SAND2007-7466P

# Sandia National Laboratories, California

# STORMWATER POLLUTION PREVENTION PLAN

Prepared by
Environmental Management, 8516
October 2007

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**Sandia National Laboratories, California**
**Stormwater Pollution Prevention Plan (October 2007)**

## CERTIFICATION

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 persons 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.

Name and Title: Gary Shamber, Manager, Environmental Department Manager
Business Name: Sandia National Laboratories, California (SNL/CA)
Telephone Number: (925) 294-2237

Signed:_____ Date:_____

Name and Title: Daniel Pelligrino, Assistant Manager Environmental, Safety, and Health and Quality Assurance
Business Name: Sandia Site Office (SSO) U.S. Department of Energy
Telephone Number: (505) 845-6192

Signed:_____ Date:_____

(See Appendix L for signatory authorization.)

**Sandia National Laboratories, California**
**Stormwater Pollution Prevention Plan (October 2007)**

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_____ _____

Robert Holland, Environmental Monitoring Program Lead Date

Summary of Changes Since Last Issue

1. Added document changes page.
2. Updated Figure 2-3, Figure 4-1 and Table 3-1.
3. Changed references to automatic samplers to mechanical samplers.
4. Minor editorial revisions.
5. Clarified SNL has not been notified of coverage under the Small MS4 General Permit in Section 5.0.
6. All Appendices are the same, except Appendix C CIS List, Appendix G operating procedures, Appendix H web pages and Appendix K figures were updated.

# 1.0 BACKGROUND

## 1.1 Introduction

Sandia National Laboratories, California (SNL/CA) is a government-owned, contractor operated facility. The Department of Energy (DOE) oversees operation of SNL/CA through the Office of Kirtland Site Operations (OKSO), which reports to Sandia Site Office (SSO).

SNL/CA has filed a NOI for the California State Water Resources Control Board (SWRCB) Industrial Activities Storm Water General Permit (see Appendix A). The general permit requires that SNL/CA 1) eliminate unauthorized non-stormwater discharges, 2) prepare and implement a Stormwater Pollution Prevention Plan (SWPPP), and 3) perform monitoring of stormwater discharges and authorized non-stormwater discharges. Implementation of all three requirements is described in the components of this document.

This document also addresses the six Minimum Control Measures required by the California SWRCB Small MS4 Storm Water General Permit, Order 2003-005-DWQ (see Appendix B).

## 1.2 Regulatory Background

1972 Amendments to the Clean Water Act (CWA) mandate that pollutant discharges to waters of the United States be effectively eliminated unless the discharge complies with the National Pollutant Discharge Elimination System (NPDES) permit. The 1987 amendments to the CWA added Section 402(p), which established a framework for regulating stormwater discharges under the NPDES Program. Subsequently, in 1990, the United States Environmental Protection Agency (EPA), promulgated regulations for permitting stormwater discharges from industrial sites (including construction sites that disturb five acres or more) and from municipal separate storm sewer systems (MS4s) serving a population of 100,000 people or more. These regulations are known as Phase I of the NPDES stormwater program. The California State Water Resources Control Board (SWRCB) adopted a Phase I Industrial Activities General Permit, Phase I Construction Activities General Permit, and individual Phase I Municipal stormwater permits. SNL/CA has an Industrial Activities General Permit.

On December 8, 1999, U.S. EPA promulgated regulations, known as the Stormwater Phase II Final Rule. The Phase II Final Rule requires permits for stormwater discharges from regulated small MS4s and construction sites disturbing between 1 and 5 acres of land. Small MS4s include any MS4 not already covered by the Phase 1 program as a medium or large MS4 in an urbanized area. This definition of a small MS4 applies to MS4s operated within cities and counties as well as governmental facilities that have a system of storm sewers. The SWRCB Small MS4 General Permit Phase II Rule (General Permit) requires operators of regulated Small MS4s to design their stormwater programs to: 1) reduce the discharge of pollutants to the "maximum extent practicable" (MEP), 2) protect water quality, and 3) satisfy the appropriate water quality requirements of the Clean Water Act.

The Small MS4s General Permit requires the permittee to develop and implement a Storm Water Management Plan (SWMP) that describes BMPs, measurable goals, and timetables for implementation in the following six program areas referred to as Minimum Control Measures (MCM):

- Public Education,
- Public Participation,
- Illicit Discharge Detection and Elimination,
- Construction Site Storm Water Runoff Control,
- Post Construction Storm Water Management, and
- Pollution Prevention/Good Housekeeping for Municipal Operations.

Dischargers that are designated as a non-traditional Small MS4, and have not obtained coverage under the NPDES General Permit for the Discharge of Storm Water from Small MS4s shall incorporate into the facility's Industrial Activities SWPPP BMPs that comply with all of the Storm Water Management Program requirements contained in that Order. Such Dischargers shall submit their SWPPPs to the appropriate RWQCB within 180 days of designation (or as otherwise directed), and shall make amendments as required by the RWQCB.

It is anticipated that SNL/CA will be designated a regulated Small MS4 under the state designation criteria and require coverage under the General Permit. SNL/CA was listed in Attachment 3 of the Small MS4 General Permit as a non-traditional MS4. However, the General Permit did not designate any non-traditional MS4s. The SWRCB or Regional Water Quality Control Board (RWQCB) may designate non-traditional MS4s at any time after the permit adoption. SNL/CA has not yet received notification of designation.

When construction activities onsite total one acre or more SNL/CA will apply for a Construction Activities General Permit. Contractors will be responsible for developing and implementing a Construction SWPPP that meets SNL/CA approval. SNL/CA has previously received coverage under the Construction Activities General Permit. Even if the site is not operating under a Construction Activities General Permit, construction BMPs are still implemented onsite under this SWPPP and the site's Stormwater Management Program.

## 1.3 Implementation of Stormwater Management Program

The SWPPP shall identify specific individuals and their positions within the facility organization as members of a stormwater pollution prevention team responsible for developing the SWPPP, assisting the facility manager in SWPPP implementation and revision, and conducting all monitoring program activities required in Section B of the Industrial General Permit. The SWPPP shall identify the responsibilities, duties, and activities of each team member. The SWPPP shall also describe procedures that shall be implemented to identify alternate individuals to perform the required SWPPP and monitoring program activities when team members are temporarily unavailable (due to vacation, illness, out of town meetings, etc.)

The Environmental Monitoring (EM) Program staff, in the Environmental Management Department (EMD), is responsible for developing, implementing, maintaining, and revising the stormwater management program. EM staff have developed and is conducting instruction to

help ensure managers are adequately trained on the goals of the program; it is the managers' responsibility to ensure that this information is disseminated to the appropriate people in their organization. Program information can be disseminated to managers at the monthly SHEAC (Safety Health Environmental Advisory Committee) meetings. For example, this forum was used to introduce the newly incorporated Phase II MS4 elements in the revised SWPPP.

EM staff also conduct presentations for site personnel and managers. Training and general site awareness programs being further developed by EM staff is described in Section 3.4.

EM staff are responsible for regular evaluations of the effectiveness of this SWPPP. Where EM staff identify locations and activities impacting stormwater quality, EM staff and the appropriate organization work cooperatively to identify and implement BMP(s) effectively to reduce or eliminate the impact. Actual implementation of the BMP(s) is the responsibility of the appropriate organization. Table 1-1 lists the names and telephone numbers of EM staff who are members of the SWPPP team. Additional SNL/CA staff have also been trained to assist with sampling activities.

The Stormwater Team conducts an annual training on monitoring requirements and procedures, before the start of the wet weather season. The training records are kept in the Environmental Monitoring Records series.

Given the size and complexity of the SNL/CA site, many of the activities described in this SWPPP undergo continuous development to meet the site's changing needs. This SWPPP is intended to be a living document and will be updated annually, as needed, to incorporate changes to the site and its operations. The SWPPP is revised as appropriate, and implemented prior to changes in industrial activity including: a significant increase in the quantities of pollutants in stormwater discharges; a new area of industrial or construction activity exposed to stormwater; or a new industrial activity that would introduce a new pollutant source.

It is the responsibility of the line organizations to notify EM staff of any changes in activity that may potentially affect the quality of stormwater discharge. EM staff also identify changes during monitoring activities, daily rounds, and ES&H Interdisciplinary Team (IDT) meetings. All new projects on site must undergo IDT review. As changes to the SWPPP are identified, they will be recorded and maintained by EM staff as addendums until the next annual update of the SWPPP.

The Environmental Management Department Manager certifies the revised SWPPP and a copy is sent to DOE/SSO for review and approval.

**Table 1-1 Stormwater Team**

| SWPPP Team Member | ext. | Stormwater Related Responsibilities |
|---|---|---|
| Robert Holland, Environmental Monitoring Program Lead | 4-3755 | Program Lead: Develop and implement SWPPP and Monitoring Programs; Communicate BMPs to other organizations on site; BMP training; Follow-up to ensure BMPs are implemented |
| John Chavarria, Environmental Management Technologist | 4-3473 | Monitoring Lead: Implement stormwater monitoring program |
| Kristin Kerr (contractor) | 4-2230 | Develop and update SWPPP and Monitoring Programs; Assist with BMP training; Assist with monitoring activities |
| *Extended Sampling Team* | | |
| Mark Brynildson | 4-3150 | Assist with sampling activities |
| Barbara Larson | 4-2567 | Assist with sampling activities |
| Rebecca Schermesser | 4-6753 | Assist with sampling activities |

The general permit requires that SNL/CA 1) eliminate unauthorized non-stormwater discharges, 2) prepare and implement a Stormwater Pollution Prevention Plan (SWPPP), and 3) perform monitoring of stormwater discharges and authorized non-stormwater discharges. Implementation of all three requirements is described in the components of this document.

The two main objectives of a SWPPP as described in the general permit are to:

1. Identify and evaluate sources of pollutants associated with industrial activities that may affect the quality of stormwater discharges and authorized non-stormwater discharges from SNL/CA, and
2. Identify and implement site-specific best management practices (BMPs) to reduce or prevent pollutants associated with industrial activities in stormwater discharges and authorized non-stormwater discharges.

As stated previously, another objective of this SWPPP is to fulfill the requirements of the Small MS4 Storm Water General Permit and the required Storm Water Management Plan (SWMP). The Small MS4 General Permit requires a SWMP that describes BMPs, measurable goals, and timetables for implementation in the following six program areas or Minimum Control Measures:

- Public Education and Outreach on Storm Water Impacts
- Public Involvement/Participation
- Illicit Discharge Detection and Elimination
- Construction Site Storm Water Runoff Control

- Post-Construction Storm Water Management in New Development and Redevelopment
- Pollution Prevention/Good Housekeeping for Municipal Operations

This Industrial Activities SWPPP contains all of the elements of a SWMP required by the Small MS4 General Permit.

## 1.4 Other Regulatory Requirements and Facility Plans

The SWPPP may incorporate or reference the elements of the dischargers' existing plans, procedures, or regulatory compliance documents that contain stormwater pollution control practices or otherwise relate to the requirements of this General Permit.

The following documents are incorporated into this plan by reference:

- *Spill Prevention Countermeasure and Control Plan* (2004) includes an inventory of all fuel storage tanks on site and describes how potential spills are prevented and, in the event of a spill, contained.

- *Spill/Slug Control Plan* (2007) describes how any spill is prevented from entering the sanitary sewer and storm drain systems.

- *Groundwater Surveillance Monitoring Plan* (2007)

- *Annual Site Environmental Reports* summarize environmental data.

- *Environmental Monitoring Program Annual Report* summarizes environmental data, program elements and Environmental Management System (EMS) metrics.

- *ES&H Manual* describes guidance on implementing the requirements of environmental, safety, and health regulations. Chapters relevant to the SWPPP include: Chapter 10. Environmental Protection (http://www-irn.sandia.gov/corpdata/esh-manuals/mn471001/c10toc.htm); Chapter 12. Packaging and Transportation of Hazardous Material (http://www-irn.sandia.gov/corpdata/esh-manuals/mn471001/c12.htm); Chapter 17. Air Emissions (http://www-irn.sandia.gov/corpdata/esh-manuals/mn471001/c17toc.htm); and Chapter 19. Waste Management (http://www-irn.sandia.gov/corpdata/esh-manuals/mn471001/c19toc.htm).

- Wastewater Management Program ensures that all wastewaters are discharged to the sanitary sewer system according to the site's wastewater discharge permit. The program also tracks the location and discharge point of drains in all laboratories and janitorial closets.

- Waste Management Program ensures that all wastes are disposed of or recycled according to federal, state, and local requirements. The program includes picking up the waste from the generator, storing the waste on site, and packaging the waste to be disposed of or recycled off site.

- Chemical Inventory System is a cradle to grave system that tracks all chemicals on site. The system also includes where the materials are stored on site. The database can be accessed on SNL/CA's internal website http://cis.sandia.gov.

- SNL/CA complies with applicable laws, regulations, and guidelines governing radiological and nonradiological emissions to the atmosphere. Numerous projects and operations at SNL/CA are subject to rules and regulations administered by the Bay Area Air Quality Management District (BAAQMD) because they have the potential to emit air contaminants. In FY 2006/07, SNL/CA had a BAAQMD permit to operate 15 sources of air pollutants. SNL/CA also operated 17 exempt sources. The BAAQMD operating permit is renewed annually.

(This list is updated as additional regulatory requirements and facility plans that relate to stormwater are identified.)

## 1.5 Record Keeping and Reporting

Record keeping and reporting for the Stormwater Management Program is the responsibility of the SWPPP team listed in Table 1-1 above. Inspection forms, follow-up tracking forms, sampling analytical data, and annual reports are described in the Operating Procedures and maintained by the Records Manager for five years.

# 2.0 SITE DESCRIPTION

The SNL/CA site includes 410 acres. The site consists of approximately 220 acres of main operating area surrounded by approximately 190 acres of pastoral land. The pastoral land acts as a security buffer zone (Figure 2-1) and limits the site area impacted by stormwater run-on. All industrial activities are conducted in the main operating area. Approximately 50% of the main *operating area* is paved.

## 2.1 Geographic Location

Sandia National Laboratories, California (SNL/CA) is about 65 kilometers east of San Francisco, California, in the Livermore Valley of eastern Alameda County, approximately 5 kilometers east of the Livermore city center (Figure 2-2). The site occupies about 1.7 $km^2$ in the north and west half of Section 13, T3S, R2E, Mount Diablo baseline (known as Murray Township), as shown in the U.S. Geological Survey topographic map "Altamont Quadrangle." The Livermore Valley is flat and roughly bowl-shaped, about 26 km long and averages 11 km wide, and is surrounded by hills that rise 300 to 790 meters above the valley floor. The City of Livermore has expanded so that SNL/CA is only a few blocks from the edge of town. The City of Livermore has a population of approximately 79,000 (SNL/CA Site Environmental Report for 2002).

## 2.2 Land Use

The SNL/CA site covers 1.7$km^2$ (410 acres), which includes approximately 220 acres of developed areas. In 1986 and 1987, the Department of Energy (DOE) acquired 228 acres to provide a security buffer zone between the developed areas and the Laboratory. The site consists of approximately 220 acres of main operating area surrounded by approximately 190 acres of pastoral land. The pastoral land acts as a security buffer zone. All industrial activities are conducted in the main operating area. Approximately 50% of the main operating area is paved. The current operating area and undeveloped area are shown in Figure 2-1.

The site facilities comprise approximately 74,400 $m^2$ (801,000 $ft^2$) of building floor space. Of this, about 31% is office and drafting areas, 48% is light laboratories, and 3% is heavy laboratories. The remaining 18% is classified as miscellaneous usage, such as computer rooms and library space. Because SNL/CA is a multi-program laboratory involved in a broad range of research and development, facilities are designed for small-scale scientific and applied engineering research. The site has neither production nor large-scale manufacturing operations.

