 : 37 A.M.	09 : 39 A.M.	09 : 57 A.M.
	Time Discharge Began	**There was no runoff during the inspection. Based on the low rainfall and observations made, there was likely no storm water runoff in December during hours of operation.**			
	Were Pollutants Observed * (If yes, complete reverse side)	No	Yes	Yes	No
Observation Date: January 23 2012 Observers Name: Karl Brunckhorst Title: Scientific Technologist	Drainage Location Description	#1- CARW2	#2 - NPT6	#3 - N829	#4 - N883
	Observation Time	9 : 37 A.M.	09 : 41 A.M.	09 : 43 A.M.	9 : 56 A.M.
	Time Discharge Began	**There was no runoff during the inspection. Based on the observations made, there was likely no storm water runoff in January during hours of operation.**			
	Were Pollutants Observed * (If yes, complete reverse side)	No	Yes	Yes	No

* When there is runoff in these open channels (like CARW2), there is some turbidity because of mobilized sediments, but no visual contamination. Leaves, sticks, and other debris are common in all channels.

FORM 4-MONTHLY VISUAL OBSERVATIONS OF STORM WATER DISCHARGES

SIDE B

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 / 11 09 : 17 AM	Sample location NPT6	There was no runoff during the inspection. Debris, such as paper and plastic were observed at the time of the inspection.	Sample location is just outside the Site 300 fence line (along Corral Hollow Road) where roadside debris occasionally collects.	None.
11 / 30 / 11 09 : 26 AM	Sample location N829	There was no runoff during the inspection. Debris, such as paper and plastic were observed at the time of the inspection.	Sample location is just outside the Site 300 fence line (along Corral Hollow Road) where roadside debris occasionally collects.	None.
11 / 30 / 11 09 : 30 AM	Sample location N883	There was no runoff during the inspection. Debris, such as paper and plastic were observed at the time of the inspection.	Sample location N883 is an onsite location. Site 300 can become very windy at times and trash such as paper and plastic may blow around.	Trash was cleaned up at the time of the observation.
12 / 21 / 11 09 : 37 AM	Sample location NPT6	There was no runoff during the inspection. There was plastic debris observed at the time of the inspection.	Sample location is just outside the Site 300 fence line (along Corral Hollow Road) where roadside debris occasionally collects.	None.
12 / 21 / 11 09 : 39 AM	Sample location N829	There was no runoff during the inspection. Debris, such as plastic and cans were observed at the time of the inspection.	Sample location is just outside the Site 300 fence line (along Corral Hollow Road) where roadside debris occasionally collects.	None.
1 / 23 / 12 09 : 41 AM	Sample location NPT6	There was no runoff during the inspection. Debris, such as paper was observed at the time of the inspection.	Sample location is just outside the Site 300 fence line (along Corral Hollow Road) where roadside debris occasionally collects.	None.
1 / 23 / 12 09 : 43 AM	Sample location N829	There was no runoff during the inspection. Debris, such as paper was observed at the time of the inspection.	Sample location is just outside the Site 300 fence line (along Corral Hollow Road) where roadside debris occasionally collects.	None.

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

SIDE A

- 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: February 29 2012	Drainage Location Description	#1- CARW2	#2 - NPT6	#3 - N829	#4 - N883
Observers Name: Karl Brunckhorst	Observation Time	9 : 27 A.M.	9 : 30 A.M.	9 : 32 A.M.	9 : 35 A.M.
Title: Scientific Technologist	Time Discharge Began	**There was no runoff during the inspection. Based on the observations made, there was likely no storm water runoff in February during hours of operation.**			
	Were Pollutants Observed * (If yes, complete reverse side)	No	Yes	Yes	Yes
Observation Date: March 29 2012	Drainage Location Description	#1- CARW2	#2 - NPT6	#3 - N829	#4 - N883
Observers Name: Karl Brunckhorst	Observation Time	9 : 33 A.M.	9 : 36 A.M.	9 : 38 A.M.	9 : 52 A.M.
Title: Scientific Technologist	Time Discharge Began	**There was no runoff during the inspection. Based on the observations made, there was likely no storm water runoff in March during hours of operation.**			
	Were Pollutants Observed * (If yes, complete reverse side)	No	Yes	Yes	No
Observation Date: April 25 2012	Drainage Location Description	#1- CARW2	#2 - NPT6	#3 - N829	#4 - N883
Observers Name: Karl Brunckhorst	Observation Time	01 : 36 P.M.	01 : 39 P.M.	01 : 42 P.M.	01 : 50 P.M.
Title: Scientific Technologist	Time Discharge Began	**There was no runoff during the inspection. Based on the observations made, there was likely no storm water runoff in April during hours of operation.**			
	Were Pollutants Observed * (If yes, complete reverse side)	No	Yes	No	No
Observation Date: May 24 2012	Drainage Location Description	#1- CARW2	#2 - NPT6	#3 - N829	#4 - N883
Observers Name: Karl Brunckhorst	Observation Time	09 : 20 A.M.	09 : 24 A.M.	09 : 26 A.M.	09 : 30 A.M.
Title: Scientific Technologist	Time Discharge Began	**There was no runoff during the inspection. Based on the observations made, there was likely no storm water runoff in May during hours of operation.**			
	Were Pollutants Observed * (If yes, complete reverse side)	No	No	No	No

* When there is runoff in these open channels (like CARW2), there is some turbidity because of mobilized sediments, but no visual contamination. Leaves, sticks, and other debris are common in all channels.

