Environmental Protection Department

Operations and Regulatory Affairs Division

UCRL-AR-144362-06

Lawrence Livermore National Laboratory
Site 300
Annual Storm Water Monitoring Report
for Waste Discharge Requirements 97-03-DWQ

July 2006

Richard Brown

Water Guidance and Monitoring Group

Lawrence Livermore National Laboratory

University of California, Livermore, California 94551

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LLNL Site 300
Annual Storm Water Monitoring Report
For WDR 97-03-DWQ

REGIONAL BOARD INFORMATION

REGION 5S: CENTRAL VALLEY REGION, SACRAMENTO
Pamela Creedon, Executive Officer
11020 Sun Center Drive
Rancho Cordova, CA 95670-6114
Jatin Khandwala (khandwj@rb5s.swrcb.ca.gov)
(916) 464-4647 FAX: (916) 255-3015

GENERAL INFORMATION

A. ***Facility ID No:*** **5S39I015973**

B. *Operator:*
UC Regents

Contact Person:
William A. Bookless
Lawrence Livermore National Laboratory
P.O. Box 808, L-668
Livermore, CA 94551
(925) 422-3343

C. *Facility/Site:*
Site 300

Contact Person:
Jim Lane
Lawrence Livermore National Laboratory
P.O. Box 808, L-871
Livermore, CA 94551
(925) 423-5217

Facility SIC Codes: SIC Code 8733: Non-Commercial Research Organizations
SIC Code 9711: National Security

Regulated Activity SIC Codes: SIC Code 4953: Hazardous Waste Treatment (sector K) and Landfill and Land Application Sites (sector L)

State of California
STATE WATER RESOURCES CONTROL BOARD

2005–2006

ANNUAL REPORT

FOR
STORM WATER DISCHARGES ASSOCIATED
WITH INDUSTRIAL ACTIVITIES

Reporting Period July 1, 2005 through June 30, 2006

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.swrcb.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:* **5S39I015973**

Facility Business Name: UC Regents LLNL

Contact Person: James Lane - Manager

Physical Address: Corral Hollow Road

e-mail: lane5@llnl.gov

City: Tracy

State: CA Zip: 95376 Phone: (925) 423-5217

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

B. Facility Operator Information:

Operator Name: University of California Regents

Contact Person: William A. Bookless

Mailing Address: PO Box 808, Mail Stop L-668

e-mail: bookless1@llnl.gov

City: Livermore

State: CA Zip: 94551 Phone: (925) 422-3343

C. Facility Billing Information:

Operator Name: UC LLNL

Contact Person: Sandra Mathews

Mailing Address: PO Box 808, Mail Stop L-627

e-mail: mathews6@llnl.gov

City: Livermore

State: CA Zip: 94551 Phone: (925) 423-6679

SPECIFIC INFORMATION

MONITORING AND REPORTING PROGRAM

D. SAMPLING AND ANALYSIS EXEMPTIONS AND REDUCTIONS

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

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

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

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

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

   Re-evaluation Date: ____/____/____

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

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

   Re-evaluation Date: ____/____/____

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

   iv. ☐ Received Regional Board Certification Certification Date: ____/____/____

   v. ☐ Received Local Agency Certification Certification Date: ____/____/____

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

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

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

E. SAMPLING AND ANALYSIS RESULTS

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

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

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

3. How many storm water discharge locations are at your facility? ___5___ ***(Note: Two additional sample locations, CARW2 and GEOCRK, represent the receiving water upstream and downstream, respectively, of Site 300.)***

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, ***Locations N829 and NPT6 were not sampled because they did not discharge offsite.***

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

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

   Date facility's drainage areas were last evaluated ___05/31/2006_____

6. Were all samples collected during the first hour of discharge? ☒ YES ☐ NO ***Normally, it is not possible to determine exactly when flow begins at each location. Every effort is made to capture runoff as soon as possible.***

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

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

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

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

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

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

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

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

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

       _____ Other. **Attach explanation**

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

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

Analytical reports are* maintained *by LLNL and are available upon request.

F. QUARTERLY VISUAL OBSERVATIONS

1. **Authorized Non-Storm Water Discharges**

Section B.3.b of the General Permit requires quarterly visual observations of all authorized non-storm water discharges and their sources.

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

☐ **YES** ☒ **NO** Go to Item F.2

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

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

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

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

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

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

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

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

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

☐ **YES** ☒ **NO** Go to Item F.2.d

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

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

NOTE: Table 2 includes unplanned nonroutine releases not observed during inspections.

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.

LLNL conducted observations for storm water discharges.

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

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

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

Rainfall during the months of October, November and December 2005 was insufficient to produce runoff during working hours. (See Table 1 attached.)

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

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

   The following SWPPP items should be reviewed:
   - pollution prevention team
   - list of significant materials
   - description of potential pollutant sources
   - assessment of potential pollutant sources
   - identification and description of the BMPs to be implemented for each potential pollutant source

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

   The following BMP categories should be reviewed:
   - good housekeeping practices
   - spill response
   - employee training
   - erosion control
   - quality assurance
   - preventative maintenance
   - material handling and storage practices
   - waste handling/storage
   - structural BMPs

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

I. ACSCE EVALUATION REPORT

The facility operator is required to provide an evaluation report that includes:
- identification of personnel performing the evaluation
- the date(s) of the evaluation
- necessary SWPPP revisions schedule for implementing SWPPP revisions
- any incidents of non-compliance and the corrective actions taken

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

J. ACSCE CERTIFICATION

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

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

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

ATTACHMENT SUMMARY

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

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

2. If you conducted sampling and analysis, have you attached the laboratory analytical reports? ☐ YES ☒ NO ☐ NA

   Sampling and analyses were conducted; laboratory analytical reports are maintained by LLNL and are available on request.

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: William A. Bookless

Signature: William Bookless Date: 6/29/06

Title: Associate Director for Safety and Environmental Protection

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.swrcb.ca.gov. It is contained in the Sampling and Analysis Reduction Certification.