An intermittent stream, the Arroyo Seco, crosses the site from the southeast to the northwest carrying surface drainage into the Alameda Creek near Sunol, which continues west to the San Francisco Bay. Stormwater runoff from the hills to the southeast flows into the Arroyo during the rainy season. The Arroyo is dry the rest of the year. The SNL/CA site storm sewer channels water into the Arroyo Seco. This system is the main pathway for the site's surface drainage.

Wetlands located onsite are primarily restricted to the channel area of the Arroyo Seco in the eastern buffer area and nearby adjacent portions of the site (see Appendix I). Wetland habitat is present in approximately 1,370 feet of the channel, starting 200 feet east of the fence separating

the buffer area from the facility and extending east to the private property boundary (see Appendix I). The wetland is approximately 8 feet wide, except near the private property boundary where it averages 20 to 30 feet wide, resulting in 0.44 acre of wetland. Where wetlands were found, each parameter in the 3-parameter wetland delineation approach, which involves the examination of vegetation, soils, and hydrology to determine whether the site meets specific criteria in each category, was met. In addition, a small subchannel at the far eastern end of the site was determined to be a wetland. It is approximately 2 feet wide and 75 feet long.

The *Management Plan for Arroyo Seco* at SNL/CA identifies concepts for active channel improvements and stream zone management activities that will reduce current flood and erosion risk while providing additional and improved habitat and migration conditions for critical species that may use Arroyo Seco on the SNL/CA campus. Under the Arroyo Seco Improvement Program, one component of the *Management Plan for Arroyo Seco*, 106 acres on the eastern side of the site have been designated as wildlife reserve (U.S. Fish and Wildlife Service December 8, 2004 *National Nuclear Security Administration's Section 7 Consultation on the Proposed Maximum Operations Alterative at SNL/CA* letter transmitting the Biological and Conference Opinion). The reserve encompasses the eastern stretch of Arroyo Seco on SNL/CA property (see Appendix I). After completion of Arroyo Seco improvements, the reserve will be left undisturbed, except for routine mowing of the grassland for onsite fire management.

## 2.3 Stormwater Conveyance System

The SNL/CA stormwater conveyance system transports surface runoff to the Arroyo Seco or a ditch along East Avenue (Figure 2-3). There are six storm drain discharge locations into the ditch along East Avenue. Generally, stormwater discharged to the ditch is a combination of above ground channel and underground pipe. There are five discharge points into the underground pipe from parking lot areas. The ditch discharges to Arroyo Seco through an outfall in the box culvert under East Avenue.

There are seventeen outfalls that discharge directly into the Arroyo Seco; the Arroyo flows in a general Northwest direction. All internal discharge locations onsite are generally the end of a pipe, ditch, or open channel.

A drainage area collects surface runoff and discharges through a single stormwater discharge location. Table 2-1 describes the activities conducted within the drainage area of each of the discharge locations on site. Activities listed in Table 2-1 that may potentially impact stormwater quality are outdoor maintenance activities, chemical storage, and materials handling. Drainage areas which include these activities are 2, 3, 10, 11, 13B, 14A, 14B, 17, and 18A (see Table 2-1 for description). BMPs to minimize the exposure of pollutants from these activities are described in Section 3.4. Non-industrial activities conducted onsite include research, administrative-type activities, and employee parking. Inlets (including those with catch basins) to the storm drain system in drainage areas that may impact stormwater quality are illustrated in Appendix K figures.

The figures in Appendix K show the outline of all stormwater drainage areas within the facility boundaries, direction of flow, site surface water bodies, location of stormwater collection and

conveyance system, points of discharge, locations where materials are directly exposed to precipitation, shipping and receiving areas, and the hazardous waste storage facility. The drainage area maps also identify buildings and large paved, gravel and field areas on site. To complement these maps to show the impervious areas onsite an aerial map is also included in Appendix K. The locations of all fuel and oil storage tanks are shown on a separate figure and table in Appendix K, which are excerpts from the site's Spill Prevention Control and Countermeasure (SPCC) Plan.

Runoff from areas immediately surrounding the Arroyo Seco discharge directly into the Arroyo. To help ensure that pollutant exposure to runoff from these areas is effectively managed with appropriate stormwater BMPs, these drainage areas (drainage areas 12A and 22) are monitored as further described in Section 4.0.

## 2.4 Erosion Potential

The SNL/CA site is shaped like a triangle with the three corners pointing west, east, and south. The site is generally flat except for the south point. From Tenth Street south, the elevation of the site rises about 200 feet. Approximately fifty percent of this area is impervious to rainwater, including paved parking lots, and roads and buildings. This is the only part of the main operating area that could have flows with significant potential to cause erosion. One hillside was grouted for erosion control in 1999. The figure in Appendix K illustrates the location of steep banks with impervious surfaces nearby. No other control measures have been necessary to prevent erosion from these banks.

As part of closure activities for the former Navy Landfill, the area surrounding the bunkers storing explosive materials has also been monitored for potential erosion. SNL/CA implements an Erosion Control Action Plan, submitted to the Regional Water Board in November 1997 to prevent any erosion in this area. The Plan includes revegetation of the area (which occurred during the Spring of 1993), as allowed by the Fire Prevention Program, and monitoring (both visual and analytical) to ensure control measures are effective. The visual monitoring has been incorporated into the Stormwater Discharge Visual Observation Operating Procedure.

Erosion in the Arroyo Seco is monitored both by Environmental Management and Facilities/Engineering. Facilities conducted a damage assessment after the heavy rains during 1997/98. SNL/CA developed a work plan to address erosion problems in the Arroyo Seco. The *Management Plan for Arroyo Seco* at SNL/CA identifies concepts for active channel improvements and stream zone management activities that will reduce current flood and erosion risk while providing additional and improved habitat and migration conditions for critical species that may use Arroyo Seco on the SNL/CA campus.

Other activities on site that could cause soil erosion are construction activities; control measures to prevent erosion from construction activities are described in Table 3-4. Additional control measures will be required depending on the specifics of a project. All projects are reviewed for erosion potential during the IDT process. Inspections to ensure control measures are operating correctly will be scheduled as appropriate.

## Table 2-1 Description of Drainage Area Activities

| Discharge Location | SW Sample Location | Drainage Area ID# | Description of Drainage Area | Description of Drainage Area Activities |
|---|---|---|---|---|
| 1 | no sample | 1 | West side of Thunderbird Lane; south side of B906 | road; drains parking and driveway areas; storage sheds; significantly identical to Area 3 |
| 2 | no sample | 2 | East side of Combustion Research Facility (CRF) area | Outdoor maintenance and material handling; oils and solvents storage; significantly identical to Area 3 |
| 3 | A | 3 | West side CRF area | Outdoor maintenance and material handling; oils and solvents storage |
| sheet flow | no sample | 4 | East side, north end A Street (B920, 921, 922) | Administration buildings/office areas |
| sheet flow | no sample | 5 | West side, north end A Street;<br>➢ East side B912<br>➢ East side park area above underground Computer Facility | office areas, outdoor activities include Cushman parking, park area |
| 6 | no sample | 6 | Building 912 courtyard | Drains park in office courtyard |
| 7 | B (6) | 7 | B Street:<br>➢ East side B911<br>➢ West side B912<br>➢ West side park area above underground Computer Facility | Office buildings; indoor equipment room; outdoor activities include Cushman parking, park area |
| | underground connection | 8 | Park area in front of Gate 1 (west side B911 and north side B910) | Drains parking and office areas |
| 9 | no sample | 9 | North west parking area (includes several underground connections to storm drain line and one visible outfall to monitor) | Drains parking area |
| 10 | X | 10 | East side B968 (CDRL); parking lot south of B968 | Outdoor material handling; covered storage next to building; parking lot |
| 10A | no sample | 10A | Driveway on east side of equipment room | unused driveway |

| Discharge Location | SW Sample Location | Drainage Area ID# | Description of Drainage Area | Description of Drainage Area Activities |
|---|---|---|---|---|
| 11 | C | 11 | East parking area and area west and south Gate 15:<br>➢ South end east parking area<br>➢ South east side B927<br>➢ North side B928<br>➢ West and east side B928 | Outdoor materials handling; materials receiving area for entire site; parking area |
| 12 | no sample | 12 | B929 and south west side of B927 | Office building (2 dry labs also in building); indoor office equipment warehouse |
| | no sample | 12A | West side B967 | Offices; catch basin in landscaping; location 10 captures possible runoff from CDRL facility |
| 13 | no sample | 13 | Water Tanks | Drains water supply tanks |
| 13A | no sample | 13A | Area south of B916; M51, M50, B919 | Indoor research laboratories; outdoor storage for B916; paved area surrounding electrical switching stations; office trailers |
| 13B | K | 13B | Maintenance yard and Hazardous Materials Building:<br>➢ 7th Street<br>➢ B961 (Hazardous Materials Facility)<br>➢ Maintenance Yard | ➢ Outdoor hazardous materials handling<br>➢ Outdoor materials storage and stockpiling<br>➢ Outdoor raw stock metals stock storage; process chemicals, gas bottles, and storage sheds<br>➢ Heavy equipment storage (on pervious surface-dirt)<br>➢ Sand/aggregate material storage<br>➢ Covered vehicle fueling area<br>➢ Site maintenance area |

| Discharge Location | SW Sample Location | Drainage Area ID# | Description of Drainage Area | Description of Drainage Area Activities |
|---|---|---|---|---|
| 14 | no sample | 14A | North end C Street:<br>➢ Area west of B9631<br>➢ South side B9633<br>➢ Former FOS site (closed)<br>➢ B964 | south west of maintenance area; raw stock metals storage, storage sheds; significantly identical to sample K and L |
| | E (1), N (5) | 14B | South end Sandia Drive/C Street:<br>➢ Areas north and west B965 and 966<br>➢ B970 through 983<br>➢ Storage bunkers<br>➢ Security firing range | ➢ Outdoor materials handling<br>➢ Outdoor storage sheds<br>➢ Outdoor firing shed<br>➢ Explosives storage<br>➢ Indoor research laboratories<br>➢ NFL site (closed) |
| 15 | | 15 | Open asphalt area south of Redwood Park | Office buildings |
| 15A | F | 15A | West end Third Street and north end Fifth Street:<br>➢ South west corner of B915 (DISL)<br>➢ Area east and south B923<br>➢ Areas west B916<br>South end D Street:<br>East end Mobile 28&29 (Redwood Park) | Indoor research laboratories |
| 16 | no sample | 16 | Area east of MANTL (B940) | Drains parking and office area |
| 17 | G (2) | 17 | Second Street west of A Street:<br>➢ North west corner of B915<br>➢ Area east and south B910<br>➢ Area west B910<br>➢ Area north and east of Credit Union<br>➢ Area north B914 | Outdoor material handling and storage sheds; parking, offices |
| 18 | H (3) | 18A | North end Sandia Drive:<br>➢ MANTL | Outdoor maintenance, material handling, storage sheds, vacuum, pumps |
| | no sample | 18B | Area surrounding B955 and 956 | Drains parking area; indoor environmental testing |
| 19 | no sample | 19 | Far northwest parking area | Drains parking area |
| | D (4,7) | | | |

| Discharge Location | SW Sample Location | Drainage Area ID# | Description of Drainage Area | Description of Drainage Area Activities |
|---|---|---|---|---|
| | L | | Sample location in Arroyo downstream of 14 and 15A sample locations | |
| | sheet flow | 22 | B919 south side | Sheet flow to Arroyo, no outdoor activities |
| | Y (4) | | Arroyo Seco as it enters the site | |
| 30 | Z (4) | | Arroyo Seco as it leaves the site | |

(1) Discontinued after baseline information determined no significant erosion from hill area.
(2) Mechanical sampler installed for the 1996/97 wet season.
(3) Discontinued after baseline information on new facility onsite identified significantly identical to Area 7.
(4) Mechanical sampler installed for the 1995/96 wet season.
(5) Sample location N is for monitoring the closure of the NLF site and is not part of the stormwater monitoring program for the General Permit.
(6) Discontinued after site construction changed site drainage patterns. This location only receives stormwater drainage from office areas.
(7) Discontinued after site construction changed site drainage patterns. This location formally received sheet flow from hazardous waste facility and maintenance area. These drainage areas are now sampled at location K, 13B.

*(updated September 2006)*

**Figure 2-1** SNL/CA Site Map

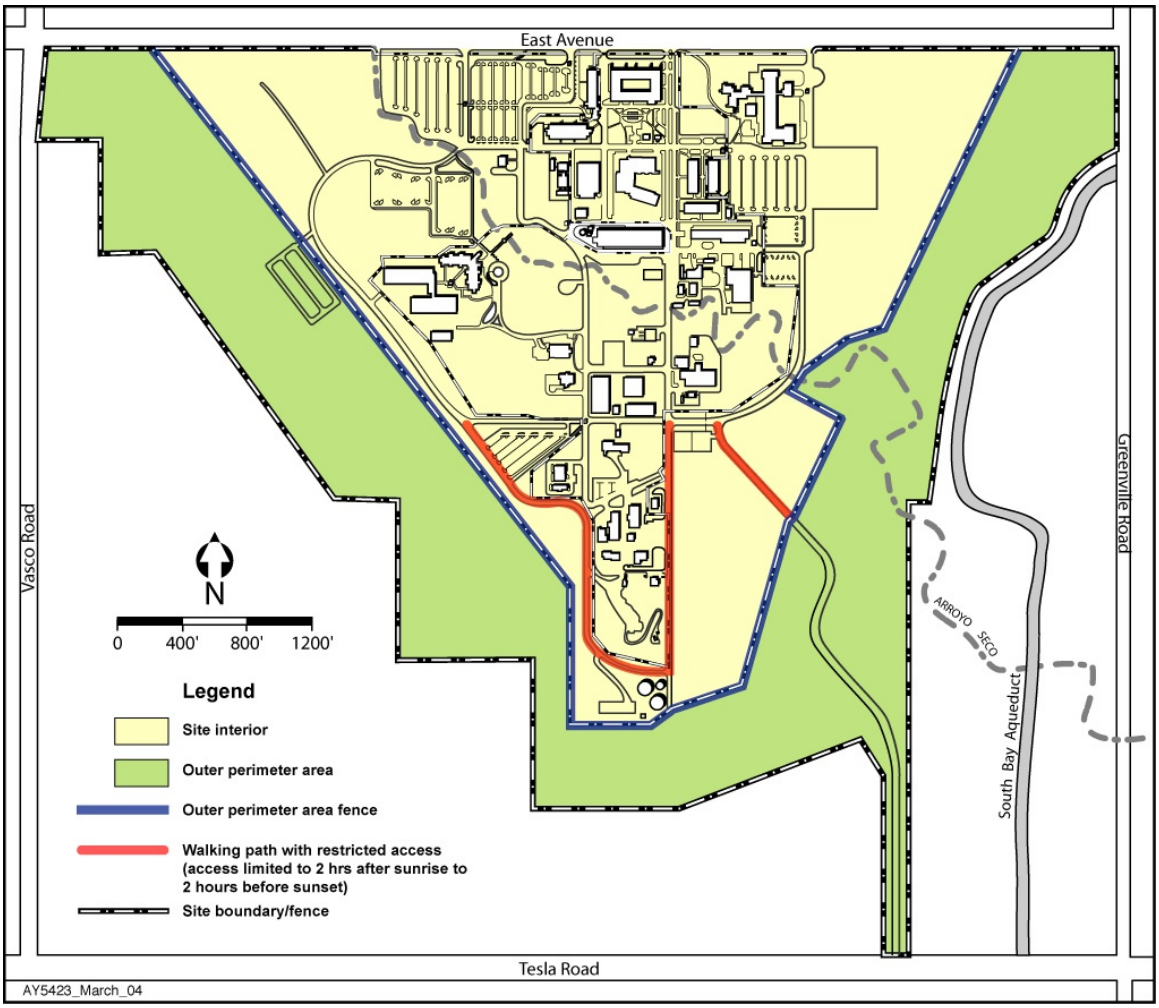
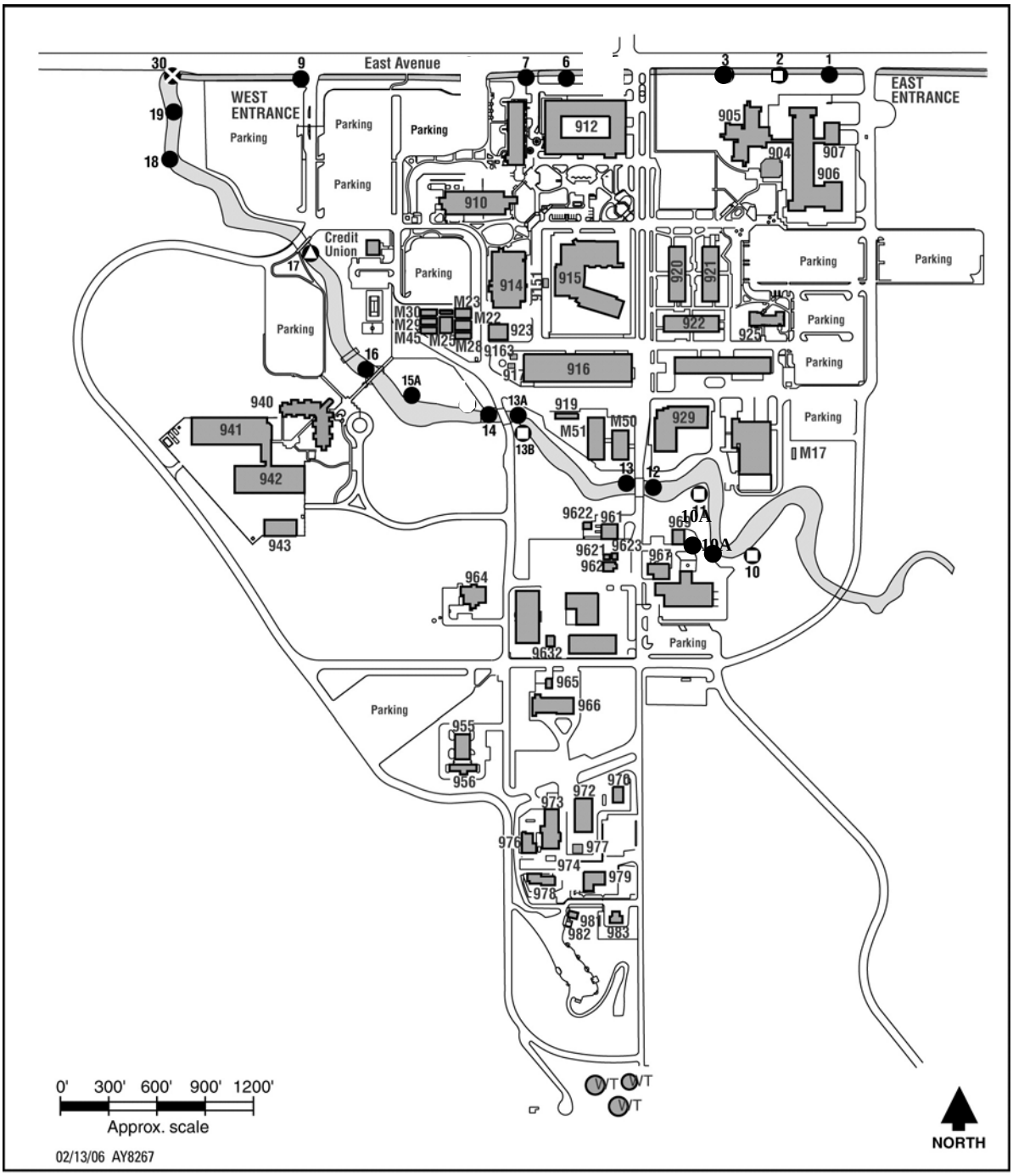


