



Environmental Functional Area

Environmental Support and Programmatic Outreach Group

UCRL-AR-144362-13

**Lawrence Livermore National Laboratory
Experimental Test Site**

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

July 2013

Greg S. Lee

**This work performed under the auspices of the U.S. Department of Energy by
Lawrence Livermore National Laboratory under Contract DE-AC52-07NA27344.**

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REGIONAL BOARD INFORMATION

REGION 5: CENTRAL VALLEY REGION, SACRAMENTO
Pamela Creedon, Executive Officer
11020 Sun Center Drive
Rancho Cordova, CA 95670-6114
Robert Ditto (rditto@waterboards.ca.gov)
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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)

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State of California
STATE WATER RESOURCES CONTROL BOARD

2012-2013
ANNUAL REPORT
FOR
STORM WATER DISCHARGES ASSOCIATED
WITH INDUSTRIAL ACTIVITIES

Reporting Period July 1, 2012 through June 30, 2013

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: 5S391021179

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: Livermore State: CA Zip: 94551

Phone: (925) 422-3343

C. Facility Billing Information:

Operator Name: Lawrence Livermore National Laboratory

Contact Person: Thomas T. Kato

Mailing Address: P.O. Box 808, Mail Stop L-626

e-mail: kato3@llnl.gov

City: Livermore State: CA Zip: 94551

Phone: (925) 422-9642

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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)

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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
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.

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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 **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.

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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"/>

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:
- 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 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.

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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
(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: 6/24/13

Title: Director, Environment, Safety & Health

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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

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Attachment 1
Explanations
Figure 1 and Tables 1, 2 & 3

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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 2012-2013 wet season. The average annual rainfall at Site 300 is 10.76 inches (27.33 cm), and the rainfall for the 2012-2013 reporting period was 8.06 inches (20.47 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 2012-2013 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. Three of the six unplanned non-routine releases reported in **Table 3** were reported to the CVRWQCB. All discharges remained on-site and percolated into ground.

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 Attachment 2 of this report.

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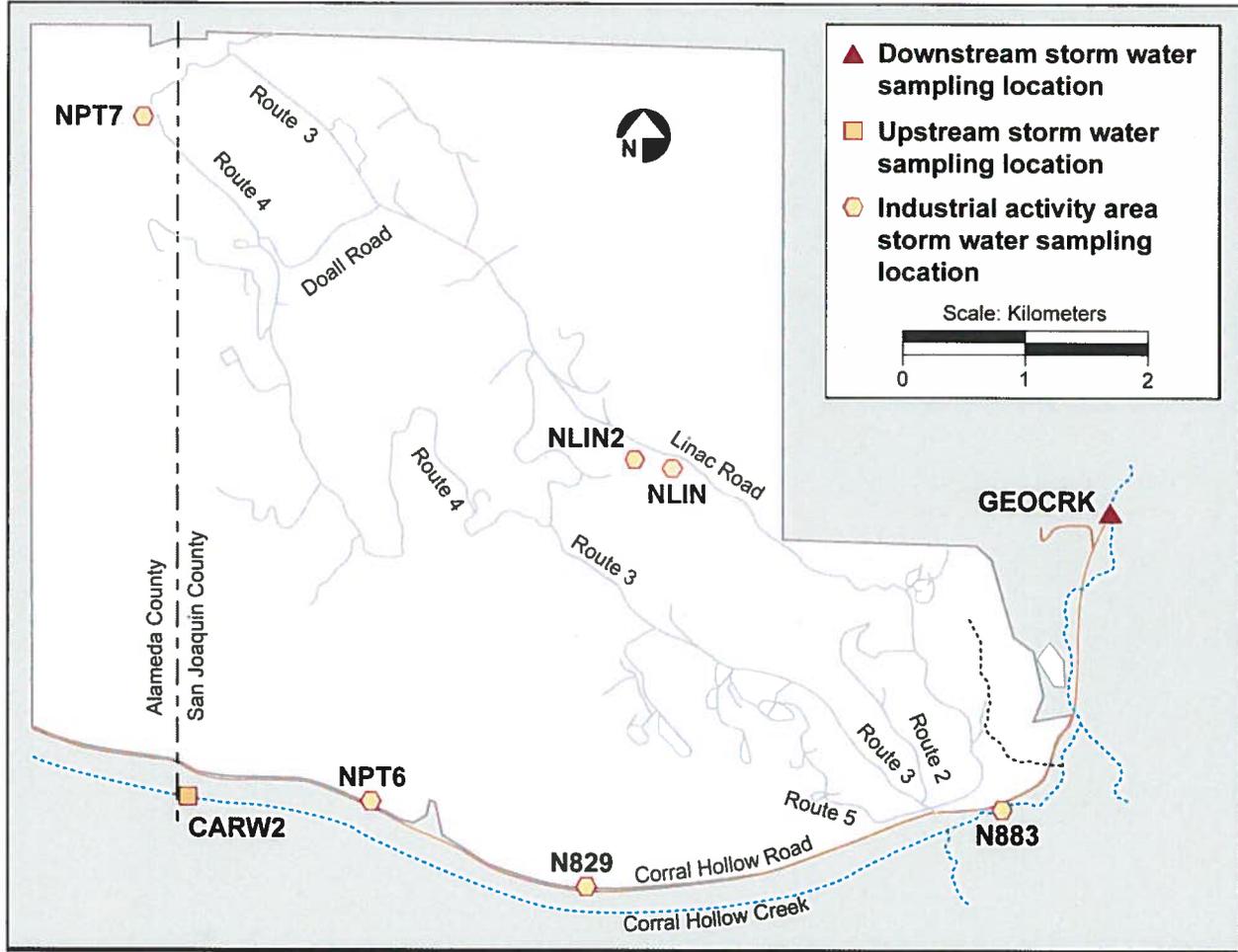