See Storm Water Contacts at

http://www.swrcb.ca.gov/stormwtr/contact.html

Form 1- Sampling & Analysis Result for the First Storm Event 2005-06 Annual Report

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

NAME OF PERSON COLLECTING SAMPLE(S): Bob Williams, Duke Ramsey

DESCRIBE DISCHARGE LOCATION	DATE/TIME OF SAMPLE COLLECTION	TIME DISCHARGE STARTED	ANALYTICAL RESULTS For First Storm Event							
			BASIC PARAMETERS					OTHER PARAMETERS		
			pH	TSS	SC	O&G	TOC	COD	Ammonia Nitrogen(as N)	Cyanide
N883	1/18/06 AM ☐ 2:20 PM ☒	Ongoing AM ☐ est. 1:45 PM ☒	7.19	25	43	<5	8.7	69	0.27	<0.02
GEOCRK (in creek, downstream)	1/18/06 AM ☐ 3:48 PM ☒	Ongoing AM ☐ est. 1:45 PM ☒	8.49	5.2	2,400	<5	7.8	25	0.033	<0.02
CARW2 (in creek, upstream)	1/18/06 AM ☐ 4:28 PM ☒	Ongoing AM ☐ est. 1:45 PM ☐	8.46	1,000	930	<5	7.1	120	0.074	<0.02
NPT7	1/18/06 AM ☐ 2:51 PM ☒	Ongoing AM ☐ est. 1:45 PM ☒	7.85	240	63	<5	2.0	39	0.054	<0.02
NLIN2	1/18/06 AM ☐ 3:18 PM ☒	Ongoing AM ☐ est. 1:45 PM ☒	8.30	330	560	<5	4.4	300	0.04	<0.02
TEST REPORTING UNITS:			**pH Units**	**mg/L**	**µmhos/cm**	**mg/L**	**mg/L**	**mg O/L**	**mg/L**	**mg/L**
TEST METHOD DETECTION LIMIT:			0.05	2.5	1.0	5.0	1.0	25	0.020	0.020
TEST METHOD USED:			E150.1	E160.2	E120.1	E1664	E415.1	E410.4	E350.1	E335.3
ANALYZED BY (SELF/LAB):			BC Labs	BC Labs	BC Labs	BC Labs	BC Labs	BC Labs	BC Labs	BC Labs

TSS - Total Suspended Solids SC - Specific Conductance O&G - Oil & Grease TOC - Total Organic Carbon
COD - Chemical Oxygen Demand NA - not applicable E - EPA Method

Form 1- Sampling & Analysis Result for the First Storm Event 2005-06 Annual Report (cont.)

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

NAME OF PERSON COLLECTING SAMPLE(S): Bob Williams, Duke Ramsey

DESCRIBE DISCHARGE LOCATION	ANALYTICAL RESULTS For First Storm Event								
	OTHER PARAMETERS: Metals								
	Arsenic	Beryllium	Cadmium	Iron	Lead	Magnesium	Mercury	Selenium	Silver
N883	<0.002	<0.0002	<0.0005	1.4	0.0015	1.1	<0.0002	<0.002	<0.001
GEOCRK (in creek, downstream)	<0.002	<0.0008	<0.0005	0.39	<0.001	59	<0.0002	<0.002	<0.001
CARW2 (in creek, upstream)	<0.002	0.0019	0.0007	67	0.033	41	<0.0002	<0.002	<0.001
NPT7	0.002	0.0005	<0.0005	17	0.0043	3.5	<0.0002	<0.002	<0.001
NLIN2	0.015	0.0006	0.0006	15	0.0067	21	<0.0002	<0.002	<0.001
TEST REPORTING UNITS:	**mg/L**	**mg/L**	**mg/L**	**mg/L**	**mg/L**	**mg/L**	**mg/L**	**mg/L**	**mg/L**
TEST METHOD DETECTION LIMIT*:	0.002	0.0008	0.0005	0.10	0.001	0.50	0.0002	0.002	0.001
TEST METHOD USED:	E200.8	E210.2	E200.8	E200.7	E200.8	E200.7	E245.1	E200.8	E200.8
ANALYZED BY (SELF/LAB):	BC Labs	BC Labs	BC Labs	BC Labs	BC Labs	BC Labs	BC Labs	BC Labs	BC Labs

E - EPA Method

* Test method detection limits may vary. Listed limits are for location GEOCRK.

Form 1- Sampling & Analysis Result for the First Storm Event 2005-06 Annual Report (cont.)

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

NAME OF PERSON COLLECTING SAMPLE(S): Bob Williams, Duke Ramsey

DESCRIBE DISCHARGE LOCATION	ANALYTICAL RESULTS For First Storm Event					
	OTHER PARAMETERS: Radioactive					
	Gross Alpha	Gross Beta	Tritium	U234*	U235*	U238*
N883	0.0157±0.014	0.101±0.033	0.618±1.92	1.3±0.78	0**±0.44	1.2±0.78
GEOCRK (in creek, downstream)	0.166±0.15	0.339±0.10	1.63±1.96	79.9±9.6	2.6±1.0	67±8.5
CARW2 (in creek, upstream)	0.544±0.24	1.17±0.26	0.529±1.92	103±13	3.6±1.4	92.1±11
NPT7	0.128±0.048	0.204±0.052	1.24±1.92	14.7±2.9	0.3±0.48	13.8±2.8
NLIN2	0.265±0.089	0.455±0.10	-0.44±1.89	75.5±10	5.2±1.7	69.9±9.2
TEST REPORTING UNITS:	**Bq/L**	**Bq/L**	**Bq/L**	**mBq/L**	**mBq/L**	**mBq/L**
TEST METHOD DETECTION LIMIT:	0.074 Bq/L (2 pCi/L)	0.11 Bq/L (3 pCi/L)	3.7 Bq/L (100 pCi/L)	3.7 mBq/L (0.1 pCi/L)	3.7 mBq/L (0.1 pCi/L)	3.7 mBq/L (0.1 pCi/L)
TEST METHOD USED:	E900	E900	E906	ALPHA SPEC	ALPHA SPEC	ALPHA SPEC
ANALYZED BY (SELF/LAB):	Eberline	Eberline	Eberline	Eberline	Eberline	Eberline

E - EPA Method

* Please note that concentrations (or activities) of uranium (U) isotopes are expressed as mBq/L = Bq/1000L (1 pCi = 37 mBq).

**This analytical result for uranium 235 was reported as) (zero).

Form 1- Sampling & Analysis Result for the First Storm Event 2005-06 Annual Report (cont.)

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

NAME OF PERSON COLLECTING SAMPLE(S): Bob Williams, Duke Ramsey

DESCRIBE DISCHARGE LOCATION	ANALYTICAL RESULTS For First Storm Event						
	OTHER PARAMETERS: Dioxins & Furans						
	1,2,3,4,6,7,8-HpCDD	Total HpCDD	1,2,3,4,6,7,8-HpCDF	1,2,3,4,7,8,9-HpCDF	Total HpCDF	1,2,3,4,7,8-HxCDF	Total-PentaCDD
CARW2** (in creek, upstream)	0.00451	0.00766	<0.0018	<0.00075	0.00233	<0.00066	<0.00077
NLIN2**	0.0986	0.162	<0.032	0.00282	0.0749	0.0029	<0.00084
GEOCRK** (in creek, downstream)	<0.0011	<0.0011	<0.00062	<0.00086	<0.00072	<0.00052	<0.00079
TEST REPORTING UNITS:	**ng/L**	**ng/L**	**ng/L**	**ng/L**	**ng/L**	**ng/L**	**ng/L**
TEST METHOD DETECTION LIMIT***:	0.0011	0.0011	0.00062	0.00086	0.00072	0.00052	0.00079
TEST METHOD USED:	E8290	E8290	E8290	E8290	E8290	E8290	E8290
ANALYZED BY (SELF/LAB):	Maxxam****/Sequoia	Maxxam****/Sequoia	Maxxam****/Sequoia	Maxxam****/Sequoia	Maxxam****/Sequoia	Maxxam****/Sequoia	Maxxam****/Sequoia

E - EPA Method
** - Polychlorinated biphenyl (PCB) monitoring results were all <0.48 μg/L from locations CARW2, NLIN2 and GEOCRK.
*** Test method detection limits vary. Listed limits are for location GEOCRK.
**** Maxxam Analytics is a subcontractor to Sequioa Analytical.