**Figure 2-2 SNL/CA Location Map**



**Figure 2-3 Site Outfall and Drainage Points**



# 3.0 POTENTIAL POLLUTANT SOURCES, BMPS and BMP ASSESSMENT

Related documentation on the following sections can be found in the ES&H Manual Chapter 10. Environmental Protection; Chapter 12. Packaging and Transportation of Hazardous Materials; Chapter 17. Air Emissions; and Chapter 19. Waste Management. Related documentation is also found in Operating Procedures for Department 8516.

## 3.1 Inventory of Materials and Chemicals

### *3.1.1 Material Handling*

Thunderbird Lane leading to Post 15 is the access road for all deliveries. All deliveries except explosives are received at the loading/unloading docks on the north east side of Building 928. Deliveries are then distributed to the different organizations. BMPs onsite are described in Section 3.4.

### *3.1.2 Significant Materials*

The general permit defines significant materials as generally any material that has the potential to be released with stormwater discharge. To develop a list of significant materials contained onsite, any material in outside storage areas was considered to have the "potential to be released with stormwater discharge".

SNL/CA implements a cradle to grave tracking system called the Chemical Inventory System (CIS). The CIS includes all materials stored outside, the location, amount and responsible owner. The CIS can be searched at any time to obtain a list of materials stored outside that have the potential to be released with stormwater. As part of the Annual Comprehensive Site Compliance Evaluation, significant materials are reviewed to ensure BMPs are implemented to prevent pollutant discharge. Appendix C contains an example printout of CIS materials stored outside one building location onsite to demonstrate the type of information that is available and how it can be accessed.

A site review of outdoor storage areas is also conducted annually. The most current list of outdoor storage areas is included in Table 3-1. The comments column includes a description of any material stored outside that is not included in the CIS (i.e. raw materials such as PVC piping).

**Table 3-1 Outdoor Storage Areas**

| Building Number | Storage Type | Comments |
|---|---|---|
| 906 west side | A, B | only gas cylinders, equipment and separate "locker" structures stored underneath the extended roof |
| 906 east side | A, B, C | only gas cylinders, equipment and separate "locker" structures stored underneath the extended roof; chemical storage sheds |
| 906 south side | A, B | only gas cylinders, equipment and separate “locker” structures stored underneath the extended roof |
| 910 west side | C | chemical storage sheds |
| 916 south side | A, B, C | only gas cylinders and separate "locker" structures stored underneath the extended roof; cooling tower water treatment unit with two tanks under extended roof |
| 914 south side | B, C | unable to verify type of storage because classified area |
| west side of MANTL | A, B, C, D | gas cylinders, material, drums, equipment and separate "locker" structures stored underneath the extended roof; chemical storage shed |
| 961 west side | B | two enclosed sheds for equipment storage only; raw metal materials stored outside behind storage sheds |
| 962-963; area bordered by C, 8th and A streets | A, B, D | general maintenance storage; open storage for raw materials (PVC, ducting, piles of sand/aggregate material, tires and metal), some drums stored on secondary containment; sheds on east side have canvas cover as one side of the structure |
| 966 east side | D | open storage for raw materials (PVC, piping, equipment, metal) |
| 968 north side | A, B | gas cylinders stored underneath the extended roof and separate “locker” structures |
| 970 west sides | A | only gas cylinders and separate “locker” structures stored underneath the extended shed with gated front |
| across the street from 970 south side | D | landscape material stored under tarps |
| 972 east | B | |
| 976 east side | B | separate “locker” structures and gas cylinders |
| 976 south side roof | B | gas cylinders stored outside |
| 977 | B | gas cylinders stored outside |

Storage Codes: (updated October 2007)
A = Storage along the side of a building with an extended roof. The storage area is not enclosed on the sides or front.
B = Storage in separate structures/sheds without secondary containment.
C = Storage in a separate structure; storage unit with secondary containment, sprinklers and alarms.
D = Storage without cover.

## 3.2 Significant Spills and Leaks

BMPs that prevent spill incidents or that minimize the affect of a spill on stormwater quality should a spill occur are described in Section 3.4. Trained personnel respond to spill incidents according to Operating Procedure OP471634 for Hazardous Waste Operations for Department 8516, Section 4.11 Spill Response. Spill incidents are documented in Environmental Protection Emergency Response Records and retained in the ES&H Records Center (WM-230.03). An example of a spill incident form is in Appendix D.

The Emergency Response Records have been regularly examined for significant spills or leaks beginning in October 1993. The general permit describes significant spills and leaks as materials that have spilled or leaked in significant quantities in stormwater discharges or non-stormwater discharges. The general permit defines significant quantities as "the volume, concentrations, or mass of a pollutant that can cause or threaten to cause pollution, contamination, or nuisance; adversely impact human health or the environment; and/or cause or contribute to a violation of any applicable water quality standards for the receiving water."

For the purpose of identifying significant spills from the Emergency Response Records, any spills that occurred inside a building are not considered significant spills. Spills that occur outside are potentially significant; these spills are not significant if BMPs effectively eliminate any discharge to the storm drains. These records are reviewed annually as part of the Annual Comprehensive Site Compliance Evaluation. Copies of the Emergency Response Records are retained in the ES&H Records Center.

To date, none of the spills were considered significant because there was no pollutant discharge to the storm drains.

## 3.3 Non-stormwater Discharges

### *3.3.1 Authorized Non-stormwater Discharges*

Special conditions in the general permit allow specific non-stormwater discharges that do not contain significant quantities of pollutants. Table 3-2 describes the authorized non-stormwater discharges on site, including the source, quantity, frequency, and characteristics of the non-stormwater discharge and associated drainage area. BMPs to prevent or reduce the contact of non-stormwater discharges with significant materials or equipment, and minimize the flow volume of the non-stormwater discharge are described in Section 3.4 and Table 3-3. Authorized discharges are inspected during quarterly, non-stormwater discharge visual observations. These discharges are reported and described annually as part of the Annual Report.

Note that discharges from fire fighting activities are authorized by the general permit and are not subject to any conditions.

**Table 3-2 Description of Authorized Non-Stormwater Discharges**

| Non-Stormwater Discharges | Source and Characteristics | Quantity; Frequency |
|---|---|---|
| air conditioning condensate | air conditioning units outside buildings or on building roof tops through out the site. | drips; only during hot weather |
| air handler condensate | air handlers in buildings or on rooftops throughout the site | drips; during hot weather |
| fire auxiliary: building systems | City water supply; testing from building sprinkler systems throughout the site | quarterly testing is done at each building for one minute with flow rates of 30-40 gpm; annual testing is done at each building for 1-2 minutes with flow rates of 150 gpm |
| fire auxiliary hydrants | City water supply; testing fire hydrants through out the site | each tests takes approximately 5 to 10 minutes at 500 to 1300 gpm; annually |
| safety wash testing | City water supply; safety eye washes and safety showers through out the site | each tests takes 20 seconds to 5 minutes; one to five gallons per test location |
| landscape/lawn irrigation | City water supply | through out year |

### *3.3.2 Identifying and Eliminating Illicit Connections*

Non-stormwater discharges can enter the storm drain system through illicit connections (cross-connections between the storm drain and sanitary sewer system) or from materials spilled, poured, dumped, or washed into the storm drains. EM staff is taking two approaches to effectively eliminate non-stormwater discharges. One approach is to conduct a rigorous operator outreach program. The objectives of the outreach are to increase awareness among the work force to eliminate illegal dumping incidents and to inform managers and operators about appropriate BMPs to reduce or eliminate discharge of pollutants with stormwater. This operator outreach program is further detailed later in this section. The second approach is the investigation EM staff conducted to identify non-stormwater discharges, to locate and eliminate any illicit connections to the storm drains.

#### *3.3.2.1 Investigations for Baseline Information on Potential Illicit Connections*

SNL/CA staff began during September 1993 an extensive investigation and testing of the storm drain system to identify sanitary-to-storm connections. The initial investigation included reviewing the piping schematics of plot plans and inspecting the storm drain system during dry weather to obtain baseline information on potential illicit connections.

**Piping Schematic Review**

A review of plot plans for the entire site revealed that, for much of the site, no storm drains are close enough to buildings or sanitary sewers to raise the possibility of cross-connections. In some areas however, the plot plans show a few buildings with rain water leaders connected directly to adjacent storm drains; rain water leaders that run inside buildings may be prone to illicit connections. These areas were noted for further investigation. (See Appendix F.)

**Extensive Site Inspection**

Preliminary interviews with Robert Garrett from SNL/CA's structural engineering department revealed that accidental cross-connections to the storm drain system from the sanitary system are improbable because pipe sizes and materials used for the two drainage systems are different; vitrified clay has been consistently used for sanitary yard piping and corrugated metal for storm drains. Based on general familiarity with the site's mechanical system, Garrett was fairly confident that, except for two specific areas of the site, cross-connections are unlikely. The two areas he was unfamiliar with were the areas surrounding Building 913 and 906. These areas, and the areas identified during the piping schematic review with rain leaders connected directly to adjacent storm drains, were targeted during the field investigation for potential cross-connections. The following describes the field investigation methodology:

- The investigation was conducted during dry weather so that any liquid identified in the storm drain system is non-stormwater.

- The exterior perimeter of each building was inspected for rainwater leader connections and unmapped drains or inlets.

- Interior locations were checked for sinks or inlets that may be connected to storm drains. Water was run into a specific drain if it was suspected to be connected to storm drains.

- The storm drain system was checked at outfalls and day-light locations for moisture, green vegetation, or damp soils.

- The interior of catch basins and manholes were examined for evidence of moisture. If moisture was found, upstream catch basins and manholes were investigated to identify the source. If the source could not be determined, the location was noted for further investigation.

Baseline investigations and findings are detailed in Appendix F. Based on the baseline investigations, eight areas with potential for illicit connections were identified and summarized.

*3.3.2.2 Eliminating Illicit Connections to the Storm Drain*

The memo, *Proposed Plan for Eliminating Illicit Connections to the Storm Drain* (EOA May 8, 1995), attached in Appendix F, proposed a strategy for verifying if any illicit connections at the eight target areas exist. A second memo, *Results of Dye and Water Testing* (EOA September 11,

1995), also attached in Appendix F, presents the findings of these tests. During investigations conducted between November 1994 through May 1995 outdoor pipes and drains were visually followed to their sources inside the building and water was run into possible source drains when the weather was dry. Observing water flowing at the outdoor storm drain would verify the indoor drain as a source drain. The results of these additional investigations eliminated several suspect illicit connections. Table F-1 in Appendix F describes the results of the field investigations and status of each target area.

*3.3.2.3 Additional Information on Illicit Connections*

Illicit connections continue to be investigated as a routine part of the Stormwater Program activities. During quarterly non-stormwater visual observations and annual site compliance evaluations EM staff identify potential illicit connections. Staff will then perform follow-up activities to confirm an illicit connection and correct the issue. Plumbing modifications (new lab sinks, drains, etc.) are reviewed as part of the IDT process. This reduces the opportunity for new illicit connections.

EM staff report illicit connections and the remedies in the Annual Stormwater Reports to the Regional Water Board.

## 3.4 Best Management Practices (BMPs)

SNL/CA implements a program that trains the workforce on appropriate stormwater BMPs. The training program informs SNL/CA workers of general permit requirements and helps them identify ways to minimize their potential impact on the quality of site stormwater discharge.

- SNL/CA developed a general information brochure titled “Only Rain in the Storm Drain”, included in Appendix E. The brochure describes how pollutants get into storm drains, examples of day-to-day activities that potentially contaminate rain, the consequences of these activities, and what SNL/CA personnel can do to prevent stormwater pollution.

- Because many of the stormwater BMPs could potentially increase the operating costs of facilities maintenance and construction activities, SNL/CA Facilities and Engineering managers were involved in developing stormwater BMPs and agreed to support their implementation. For example, garbage containers with lids have replaced containers without lids stored outdoors. SNL/CA has also increased its supply of sandbags to prevent flows from entering the storm drains, and tarps to cover materials stored outdoors.

  SNL/CA developed four BMP brochures for 1) construction activities, 2) material handling and storage, 3) vehicle and equipment maintenance, and 4) site and building maintenance. All four brochures are included in Appendix E.

- To introduce the newly developed BMPs SNL/CA conducted presentations at seven department meetings. All SNL/CA facilities maintenance and construction personnel

were required to participate in this training course. The presentation outline is included in Appendix E. These presentations were very effective in answering questions facilities maintenance and construction personnel had about how to implement the BMPs. The training session discussions were also beneficial for obtaining suggestions for improving the effectiveness of the BMPs.