Figure 1. Storm water sampling locations at Site 300.

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Table 1. Monthly rainfall totals (inches) at Site 300 weather station, June 2012 through May 2013.

Date	Monthly Total (in.)
June 2012	0.06
July 2012	0.00
August 2012	0.01
September 2012	0.01
October 2012	0.28
November 2012	2.00
December 2012	3.85
January 2013	0.74
February 2013	0.33
March 2013	0.45
April 2013	0.32
May 2013	0.01
Water Year TOTAL	8.06

Table 2. Daily rainfall totals (for days with >0.2 inches precipitation) at Site 300 weather station and description of rainfall event, October 2012 through May 2013.

Date	Precipitation Daily Total (Inches)	Day of Week	Description of Event	
November 9, 2012	0.22	Friday		
November 18, 2012	0.25	Sunday		
November 30, 2012	1.15	Friday		
December 2, 2012	0.60	Sunday		
December 5, 2012	0.75	Wednesday		<3 days w/o run-off
December 22, 2012	0.66	Saturday		
December 23, 2012	1.20	Sunday		
December 25, 2012	0.21	Tuesday	Holiday Closure	
January 6, 2013	0.36	Sunday		
February 19, 2013	0.33	Tuesday	0.33 by 5 pm	No run-off*
March 31, 2013	0.28	Sunday		

*No storm water run-off during hours of operation.

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Table 3. Summary of non-routine releases, June 2012 through May 2013.