Form 1- Sampling & Analysis Result for the First Storm Event 2005-06 Annual Report (cont.)

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

NAME OF PERSON COLLECTING SAMPLE(S): Bob Williams, Duke Ramsey

DESCRIBE DISCHARGE LOCATION	ANALYTICAL RESULTS For First Storm Event						
	OTHER PARAMETERS: Dioxins & Furans (cont.)						
	1,2,3,4,7,8-HxCDD	1,2,3,6,7,8-HxCDD	1,2,3,6,7,8-HxCDF	1,2,3,7,8,9-HxCDD	1,2,3,7,8,9-HxCDF	2,3,4,6,7,8-HxCDF	OCDD
CARW2** (in creek, upstream)	<0.0011	<0.001	<0.00067	<0.00094	<0.00088	<0.00078	0.0204
NLIN2**	0.00124	0.00385	<0.0054	0.00285	<0.00079	0.0009	0.763
GEOCRK** (in creek, downstream)	<0.00077	<0.00076	<0.00053	<0.0007	<0.00069	<0.00061	0.0029
TEST REPORTING UNITS:	**ng/L**	**ng/L**	**ng/L**	**ng/L**	**ng/L**	**ng/L**	**ng/L**
TEST METHOD DETECTION LIMIT***:	0.00077	0.00076	0.00053	0.0007	0.00069	0.00061	0.001
TEST METHOD USED:	E8290	E8290	E8290	E8290	E8290	E8290	E8290
ANALYZED BY (SELF/LAB):	Maxxam****/Sequoia	Maxxam****/Sequoia	Maxxam****/Sequoia	Maxxam****/Sequoia	Maxxam****/Sequoia	Maxxam****/Sequoia	Maxxam****/Sequoia

E - EPA Method

** - Polychlorinated biphenyl (PCB) monitoring results were all <0.48 μg/L from locations CARW2, NLIN2 and GEOCRK.

*** Test method detection limits vary. Listed limits are for location GEOCRK.

**** Maxxam Analytics is a subcontractor to Sequioa Analytical.

Form 1- Sampling & Analysis Result for the First Storm Event 2005-06 Annual Report (concluded)

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

NAME OF PERSON COLLECTING SAMPLE(S): Bob Williams, Duke Ramsey

DESCRIBE DISCHARGE LOCATION	ANALYTICAL RESULTS For First Storm Event						
	OTHER PARAMETERS: Dioxins & Furans (concluded)						
	Total HexaCDD	Total HexaCDF	Total PentaCDF	OCDF	2,3,7,8-TCDD	2,3,7,8-TCDF	Total-TCDF
CARW2** (in creek, upstream)	0.0015	0.00099	<0.0016	0.0029	<0.00097	<0.0009	<0.0009
NLIN2**	0.0178	0.0285	0.0034	0.114	<0.00071	0.00159	0.00335
GEOCRK** (in creek, downstream)	<0.0012	<0.00058	<0.00091	<0.0012	<0.00061	<0.00074	<0.00074
TEST REPORTING UNITS:	**ng/L**	**ng/L**	**ng/L**	**ng/L**	**ng/L**	**ng/L**	**ng/L**
TEST METHOD DETECTION LIMIT***:	0.0012	0.00058	0.00091	0.0012	0.00061	0.00074	0.00074
TEST METHOD USED:	E8290	E8290	E8290	E8290	E8290	E8290	E8290
ANALYZED BY (SELF/LAB):	Maxxam****/Sequoia	Maxxam****/Sequoia	Maxxam****/Sequoia	Maxxam****/Sequoia	Maxxam****/Sequoia	Maxxam****/Sequoia	Maxxam****/Sequoia

E - EPA Method
** - Polychlorinated biphenyl (PCB) monitoring results were all <0.48 μg/L from locations CARW2, NLIN2 and GEOCRK.
*** Test method detection limits vary. Listed limits are for location GEOCRK.
**** Maxxam Analytics is a subcontractor to Sequioa Analytical.

Form 1- Sampling & Analysis Result for the Second Storm Event 2005-06 Annual Report

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

NAME OF PERSON COLLECTING SAMPLE(S): Gary Bear, Duke Ramsey

DESCRIBE DISCHARGE LOCATION	DATE/TIME OF SAMPLE COLLECTION	TIME DISCHARGE STARTED	ANALYTICAL RESULTS For Second Storm Event							
			BASIC PARAMETERS					OTHER PARAMETERS		
			pH	TSS	SC	O&G	TOC	COD	Ammonia Nitrogen(asN	Cyanide
N883	3/7/06 AM ☐ 1:30 PM ☒	AM ☐ est. 1:15 PM ☒	6.60	17	26	<5.6	6.5	<25	0.20	<0.02
GEOCRK (in creek, downstream)	3/7/06 AM ☐ 2:57 PM ☒	Ongoing AM ☐ est. 1:15 PM ☒	8.50	<3.3	1,900	<5	4.6	25	<0.02	<0.02
CARW2 (in creek, upstream)	3/7/06 AM ☐ 3:23 PM ☒	Ongoing AM ☐ est. 1:15 PM ☒	8.63	110	1,000	<5	4.9	<25	0.02	<0.02
NPT7	3/7/06 AM ☐ 2:02 PM ☒	AM ☐ est. 1:15 PM ☒	8.61	380	83	<5	5.2	51	0.039	<0.02
NLIN2	3/7/06 AM ☐ 2:24 PM ☒	Ongoing AM ☐ est. 1:15 PM ☒	7.92	1,700	300	<5	5.8	130	0.068	<0.02
TEST REPORTING UNITS:			**pH Units**	**mg/L**	**µmhos/cm**	**mg/L**	**mg/L**	**mg O/L**	**mg/L**	**mg/L**
TEST METHOD DETECTION LIMIT:			0.10	2.5	1.0	5.0	1.0	25	0.020	0.020
TEST METHOD USED:			E150.1	E160.2	E120.1	E1664	E415.1	E410.4	E350.1	E335.3
ANALYZED BY (SELF/LAB):			BC Labs	BC Labs	BC Labs	BC Labs	BC Labs	BC Labs	BC Labs	BC Labs

TSS - Total Suspended Solids SC - Specific Conductance O&G - Oil & Grease TOC - Total Organic Carbon
COD - Chemical Oxygen Demand NA - not applicable E - EPA Method

Form 1- Sampling & Analysis Result for the Second Storm Event 2005-06 Annual Report (cont.)