- The EM staff continue to provide presentations for refresher training of BMPs or to introduce new BMPs to Maintenance and Engineering and Planning staff.

- Stormwater Program staff conducts annual Spill Prevention, Control and Countermeasures (SPCC) training for anyone on site that handles petroleum products, including maintenance staff and hazardous waste program staff. The Stormwater BMPs for this program are contained in the Operating Procedure Stormdrain Spill Prevention and Control.

- Stormwater BMPs are also discussed with line personnel during laboratory visits for the wastewater program.

### *3.4.1 Assessment of Potential Pollution Sources and Corresponding Best Management Practices Summary*

Tables 3-3 and 3-4 summarize industrial activities on site that have potential to discharge pollutants, potential sources, potential pollutants, and corresponding BMPs. Although the Stormwater Management Program has specifically developed certain BMPs, many BMPs are already part of the site's operating practices. For example, using dry cleanup methods rather than hosing down an area in response to spills is the standard operating procedure for the Emergency Response personnel. This is documented in the Operating Procedure OP471634 for Hazardous Waste Operations for Department 8516, Section 4.11 Spill Response.

Controls for the fuel and oil storage locations on site are described in the SPCC Plan. Secondary containment structures for all (including outdoor) fuel and oil tanks are inspected by SNL/CA's Preventive Maintenance Team. The underground diesel storage tank is monitored daily and all other tanks are monitored weekly. Both the Preventive Maintenance Team and the Maintenance Engineering Department keep copies of the inspection logs. The Stormwater Team contacts the Preventive Maintenance Team quarterly to ensure the inspections are being conducted and that any leaks have been repaired.

There is no stormwater treatment onsite. Stormwater runoff does receive some treatment in places where it flows through open, grass lined channels or rock ponds on site. These site features were not designed to treat stormwater runoff but there is likely some treatment benefit achieved.

### *3.4.2 BMP Training*

SNL/CA implements a program that trains the general workforce on appropriate stormwater BMPs. The training program informs SNL/CA workers of general permit requirements and

helps them identify ways to minimize their potential impact on the quality of site stormwater discharge.

The training program is implemented in a two-tiered approach. One level of training focuses on increasing sitewide awareness of the SNL/CA Stormwater Management Program to applicable SNL/CA workforce. The second level of training teaches appropriate BMPs to personnel whose daily activities potentially impact the quality of stormwater runoff, specifically facilities maintenance and construction personnel. The training program's strategy has been to:

- obtain agreement from management to implement stormwater BMPs,
- train the current workforce on the BMPs,
- conduct refresher presentations for facilities maintenance and construction personnel, as necessary.

All new projects must pass through the Inter-disciplinary Team (IDT) process, which includes review and evaluation by the Stormwater Team. New activities that could potentially impact stormwater are identified through IDT.

Stormwater BMPs are now available on SNL/CA's internal web. BMPs are identified by personnel (maintenance or line) and by activity (construction activities, vehicle and equipment maintenance, site and building maintenance, material handling and storage, spill prevention of liquid fuel and spill prevention of chemicals). Printouts of the web page are in Appendix H. Environmental Management has instituted web based training for the SPCC Plan.

All new employees must receive ES&H training which includes a stormwater pollution prevention message. In addition, EM staff conduct annual presentations to maintenance and facilities department staff to present new BMPs, conduct refresher training and obtain feedback on the program.

## 3.5 Annual Comprehensive Site Compliance Evaluation

EM staff conducts an annual, comprehensive site evaluation. The evaluations are conducted within eight to sixteen months of each other. The annual evaluation is conducted in conjunction with and reported in the Annual Stormwater Monitoring Report. The annual evaluation includes:

- A review of all visual observation records, inspection records, and sampling and analyses results;
- A visual inspection of all potential pollutant sources for evidence of, or the potential for, pollutants entering the drainage area;
- A review and evaluation of all BMPs to determine whether the BMPs are adequate, properly implemented and maintained, or whether additional BMPs are needed.
- A visual inspection of all equipment needed to implement the SWPPP.

The Operating Procedure for Annual Comprehensive Site Compliance Evaluation (OP471724) (Appendix G) describes how the annual evaluation is conducted and recorded. Follow-up activities (including identifying potential pollutant sources, preventing pollutant discharge with BMPs, and updating the SWPPP) are conducted as appropriate, and tracked on the Stormwater

Inspection Report Tracking Form. Follow-up activities are also reported in the Annual Monitoring Report submitted to the Regional Water Board.

**Table 3-3 Assessment of Potential Pollution Sources and Corresponding BMPs**

| Activity | Drainage Area(s) | Potential | | BMPs |
|---|---|---|---|---|
| | | Pollutants Sources | Pollutants | |
| ***Outdoor Industrial Processes*** | | | | |
| vehicle, golf cart, and equipment storage | 2, 3, 5, 10, 11, 12, 13B, 14A, 14B, 17, 18A | Leaks/spills from vehicles and equipment | Oil, grease, fuel, antifreeze | • Keep vehicle, cart, and equipment storage areas clean. Do not allow excess buildup oil and grease.<br>• Sweep vehicle, cart, and equipment storage areas regularly.<br>• All chemical spills will be cleaned up immediately. Call the ES&H Hotline (ext. 4-3724) for spill cleanup assistance. |
| vehicle, golf carts, bikes, and heavy equipment maintenance | 13B, 14A, 18A | Leaks/spills from vehicles and equipment | Oil, grease, fuel, antifreeze | • Regularly inspect vehicles, carts, and equipment used on site for leaks.<br>• Place drip pans under leaks until the leaks can be fixed.<br>• Keep maintenance areas clean. Do not allow excess buildup of oil and grease.<br>• Remove any excess buildup of oil and grease on impervious surfaces using dry cleanup methods (e.g. absorbent materials)<br>• Sweep maintenance areas regularly.<br>• All chemical spills will be cleaned up immediately. Call the ES&H Hotline (ext. 4-3724) for spill cleanup assistance.<br>• Dispose oil filters as hazardous waste.<br>• Use tarps on the ground to collect fallen debris or splatters. |
| golf cart and equipment washpad | 14A | Washwater | Oil, grease, fuel, antifreeze | • Conduct all on site vehicle, cart, and heavy equipment washing/cleaning on the wash pad by Building 963. The wash pad discharges to the sanitary sewer. |
| site maintenance | All | Leaks, spills, washwater, debris, landscaping activity, transportation | Pesticides, oil, grease, fuel, antifreeze, sediment, floatable materials, metals | • Minimize the amount of fertilizer and pesticides used, whenever possible.<br>• Sweep paved areas regularly, including parking lots.<br>• Pick up letter and other wastes from outside areas, especially around storm drain inlets and grates, regularly.<br>• Clean storm drain inlets annually. Minimize the amount of pollutants discharged to the storm drains or Arroyo Seco during cleaning.<br>• Properly dispose of wash water, swept debris, and sediment - do not dispose of them in the storm drains or Arroyo.<br>• All chemical spills will be cleaned up immediately. Call the ES&H Hotline (ext. 4-3724) for spill cleanup assistance. |

| Activity | Drainage Area(s) | Potential Pollutants Sources | Potential Pollutants | BMPs |
|---|---|---|---|---|
| ***Outdoor Industrial Processes*** | | | | |
| building maintenance | All | Building material and surfaces, roof drains | Paint chips, construction materials, roof sealants, toxic materials | • Use tarps on the ground to collect fallen debris or splatters.<br>• All chemical spills will be cleaned up immediately. Call the ES&H Hotline (ext. 4-3724) for spill cleanup assistance.<br>• If stripping or cleaning building exteriors with high-pressure water, prevent wash water from entering the storm drains. For example, block nearby storm drains or inlets with sandbags. If possible, divert the water to pervious areas to allow to evaporate or infiltrate. Contact Environmental Monitoring (ext. 4-3803) if discharging to the sanitary sewer system.<br>• No brushes or paint containers are cleaned or rinsed in a street, gutter, storm drain, or the Arroyo Seco. |
| maintenance shop | 13B, 14A | Repair site equipment including pumps, chillers | Oil, grease, fuel, solvents | • All maintenance activities conducted outdoors is performed under a roofed area attached to Building 963.<br>• All chemical spills will be cleaned up immediately. Call the ES&H Hotline (ext. 4-3724) for spill cleanup assistance. |
| construction, remodeling | 2, 3, 14B | Equipment, outdoor construction materials and activities | Sediment, nutrients, toxic materials, oil, grease, floatable materials, other construction waste, basic components | See Table 3-5 for Construction BMPs. |
| firing range | 13 | None. | None. | None. |

| Activity | Drainage Area(s) | Potential Pollutants Sources | Potential Pollutants | BMPs |
|---|---|---|---|---|
| ***Material Handling and Storage Areas*** | | | | |
| shipping access roads, receiving, loading/unloading | 1, 10, 11, 17, 18 | Delivered chemicals, vehicles | Oil, grease, fuel, chemicals (see CIS) | • Park trucks and other delivery vehicles so that materials that leak or spill during transfer can be contained.<br>• Implement a spill plan for material transfer areas to prevent the discharge of material in case of a spill.<br>• All chemical spills will be cleaned up immediately. Call the ES&H Hotline (ext. 4-3724) for spill cleanup assistance. |
| material storage (containers) | See Table 3-1 for descrip-tion of Outdoor Storage Areas | Bulk storage of chemicals used in laboratories | Chemicals (see CIS for chemicals stored in outside storage locations) | • Clearly label all storage containers.<br>• Maintain storage containers in good condition. Inspect all storage containers regularly for leaks.<br>• Replace leaking storage containers immediately.<br>• Keep liquid material in secondary containment and in a designated area on a paved or other impervious surface.<br>• All chemical spills will be cleaned up immediately. Call the ES&H Hotline (ext. 4-3724) for spill cleanup assistance. |
| material storage (sand/aggregate) | 13B | Bulk storage of construction material | Sand, cement, sediment | • Store stockpiled materials under a roof or covered with a tarp to prevent contact with rain.<br>• Sweep open storage areas regularly. |
| fuel storage | | | | See SPCC Plan. |
| waste storage | All | Food waste, office waste, laboratory non-hazardous waste | Organic material, nutrients, floatable materials | • Close the lid or place under cover waste containers stored outside, especially during the wet weather.<br>• Pick up litter and other waste regularly from outside areas, especially around storm drain inlets and grates.<br>• Sweep waste storage areas (e.g. around dumpsters) regularly.<br>• Chemical wastes are handled by the Waste Management Program which includes picking up the waste from the generator, storing the waste on site, and packaging the waste to be disposed of or recycled off site. See OP471634.<br>• All chemical spills will be cleaned up immediately. Call the ES&H Hotline (ext. 4-3724) for spill cleanup assistance. |

| Activity | Drainage Area(s) | Potential Pollutants Sources | Potential Pollutants | BMPs |
|---|---|---|---|---|
| ***Dust and Particulate Generating Activities*** | | | | |
| construction, remodeling | 14B, 17 | Equipment, outdoor construction materials and activities | Sediment, nutrients, toxic materials, oil, grease, floatable materials, other construction waste, basic components | See Table 3-5 for Construction BMPs. |
| The Air Quality Program assists projects on site assess their potential to generate dust or particulates. The Program sets standard limits, and tracks permits with the Bay Area Air Quality Management District. This information is maintained on an internal database. | | | | |
| ***Significant Spills and Leaks*** | | | | |
| Trained personnel respond to spill incidents according to Operating Procedure OP471634 for Hazardous Waste Operations. | | | | |
| ***Soil Erosion*** | | | | |
| Former Navy Landfill | 14B | Steep hillside | Sediment | Erosion Control Action Plan for the Navy Landfill (DOE, November 12, 1997) |
| Area between "A" and "C" Streets south of Sandia Drive | 14B | Steep hillside | Sediment | Vegetation is left rooted in hill area; grasses are mowed or cut down for Fire Prevention and Security purposes (an existing paved hillside is also located in this area) |
| Arroyo Seco | Direct discharge | Eroding banks | Sediment | Site Facilities is undergoing a series of maintenance and flood prevention activities along the Arroyo Seco, as funding becomes available. See "Arroyo Seco Sandia California Damage" Assessment (Miller and Garrett, July 22, 1998).. Control measures are being implemented to prevent further erosion from site activities. Some erosion continues to occur as a natural process. |

| Activity | Drainage Area(s) | Potential Pollutants Sources | Potential Pollutants | BMPs |
|---|---|---|---|---|
| ***Non-Stormwater Discharges*** | | | | |
| Air Conditioning Condensate | | Equipment, material on the ground, if any | Oil and grease, metals, litter | • Volume is minimal (drips) but dependent on weather<br>• Areas and equipment are kept clean to minimize pollutant exposure |
| Air Handler Condensate | 2, 3 | Equipment, material on the ground, if any | Oil and grease, metals, litter | • Volume is dependent on weather and minimal<br>• Areas and equipment are kept clean to minimize pollutant exposure |
| Fire Auxiliary - building sprinkler testing | 1, 2, 3, 11, 13A, 14A, 15, 18A | Material on the ground, if any | Litter | • Volume is restricted to the minimum required by the test<br>• Areas are kept clean to minimize pollutant exposure |
| Fire Auxiliary - hydrant testing | | Material on the ground, if any | Litter | • Volume is restricted to the minimum required by the test<br>• Areas are kept clean to minimize pollutant exposure |
| Safety Wash - eye wash and shower testing | 10, 13A, 13B, 14B, 18A | None | None | • Volume is restricted to what is necessary to ensure the safe use of the eye wash and shower |
| Landscape/Lawn Irrigation | 1, 2, 4, 5, 6, 7, 8, 9, 10, 14, 16, 17, 18, 19 | Landscaping activities (e.g., planting, mowing, etc.) fertilizers, pesticides | | • Apply pesticides and fertilizers at rates recommended by manufacturer<br>• Dispose of clippings and landscaping waste properly, not in storm drains<br>• Do not over irrigate landscape |
| Supply Water Tank or Line Maintenance | 13 | None | None | |

See Table 2-1 for description of Drainage Areas and Appendix K for drainage area maps.