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

SIDE B

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
2 / 29 / 12 09 : 30 AM	Sample location NPT6	There was no runoff during the inspection. Debris, such as paper and plastic were observed at the time of the inspection.	Sample location is just outside the Site 300 fence line (along Corral Hollow Road) where roadside debris occasionally collects.	None.
2 / 29 / 12 09 : 32 AM	Sample location N829	There was no runoff during the inspection. Debris, such as paper was observed at the time of the inspection.	Sample location is just outside the Site 300 fence line (along Corral Hollow Road) where roadside debris occasionally collects.	None.
2 / 29 / 12 09 : 35 AM	Sample location N883	There was no runoff during the inspection. Debris, such as paper was observed at the time of the inspection.	Sample location N883 is an onsite location. Site 300 can become very windy at times and trash such as paper and plastic may blow around.	Trash was cleaned up at the time of the observation.
3 / 29 / 12 09 : 36 AM	Sample location NPT6	There was no runoff during the inspection. Debris, such as paper and plastic were observed at the time of the inspection.	Sample location is just outside the Site 300 fence line (along Corral Hollow Road) where roadside debris occasionally collects.	None.
3 / 29 / 12 09 : 38 AM	Sample location N829	There was no runoff during the inspection. Debris, such as paper was observed at the time of the inspection.	Sample location is just outside the Site 300 fence line (along Corral Hollow Road) where roadside debris occasionally collects.	None.
4 / 25 / 12 01 : 39 PM	Sample location NPT6	There was no runoff during the inspection. Debris, such as paper and plastic were observed at the time of the inspection.	Sample location is just outside the Site 300 fence line (along Corral Hollow Road) where roadside debris occasionally collects.	None.

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

SIDE A

- 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: October 31 2011 Observers Name: Karl Brunckhorst Title: Scientific Technologist	Drainage Location Description	#5 – NPT7	#6 - NLIN	#7 - NLIN2*	#8 - GEOCRK*
	Observation Time	10: 04 A.M.	09: 53 A.M.	09: 47 A.M.	09: 26 A.M.
	Time Discharge Began	**There was no runoff during the inspection. Based on the low rainfall and observations made, there was likely no storm water runoff in October during hours of operation.**			
	Were Pollutants Observed ** (If yes, complete reverse side)	No	No	No	Yes
Observation Date: November 30 2011 Observers Name: Karl Brunckhorst Title: Scientific Technologist	Drainage Location Description	#5 – NPT7	#6 - NLIN	#7 - NLIN2*	#8 - GEOCRK*
	Observation Time	09 : 57 A.M.	09 : 49 A.M.	09 : 44 A.M.	10: 20 A.M.
	Time Discharge Began	**There was no runoff during the inspection. Based on the low rainfall and observations made, there was likely no storm water runoff in November during hours of operation.**			
	Were Pollutants Observed ** (If yes, complete reverse side)	No	No	No	Yes
Observation Date: December 21 2011 Observers Name: Karl Brunckhorst Title: Scientific Technologist	Drainage Location Description	#5 – NPT7	#6 - NLIN	#7 - NLIN2*	#8 - GEOCRK*
	Observation Time	10 : 17 A.M.	10 : 09 A.M.	10 : 06 A.M.	09 : 47 A.M.
	Time Discharge Began	**There was no runoff during the inspection. Based on the low rainfall and observations made, there was likely no storm water runoff in December during hours of operation.**			
	Were Pollutants Observed ** (If yes, complete reverse side)	No	No	No	No
Observation Date: January 23 2012 Observers Name: Karl Brunckhorst Title: Scientific Technologist	Drainage Location Description	#5 - NPT7	#6 - NLIN	#7 - NLIN2*	#8 - GEOCRK*
	Observation Time	10 : 23 A.M.	10 : 13 A.M.	10 : 09 A.M.	9 : 48 A.M
	Time Discharge Began	**There was no runoff during the inspection at NLIN, NLIN2 and GEOCRK. There was insignificant runoff at NPT7. Based on the observations made, there was likely no significant storm water runoff in January during hours of operation.**			
	Were Pollutants Observed ** (If yes, complete reverse side)	No	No	No	No

* NLIN2 and GEOCRK generally have flow from springs located upstream of each location.
** When there is runoff in these open channels (NLIN2 and GEOCRK), there is some turbidity because of mobilized sediments but no visual contamination. Leaves, sticks, and other debris are common in all channels.