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

NAME OF PERSON COLLECTING SAMPLE(S): Gary Bear, Duke Ramsey

DESCRIBE DISCHARGE LOCATION	ANALYTICAL RESULTS For Second Storm Event								
	OTHER PARAMETERS: Metals (total)								
	Arsenic	Beryllium	Cadmium	Iron	Lead	Magnesium	Mercury	Selenium	Silver
N883	<0.002	<0.0002	<0.0005	0.56	<0.005	<0.5	<0.0002	<0.002	<.0.001
GEOCRK (in creek, downstream)	<0.002	<0.0002	<0.0005	<0.10	<0.005	55	<0.0002	<0.002	<.0.001
CARW2 (in creek, upstream)	0.0044	0.0002	<0.0005	7.9	<0.005	33	<0.0002	<0.002	<0.001
NPT7	0.0033	0.0009	0.0012	31	0.0071	5.9	<0.0002	<0.002	<.0.001
NLIN2	0.010	**0.0022**	0.0029	64	0.024	27	<0.0002	<0.002	<.0.001
TEST REPORTING UNITS:	**mg/L**	**mg/L**	**mg/L**	**mg/L**	**mg/L**	**mg/L**	**mg/L**	**mg/L**	**mg/L**
TEST METHOD DETECTION LIMIT:	0.002	0.0002	0.0005	0.10	0.005	0.5	0.0002	0.002	0.001
TEST METHOD USED:	E200.8	E210.2	E200.8	E200.7	E200.8	E200.7	E245.1	E200.8	E200.8
ANALYZED BY (SELF/LAB):	BC Labs	BC Labs	BC Labs	BC Labs	BC Labs	BC Labs	BC Labs	BC Labs	BC Labs

E - EPA Method

Form 1- Sampling & Analysis Result for the Second Storm Event 2005-06 Annual Report (cont.)

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

NAME OF PERSON COLLECTING SAMPLE(S): Gary Bear, Duke Ramsey

DESCRIBE DISCHARGE LOCATION	ANALYTICAL RESULTS For Second Storm Event					
	OTHER PARAMETERS: Radioactive					
	Gross Alpha	Gross Beta	Tritium	U234*	U235*	U238*
N883	-0.013±0.014	0.072±0.028	-1.02±2.1	2.7±1.3	0.52±0.78	3.03±1.3
GEOCRK (in creek, downstream)	0.033±0.089	0.199+±0.089	3.77±2.18	65.1±8.5	2.8±1.4	51.4±7.0
CARW2 (in creek, upstream)	0.339±0.15	0.56±0.13	-2.57±2.04	50.0±7.0	2.8±1.3	45.1±6.3
NPT7	0.127±0.059	0.300±0.07	-1.45±2.1	64.0±8.1	2.6±1.2	67.7±8.5
NLIN2	0.559±0.21	1.10±0.24	-0.559±2.1	22±3.6	0.70±0.59	28.3±4.4
TEST REPORTING UNITS:	**Bq/L**	**Bq/L**	**Bq/L**	**mBq/L**	**mBq/L**	**mBq/L**
TEST METHOD DETECTION LIMIT:	0.074 Bq/L (2 pCi/L)	0.11 Bq/L (3 pCi/L)	3.7 Bq/L (100 pCi/L)	3.7 mBq/L (0.1 pCi/L)	3.7 mBq/L (0.1 pCi/L)	3.7 mBq/L (0.1 pCi/L)
TEST METHOD USED:	E900	E900	E906	ALPHA SPEC	ALPHA SPEC	ALPHA SPEC
ANALYZED BY (SELF/LAB):	Eberline	Eberline	Eberline	Eberline	Eberline	Eberline

E - EPA Method

* Please note that concentrations (or activities) of uranium (U) isotopes are expressed as mBq/L = Bq/1000L (1 pCi = 37 mBq).

Form 1- Sampling & Analysis Result for the Second Storm Event 2005-06 Annual Report (cont.)

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

NAME OF PERSON COLLECTING SAMPLE(S): Gary Bear, Duke Ramsey

DESCRIBE DISCHARGE LOCATION	ANALYTICAL RESULTS For Second Storm Event						
	OTHER PARAMETERS: Dioxins & Furans						
	1,2,3,4,6,7,8-HpCDD	Total HpCDD	1,2,3,4,6,7,8-HpCDF	1,2,3,4,7,8,9-HpCDF	Total HpCDF	1,2,3,4,7,8-HxCDF	Total-PentaCDD
CARW2** (in creek, upstream)	0.0032	0.0058	<0.002	<0.0013	<0.0024	<0.0012	<0.0011
NLIN2**	0.604	1.02	0.191	0.0111	0.646	0.012	0.0047
GEOCRK** (in creek, downstream)	0.0018	0.0018	<0.00089	<0.0014	<0.0011	<0.0011	<0.0016
TEST REPORTING UNITS:	**ng/L**	**ng/L**	**ng/L**	**ng/L**	**ng/L**	**ng/L**	**ng/L**
TEST METHOD DETECTION LIMIT***:	0.0012	0.0012	0.00089	0.0014	0.0011	0.0011	0.0016
TEST METHOD USED:	E8290	E8290	E8290	E8290	E8290	E8290	E8290
ANALYZED BY (SELF/LAB):	Maxxam***/Sequoia	Maxxam***/Sequoia	Maxxam***/Sequoia	Maxxam***/Sequoia	Maxxam***/Sequoia	Maxxam***/Sequoia	Maxxam***/Sequoia

E - EPA Method

** - Polychlorinated biphenyl (PCB) monitoring results were all <0.5 μg/L from locations CARW2, NLIN2 and GEOCRK.

*** Test method detection limits vary. Listed limits are for location GEOCRK.

**** Maxxam Analytics is a subcontractor to Sequioa Analytical.

Form 1- Sampling & Analysis Result for the Second Storm Event 2005-06 Annual Report (cont.)