**Table 3-4 Construction BMPs**

| Activity | Potential | | BMPs |
|---|---|---|---|
| | **Pollutants Sources** | **Pollutants** | |
| ***Construction Activities*** | | | |
| general practices | Outside construction activities and equipment | Sediments, toxic materials, oil and grease, floatable materials, other construction waste, pH increase | • Regularly inspect outdoor areas to ensure the effective implementation of these BMPs.<br>• Store all materials that could be discharged to the storm drains under cover (e.g., tarp, roof, lean-to), protected from rainfall and runoff. For stockpiled materials that are too large to cover, berm the material to minimize the amount discharged with runoff.<br>• Do no stockpile construction materials or waste along the side of the Arroyo.<br>• When working on or cleaning pieces of equipment, use tarps on the ground to collect fallen debris or splatters.<br>• Pick up letter and other waste regularly from outside areas, especially around storm drain inlets and grates.<br>• Do not discharge process or wash water to the storm drains or the Arroyo. |
| material storage and handling | Bulk storage of chemicals | Chemicals (see CIS for chemicals and quantities onsite) | • Store materials on site only where and when needed to complete the construction activity.<br>• Minimize on-site storage of construction materials that could discharge to the storm drains.<br>• Properly store, in approved facilities, containers of paints, chemicals, solvents, and other liquid materials that could discharge to the storm drains. Use secondary containment where runoff can reach floor drains or unroofed areas.<br>• All chemical spills will be cleaned up immediately. Call the ES&H Hotline for spill cleanup assistance. |
| material disposal | Exposed waste | Sediment, nutrients, toxic materials, floatable materials, other construction waste, pH increase | • Arrange for regular waste collection and regularly clean the project area using dry cleanup methods, such as sweeping.<br>• Prevent rain from entering waste containers. For example, place waste containers under a roof or cover with plastic sheeting during rainy weather and/or at the end of each work day. Make sure dumpster lids are closed.<br>• Hose down waste containers only on the wash pad.<br>• Handle hazardous wastes in accordance with laws and regulations. Contact Waste Management (ext. 4-2145)<br>• Do not clean or rinse tools or equipment in the street, gutters, storm drains, or the Arroyo.<br>• Do not bury waste materials. |

| Activity | Potential Pollutants Sources | Potential Pollutants | BMPs |
|---|---|---|---|
| | | | • Do not leave waste materials in the street, gutters, rains, or the Arroyo. |
| paving and other concrete/asphalt operations | Activity and equipment | Sediment, toxic materials, oil and grease, other construction waste, pH increase | • Prevent wash water from concrete cutting and other concrete operations from entering the storm drains. If possible, divert the water to pervious areas to allow it to evaporate. Or block nearby storm drains and divert to the sanitary sewer.<br>• Wash concrete mixers in a designated area. where the water will flow onto dirt.<br>• Place all excess concrete in a form, holder, box, or area where it may be removed once it has hardened.<br>• Cover catch basins and open manholes with an impervious material, such as a rubber mat, when applying seal coat, tack coat, slurry seal, or other such material.<br>• Secure bags of cement to prevent spills after they have been opened. |
| trenching, excavation, and other earthwork | Activity and equipment | Sediment, oil and grease | • Close and stabilize open trenches as soon as possible. Sequence trenching projects so that most open portions are closed before new trenching is begun.<br>• Remove designated material from the construction site as instructed by the project manager. Cover piles of backfill, which could discharge sediment to the storm drains, if rainy weather is forecast and at the end of each work day during the wet season (October 1 through May 31)<br>• Minimize the amount of sediment discharged to the storm drains or the Arroyo as a result of earthwork activities. Cover nearby storm drain inlets to prevent sediment from entering inlets. |

# 4.0 STORMWATER MONITORING PROGRAM

The objectives of the Stormwater (SW) Monitoring Program are to:

- Ensure that stormwater discharges are in compliance with the Discharge Prohibitions, Effluent Limitations, and Receiving Water Limitations specified in the general permit,
- Ensure practices at the facility to reduce or prevent stormwater discharges and authorized non-stormwater discharges are evaluated and revised to meet changing site conditions,
- Aid in the implementation and revision of the SWPPP as described in the general permit, and
- Measure the effectiveness of BMPs to prevent or reduce pollutants in stormwater discharges and authorized non-stormwater discharges.

The specific components of the SW Monitoring Program as described in the general permit are:

1. Non-stormwater discharge visual observations,
2. Stormwater discharge visual observations, and
3. Sampling and analyses of stormwater discharges.

Monitoring data are stored in the EM Program offices for one year then transferred to the Records Center and maintained for five years. (EM-217).

## 4.1 Non-stormwater Discharge Visual Observations

EM staff inspects all drainage areas on-site for the presence of unauthorized non-stormwater discharges once every quarter (January through March, April through June, July through September, and October through December) during dry weather. Inspections are conducted during scheduled SNL/CA working hours. The purpose of the non-stormwater discharge observations are to observe for the presence of 1) dry weather flow (non-stormwater discharges) or 2) any stains, sludges, odors, or any other abnormal conditions that may indicate non-stormwater has been discharged. Non-stormwater discharge observations also include inspection of authorized discharges and their sources described in Section 3.3.1 to ensure no pollutants are discharged to the storm drains.

The Operating Procedure for Non-stormwater Discharge Visual Observations (OP471089) (Appendix G) describes how the observations are conducted and recorded. Follow-up activities on unauthorized non-stormwater discharges are conducted as appropriate, and tracked on the Stormwater Inspection Tracking Form. Follow-up activities include identifying the source, effectively eliminating the discharge, and updating the SWPPP if deemed necessary. Follow-up activities for specific discharges are reported in the Annual Monitoring Report submitted to the Regional Water Board

## 4.2 Stormwater Discharge Visual Observations

EM staff inspects all stormwater discharge locations illustrated in Figure 2-2. Inspections are conducted generally during the first hour of discharge of one storm event per month between the months of October through May. EM staff only conducts these observations if the storm is preceded by three workdays without stormwater discharge. EM staff observes for the presence

of floating and suspended materials, oil and grease, discoloration, turbidity, odor, or any other abnormal conditions that may indicate pollutants are being discharged with stormwater.

The Operating Procedure for Stormwater Discharge Visual Observations (OP471090) (Appendix G) describes how the observations are conducted and recorded. Follow-up activities to eliminate pollutants identified in the discharge are conducted as appropriate, and tracked on the Stormwater Inspection Tracking Form. Follow-up activities include identifying the source, reducing or preventing pollutant discharge with stormwater, and updating the SWPPP. Follow-up activities for specific actions are reported in the Annual Monitoring Report submitted to the Regional Water Board.

## 4.3 Sampling and Analysis

EM staff has collected samples of stormwater discharge from SNL/CA since the 1992/93 wet season, (once during 1992/93, twice since) and will continue to collect samples from at least two storm events in subsequent wet seasons. When possible and safe, EM staff collects samples during the first hour of discharge from the first storm event and at least one other storm event in the wet season. The permit also allows EM staff to only collect samples during scheduled facility operating hours and when the storm is preceded by three days of no stormwater discharge.

### *4.3.1 Sampling Locations*

There are a total of twenty two storm drain discharge locations into the Arroyo Seco and East Avenue, the two main stormwater conveyance channels. Beginning the 1994/95 wet season, stormwater samples had been collected from eight of the outfalls, which primarily drain industrial activity areas (stations A through G; see Table 2-1 for summary of drainage areas and activities conducted in each drainage area and Appendix K for drainage area maps). A mechanical sampler was installed at Station G in time for the 1996/97 wet season. Previously, EM staff was required to enter the Arroyo Seco to collect a sample at Station G, which is too dangerous to enter during heavy storms.

The general permit allows reducing the number of sampling locations if different locations are substantially identical. For example, drainage areas 2 and 3 both primarily include outdoor handling of materials, solvents and oil. Table 4-1 summarizes the rationale for selecting stormwater sample locations. The sampling locations are illustrated on Figure 4-1.

In addition to reductions in the number of sampling locations, there have been changes over the years to the drainage areas of the site. Sampling locations have been added and discontinued, as appropriate.

The Arroyo Seco is also sampled immediately before it enters and as it exits the main operating area. Two mechanical samplers were installed in time for the 1995/96 wet season at these locations (stations Y and Z respectively). In the past, these locations could be sampled only if weather conditions allowed safe access along the steep banks of the Arroyo. The mechanical samplers are manually actuated to pump water from the Arroyo during sampling events.

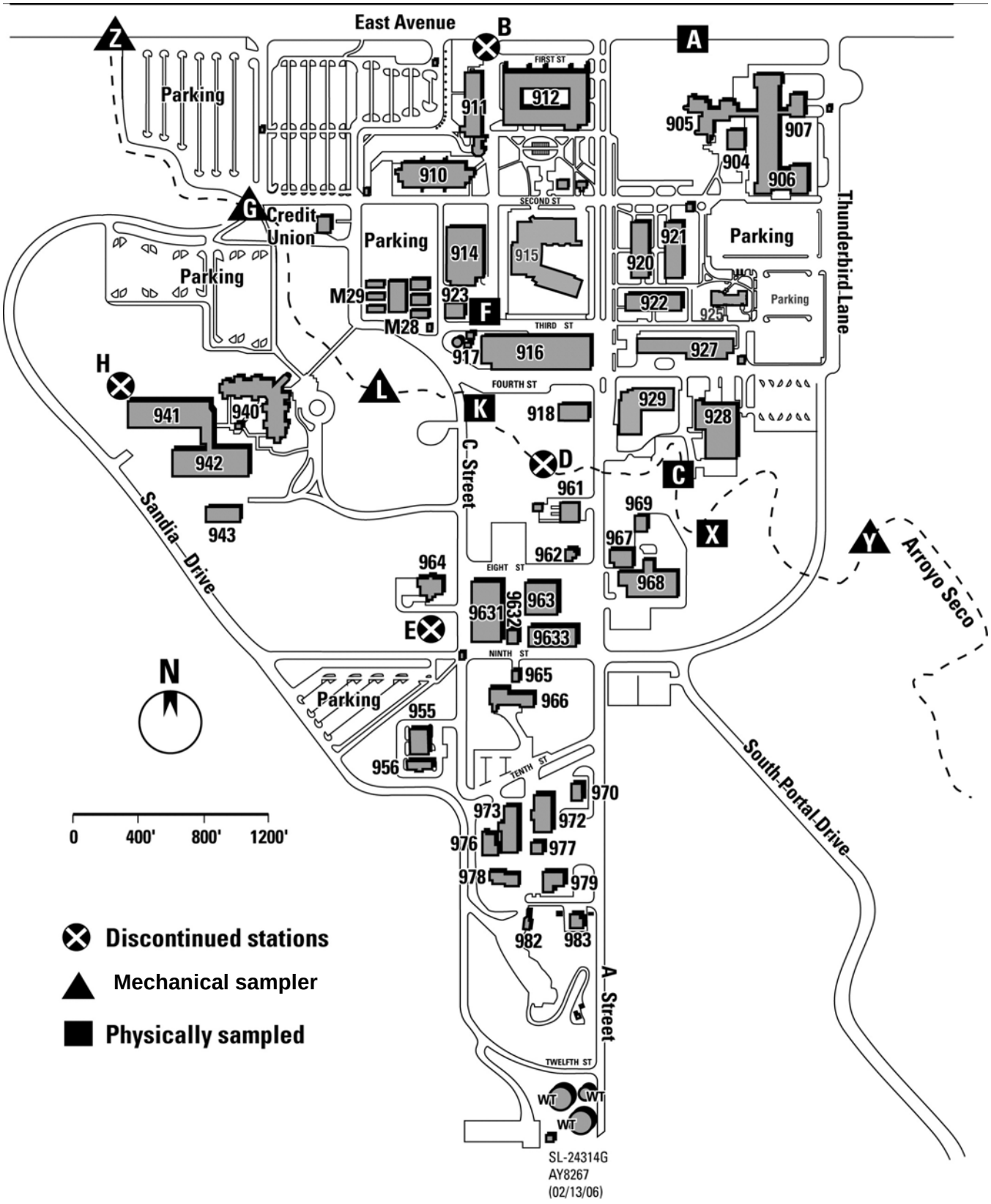
In addition, ISCO 750 area velocity flow gauges were installed at stations Y and Z in 2005. These flow gauges collect continuous water height, velocity and flow volume measurements.

## Table 4-1 Rationale for Selecting Stormwater Sampling Locations

| SW Outfall or Area ID # | SW Sample Location | Description of Drainage Area |
|---|---|---|
| 1 | no sample | drains parking and driveway areas |
| 2 | no sample | significantly identical to Area 3 (Sample A) |
| 3 | A | outdoor maintenance and material handling |
| 4 | no sample | drains office areas |
| 5 | no sample | office buildings and parking, significantly identical to Area 7 (Sample B) |
| 6 | no sample | drains park courtyard |
| 7 | B (6) | office buildings (previously outdoor equipment maintenance and materials handling) |
| 8 | no sample | drains parking and office areas; underground connection |
| 9 | no sample | drains parking areas |
| 10 | X | outdoor equipment maintenance and materials handling; outdoor storage sheds |
| 10A | no sample | unused driveway within Area 10 (Sample X) |
| 11 | C | outdoor materials handling; materials receiving area for entire site |
| 12 | no sample | office trailers |
| 12A | no sample | Offices; catch basin in landscaping; location 10 captures possible runoff from CDRL facility |
| 13 | no sample | drains water supply tanks |
| 13A | no sample | significantly identical to Area 10 (Sample X) |
| 13B | K | outdoor hazardous materials handling; outdoor materials storage and stockpiling; process chemicals, gas bottles; heavy equipment storage; covered vehicle fueling area; site maintenance area |
| 14A | no sample | drains maintenance area and maintenance storage area, captured at Location L in the Arroyo (previously significantly identical to Area 20 (Sample D)) |
| 14B | E (1), N (5) | outdoor materials handling; outdoor storage sheds; outdoor firing shed; significantly identical to Areas 7 (Sample B), 10 (Sample X), and 15 (Sample F) |
| 15 | no sample | office buildings |
| 15A | F | Indoor research laboratories |
| 16 | no sample | drains parking and office areas |
| 17 | G (2) | outdoor materials handling; outdoor storage sheds |
| 18A | H (3) | outdoor maintenance and materials handling |
| 18B | no sample | drains parking and office areas |
| 19 | no sample | drains parking area |
| | D (4,7,8) | |
| | L | Arroyo after locations 14A, 14B, 15 |
| 22 | sheet flow | sheet flow to Arroyo, no outdoor activities |
| | Y (4) | Arroyo Seco as it enters the site |
| 30 | Z (4) | Arroyo Seco as it leaves the site |

(1) Discontinued after baseline information determined no significant erosion from hill area.
(2) Mechanical sampler installed for the 1996/1997 wet season.
(3) Discontinued after baseline information on new facility on site identified significantly identical to Area 7.
(4) Mechanical sampler installed for the 1995/1996 wet season.
(5) Sample location N is for monitoring the closure of the NLF site and is not part of the stormwater monitoring program for the General Permit.
(6) Discontinued after site construction changed site drainage patterns. This location only receives stormwater drainage from office areas.
(7) Discontinued after site construction changed site drainage patterns. This location formerly received sheet flow from hazardous waste facility and maintenance area. These drainage areas are now sampled at location K, 13B.
(8) An additional sample was collected in the Arroyo Seco immediately downstream from activity areas 20 through 23; these areas drained directly into the Arroyo Seco. Outdoor activities conducted in these areas include handling and storage of hazardous materials, old raw stock metal storage, process chemical and gas bottle storage, and sand/aggregate material stockpiling. The drainage areas also include an empty asphalt area formerly used as a reclamation yard for metals and other scrap material. Mechanical sampler installed for the 1995/1996 wet season.

**Figure 4-1 Stormwater Sampling Locations**



### *4.3.2 Sampling History*

Currently there are a total of ten stormwater sampling locations. Four locations have mechanical samplers.

Two sampling locations were changed beginning in the 2003/04 wet season due to changed drainage patterns from completed construction activities. Location D was placed in the Arroyo to capture sheet flow from the maintenance and hazardous waste facilities on site. A new road constructed in 2003 on site prevents sheet flow from these areas entering the Arroyo. The drainage from these areas is captured in the new sampling Location K (drainage location 13B). Location B is no longer sampled because the drainage area activities are related to office buildings in the area. Drainage from the nearby new DISL facility is captured by sample Location G. Location L was added in the Arroyo downstream of drainage areas 15 (sheet flow), 14A (former FOS site), and 14B (hillside research facilities, explosives storage and NLF site). This sampling location provides a characterization of the Arroyo flow in between the influent and effluent sampling locations. Location L now has the mechanical sampler once installed at Location D.

From the 1999/2000 wet season through the 2002/03 wet season, the area of Location F was under construction associated with the demolition of Building 913 and the remodeling of Building 914.

Location N was added in the 1998/99 wet season. Location N was added as part of the Navy Landfill (NLF) closure agreement with Regional Water Board staff. Conditions of the closure require SNL/CA to collect stormwater runoff samples immediately downstream of the NLF site twice per year. The sampling is incorporated into the stormwater program, and the samples are analyzed for the basic parameters (TSS, pH, specific conductivity, and oil and grease). Under the terms of the negotiation, Regional Water Board staff may approve discontinuation of further stormwater sampling at the NLF site, if TSS concentrations continue to be lower than background concentrations for two consecutive seasons. It is often difficult to collect stormwater samples from this location. There is typically no or low flow at the location unless there is a heavy rain event. In addition, for safety reasons personnel cannot gain access to the sampling location when the lightning indicator is activated. (This is typical during heavy rains).