Date	Location	Description
8/18/12	B-870	Water leaked from the fire system outside of B-870 due to a broken pipe nipple. Less than 500 gallons ran into landscape area, none reached a stream bed. The pipe was repaired and the system returned to service.
9/17/12	B-834	A broken 6-inch water main located on Route 1 between B-834 and B-836 eroded a hole (approximately 4' x 4' x 4') and flowed down the slope, but did not reach the streambed. Approximately 12,000 to 15,000 gallons were released between 9:30 and 10:00 pm. This release was reported to the CVRWQCB.
9/30/12	B-815	A maintenance mechanic performing the monthly start-up of the B-815 portable air compressor was sprayed with battery acid when the battery blew up. He immediately hosed himself down with water and contacted the Fire Department. He was wearing safety glasses and was not injured. Absorbent was applied to the spilled battery acid and the area was cordoned off. Radioactive and Hazardous Waster Management (RHWM) provided clean up and disposal services the next morning. The release was contained to the asphalt, did not exceed any Reportable Quantity (RQ), and there were no injuries.
10/17/12	B-836	A drinking water line between Tank 8 and Tank 11 (drinking water storage tanks, containing treated, chlorinated water) failed and "blew-out" four valves. The responding crew was able to successfully stop the release. It was estimated that approximately 20,000 gallons of water were released. The water flowed east from Tank 8, down the slope and across Route 1. It continued in the ravine between B-840 and B-841 and soaked into the ground NE of the sewage pond. All of the water was absorbed into the soil. The water did not leave S300 property or reach Corral Hollow Creek. This release was reported to the CVRWQCB.
10/22/12	B-857	Approximately 1,000 gallons of drinking water were released near B-857 due to a broken vent valve. Maintenance and Utility Services Department (MUSD) immediately secured the line and stopped the leak. The release ran down the hillside and into the roadside drainage. It did not go off site, nor did it reach a stream bed. This release was reported to the CVRWQCB.
3/17/13	B-812C	Approximately 100 gallons of drinking water leaked from a dirt bank on north side of the road across from B-812C and soaked into the ground. A 1" to 1 1/2" valve in the area above the leak was secured by a maintenance mechanic.
5/6/13	B-858	A drinking water line broke near B-858. MUSD valved off and isolated the leak area to stop the discharge. The discharge appeared to be soaking into the ground with a small amount trickling to the surface from residual water in the line (6" necked down to 2" line). On 5/7/13, MUSD located the problem (a broken elbow pipe) and initiated repairs. An estimated 5,655 gallons of water were released.
5/7/13	B-825 & B-826	Tank 1 overflowed, releasing drinking water to the ground. MUSD stopped the release by diverting the water to uphill tanks. The water traveled about 75–100 feet before soaking into the ground, the release is estimated to be less than 500 gal.
5/22/13	S-300 Main Gate	A water leak ran into the storm drain at the Site 300 main gate. MUSD personnel immediately responded and shut off the water. The cause of the leak was a defective valve in an abandoned, but still charged irrigation line. The water traveled approximately 300 feet before it crossed Corral Hollow Road, went into the field, and pooled up. It did not reach Corral Hollow Creek. The volume and duration of the release is unknown; however, employees who went out the gate at approximately 1:00 PM on 5/22 said there was no flowing water visible at that time. This indicates the release to storm drain began sometime after 1:00 PM and was secured by approximately 5:45 PM the same day.

*Lawrence Livermore National Laboratory Experimental Test Site
Annual Storm Water Monitoring Report for Waste Discharge Requirements 97-03-DWQ
July 2013*

Attachment 2

Forms 2 through 5

Form 2 (page 15)

Form 3 (page 17)

Form 4 (page 19)

Form 5 (page 27)

LLNL Experimental Test Site
Annual Storm Water Monitoring Report for Waste Discharge Requirements 97-03-DWQ – July 2013

**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: <u> 9 / 12 / 12 </u>	Observers Name: <u> Karl Brunckhorst </u> Title: <u> Scientific Technologist </u> Observations were made at the eight locations identified on Form 4.	WERE ANY AUTHORIZED NSWDs DISCHARGED DURING THIS QUARTER? <div style="float: right; text-align: right;"> <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO </div> If YES, complete reverse side of this form.
QUARTER: OCT.-DEC. DATE: <u> 11 / 29 / 12 </u>	Observers Name: <u> Karl Brunckhorst </u> Title: <u> Scientific Technologist </u> Observations were made at the eight locations identified on Form 4.	WERE ANY AUTHORIZED NSWDs DISCHARGED DURING THIS QUARTER? <div style="float: right; text-align: right;"> <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO </div> If YES, complete reverse side of this form.
QUARTER: JAN.-MARCH DATE: <u> 2 / 28 / 13 </u>	Observers Name: <u> Karl Brunckhorst </u> Title: <u> Scientific Technologist </u> Observations were made at the eight locations identified on Form 4.	WERE ANY AUTHORIZED NSWDs DISCHARGED DURING THIS QUARTER? <div style="float: right; text-align: right;"> <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO </div> If YES, complete reverse side of this form.
QUARTER: APRIL-JUNE DATE: <u> 5 / 29 / 13 </u>	Observers Name: <u> Karl Brunckhorst </u> Title: <u> Scientific Technologist </u> Observations were made at the eight locations identified on Form 4.	WERE ANY AUTHORIZED NSWDs DISCHARGED DURING THIS QUARTER? <div style="float: right; text-align: right;"> <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO </div> If YES, complete reverse side of this form.