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

NAME OF PERSON COLLECTING SAMPLE(S): Gary Bear, Duke Ramsey

DESCRIBE DISCHARGE LOCATION	ANALYTICAL RESULTS For Second Storm Event						
	OTHER PARAMETERS: Dioxins & Furans (cont.)						
	1,2,3,4,7,8-HxCDD	1,2,3,6,7,8-HxCDD	1,2,3,6,7,8-HxCDF	1,2,3,7,8,9-HxCDD	1,2,3,7,8,9-HxCDF	2,3,4,6,7,8-HxCDF	OCDD
CARW2** (in creek, upstream)	<0.0012	<0.001	<0.0011	<0.0011	<0.0018	<0.0013	0.0178
NLIN2**	0.0084	0.0207	0.0037	0.0174	<0.002	0.0038	4.67
GEOCRK** (in creek, downstream)	<0.0012	<0.0011	<0.00094	<0.0011	<0.0016	<0.0012	0.0071
TEST REPORTING UNITS:	**ng/L**	**ng/L**	**ng/L**	**ng/L**	**ng/L**	**ng/L**	**ng/L**
TEST METHOD DETECTION LIMIT***	0.0012	0.0011	0.00094	0.0011	0.0016	0.0012	0.0014
TEST METHOD USED:	E8290	E8290	E8290	E8290	E8290	E8290	E8290
ANALYZED BY (SELF/LAB):	Maxxam***/Sequoia	Maxxam***/Sequoia	Maxxam***/Sequoia	Maxxam***/Sequoia	Maxxam***/Sequoia	Maxxam***/Sequoia	Maxxam***/Sequoia

E - EPA Method
** - Polychlorinated biphenyl (PCB) monitoring results were all <0.5 μg/L from locations CARW2, NLIN2 and GEOCRK.
*** Test method detection limits vary. Listed limits are for location GEOCRK.
**** Maxxam Analytics is a subcontractor to Sequioa Analytical.

Form 1- Sampling & Analysis Result for the Second Storm Event 2005-06 Annual Report (concluded)

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

NAME OF PERSON COLLECTING SAMPLE(S): Gary Bear, Duke Ramsey

DESCRIBE DISCHARGE LOCATION	ANALYTICAL RESULTS For Second Storm Event						
	OTHER PARAMETERS: Dioxins & Furans (concluded)						
	Total HexaCDD	Total HexaCDF	Total PentaCDF	OCDF	2,3,7,8-TCDD	2,3,7,8-TCDF	Total-TCDF
CARW2** (in creek, upstream)	<0.0013	<0.0013	0.0028	<0.0017	<0.0012	<0.0019	<0.0019
NLIN2**	0.110	0.166	0.0219	0.554	<0.0016	<0.0012	0.0012
GEOCRK** (in creek, downstream)	<0.0012	<0.0011	<0.0011	<0.0013	<0.0013	<0.0011	<0.0011
TEST REPORTING UNITS:	**ng/L**	**ng/L**	**ng/L**	**ng/L**	**ng/L**	**ng/L**	**ng/L**
TEST METHOD DETECTION LIMIT***:	0.0012	0.0011	0.0011	0.0013	0.0013	0.0011	0.0011
TEST METHOD USED:	E8290	E8290	E8290	E8290	E8290	E8290	E8290
ANALYZED BY (SELF/LAB):	Maxxam****/Sequoia	Maxxam****/Sequoia	Maxxam****/Sequoia	Maxxam****/Sequoia	Maxxam****/Sequoia	Maxxam****/Sequoia	Maxxam****/Sequoia

E - EPA Method

** - Polychlorinated biphenyl (PCB) monitoring results were all <0.48 μg/L from locations CARW2, NLIN2 and GEOCRK.

*** Test method detection limits vary. Listed limits are for location GEOCRK.

**** Maxxam Analytics is a subcontractor to Sequioa Analytical.

SIDE A

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

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

QUARTER: **JULY-SEPT.** DATE: ___/___/___	**Observers Name:** _____ **Title:** _____ **Signature:** _____	**WERE ANY AUTHORIZED NSWDs DISCHARGED DURING THIS QUARTER?** ☐ **YES** ☒ **NO** If **YES**, complete reverse side of this form.
QUARTER: **OCT.-DEC.** DATE: ___/___/___	**Observers Name:** _____ **Title:** _____ **Signature:** _____	**WERE ANY AUTHORIZED NSWDs DISCHARGED DURING THIS QUARTER?** ☐ **YES** ☒ **NO** If **YES**, complete reverse side of this form.
QUARTER: **JAN.-MARCH** DATE: ___/___/___	**Observers Name:** _____ **Title:** _____ **Signature:** _____	**WERE ANY AUTHORIZED NSWDs DISCHARGED DURING THIS QUARTER?** ☐ **YES** ☒ **NO** If **YES**, complete reverse side of this form.
QUARTER: **APRIL-JUNE** DATE: ___/___/___	**Observers Name:** _____ **Title:** _____ **Signature:** _____	**WERE ANY AUTHORIZED NSWDs DISCHARGED DURING THIS QUARTER?** ☐ **YES** ☒ **NO** If **YES**, complete reverse side of this form.

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

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

QUARTER: **JULY - SEPT.** **DATE/TIME OF OBSERVATIONS** ☐ 8/18/05 ☐ (Sampling times available for individual locations.)	**Observers Name:** Karl Brunckhorst, **Title:** Scientific Technologist	**WERE UNAUTHORIZED NSWDs OBSERVED?** ☐YES ☒ NO **WERE THERE INDICATIONS OF PRIOR UNAUTHORIZED NSWDs?** ☐ YES ☒ NO	If **YES** to either question, complete reverse side.
QUARTER: **OCT. - DEC.** **DATE/TIME OF OBSERVATIONS** ☐ 10/27/05 ☐ (Sampling times available for individual locations.)	**Observers Name:** Karl Brunckhorst, Crystal Foster **Title:** Scientific Technologists	**WERE UNAUTHORIZED NSWDs OBSERVED?** ☐YES ☒NO **WERE THERE INDICATIONS OF PRIOR UNAUTHORIZED NSWDs?** ☐ YES ☒NO	If **YES** to either question, complete reverse side.
QUARTER: **JAN. - MARCH** **DATE/TIME OF OBSERVATIONS** ☐ 2/28/06 ☐ (Sampling times available for individual locations.)	**Observers Name:** Bob Williams, Duke Ramsey **Title:** Field Operations Managers	**WERE UNAUTHORIZED NSWDs OBSERVED?** ☐YES ☒NO **WERE THERE INDICATIONS OF PRIOR UNAUTHORIZED NSWDs?** ☐ YES ☒NO	If **YES** to either question, complete reverse side.
QUARTER: **APRIL - JUNE** **DATE/TIME OF OBSERVATIONS** ☐ 5/31/06 ☐ (Sampling times available for individual locations.)	**Observers Name:** Karl Brunckhorst **Title:** Scientific Technologist	**WERE UNAUTHORIZED NSWDs OBSERVED?** ☐YES ☒NO **WERE THERE INDICATIONS OF PRIOR UNAUTHORIZED NSWDs?** ☐ YES ☒NO	If **YES** to either question, complete reverse side.

Note: There is an abandoned refrigerator in the off-site downstream location, known as GEOCRK, within Corral Hollow Creek.