Beginning in the 1994/95 wet season, stormwater samples were collected from eleven sampling locations indicated in Figure 4-1. Locations E and H were discontinued beginning 1996/97. As reported in the 1997 Annual Report, neither Stations E nor H are storm drain outfalls. These locations were sampled to help characterize a portion of a larger drainage basin. Sampling results from E and H have been similar to results from other stations with the same types of activities. The effectiveness of stormwater BMPs is monitored with the remaining sampling stations.

Because stormwater discharge at location F is sheet flow, a sample could not be collected into the sample bottle at this location during the 1993/94 wet season. Location F was moved for the 1994/95 wet season to allow a sample to be collected.

### *4.3.3 Sampling Procedure and Methods*

The Operating Procedure for Stormwater Sampling and Analyses (OP471091) (see Appendix G) describes how the observations are conducted and recorded. Follow-up activities to eliminate pollutants identified in the discharge are conducted as appropriate, and tracked on the Stormwater Inspection Tracking Form. Follow-up activities include identifying the source, reducing or preventing pollutant discharge with stormwater, and updating the SWPPP. Follow-up activities for specific actions are reported in the Annual Monitoring Report submitted to the Regional Water Board.

A grab sample of stormwater discharge is collected during a storm event preceded by three days of no stormwater discharge. If a grab sample could not be collected during the first hour of the discharge, the reason for the delay is recorded and reported in the Monitoring Report to the Regional Water Board. Grab samples are taken as soon as practical and safe. The mechanical stormwater samplers are operated manually to collect grab samples.

The mechanical stormwater samplers are inspected and maintained before the start of the wet weather season. The Stormwater Calibration and Maintenance Log, which includes a checklist for the mechanical sampler, is described in OP471091. The Environmental Technician keeps the logs in Building 922, Room 105. (EM 217.03)

Stormwater sample preservation and analysis is conducted in accordance with EPA Standard Methods described in 40 CFR Part 136. Samples are analyzed to identify parameters listed in Table 4-2.

The general permit requires that stormwater samples be analyzed for: pH; total suspended solids; specific conductance; total organic carbon or oil and grease; and any other pollutants that are likely to be present in stormwater discharge in significant quantities. There is presently no evidence of any pollutants likely to be present in stormwater discharge in significant quantities. The general permit also has required parameters for specific SIC codes. Of the three SIC codes listed in SNL/CA's most recent NOI, there are required parameters for SIC 3471 code only. SNL/CA also analyzes for parameters required for SIC 3471, as listed in Table 4-2.

The purpose of analyzing for the additional chemicals listed in Table 4-2 was to determine if the chemicals are present in SNL/CA stormwater discharge. The general permit allows eliminating a chemical if it is not detected in two consecutive sampling events. Chemicals will be added as potential pollutants if they are identified as a result of future monitoring or other activities. Note SIC 4953 was not listed in SNL/CA's most recent NOI, but the parameters associated with this SIC code in the general permit are analyzed.

**Table 4-2 Chemicals Analyzed in Stormwater Samples)**

| Parameters | Standard EPA Method | Test Method Detection Limit | Requirements |
|---|---|---|---|
| **BASIC** | | | |
| Total Suspended Solids | SM 2540-D | 4 mg/L | Baseline |
| Specific Conductivity | SM 2510 B | 10 μmhos/cm | Baseline |
| PH | EPA 9040 | None | Baseline |
| Oil and Grease | EPA 1664 | 5 mg/L | Baseline |
| **OTHER** | | | |
| Chemical Oxygen Demand (COD) | SM 5220-D | 10 mg/L | SIC 4953 |
| Cyanide | SM 4500-CN-E | 2.0 ug/L | SIC 4953 |
| Tritium | None | 800 pCi/L | |
| Aluminum | EPA 200.7 | 0.05 mg/L | SIC 3471 |
| Arsenic | EPA 200.8 | 0.005 mg/L | SIC 4953 |
| Cadmium | EPA 200.8 | 0.00025 mg/L | |
| Iron | EPA 200.7 | 0.02 mg/L | SIC 3471 |
| Lead | EPA 200.8 | 0.0005 mg/L | SIC 4953 |
| Magnesium | EPA 200.7 | 0.02 mg/L | SIC 4953 |
| Mercury | EPA 200.8 | 0.000012 mg/L | SIC 4953 |
| Selenium | EPA 200.8 | 0.0005 mg/L | SIC 4953 |
| Silver | EPA 200.7 | 0.00019 mg/L | SIC 4953 |
| Zinc | EPA 200.8 | 0.005 mg/L | SIC 3471 |
| Ammonia-N | SM 4500-NH3-F | 0.2 mg/L | SIC 4953 |
| Nitrite + Nitrate as Nitrogen | EPA 300.0 | 0.1 mg/L | SIC 3471 |

Notes:
1. SIC 3471: Electroplating, plating, polishing, anodizing and coloring
2. SIC 4953: Hazardous waste treatment, storage on disposal.
3. There are three SIC codes listed in the SNL/CA NOI, dated 7/2/1997 (9511 Air, Water, and Solid Waste Management, 9711 Research and Development, and 3471 Plating and Polishing). For SIC codes 9511 and 9711 the permit does not list any additional monitoring requirements. Although it is not listed in the NOI, SNL/CA monitors the additional parameters listed under SIC 4953 Hazardous waste treatment, storage and disposal.

### *4.3.4 Quality Assurance/Quality Control*

QA/QC information for each sampling event is maintained with the analysis results from the laboratory. SNL/CA also has an extensive Quality Control Program whose requirements must be met by the stormwater sampling program. Applicable procedures developed by the Quality Control Program include OP 471600 Administrative Procedure for Control of Technical Data, OP 471310 Administrative Procedure for the Control of Samples (sample labeling and chain of custody requirements), and OP 471131 Data Validation and Verification for the Environmental Monitoring Program.

The Environmental Monitoring Program has established a Quality Assurance Project Plan (QAPP) to provide details on the application of the above Operating Procedures. The QAPP details programmatic activities such as training and record keeping. In addition, the QAPP specifies the level of Quality Control Samples required for sampling programs. In accordance with the guidance described in the QAPP, a minimum of ten percent duplicate samples, chosen at random, will be collected per sampling event, and a minimum of ten percent blank samples will be submitted to the analytical laboratory.

## 4.4 Reporting Requirements

The annual monitoring report is submitted to the Executive Officer of the Regional Water Quality Control Board, San Francisco Bay Region by July 1 of each year. The Annual Report includes, at a minimum, a summary of visual observations, sampling results, certification requirements, and a summary of the evaluation of the effectiveness of the SWPPP and stormwater monitoring program. State Board staff have developed a format that is used to report SNL/CA Annual Stormwater Monitoring Report. Annual Monitoring Reports are stored in Building 922, room 105 for one year then transferred to the Records Center and maintained for at least five years. (EM 205.05)

# 5.0 SMALL MS4 MINIMUM CONTROL MEASURES

The Small MS4 General Permit (see Appendix B) requires a Storm Water Management Program (SWMP), that addresses six Minimum Control Measures (MCMs), be fully implemented within 5 years of being notified of designation as a non-traditional Small MS4. SNL/CA has not been notified by the Regional Board yet. SNL/CA already has a Stormwater Program implemented on site. The following describes the six MCMs and the current and future Stormwater Program activities that fulfill the requirements of the General Permit. An implementation schedule (see Tables 5-1 through 5-6) with BMPs and measurable goals demonstrates how the current SNL/CA Stormwater Program will become compliant with the Small MS4 General Permit requirements within 5 years.

The Environmental Monitoring Program Lead will coordinate the implementation of the Stormwater Program, including the SWMP elements and each minimum control measures. The SWPPP team members identified in Table 1-1 will assist with implementation. SNL/CA is several years into the implementation of the schedule presented in this SWPPP. The implementation progress is reported each year to the Regional Water Board in the Stormwater Annual Report.

## 5.1 Employee Education and Outreach

In municipalities, stormwater pollution results from the small, incremental, and collective activities of the public. SNL/CA is a federal facility; therefore employees comprise the site's population. For implementation of this minimum control measure the site employees are comparable to the public in a municipality.

The origins of stormwater pollution are often the result of the unintended and unrecognized consequences of thousands of routine, seemingly inconsequential decisions made daily. Employee education is one key to preventing stormwater pollution. The better the site employees understand what causes stormwater pollution, and the simple measures that can be taken to prevent stormwater pollution, the cleaner the stormwater and Arroyo will become.

### *5.1.1 Objectives*

The following Employee Education and Outreach MCM objectives are designed to address stormwater pollution through the cooperative efforts of an informed community:

- Increase employee awareness about stormwater pollution
- Educate the employee community about specific pollutant sources and on what they can do to reduce them in storm water
- Invite comments/suggestions and notification of observed problems from the employee population

### *5.1.2 Tasks and Associated BMPs*

The Employee Education and Outreach MCM is divided into four categories to effectively address stormwater issues. Each category, and associated BMPs, is described below and

summarized in Table 5-1 (beginning on page 5-13).

*5.1.2.1 Outreach to Site Managers*

Presentations are an important element of educating site managers about stormwater pollution and the importance of the Stormwater Program. During year one, a presentation was developed to inform site managers of the importance of reducing stormwater pollution, the regulatory requirements and the revised SWPPP (which includes the elements of a SWMP). The presentation was given at a regularly scheduled site managers meetings in the first year, and managers were invited to review the SWPPP.

*5.1.2.2 Outreach to Employee Community*

The purpose of employee outreach and educational efforts is to increase awareness among the employee community about stormwater pollution and to discourage non-stormwater discharges into the storm drain system. During year one, a stormwater outreach message was developed for the employee population.

Beginning in year one, the stormwater outreach message was distributed to employees on the daily electronic newsletter. The Wastewater/Stormwater Program webpage is also maintained with current BMPs. In year two, a training module was added to the new hire orientation. During years three and five, one additional employee education and outreach BMP will be developed, as needed, based on evaluations of the BMPs implemented in the previous years. In year three an article on stormwater pollution prevention was also published in the bi-weekly site newsletter, The Communicator. In year four a new outreach method was used. This was the use of sandwich boards placed, in rotation, at the main gate entrances to the site.

SNL/CA will continue to implement the activity specific stormwater training for certain site employee groups as described in Section 3.4.2.

*5.1.2.3 Identify Opportunities to Work With Other Programs*

Coordinating with other SNL/CA programs means one stormwater message, instead of many different messages, from all participating groups, making the message more memorable and influential. Opportunities to work with other SNL/CA programs (e.g. Pollution Prevention) were identified during the first year of the implementation schedule. Beginning in the second year, areas for cooperation with these programs and an implementation schedule was investigated. The Pollution Prevention Program routinely provides educational messages also relevant to stormwater pollution prevention. When Earth Day events are hosted onsite the Stormwater Program invites the City of Livermore to participate and provide educational materials.

*5.1.2.4 Storm Drain Stenciling*

Storm drain stenciling involves labeling storm drain inlets with painted messages warning employees not to dump pollutants into the drain. The signs raise awareness about the connection between storm drains and receiving waters. Maintenance employees will perform the stenciling.

SNL/CA previously stenciled storm drains in the industrial activities areas of the site as part of the SWPPP. During the first year of the implementation schedule, storm drain inlets without a stencil were identified. Beginning in year one, storm drain inlets without the message were scheduled for stenciling with maintenance. As part of this task, a checklist for annually tracking stenciled drains was developed and, at a minimum, 20 percent of all storm drain inlets without a message would be stenciled during each of the five years. Stenciling storm drain inlets has been completed ahead of schedule with 99% of all storm drains completed by the third year. The painters continue to inspect labels each year for fading and repaint as needed.

### *5.1.3 Program Evaluation, Documentation and Annual Reporting*

Measurable goals are used to assess SNL/CA's efforts to reduce stormwater runoff pollution and to evaluate the success of the Program each year. BMPs and measurable goals for the Employee Education and Outreach MCM are presented in Table 5-1 (beginning on page 5-13). SNL/CA will maintain records to document program implementation and annual progress. This information is included in the Industrial Activities Stormwater Annual Report (Annual Report) submitted to the RWQCB.

## 5.2 Employee Involvement and Participation

Employee involvement and participation are important components of the Stormwater Program. SNL/CA site employees are the target audience instead of the "public" since SNL/CA is a federal facility. The success of the Stormwater Program depends largely upon acceptance and support from all SNL/CA employees.

Employees can provide valuable input and assistance to the Stormwater Program. SNL/CA implements an employee involvement and participation MCM that not only informs this audience of the stormwater runoff concerns within SNL/CA, but also invites participation in evaluating the SWPPP.

### *5.2.1 Objectives*

The following Employee Involvement and Participation MCM objectives are designed to address stormwater pollution through the supportive efforts of an informed employee community.

- Raise employee awareness about stormwater runoff pollution through involvement in the Stormwater Program.
- Raise employee awareness about stormwater pollution prevention efforts.
- Invite comments, suggestions and notification of observed problems from employee population.

### *5.2.2 Tasks and Associated BMPs*

The Employee Involvement and Participation MCM is divided into two categories to effectively address stormwater issues. Each category, and associated BMPs, is described below and summarized in Table 5-2 (beginning on page 5-15).

*5.2.2.1 Employee Participation*

A key goal for the Employee Involvement and Participation MCM is to involve a diverse cross-section of employees who can offer a variety of opinions, concerns, ideas, and connections related to stormwater pollution prevention. Providing site employees notice of the SWPPP involves announcements made in the site daily electronic newspaper. During the second year of the implementation schedule, employees were encouraged to comment on the SWPPP. No revisions to the SWPPP were necessary. Also during the second year, SNL/CA evaluated the need for new BMPs annually.

*5.2.2.2 Employee Involvement*

During the first year of the implementation schedule, staff reviewed and evaluated the SNL/CA ES&H (Environment, Safety and Health) hotline for stormwater issues. The purpose of evaluating the ES&H hotline is to provide a means for addressing employee questions, concerns and emergencies related to water quality. Beginning in year one, program staff representatives will participate in a Countywide or Statewide Stormwater Task Force. The purpose of participating in a Task Force is to allow employee representatives to discuss viewpoints, learn how other agencies are addressing stormwater issues and provide input on stormwater management policies and BMPs. Over the years staff have participated in CASQA conferences and training classes, CWEA conferences and training and other regional activities.

### *5.2.3 Program Evaluation, Documentation, and Annual Reporting*

Measurable goals are used to assess SNL/CA's efforts to reduce stormwater runoff pollution and to evaluate the success of the Program each year. BMPs and measurable goals for the Employee Involvement and Participation MCM are presented in Table 5-2 (beginning on page 5-15). SNL/CA will maintain records to document program implementation and annual progress. This information is included in the Annual Report submitted to the RWQCB.

## 5.3 Illicit Discharge Detection and Elimination

The storm drain system begins with streets and gutters, whose drainage flows to ditches and to the Arroyo. Pollutants poured, spilled, dumped, washed into, or discharged through illicit connections to storm drains can go undetected without an active illicit discharge detection and elimination program. Illicit discharges, any discharge to a storm drain that is not composed entirely of stormwater, enter the system through either direct connections (e.g. wastewater piping either mistakenly or deliberately connected to the storm drain) or through indirect connections (e.g. infiltration into the storm sewer from cracked sanitary systems, spills collected by drain outlets, or wastes dumped directly into a storm drain). The result is untreated discharges that contribute high levels of pollutants, including heavy metals, toxics, oil and grease, solvents, nutrients and bacteria to receiving water bodies.

### *5.3.1 Objectives*

The objectives of the Illicit Discharge Detection and Elimination MCM are to:

- Control illicit discharges by conducting field surveys of the SNL/CA storm drainage conveyance system and identifying and eliminating the source of non-stormwater discharges.
- Detect and eliminate illegal disposal of wastes to the storm drain system through a program that combines training, alternative disposal options, and enforcement.
- Effectively coordinate spill response and clean-up with existing programs.
- Optimize illicit discharge control activities through planning and prioritization.

### *5.3.2 Tasks and Associated BMPs*

The Illicit Discharge Detection and Elimination MCM is divided into three categories to effectively address stormwater issues. Each category and associated BMPs is described below and summarized in Table 5-3 (beginning on page 5-16).