LLNL Experimental Test Site
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**FORM 2 – QUARTERLY VISUAL OBSERVATIONS OF AUTHORIZED
 NON-STORM WATER DISCHARGES (NSWDs)**

SIDE I

DATE /TIME OF OBSERVATION	SOURCE AND LOCATION OF AUTHORIZED NSWD <i>EXAMPLE:</i> Air conditioner Units on Building C	NAME OF AUTHORIZED NSWD <i>EXAMPLE:</i> Air conditioner condensate	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
			At the NSWD Source	At the NSWD Drainage Area and Discharge Location	
/ / : <input type="checkbox"/> AM <input type="checkbox"/> PM					
/ / : <input type="checkbox"/> AM <input type="checkbox"/> PM					
/ / : <input type="checkbox"/> AM <input type="checkbox"/> PM					
/ / : <input type="checkbox"/> AM <input type="checkbox"/> PM					

LLNL Experimental Test Site
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**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 <u>09/12/12 9:26 – 10:24 AM</u>	Observers Name: <u>Karl Brunckhorst</u> Title: <u>Scientific Technologist</u> 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 <u>11/29/12 01:15 – 02:03 PM</u>	Observers Name: <u>Karl Brunckhorst</u> Title: <u>Scientific Technologist</u> 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 <u>02/28/13 9:38 – 10:30 AM</u>	Observers Name: Karl Brunckhorst Title: <u>Scientific Technologist</u> 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 <u>05/29/13 09:00 – 09:57 AM</u>	Observers Name: <u>Karl Brunckhorst</u> Title: <u>Scientific Technologist</u> 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.

LLNL Experimental Test Site
 Annual Storm Water Monitoring Report for Waste Discharge Requirements 97-03-DWQ – July 2013

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

SIDE B

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

LLNL Experimental Test Site
Annual Storm Water Monitoring Report for Waste Discharge Requirements 97-03-DWQ – July 2013

**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 2012 Observers Name <u>Karl Brunckhorst</u> Title <u>Scientific Technologist</u>	Drainage Location Description	#1- CARW2	#2 - NPT6	#3 - N829	#4 - N883
	Observation Time	09 : 15 A.M.	09 : 17 A.M.	09 : 21 A.M.	09 : 37 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 29 2012 Observers Name: <u>Karl Brunckhorst</u> Title: <u>Scientific Technologist</u>	Drainage Location Description	#1- CARW2	#2 - NPT6	#3 - N829	#4 - N883
	Observation Time	01 : 15 P.M.	01 : 19 P.M.	01 : 21 P.M.	01 : 35 P.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	Yes	No	No
Observation Date: December 20 2012 Observers Name: <u>Karl Brunckhorst</u> Title: <u>Scientific Technologist</u>	Drainage Location Description	#1- CARW2	#2 - NPT6	#3 - N829	#4 - N883
	Observation Time	09 : 33 A.M.	09 : 37 A.M.	09 : 40 A.M.	09 : 56 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	No	No
Observation Date: January 31 2013 Observers Name: <u>Karl Brunckhorst</u> Title: <u>Scientific Technologist</u>	Drainage Location Description	#1- CARW2	#2 - NPT6	#3 - N829	#4 - N883
	Observation Time	9 : 01 A.M.	09 : 06 A.M.	09 : 08 A.M.	9 : 23 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.

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**FORM 4 – MONTHLY VISUAL OBSERVATIONS OF
STORM WATER DISCHARGES**

SIDE B

DATE/TIME OF OBSERVATION (From Reverse Side)	DRAINAGE AREA DESCRIPTION	DESCRIBE STORM WATER DISCHARGE CHARACTERISTICS	IDENTIFY AND DESCRIBE SOURCE(S) OF POLLUTANTS	DESCRIBE ANY REVISED OR NEW BMPs AND THEIR DATE OF IMPLEMENTATION
_10 / 31 / 12 _09 : 17 AM	EXAMPLE: Discharge from material storage Area #2 Sample location NPT6	Indicate whether storm water discharge is clear, cloudy, or discolored; causing staining; containing floating objects or an oil sheen, has odors, etc. There was no runoff during the inspection. Debris, such as paper and plastic were observed at the time of the inspection.	EXAMPLE: Oil sheen caused by oil dripped by trucks in vehicle maintenance area. Sample location is just outside the Site 300 fence line (along Corral Hollow Road) where roadside debris occasionally collects.	None.
_11 / 29 / 12 _01 : 19 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.
_12 / 20 / 12 _09 : 37 AM	Sample location NPT6	There was no runoff during the inspection. There were plastic bottles and cans 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 / 31 / 13 _09 : 06 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.
_1 / 31 / 13 _09 : 08 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.