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

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

QUARTER: **JULY - SEPT.** **DATE/TIME OF OBSERVATIONS** ☐ 8/18/05 ☐ (Sampling times available for individual locations.)	**Observers Name:** Karl Brunckhorst, **Title:** Scientific Technologist	**WERE UNAUTHORIZED NSWDs OBSERVED?** ☐YES ☒ NO **WERE THERE INDICATIONS OF PRIOR UNAUTHORIZED NSWDs?** ☐ YES ☒ NO	If **YES** to either question, complete reverse side.
QUARTER: **OCT. - DEC.** **DATE/TIME OF OBSERVATIONS** ☐ 10/27/05 ☐ (Sampling times available for individual locations.)	**Observers Name:** Karl Brunckhorst, Crystal Foster **Title:** Scientific Technologists	**WERE UNAUTHORIZED NSWDs OBSERVED?** ☐YES ☒NO **WERE THERE INDICATIONS OF PRIOR UNAUTHORIZED NSWDs?** ☐ YES ☒NO	If **YES** to either question, complete reverse side.
QUARTER: **JAN. - MARCH** **DATE/TIME OF OBSERVATIONS** ☐ 2/28/06 ☐ (Sampling times available for individual locations.)	**Observers Name:** Bob Williams, Duke Ramsey **Title:** Field Operations Managers	**WERE UNAUTHORIZED NSWDs OBSERVED?** ☐YES ☒NO **WERE THERE INDICATIONS OF PRIOR UNAUTHORIZED NSWDs?** ☐ YES ☒NO	If **YES** to either question, complete reverse side.
QUARTER: **APRIL - JUNE** **DATE/TIME OF OBSERVATIONS** ☐ 5/31/06 ☐ (Sampling times available for individual locations.)	**Observers Name:** Karl Brunckhorst **Title:** Scientific Technologist	**WERE UNAUTHORIZED NSWDs OBSERVED?** ☐YES ☒NO **WERE THERE INDICATIONS OF PRIOR UNAUTHORIZED NSWDs?** ☐ YES ☒NO	If **YES** to either question, complete reverse side.

Note: There is an abandoned refrigerator in the off-site downstream location, known as GEOCRK, within Corral Hollow Creek.

Form 4 - Monthly Observations of Storm Water Discharges, 2005-06

- 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.
- Discharge 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 not storm water.

Observation Date:	**October 27 2005**	Drainage Location Description	#1 - N883		#2 - GEOCRK*		#3 - NLIN2*		#4 - NPT6	
Observer's Name(s):	**Karl Brunckhorst, Crystal Foster**	Observation Time **from 9:30 to 10:31 am**	**Based on the low rainfall and on the observations made, there was no storm water discharge in October.**							
		Time Discharge Began **(none)**								
Title:	**Scientific Technologists**	Were Pollutants Observed (If yes, complete reverse side)	Yes		Yes		Yes		Yes	
			No		No		No		No	
Observation Date:	**November 29 2005**	Drainage Location Description	#1 - N883		#2 - GEOCRK*		#3 - NLIN2*		#4 - NPT6	
Observer's Name(s):	**Karl Brunckhorst**	Observation Time **from 2:19 to 3:20 pm**	**Based on the low rainfall during working hours and on the observations made, there was no storm water discharge during working hours in November.**							
Title:	**Scientific Technologist**	Time Discharge Began **(none)**								
		Were Pollutants Observed (If yes, complete reverse side)	Yes		Yes		Yes		Yes	
			No		No		No		No	
Observation Date:	**December 21 2005**	Drainage Location Description	#1 - N883		#2 - GEOCRK*		#3 - NLIN2*		#4 - NPT6	
Observer's Name(s):	**Karl Brunckhorst, Crystal Foster**	Observation Time **from 2:24 to 3:32 pm**	**Based on the low rainfall during working hours and on the observations made, there was no storm water discharge during working hours in December.**							
		Time Discharge Began **(none)**								
Title:	**Scientific Technologists**	Were Pollutants Observed (If yes, complete reverse side)	Yes		Yes		Yes		Yes	
			No		No		No		No	

*Note: Locations GEOCRK & NLIN2 generally have flow from springs located upstream of each location.

Form 4 - Monthly Observations of Storm Water Discharges, 2005–06 (cont.)

- 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.
- Discharge 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 not storm water.

Observation Date:	**October 27 2005**	Drainage Location Description	#5 - N829		#6 - CARW2**		#7 - NPT7	
Observer's Name(s):	**Karl Brunckhorst, Crystal Foster**	Observation Time **from 9:30 to 10:31 am**	**Based on the low rainfall and on the observations made, there was no storm water discharge in October.**					
		Time Discharge Began **(none)**						
Title:	**Scientific Technologist**	Were Pollutants Observed (If yes, complete reverse side)	Yes		Yes		Yes	
			No		No		No	
Observation Date:	**November 29 2005**	Drainage Location Description	#5 - N829		#6 - CARW2**		#7 - NPT7	
Observer's Name(s):	**Karl Brunckhorst**	Observation Time **from 2:19 to 3:20 pm**	**Based on the low rainfall during working hours and on the observations made, there was no storm water discharge during working hours in November.**					
		Time Discharge Began **(none)**						
Title:	**Scientific Technologist**	Were Pollutants Observed (If yes, complete reverse side)	Yes		Yes		Yes	
			No		No		No	
Observation Date:	**December 21 2005**	Drainage Location Description			#6 - CARW2**			
Observer's Name(s):	**Karl Brunckhorst, Crystal Foster**	Observation Time **from 2:24 to 3:32 pm**	**Based on the low rainfall during working hours and on the observations made, there was no storm water discharge during working hours in December.**					
		Time Discharge Began **(none)**						
Title:	**Scientific Technologist**	Were Pollutants Observed (If yes, complete reverse side)	Yes		Yes		Yes	
			No		No		No	

**Location CARW2 is offsite & upstream of LLNL's Site 300 and carries a load of sediments during significant storm events.

Form 4 - Monthly Observations of Storm Water Discharges, 2005–06 (cont.)

- 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.
- Discharge 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 not storm water.