#### *5.3.2.1 Outfall and Storm Drain Mapping*

The storm sewer system and outfall map is intended to demonstrate a basic awareness of the intake and discharge areas of the system. It is needed to help determine the extent of discharges during dry weather flows and the possible sources of the dry weather flows.

During the first year of the implementation schedule, SNL/CA obtained a current storm sewer system map and identified data gaps. Based on the data gaps, a final storm sewer system map was completed in year two.

#### *5.3.2.2 Detect and Eliminate Illicit Discharges*

Since 1993 SNL/CA staff have conducted baseline investigations to identify potential illicit connections to the storm drain. These investigations included reviewing piping schematics and field inspections. Section 3.3.2.1 further details SNL/CA's existing illicit discharge program. There are two existing program elements:

- Identification and elimination of illicit connections (Section 3.3.2)
- Stormwater monitoring program (Section 4.0)

SNL/CA will continue to identify and eliminate illicit connections. High-risk areas for illicit connections are monitored by monitoring site plumbing changes in new buildings and renovations. All new buildings and renovations must be reviewed in the IDT process.

An annual review of Spill Response Records is conducted to identify illicit discharges. Discharges are recorded and submitted to the ES&H records center, to determine if additional BMPs are needed for the site or specific area. This review is described above in Section 3.2 and documented in the Annual Compliance Evaluation Inspection. When illicit discharges are identified through routine inspections, site employee phone calls or visual sightings, the discharge and follow-up activities are tracked on the Stormwater Inspection Report Tracking Form and reported in the Annual Report.

As part of the stormwater monitoring programs, four dry weather inspections of the site are conducted annually to identify and investigate any dry weather flows. These inspections are described above in Section 4.1 and documented in the Annual Report.

SNL/CA operates under the Industrial Activities General Permit that prohibits non-stormwater discharges, except authorized non-stormwater discharges. Authorized non-stormwater discharges identified in the Small MS4 General Permit D.2.c.6 that are found at SNL/CA are managed according to Section 3.3.1.

During the first year of the implementation schedule, the Spill Response Operating Procedure was reviewed to confirm proper identification of the Stormwater Program Lead. In addition, the Hazardous Waste Program was evaluated, and revised as appropriate, to include illicit discharge issues.

*5.3.2.3 Education*

Training is an important component of the Illicit Discharge Detection and Elimination MCM. During the first year of the implementation schedule, SNL/CA Stormwater Program staff were trained on the administrative process for the Illicit Discharge Detection and Elimination MCM. Beginning in year two, an annual training program is conducted, as appropriate, for new staff and when changes to the program occur. Spill Prevention, Control and Countermeasure Plan (SPCC) training for Maintenance staff, Hazardous Waste Program staff and other staff handling 55 gallons or more of oil is conducted annually.

### *5.3.3 Program Evaluation, Documentation and Annual Reporting*

Measurable goals are used to assess SNL/CA's efforts to reduce stormwater runoff pollution and to evaluate the success of the Program each year. BMPs and measurable goals for the Illicit Discharge Detection and Elimination MCM are presented in Table 5-3 (beginning on page 5-16). SNL/CA will maintain records to document program implementation and annual progress. This information is included in the Annual Report submitted to the RWQCB.

## 5.4 Construction Site Stormwater Runoff Control

In the absence of proper management, construction sites can release significant amounts of sediment into stormwater and eventually into the storm drain system. Land disturbance leaves soils vulnerable to erosion. Sediment in runoff from construction sites, and wastes generated during construction, can pollute creeks and waterways. Long term increases in the amount of paved and roofed areas cause increases in the volume and peak flow runoff. Increased runoff mobilizes and transports pollutants into storm drains, creeks and waterways.

### *5.4.1 Objectives*

The stormwater Phase II Final Rule requires that construction activities resulting in a land disturbance of greater than or equal to one acre adhere to a site runoff program. This program is implemented by the SWRCB. SNL/CA is responsible for ensuring coverage, as necessary, under

the Construction Activities General Permit. The site's Stormwater Program will implement these requirements at the facility. The following objectives of the Construction Site Runoff Control MCM are designed to reduce pollutants generated by construction activities:

- Effectively prohibit non-stormwater discharges and require controls to reduce the discharge of pollutants during construction.
- Minimize land disturbance at construction sites.
- Protect water quality from pollutants generated by construction activities.
- Require BMP implementation at construction sites.
- Develop and implement measurable goals to evaluate the success of the BMPs.

### *5.4.2 Tasks and Associated BMPs*

The Construction Site Runoff Control MCM exists in one comprehensive section to effectively address stormwater issues. The section and associated BMPs are described below and summarized in Table 5-4 (beginning on page 5-18).

#### *5.4.2.1 Construction Activities Storm Water Pollution Prevention Plan*

Beginning the first year of the implementation schedule, erosion and sediment control BMPs were required for any construction contractor on site in standard contract language. Standard contract language also includes the control of waste such as discarded building material, concrete truck washout, chemicals, litter and sanitary waste at the construction site. This standard contract language is in Appendix J. Existing brochures for runoff control, erosion control, sediment control and good housekeeping BMPs are distributed to on site employees who are involved in construction activities. Copies of these brochures are in Appendix E. An integral part to the success of the Program is providing periodic training to Facilities Planning and Construction Management Department staff on erosion prevention and sediment control BMP requirements. The Facilities Planning and Construction Management Department staff review site plans for potential water quality impacts. The Facilities Planning and Construction Management Department staff's form must be completed before work can begin on a project. This insures the review is completed. A copy of this checklist is in Appendix J (Specification 0110 Attachment 'A' Pre-work Checklist item #8. SWPPP Measures Installed).

Previously, SNL/CA had a Construction Activities General Permit Stormwater Pollution Prevention Plan (SWPPP) in compliance with the Construction Activities General Permit for construction projects on site that were greater than one acre. SNL/CA points of contact, or designated properly trained contractors, were required by the Construction Activities General Permit to inspect and repair as necessary, BMPs at the construction sites. In the future, SNL/CA may choose to have individual contractors obtain coverage under the Construction Activities General Permit or file another NOI. In either case, BMP inspections will continue to be required.

### *5.4.3 Program Evaluation, Documentation and Annual Reporting*

Measurable goals are used to assess SNL/CA's efforts to reduce urban runoff pollution and to evaluate the success of the Program each year. BMPs and measurable goals for the Construction

Site Runoff Control MCM are presented in Table 5-4 (beginning on page 5-18). SNL/CA will maintain records to document program implementation and annual progress. This information is included in the Annual Report submitted to the RWQCB.

## 5.5 Post-Construction Stormwater Management: New and Redevelopment

Post-construction stormwater management in areas undergoing new development or redevelopment is necessary because runoff from these areas has been shown to significantly effect receiving waterbodies. There are generally two forms of significant impacts of post-construction runoff. The first is caused by an increase in the type and quantity of pollutants in stormwater runoff. As runoff flows over areas altered by development, it picks up harmful sediment and chemicals such as oil and grease, pesticides, heavy metals, and nutrients. These pollutants often become suspended in runoff and are carried to receiving waters. The second kind of post-construction runoff impact occurs by increasing the quantity of water delivered to the waterbody during storms. The effects of this process include streambank scouring and downstream flooding. In addition, new urban areas add to the urban runoff pollutant loads by creating new sources.

If areas of SNL/CA proposed for new development or redevelopment are planned, designed, and constructed in a manner that is sensitive to the issues of quantity and quality of urban runoff, then future pollutant loads from these areas will be reduced.

### *5.5.1 Objectives*

The following objectives of the Post-Construction Stormwater Management: New and Redevelopment MCM are designed to reduce pollutants after construction activities have been completed:

- Reducing/eliminating sources of pollutants
- Managing site runoff volumes and flow rates such that they are similar to preconstruction levels
- Treating runoff as appropriate
- Maintenance of post construction BMP.

### *5.5.2 Tasks and Associated BMPs*

The Post-Construction Stormwater Management: New and Redevelopment MCM falls into two categories to effectively address stormwater issues. These categories and associated BMPs are described below and summarized in Table 5-5 (beginning on page 5-20).

#### *5.5.2.1 Post-Construction Program Development*

Beginning the first year of the implementation schedule, structural stormwater controls on site were identified and in year two a maintenance program was developed, as needed. In addition, during the first year, Stormwater Program staff worked with the facility's planning department to update the existing Plan Review Program for post-construction stormwater issues. The second year, a BMP binder detailing post-construction BMPs for the Facility Planning and Construction

Management Department was completed. Beginning in the third year, strategies were developed to incorporate structural and non-structural BMPs into future developments. Strategies to reduce impervious surfaces in future development projects were also be developed and additional BMPs for development will be identified.

*5.5.2.2 Develop Staff Training Program*

Staff training is an integral part of a successful Stormwater Program. Each department is responsible for ensuring that personnel are trained and familiar with the BMPs applicable to their activities or areas of responsibility. During the second year of the implementation schedule, staff were trained in proper inspection and monitoring of structural controls, BMPs, and record-keeping procedures, as needed. Environmental Management Department staff will coordinate with other countywide, regional and state agencies to stay abreast of stormwater technology and the development of stormwater regulations. Examples include the Regional Water Board, State Board, Bay area Stormwater management Agencies association (BASMAA) and the California Stormwater Quality Task Force.

### *5.5.3 Program Evaluation, Documentation and Annual Reporting*

Measurable goals are used to assess SNL/CA's efforts to reduce urban runoff pollution and to evaluate the success of the Program each year. BMPs and measurable goals for the Post-Construction Stormwater Management: New and Redevelopment MCM are presented in Table 5-5 (beginning on page 5-20). SNL/CA will maintain records to document program implementation and annual progress. This information is included in the Annual Report submitted to the RWQCB.

## 5.6 Pollution Prevention/Good Housekeeping for Municipal Operations

Significant amounts of urban pollutants are associated with street and road surfaces; these pollutants come from pavement and vehicle wear, atmospheric deposition and littering. Similarly, sidewalks, parking lots, corporation yards and other paved surfaces are sources of urban stormwater runoff pollutants.

Maintenance staff comprise a group of employees whose everyday work can directly help prevent stormwater pollution. In addition, the maintenance field personnel play an essential role in reporting illicit discharges and pollution problems that need to be fixed.

### *5.6.1 Objectives*

The following objectives of the Municipal Operations MCM are designed to address pollutant sources and to reduce pollutants generated by SNL/CA maintenance activities.

- Optimize pollutant removal during routine maintenance activities such as street sweeping and maintenance of storm drain facilities.
- Prevent or minimize discharges to storm drains and watercourses from road maintenance, corporation yards and other operations areas.

- Provide information and education about the Stormwater Program to maintenance employees.
- Develop and implement measurable goals to evaluate the success of the BMPs.

### *5.6.2 Tasks and Associated BMPs*

The Municipal Operations MCM is divided into four categories to effectively address stormwater issues. Each category and associated BMPs is described below and summarized in Table 5-6 (beginning on page 5-21).

#### *5.6.2.1 Good Housekeeping Procedures for Maintenance Operations Areas*

There are several urban runoff concerns associated with corporation yards and other SNL/CA operations areas. These sites typically conduct vehicle and equipment repair, and fueling and washing activities. In addition, these sites typically maintain storage areas for new and waste chemicals such as paints, pesticides, lubricating oils, soaps, solvents and cleaners.

| **Activity/Source** | **Urban Runoff Concerns** |
|---|---|
| Vehicle washing, equipment cleaning, engine steam cleaning | Discharge of soap, cleansers, heavy metals, oil and grease, and sediments to the storm drain |
| Changing auto fluids | Spills of fluids, especially in outdoor or uncovered areas |
| Vehicle fueling | Fuel spills |
| Parked vehicles and equipment | Fuel leaks and drips outdoors |
| Outdoor materials /waste storage | Release /spill of stored materials |

SNL/CA currently implements the following good housekeeping MCM elements:

- Vehicle Wash Area
- Hazardous Materials Storage Program
- Spill Prevention Control and Countermeasures Plan
- Industrial Activities Stormwater Pollution Prevention Plan

These MCM elements and BMPs are all described in Section 3.0. Existing Good Housekeeping BMPs for maintenance personnel already in place will continue to be implemented. Good Housekeeping BMPs for maintenance personnel are documented on the Stormwater/Wastewater web page (see Appendix H) and brochures (see Appendix E). The proper implementation of these BMPs are documented in the quarterly non-stormwater discharge visual observations and annual compliance evaluation inspection.

#### *5.6.2.2 Update Storm Drain Facilities Inspection and Cleaning Program*

A variety of urban pollutants can flow to and accumulate in the storm drain system. For example, trash and litter from food packaging and paper products lodge in storm drain inlets.

Organic mater and sediment can also clog catch basins. Heavy metals and toxic chemicals from the illegal dumping of waste antifreeze and oil, leaking vehicle fluids, and runoff of fertilizers and pesticides may enter storm drain inlets and catch basins. Many pollutants are also flushed into receiving waters by dry weather flows or stormwater in the wet season, particularly the season's first heavy storm.

SNL/CA currently inspects and cleans, as needed, stormwater catch basins and inlets. Drainage ditches and the Arroyo are also cleared of vegetation and debris, as needed, to facilitate the flow of stormwater. During the first year of the implementation schedule, the number of storm drain inlets, outlets, ditches and concrete channels for inspection and cleaning were identified. In the second year, a draft Storm Drain System Preventative Maintenance Operating Procedure was developed. Beginning in the third year, storm drain inlet maintenance is tracked and areas requiring frequent cleaning are identified.

*5.6.2.3 Review Street Sweeping Program*

A variety of urban pollutants are found on streets and road surfaces. For example, concrete and asphalt particles from pavement abrasion, heavy metals from leaking vehicle fluids, and litter are deposited on streets and roads. These pollutants ultimately run off into a drain inlet and enter the storm drain system.

SNL/CA currently conducts routine sweeping for aesthetic, safety and public health reasons. SNL/CA's street sweeping program to reduce polluted runoff consists of sweeping frequently in areas most prone to litter and dirt accumulation.

During the first year of the implementation schedule, current street sweeping and leaf collection activities were reviewed. SNL/CA developed a street sweeping BMP, based on existing stormwater concerns during the second year. The BMP addressed the following:

- Street sweeping frequency
- Prioritized sweeping
- Leaf collection
- Identifying problem areas
- Record keeping

The BMP was documented in the draft Storm Drain System Preventative Maintenance Operating Procedure in the second year. Street sweeping BMP implementation began during the third year of the Stormwater Program.

*5.6.2.4 Develop Staff Training Program*

Staff training is an integral part of a successful stormwater program. Each department will ensure that personnel are trained and familiar with the BMPs applicable to their activities or areas of responsibility. An initial and refresher training program for maintenance employees was developed during the first year of the implementation schedule. Training began in the second year. Annual refresher training is held each subsequent year.

### *5.6.3 Program Evaluation, Documentation and Annual Reporting*

Measurable goals are used to assess SNL/CA's efforts to reduce urban runoff pollution and to evaluate the success of the Program each year. BMPs and measurable goals for the Municipal Maintenance MCM are presented in Table 5-6 (beginning on page 5-21). SNL/CA will maintain records to document program implementation and annual progress. This information is included in the Annual Report submitted to the RWQCB.