FORM 4-MONTHLY VISUAL OBSERVATIONS OF STORM WATER DISCHARGES

SIDE B

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 / 11 09 : 26 AM	Downstream sample location GEOCRK	There was no runoff during the inspection. Water flows through the sample location from an upstream spring. Debris, such as paper, plastic and cans were observed in the creek bed at the time of the inspection.	Sample location is near Corral Hollow Creek where occasional roadside dumping occurs and roadside trash collects.	Not applicable, this is an off site location.
11 / 30 / 11 10 : 20 AM	Downstream sample location GEOCRK	There was no runoff during the inspection. Water flows through the sample location from an upstream spring. Debris, such as paper, plastic and cans were observed in the creek bed at the time of the inspection.	Sample location is near Corral Hollow Creek where occasional roadside dumping occurs and roadside trash collects.	Not applicable, this is an off site location.

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

SIDE A

- 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: February 29 2012	Drainage Location Description	#5 - NPT7	#6 - NLIN	#7 - NLIN2*	#8 - GEOCRK*
Observers Name: Karl Brunckhorst	Observation Time	10 : 08 A.M.	10 : 00 A.M.	09 : 56 A.M.	10 : 36 A.M.
Title: Scientific Technologist	Time Discharge Began	**There was no runoff during the inspection. Based on the observations made, there was likely no storm water runoff in February during hours of operation.**			
	Were Pollutants Observed ** (If yes, complete reverse side)	No	No	No	Yes
Observation Date: March 29 2012	Drainage Location Description	#5 - NPT7	#6 - NLIN	#7 - NLIN2*	#8 - GEOCRK*
Observers Name: Karl Brunckhorst	Observation Time	10:19 A.M.	10 : 11 A.M.	10 : 06 A.M.	9 : 44 A.M.
Title: Scientific Technologist	Time Discharge Began	**There was no runoff during the inspection. Based on the observations made, there was likely no storm water runoff in March during hours of operation.**			
	Were Pollutants Observed ** (If yes, complete reverse side)	No	No	No	Yes
Observation Date: April 25 2012	Drainage Location Description	#5 - NPT7	#6 - NLIN	#7 - NLIN2*	#8 - GEOCRK*
Observers Name: Karl Brunckhorst	Observation Time	02 : 11 P.M.	02 : 03 P.M.	02 : 00 P.M.	02 : 38 P.M.
Title: Scientific Technologist	Time Discharge Began	**There was no runoff during the inspection. Based on the observations made, there was likely no storm water runoff in April during hours of operation.**			
	Were Pollutants Observed ** (If yes, complete reverse side)	No	No	No	No
Observation Date: May 24 2012	Drainage Location Description	#5 - NPT7	#6 - NLIN	#7 - NLIN2*	#8 - GEOCRK*
Observers Name: Karl Brunckhorst	Observation Time	10 : 04 A.M.	09 : 52 A.M.	09 : 45 A.M.	10 : 34 A.M.
Title: Scientific Technologist	Time Discharge Began	**There was no runoff during the inspection. There was insignificant rainfall in May.**			
	Were Pollutants Observed ** (If yes, complete reverse side)	No	No	No	Yes

* NLIN2 and GEOCRK generally have flow from springs located upstream of each location.

** When there is runoff in these open channels (NLIN2 and GEOCRK), there is some turbidity because of mobilized sediments but no visual contamination. Leaves, sticks, and other debris are common in all channels.

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

SIDE B

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 / 29 / 12 10 : 36 AM	Downstream sample location GEOCRK	There was no runoff during the inspection. Water flows through the sample location from an upstream spring. Debris, such as plastic and bottles were observed in the creek bed at the time of the inspection.	Sample location is near Corral Hollow Creek where occasional roadside dumping occurs and roadside trash collects.	Not applicable, this is an off site location.
03 / 29 / 12 09 : 44 AM	Downstream sample location GEOCRK	There was no runoff during the inspection. Water flows through the sample location from an upstream spring. Debris, such as plastic and bottles were observed in the creek bed at the time of the inspection.	Sample location is near Corral Hollow Creek where occasional roadside dumping occurs and roadside trash collects.	Not applicable, this is an off site location.
05 / 24 / 12 10 : 34 AM	Downstream sample location GEOCRK	There was no runoff during the inspection. Water flows through the sample location from an upstream spring. Debris, such as plastic and bottles were observed in the creek bed at the time of the inspection.	Sample location is near Corral Hollow Creek where occasional roadside dumping occurs and roadside trash collects.	Not applicable, this is an off site location.

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

EVALUATION DATE: **February 2012 - March 2012**

SIGNATURE: **Signed copies of the Annual Inspection Summary Certification Forms are provided in the Data Supplement**

NOTE: **Annual Facility Inspection Summary Forms are also provided in the Data Supplement**

PRINCIPAL DIRECTORATE RESPONSIBLE FOR POTENTIAL POLLUTANT SOURCE/INDUSTRIAL ACTIVITY	HAVE ANY BMPs NOT BEEN FULLY IMPLEMENTED?	ARE ADDITIONAL/ REVISED BMPs NECESSARY?	Describe deficiencies in BMPs or BMP implementation and Describe additional/revised BMPs or corrective actions and their date(s) of implementation
Directors Office	NO	NO	Areas of erosion (which were noted and repaired in 2010) show no erosion issues this year.
Weapons and Complex Integration	NO	NO	
Operations and Business	NO	NO	

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