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**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 28 2013 Observers Name: <u>Karl Brunckhorst</u> Title: <u>Scientific Technologist</u>	Drainage Location Description	#1- CARW2	#2 - NPT6	#3 - N829	#4 - N883
	Observation Time	9 : 38 A.M.	9 : 41 A.M.	9 : 43 A.M.	9 : 58 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 February during hours of operation.			
	Were Pollutants Observed * (If yes, complete reverse side)	No	Yes	No	No
Observation Date: March 28 2013 Observers Name: <u>Karl Brunckhorst</u> Title: <u>Scientific Technologist</u>	Drainage Location Description	#1- CARW2	#2 - NPT6	#3 - N829	#4 - N883
	Observation Time	9 : 38 A.M.	9 : 41 A.M.	9 : 43 A.M.	9 : 57 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 March during hours of operation.			
	Were Pollutants Observed * (If yes, complete reverse side)	No	Yes	No	No
Observation Date: April 29 2013 Observers Name: <u>Karl Brunckhorst</u> Title: <u>Scientific Technologist</u>	Drainage Location Description	#1- CARW2	#2 - NPT6	#3 - N829	#4 - N883
	Observation Time	09 : 22 A.M.	09 : 35 A.M.	09 : 27 A.M.	09 : 43 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 April during hours of operation.			
	Were Pollutants Observed * (If yes, complete reverse side)	No	Yes	No	No
Observation Date: May 29 2013 Observers Name: <u>Karl Brunckhorst</u> Title: <u>Scientific Technologist</u>	Drainage Location Description	#1- CARW2	#2 - NPT6	#3 - N829	#4 - N883
	Observation Time	09 : 00 A.M.	09 : 02 A.M.	09 : 05 A.M.	09 : 10 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 May during hours of operation.			
	Were Pollutants Observed * (If yes, complete reverse side)	No	Yes	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.

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**FORM 4 – MONTHLY VISUAL OBSERVATIONS OF
STORM WATER DISCHARGES**

SIDE B

DATE/TIME OF OBSERVATION (From Reverse Side)	DRAINAGE AREA DESCRIPTION <i>EXAMPLE:</i> 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 <i>EXAMPLE:</i> Oil sheen caused by oil dripped by trucks in vehicle maintenance area.	DESCRIBE ANY REVISED OR NEW BMPs AND THEIR DATE OF IMPLEMENTATION
<u>2 / 28 / 13</u> <u>09 : 41</u> 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.
<u>3 / 28 / 13</u> <u>09 : 41</u> 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.
<u>4 / 29 / 13</u> <u>09 : 25</u> PM	Sample location NPT6	There was no runoff during the inspection. Debris, such as paper, bottles 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.
<u>5 / 29 / 13</u> <u>09 : 02</u> 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.

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**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 2012 Observers Name: <u>Karl Brunckhorst</u> Title: <u>Scientific Technologist</u>	Drainage Location Description	#5 – NPT7	#6 - NLIN	#7 - NLIN2*	#8 - GEOCRK*
	Observation Time	10 : 13 A.M.	10 : 00 A.M.	09 : 54 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 October during hours of operation.			
	Were Pollutants Observed ** (If yes, complete reverse side)	No	No	No	Yes
Observation Date: November 29 2012 Observers Name: <u>Karl Brunckhorst</u> Title: <u>Scientific Technologist</u>	Drainage Location Description	#5 – NPT7	#6 - NLIN	#7 - NLIN2*	#8 - GEOCRK*
	Observation Time	02 : 03 P.M.	01 : 52 P.M.	01 : 50 P.M.	01 : 28 P.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 20 2012 Observers Name: <u>Karl Brunckhorst</u> Title: <u>Scientific Technologist</u>	Drainage Location Description	#5 – NPT7	#6 - NLIN	#7 - NLIN2*	#8 - GEOCRK*
	Observation Time	10 : 32 A.M.	10 : 26 A.M.	10 : 23 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	Yes
Observation Date: January 31 2013 Observers Name: <u>Karl Brunckhorst</u> Title: <u>Scientific Technologist</u>	Drainage Location Description	#5 - NPT7	#6 - NLIN	#7 - NLIN2*	#8 - GEOCRK*
	Observation Time	10 : 00 A.M.	09 : 48 A.M.	09 : 46 A.M.	9 : 16 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 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.