Observation Date: January 18 2006	Drainage Location Description	#1 - N883	#2 - GEOCRK*	#3 - NLIN2*	#4 - NPT6
	Observation Time	14:20 P.M.	15:48 P.M.	15:18 P.M.	16:40 P.M.
Observer's Name(s): **Bob Williams, Duke Ramsey**	**from 2:20 to 4:40 pm**				
	Time Discharge Began		P.M.	P.M.	P.M.
Title: **Field Operations Managers**	**est. 1:45 pm**	A.M.		A.M.	A.M.
	Were Pollutants Observed	Yes	Yes	Yes	Yes
	(If yes, complete reverse side)	No X	No X	No X	No X
Observation Date: February 28 2006	Drainage Location Description	#1 - N883	#2 - GEOCRK*	#3 - NLIN2*	#4 - NPT6
	Observation Time		13:14 P.M.	12:09 P.M.	
Observer's Name(s): **Bob Williams, Duke Ramsey**	**from 10:55 am to 1:14 pm**	11:52 A.M.			10:55 A.M.
	Time Discharge Began	**Some light rain but insufficent for runoff.**			
Title: **Field Operations Managers**	**(none)**				
	Were Pollutants Observed	Yes	Yes	Yes	Yes
	(If yes, complete reverse side)	No X	No X	No X	No X
Observation Date: March 7 2006	Drainage Location Description	#1 - N883	#2 - GEOCRK*	#3 - NLIN2*	#4 - NPT6
	Observation Time	13:30 P.M.	14:57 P.M.	14:24 P.M.	15:19 P.M.
Observer's Name(s): **Karl Brunckhorst, Gary Bear/**	**from 1:30 to 3:23 pm**	A.M.	A.M.	A.M.	A.M.
Duke Ramsey	Time Discharge Began	P.M.	Ongoing P.M.	Ongoing P.M.	P.M.
Title(s): **Scientific Technologist(s)/**	**est. 1:15 pm**	A.M.	A.M.	A.M.	NA A.M.
Field Operations Manager	Were Pollutants Observed	Yes	Yes	Yes	Yes
	(If yes, complete reverse side)	No X	No X	No X	No X
Observation Date: April 26 2006	Drainage Location Description	#1 - N883	#2 - GEOCRK*	#3 - NLIN2*	#4 - NPT6
	Observation Time	14:45 P.M.	15:10 P.M.		14:55 P.M.
Observer's Name(s): **Karl Brunckhorst, Crystal**	**from 9:30 am to 3:10 pm**			9:30 A.M.	
Foster	Time Discharge Began	Ongoing P.M.	Ongoing P.M.	Ongoing P.M.	Ongoing P.M.
	(none)	A.M.	A.M.	A.M.	A.M.
Title: **Scientific Technologists**	Were Pollutants Observed	Yes	Yes	Yes	Yes
	(If yes, complete reverse side)	No X	No X	No X	No X

*Note: Locations GEOCRK & NLIN2 generally have flow from springs located upstream of each location.

Form 4 - Monthly Observations of Storm Water Discharges, 2005–06 (cont.)

- 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.
- Discharge 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 not storm water.

Observation Date:	**January 18 2006**	Drainage Location Description	#5 - N829		#6 - CARW2**		#7 - NPT7	
		Observation Time	16:39	P.M.	16:28	P.M.	14:51	P.M.
Observer's Name(s):	**Bob Williams, Duke Ramsey**	**from 2:20 to 4:40 pm**						
		Time Discharge Began		P.M.		P.M.		P.M.
Title:	**Field Operations Managers**	**est. 1:45 pm**		A.M.		A.M.		A.M.
		Were Pollutants Observed	Yes		Yes		Yes	
		(If yes, complete reverse side)	No	X	No	X	No	X
Observation Date:	**February 28 2006**	Drainage Location Description	#5 - N829		#6 - CARW2**		#7 - NPT7	
		Observation Time						
Observer's Name(s):	**Bob Williams, Duke Ramsey**	**from 10:55 am to 1:14 pm**	10:58	A.M.	11:00	A.M.	11:59	A.M.
		Time Discharge Began	**Some light rain but insufficent for runoff.**					
Title:	**Field Operations Managers**	**(none)**						
		Were Pollutants Observed	Yes		Yes		Yes	
		(If yes, complete reverse side)	No	X	No	X	No	X
Observation Date:	**March 7 2006**	Drainage Location Description	#5 - N829		#6 - CARW2**		#7 - NPT7	
		Observation Time	15:17	P.M.	15:23	P.M.	14:02	P.M.
Observer's Name(s):	**Karl Brunckhorst, Gary Bear/ Duke Ramsey**	**from 1:30 to 3:23 pm**						
		Time Discharge Began	Ongoing	P.M.	Ongoing	P.M.	Ongoing	P.M.
Title(s):	**Scientific Technologist(s)/**	**est. 1:15 pm**		A.M.		A.M.		A.M.
	Field Operations Manager	Were Pollutants Observed	Yes		Yes		Yes	
		(If yes, complete reverse side)	No	X	No	X	No	X
Observation Date:	**April 26 2006**	Drainage Location Description	#5 - N829		#6 - CARW2**		#7 - NPT7	
		Observation Time	14:50	P.M.	15:00	P.M.		
Observer's Name(s):	**Karl Brunckhorst, Crystal Foster**	**from 9:30 am to 3:10 pm**					9:50	A.M.
		Time Discharge Began		P.M.	Ongoing	P.M.	Ongoing	P.M.
		(none)	NA	A.M.		A.M.		A.M.
Title:	**Scientific Technologists**	Were Pollutants Observed	Yes		Yes		Yes	
		(If yes, complete reverse side)	No	X	No	X	No	X

**Location CARW2 is offsite & upstream of LLNL's Site 300 and carries a load of sediments during significant storm events.

Form 4 - Monthly Observations of Storm Water Discharges, 2005–06 (cont.)

- 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.
- Discharge 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 not storm water.

Observation Date:	**May 31 2006**	Drainage Location Description	#1 - N883		#2 - GEOCRK*		#3 - NLIN2*		#4 - NPT6	
		Observation Time			13:11	P.M.				
Observer's Name(s):	**Karl Brunckhorst**	**from 10:25 am to 1:11 pm**	10:53	A.M.			11:23	A.M.	10:31	A.M.
		Time Discharge Began **(none)**	**There was no storm water discharge during working hours in May.**							
Title:	**Scientific Technologist**	Were Pollutants Observed	Yes		Yes		Yes		Yes	
		(If yes, complete reverse side)	No	x	No	x	No	x	No	X

*Note: Locations GEOCRK & NLIN2 generally have flow from springs located upstream of each location.

Form 4 - Monthly Observations of Storm Water Discharges, 2005–06 (concluded)

- 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.
- Discharge 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 not storm water.

Observation Date:	**May 31 2006**	Drainage Location Description	#5 - N829		#6 - CARW2**		#7 - NPT7	
		Observation Time					12:08	P.M.
Observer's Name(s):	**Karl Brunckhorst**	**from 10:25 am to 1:11 pm**	10:39	A.M.	10:25	A.M.		
		Time Discharge Began	**There was no storm water discharge during working hours in May.**					
		(none)						
Title:	**Scientific Technologist**	Were Pollutants Observed	Yes		Yes		Yes	
		(If yes, complete reverse side)	No	X	No	X	No	X

**Location CARW2 is offsite & upstream of LLNL's Site 300 and carries a load of sediments during significant storm events.

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

EVALUATION DATE: Jan - May 2006 **Note:** Specific BMP inspections records are available upon request

SIGNATURE: Signed inspection records are maintained and available upon request.