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**FORM 4 – MONTHLY VISUAL OBSERVATIONS OF
 STORM WATER DISCHARGES**

SIDE B

DATE/TIME OF OBSERVATION (From Reverse Side)	DRAINAGE AREA DESCRIPTION	DESCRIBE STORM WATER DISCHARGE CHARACTERISTICS	IDENTIFY AND DESCRIBE SOURCE(S) OF POLLUTANTS	DESCRIBE ANY REVISED OR NEW BMPs AND THEIR DATE OF IMPLEMENTATION
<u>10 / 31 / 12</u> <u>09 : 30 AM</u>	EXAMPLE: Discharge from material storage Area #2 Downstream sample location GEOCRK	Indicate whether storm water discharge is clear, cloudy, or discolored; causing staining; containing floating objects or an oil sheen, has odors, etc. There was no runoff during the inspection. Water flows through the sample location from an upstream spring. Debris, such as paper and plastic were observed in the creek bed at the time of the inspection. A sheen was also observed at the time of the inspection.	EXAMPLE: Oil sheen caused by oil dripped by trucks in vehicle maintenance area. Sample location is near Corral Hollow Creek where occasional roadside dumping occurs and roadside trash collects.	Not applicable, this is an off site location.
<u>11 / 29 / 12</u> <u>01 : 28 AM</u>	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 and plastic 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.
<u>12 / 20 / 12</u> <u>09 : 47 AM</u>	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 and plastic 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.

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**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 28 2013 Observers Name: <u>Karl Brunckhorst</u> Title: <u>Scientific Technologist</u>	Drainage Location Description	#5 - NPT7	#6 - NLIN	#7 - NLIN2*	#8 - GEOCRK*
	Observation Time	10 : 30 A.M.	10 : 19 A.M.	10 : 15 A.M.	09 : 50 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 February during hours of operation.			
	Were Pollutants Observed ** (If yes, complete reverse side)	No	No	No	Yes
Observation Date: March 28 2013 Observers Name: <u>Karl Brunckhorst</u> Title: <u>Scientific Technologist</u>	Drainage Location Description	#5 - NPT7	#6 - NLIN	#7 - NLIN2*	#8 - GEOCRK*
	Observation Time	10 : 32 A.M.	10 : 19 A.M.	10 : 15 A.M.	9 : 51 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 March during hours of operation.			
	Were Pollutants Observed ** (If yes, complete reverse side)	No	No	No	Yes
Observation Date: April 29 2013 Observers Name: <u>Karl Brunckhorst</u> Title: <u>Scientific Technologist</u>	Drainage Location Description	#5 - NPT7	#6 - NLIN	#7 - NLIN2*	#8 - GEOCRK*
	Observation Time	10 : 15 A.M.	10 : 01 A.M.	09 : 58 A.M.	09 : 35 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 April during hours of operation.			
	Were Pollutants Observed ** (If yes, complete reverse side)	No	No	No	No
Observation Date: May 29 2013 Observers Name: <u>Karl Brunckhorst</u> Title: <u>Scientific Technologist</u>	Drainage Location Description	#5 - NPT7	#6 - NLIN	#7 - NLIN2*	#8 - GEOCRK*
	Observation Time	09 : 36 A.M.	09 : 24 A.M.	09 : 27 A.M.	09 : 57 A.M.
	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	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.

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

SIDE B

DATE/TIME OF OBSERVATION (From Reverse Side)	DRAINAGE AREA DESCRIPTION <i>EXAMPLE:</i> 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 <i>EXAMPLE:</i> Oil sheen caused by oil dripped by trucks in vehicle maintenance area.	DESCRIBE ANY REVISED OR NEW BMPs AND THEIR DATE OF IMPLEMENTATION
<u>02 / 28 / 13</u> <u>09 : 50</u> 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 was 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.
<u>03 / 28 / 13</u> <u>09 : 51</u> 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 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.

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

EVALUATION DATE: February 2013 – March 2013

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

<u>PRINCIPAL DIRECTORATE RESPONSIBLE FOR POTENTIAL POLLUTANT SOURCE/INDUSTRIAL ACTIVITY</u>	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	No deficiencies were found
Weapons and Complex Integration	NO	NO	No deficiencies were found
Operations and Business	NO	NO	TF-834: Outdoor storage of materials/equipment could degrade storm water quality. Remove, relocate, clean or cover noted items.



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