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
Administration	NO	NO	
Chemistry and Materials Science	NO	NO	
Defense and Nuclear Technologies	NO	NO	
Directors Office	NO	NO	

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

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
Engineering	NO	NO	
Laboratory Services	NO	NO	
Safety and Environmental Protection	NO	NO	
Safeguards and Security	NO	NO	

Table 1. Daily rainfall totals (in cm) at Site 300 weather station, October 2005 – May 2006

Date	Total (cm)	Description
10/15/05	0.025	Off hours weekend (Sat.) rain, insufficient to produce runoff
10/26/05	0.076	Insufficient to produce runoff
10/28/05	0.025	Off hours (Fri.) rain, insufficient to produce runoff
11/08/05	0.051	Insufficient to produce runoff
11/28/05	1.04	Insufficient to produce runoff during working hours
11/29/05	0.051	Insufficient to produce runoff
12/01/05	0.15	Insufficient to produce runoff
12/02/05	0.18	Off hours (Fri.) rain, insufficient to produce runoff
12/07/05	0.025	Insufficient to produce runoff
12/17/05	0.46	Off hours weekend (Sat.) rain
12/18/05	1.88	Off hours weekend (Sun.) rain
12/19/05	0.025	Insufficient to produce runoff
12/21/05	0.84	Insufficient to produce runoff during working hours
12/22/05	1.04	Off hours (holiday) rain
12/23/05	0.025	Off hours (holiday) rain, insufficient to produce runoff
12/24/05	0.025	Off hours (weekend) rain, insufficient to produce runoff
12/25/05	0.36	Off hours (weekend) rain, insufficient to produce runoff
12/26/05	0.69	Off hours (holiday) rain
12/28/05	0.41	Off hours rain, insufficient to produce runoff
12/29/05	0.051	Off hours (holiday) rain, insufficient to produce runoff
12/31/05	1.63	Off hours (weekend) rain
01/01/06	0.15	Off hours (weekend) rain, insufficient to produce runoff
01/02/06	3.25	Off hours (holiday) rain
01/03/06	0.025	Insufficient to produce runoff
01/04/06	0.025	Insufficient to produce runoff
01/07/06	0.41	Off hours weekend rain, insufficient to produce runoff
01/11/06	0.051	Insufficient to produce runoff
01/13/06	0.025	Off hours weekend rain, insufficient to produce runoff
01/14/06	0.53	Off hours weekend rain, insufficient to produce runoff
01/18/06	0.61	Collected runoff samples (first storm)
01/21/06	0.20	Insufficient to produce runoff
01/26/06	0.051	Insufficient to produce runoff
01/27/06	0.025	Insufficient to produce runoff
01/29/06	0.10	Insufficient to produce runoff
01/30/06	0.53	Insufficient to produce runoff during working hours
02/04/06	0.051	Off hours weekend (Sat.) rain, insufficient to produce runoff
02/17/06	0.66	Off hours (Fri.) rain
02/18/06	0.18	Off hours weekend (Sat.) rain

Table 1. Daily rainfall totals (in cm) at Site 300 weather station (cont.)

Date	Total (cm)	Description
2/19/06	0.051	Off hours weekend (Sun.) rain, insufficient to produce runoff
2/26/06	0.10	Off hours weekend (Sun.) rain, insufficient to produce runoff
2/27/06	0.86	Insufficient to produce runoff, during working hours
2/28/06	0.81	Insufficient to produce runoff, during working hours
3/02/06	0.36	Insufficient to produce runoff, during working hours
3/03/06	0.13	Off hours (Fri.) rain, insufficient to produce runoff
3/06/06	0.56	Insufficient to produce runoff during working hours
3/07/06	0.94	Collected runoff samples (second storm)
3/08 – 4/21		Significant rains continued

* Site 300 normal business hours are M-Th, 7:00 am - 5:30 pm. The site is closed Friday through Sunday and University of California holidays.

Table 2. Summary of non-routine releases June 2005–May 2006.

Date of Incident	Location	Description of non-routine releases at sources
6/9/05	Building 854	Around 3 pm, LLNL personnel were removing some bollards in the area where Building 854D (B854D) used to be and they struck an aboveground 2-inch water line that fed the fire auxiliary line. The line was believed to be dead but unfortunately it was not, and it cracked and released several hundred gallons (about 300-500) of water to ground when it was struck.
6/15/05	B854J	An LLNL technician working at B854J noted that one of the four motors that operated the bridge crane was leaking. The technician drained the oil from the leaking motor into a photo tray then carried this tray to an area near the waste accumulation area (WAA), northeast of B854J, and transferred the oil through a funnel into a 35 gallon drum. Due to high winds, the oil did not all funnel into the drum and approximately 2-3 quarts of oil were spilled to the ground. The total area of contamination was 1-2 square feet. Another technician arrived and covered the area with plastic to prevent spread of contamination. That technician also drained the remaining three motors in B854J of oil. The contaminated soil was placed into a drum and managed properly as petroleum-contaminated waste.
6/15/2005	B836B	A past hydraulic fluid release was discovered when a section of a concrete floor was removed at B836B. The extent of contamination from the hydraulic fluid was determined and reported to the Central Valley Regional Water Quality Control Board (CVRWQCB). Some of the material had spread laterally under the building. The CVRWQCB has agreed to leave the laterally spread material in place until the building is demolished.
6/24/05	B854G	At 2:00 pm a 3-inch fire main header was broken at B854G. An estimated release of approximately 750 gallons of potable water flowed onto the ground and street. All of it either evaporated or soaked into the ground. The release did not trigger any notification, other than this annual report.

Table 2. Summary of non-routine releases June 2005–May 2006 (Cont.)

Date of Incident	Location	Description of non-routine releases at sources
6/30/05	B854G	There was a minor oil spill to soil at B854G. The pipe was believed to be a de-energized water line and performed a verification of this by putting a small hole in the pipe. When they did this, oil started leaking out. The hole was quickly patched and the leak stopped. Approximately one gallon leaked to ground. Further investigation has uncovered that this pipe led to oil-cooled programmatic equipment (a shaker table) at B854H. The soil was cleaned up and kept in the WAA temporarily.
8/1/05	B850 cooling tower	A release from the B850 cooling tower wetted the asphalt but did not flow into a surface water drainage course or storm drain. Steps were taken to minimize the release by shutting off the blow down flow until the problem could be diagnosed and fixed. Because this release did not reach a surface water drainage course or the storm drainage system, it did not need to be reported immediately to the CVRWQCB.
9/4/05	Chemistry Mag Loop	A fire hydrant water break released approximately 7-9 gal of water. No water reached a surface water drainage course.
9/4/05	B854H	A sprinkler head blew releasing to the outdoors approximately 200 gallons from a room. The release did not reach a surface water drainage course.
10/12/05	Hydraulic unit outside B826	Hydraulic unit behind B826 sprayed hydraulic fluid from a connection. Most of the fluid (approximately 5 gallons) remained in the drip pan around the unit or on the cement pad where unit was mounted, which was picked up using absorbent pads. A small amount, approximately one-half gallon, ended up on the dirt around the pad. The contaminated dirt was removed.

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