**Table 5-1 BMPs, Measurable Goals and Implementation Schedule for Minimum Measure 1 Employee Education and Outreach on Storm Water Impacts**

| | | Implementation Schedule[1] | | | | |
|---|---|---|---|---|---|---|
| **Program Task/BMPs** | **Measurable Goals** | **03/04** | **04/05** | **05/06** | **06/07** | **07/08** |
| ***Outreach to Site Managers*** | | | | | | |
| 1. Develop presentation to inform site managers of importance of reducing stormwater pollution, the regulatory requirements and SWPPP. | 1. Completed presentation | x | | | | |
| 2. Give presentation at regularly scheduled site managers meeting (SHEAC). | 2. One presentation given. | x | | | | |
| 3. Invite managers to review SWPPP. | 3. At least one manager comments on SWMP. | x | | | | |
| ***Outreach to Employee Community*** | | | | | | |
| 1. Develop a stormwater outreach message for the employee population. | 1. Completed outreach message. | x | | | | |
| 2. Submit message to daily electronic newsletter (*TNT Announcements*). | 2. A message appears in the daily electronic newsletter twice per year.<br>2.b. At least 25% of employee population reached by announcement reported. | x | x | x | x | x |
| 3. Develop one new stormwater outreach message for the daily electronic newsletter every other year. | 3. One new message appears in the daily electronic newsletter once a year. | | | x | | x |
| 4. Maintain Wastewater/Stormwater Program web page with current BMPs. | 4. Web site accessible to site personnel. | x | x | x | x | x |
| 5. Add module to new hire training. | 5. Module incorporated into new hire training. | | x | x | x | x |

| | | Implementation Schedule[1] | | | | |
|---|---|---|---|---|---|---|
| **Program Task/BMPs** | **Measurable Goals** | **03/04** | **04/05** | **05/06** | **06/07** | **07/08** |
| ***Identify Opportunities to Work with Other Programs*** | | | | | | |
| 1. Determine other on-site programs to coordinate with (e.g. SNL/CA Pollution Prevention Program) | 1. Completed list of programs and contacts. | x | | | | |
| 2. Investigate areas for cooperation and implementation schedule. (e.g. participate in site Earth Day event, provide P2 coordinator with stormwater pollution prevention information, etc.) | 2. One activity coordinated with another program to include stormwater pollution prevention information reported. | | x | x | x | x |
| ***Storm Drain Stenciling*** | | | | | | |
| 1. Identify storm drain inlets without "No Dumping Drains to Arroyo" stencil. | 1. Completed list. | x | | | | |
| 2. Schedule storm drain inlets for stenciling with maintenance. | 2.a. Completed stenciling 20% of storm drain inlets per year.<br>2.b. All storm drain inlets on site stenciled within five years. | x | x | x | x | x |

Notes:
1. The implementation schedule years run from July through June (i.e. July 2003 – June 2004) to correspond with the Industrial Activities Annual Reporting period.

**Table 5-2 BMPs, Measurable Goals and Implementation Schedule for Minimum Measure 2 Employee Involvement/Participation**

| **Program Task/BMPs** | **Measurable Goals** | **Implementation Schedule**[1] | | | | |
|---|---|---|---|---|---|---|
| | | **03/04** | **04/05** | **05/06** | **06/07** | **07/08** |
| ***"Employee" Notice of SWMP*** | | | | | | |
| 1. Provide site employees notice of SWPPP. | 1. Announcement made in site daily electronic newspaper (*TNT Announcement*) | x | | | | |
| 2. Respond to employee comments. | 2. Responded to comments. | | x | | | |
| 3. Revise SWPPP based on comments. | 3. SWMP revised. | | x | | | |
| ***Employee Involvement*** | | | | | | |
| 1. Review and evaluate site ES&H (Environment, Safety and Health) Hotline for stormwater issues. | 1. Completed evaluation of site ES&H Hotline. | x | | | | |
| 2. Continue to operate ES&H Hotline | 2. Document number of stormwater issues received from ES&H Hotline. | | x | x | x | x |
| 3. Participate in Countywide or Statewide Stormwater Task Force | 3. Attend two meetings per year. | x | x | x | x | x |

Notes:
1. The implementation schedule years run from July through June (i.e. July 2003 – June 2004) to correspond with the Industrial Activities Annual Reporting period.

**Table 5-3 BMPs, Measurable Goals and Implementation Schedule for Minimum Measure 3 Illicit Discharge Detection and Elimination**

| **Program Task/BMPs** | **Measurable Goals** | **Implementation Schedule**[1] | | | | |
|---|---|---|---|---|---|---|
| | | **03/04** | **04/05** | **05/06** | **06/07** | **07/08** |
| ***Outfall and Storm Drain Mapping*** | | | | | | |
| 1. Obtain current storm sewer system map from Facilities Department. | 1. Map obtained. | x | | | | |
| 2. Identify data gaps. | 2. Data gaps identified. | x | | | | |
| 3. Work with Facilities Department to fill in data gaps. | 3. Data gaps filled. | | x | | | |
| 4. Have Facilities draw final map. | 4. Final outfall map completed and submitted with Annual Report. | | x | | | |
| ***Detect and Eliminate Illicit Discharges*** | | | | | | |
| 1. Document past illicit connection investigations. | 1. Document past illicit connection investigations in SWPPP. | x | | | | |
| 2. Monitor high risk areas for illicit connections by reviewing site plumbing changes in new buildings and renovations. | 2. Participated in 80% of Inter Disciplinary Team (IDT) meetings, where new projects, facility and building plans are presented, during the reporting period. | x | x | x | x | x |
| 3. Conduct four dry weather inspections of the site annually to identify and investigate any dry weather flows. | 3.a. Four inspections completed.<br>3.b. Inspection results reported in Annual Report. | x | x | x | x | x |
| 4. Track illicit discharge activity data and follow-up with Stormwater Inspection Report Tracking Form.. | 4. Document data from Stormwater Inspection Report Tracking Form in Annual Report. | x | | | | |
| 5. Review Spill Response Records, where illicit discharges are recorded and submitted to ES&H records center annually, to determine if additional BMPs are needed for the site or specific area. | 5. Document review on the Stormwater Inspection Report Tracking Form. | x | x | x | x | x |
| 6. Review Spill Response Operating Procedure to confirm Stormwater Program Lead is properly identified. | 6. Updated Spill Response Operating Procedure, if needed. | x | | | | |

| **Program Task/BMPs** | **Measurable Goals** | **Implementation Schedule**[1] | | | | |
|---|---|---|---|---|---|---|
| | | **03/04** | **04/05** | **05/06** | **06/07** | **07/08** |
| 7. Evaluate Hazardous Waste Program and revise as appropriate to include illicit discharge issues. | 7. Hazardous Waste Program in place. | x | | | | |
| ***Education*** | | | | | | |
| 1. Conduct annual Spill Prevention, Control and Countermeasure Plan (SPCC) training for maintenance staff and hazardous waste program staff. (Beginning in 07/08 it became part of electronic corporate training system.) | 1. Staff trained. | x | x | x | x | x |
| 2. Train Stormwater Program staff on the administrative process for the illicit discharge and screening program. | 2. Stormwater Program staff trained. | x | | | | |
| 3. Annual training, as appropriate, for new staff and when changes to the program occur. | 3. Training provided. | | x | x | x | x |

Notes:

1. The implementation schedule years run from July through June (i.e. July 2003 – June 2004) to correspond with the Industrial Activities Annual Reporting period.

**Table 5-4 BMPs, Measurable Goals and Implementation Schedule for Minimum Measure 4 Construction Site Storm Water Runoff Control**

| Program Task/BMPs | Measurable Goals | Implementation Schedule[1] | | | | |
|---|---|---|---|---|---|---|
| | | 03/04 | 04/05 | 05/06 | 06/07 | 07/08 |
| ***Construction Activities Stormwater Pollution Prevention Plan*** | | | | | | |
| 1. Include requirement for erosion and sediment controls in all construction contracts for the site. | 1. Erosion and sediment control requirements included in Standard Contract language. | x | x | x | x | x |
| 2. Include requirement for control of waste such as discarded building material, concrete truck washout, chemicals, litter and sanitary waste at construction site. | 2. Waste control requirements included in Standard Contract language. | x | x | x | x | x |
| 3. Facility staff review site plans for consideration of potential water quality impacts. | 3. On the form Specification 0110 Attachment 'A' Pre-work Checklist item #8. SWPPP Measures Installed is completed before work can begin. | x | x | x | x | x |
| 4. Require SNL/CA points of contact to inspect and repair as necessary, or designate properly trained contractor to inspect and repair as necessary, BMPs at the construction site. | 4. "BMP Inspection Log" forms received from all construction sites (with earth disturbing activities) during wet season. | x | x | x | x | x |
| 5. Train Facility staff on erosion prevention and sediment control BMP requirements. | 5. SNL/CA points of contact for current construction projects receive training before new project enters the wet season. | x | x | x | x | x |
| 6. Provide existing BMP brochures for runoff control, erosion control, sediment control and good housekeeping BMPs to employees involved in construction on-site. | 6. Distribute brochures, as needed. | x | x | x | x | x |
| 7. Keep Construction Activities General Permit Stormwater Pollution Prevention Plan (SWPPP) current or require contractor to obtain coverage under the General Permit. | 7. SNL/CA or contractor's Construction Activity SWPPP is current. | x | x | x | x | x |

Notes:

1. The implementation schedule years run from July through June (i.e. July 2003 – June 2004) to correspond with the Industrial Activities Annual Reporting period.

**Table 5-5 BMPs, Measurable Goals and Implementation Schedule for Minimum Measure 5 Post-Construction Storm Water Management in New Development and Redevelopment**

| Program Task/BMPs | Measurable Goals | Implementation Schedule | | | | |
|---|---|---|---|---|---|---|
| | | 03/04 | 04/05 | 05/06 | 06/07 | 07/08 |
| ***Post-Construction Program Development*** | | | | | | |
| 1. Review existing Plan Review Program and revise for post-construction stormwater issues. | 1. Program reviewed and revised. | x | | | | |
| 2. Compile BMP brochure/manual of post-construction BMPs for Facility Planning Department. | 2. BMP manual completed and available to Facility Planning Department. | | x | | | |
| 3. Identify existing Structural Stormwater Controls and develop a maintenance program. | 3.a. Existing structural controls identified.<br>3.b. Maintenance program developed.<br>3c. Maintenance program implemented. | x | x | x | | |
| 4. Develop strategies to include structural and non-structural BMPs into future developments. | 4. Workgroup established to evaluate strategies for including structural and non-structural BMPs into future developments. | | | x | x | x |
| 5. Develop strategies to reduce impervious surfaces in future development projects. | 5. Workgroup established to evaluate reducing impervious surfaces. | | | x | x | x |
| 6. Identify additional BMPs for development. | 6. Program evaluated annually for new BMPs. | | | x | x | x |
| ***Training*** | | | | | | |
| 1. Train staff in proper inspection and monitoring of structural controls, BMPs, and record keeping procedures. | 1. One training per year conducted. (Note this BMP was reevaluated in 06/07 during a reorganization. Training will be conducted as needed.) | | x | x | x | x |
| 2. Collaborate with County, Bay-area or State workshops. | 2. Attend applicable workshops as appropriate. | | x | x | x | x |

**Table 5-6 BMPs, Measurable Goals and Implementation Schedule for Minimum Measure 6 Pollution Prevention/Good Housekeeping for Municipal Operations**

| Program Task/BMPs | Measurable Goals | Implementation Schedule[1] | | | | |
|---|---|---|---|---|---|---|
| | | 03/04 | 04/05 | 05/06 | 06/07 | 07/08 |
| ***Good Housekeeping Procedures for Maintenance Operation Areas*** | | | | | | |
| 1. Continue implementation of existing Good Housekeeping BMPs for maintenance personnel. | 1. Annual Compliance Evaluation Inspection reported. | x | x | x | x | x |
| ***Storm Drain Facilities Inspection and Cleaning*** | | | | | | |
| 1. Identify storm drain inlets, outlets, ditches, and concrete channels for inspection and cleaning procedures. | 1. Report number of storm drain inlets, outlets, ditches, and concrete channels for inspection and cleaning procedures. | x | | | | |
| 2. Develop draft storm drain system preventative maintenance operating procedure including inspection and cleaning procedures. | 2. Draft storm drain system preventative maintenance operating procedure. | | x | | | |
| 3. Implement Storm drain Maintenance BMPs. | 3. Annual summary of inlet maintenance reported. | | | x | x | x |
| ***Street Sweeping*** | | | | | | |
| 1. Review and evaluate existing street sweeping practices | 1. Documented street sweeping practices. | x | | | | |
| 2. Review and evaluate existing leaf collection program. | 2. Documented leaf collection practices. | x | | | | |
| 3. Develop Street Sweeping BMPs (including litter and leaf control). | 3. Completed Street Sweeping BMPs in draft storm drain system preventative maintenance operating procedure. | | x | | | |
| 4. Implement Street Sweeping BMPs. | 4. Annual summary of Street Sweeping Practices. | | | x | x | x |
| ***Staff Training*** | | | | | | |
| 1. Develop initial and refresher training program for maintenance employees. | 1. Completed training program. | x | | | | |
| 2. Conduct training program | 2. Document training program | | x | | | |

| **Program Task/BMPs** | **Measurable Goals** | **Implementation Schedule**[1] | | | | |
|---|---|---|---|---|---|---|
| | | **03/04** | **04/05** | **05/06** | **06/07** | **07/08** |
| 3. Conduct Annual refresher training programs for maintenance employees. | 3. Documented annual training. | | | x | x | x |

Notes:
1. The implementation schedule years run from July through June (i.e. July 2003 – June 2004) to correspond with the Industrial Activities Annual Reporting period.

# APPENDIX A

General Industrial Activities Stormwater NPDES permit and Notice of Intent (NOI)

State of California State
Water Resources Control Board

# NOTICE OF INTENT

For Existing Facility Operators

4680

TO COMPLY WITH THE TERMS OF THE
GENERAL PERMIT TO DISCHARGE STORM WATER
ASSOCIATED WITH INDUSTRIAL ACTIVITY (WQ ORDER No. 97-03-DWQ)

This Notice of Intent (NOI) is being sent to all facility operators that were enrolled under the prior Industrial Storm Water General Permit that has now expired. A new General Permit has been adopted to replace the expired one. To enroll under the new General Permit, review this NOI (and make any necessary corrections), sign the CERTIFICATION on the reverse side, and return this original NOI within 45 days of receipt to: STORM WATER NOI PROCESSING UNIT, STATE WATER RESOURCES CONTROL BOARD, PO BOX 1977, SACRAMENTO, CA 95812-1977

## FACILITY OPERATOR INFORMATION:

**WDID:** 2 01S002598

**NAME:** US DEPARTMENT OF ENERGY

**CONTACT & PHONE**

Ron Dobbs ~~MICHAEL ZAMORSKI~~

**STREET:** PO BOX 5400

(505) 845-~~6617~~4428

**CITY, STATE, ZIP:** ALBUQUERQUE, NM 87185-5400

## FACILITY LOCATION:

County: Alameda

**NAME:** SANDIA NAT LABS, CALIFORNIA

**CONTACT & PHONE**

JANET HARRIS/~~JESSICA BUSSELLE~~

**STREET:** 7011 EAST AVENUE

(925) ~~(510)~~ 294-3803

**CITY, STATE, ZIP:** LIVERMORE, CA 94550

## FACILITY MAILING ADDRESS: (IF DIFFERENT THAN FACILITY LOCATION)

**STREET OR POST OFFICE BOX:** P.O. Box 5400

**CITY, STATE, ZIP:** Albuquerque, NM 87185-540

## ADDRESS FOR CORRESPONDENCE - SEND TO: (CHECK ONE)

[ ] Facility Operator Address [ ] Facility Mailing Address [X] Both

## BILLING ADDRESS INFORMATION - SEND TO: (CHECK ONE)

[ ] Facility Operator Address [X] Facility Mailing Address [ ] Other (enter below)

**NAME:**

**STREET:**

**CITY, STATE, ZIP:**

**CONTACT PERSON:** **PHONE:**

## SIC(S) OF REGULATED ACTIVITY:

~~4953 -- Refuse Systems~~

9711 Research and Development
3471 Plating and Polishing
9511 Air, Water, and Solid Waste Management

(CERTIFICATION continued on the reverse side)

**ERTIFICATION:**

**WDID:** 2 01S002598

"I certify under penaty of law that this document and all attachments were prepared under my direction and supervision in accordance with a system designed to assure 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 persons 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. In addition, I certify that the provisions of the permit, including the development of and implementation of a Storm Water Pollution Prevention Plan and a Monitoring Program Plan, will be complied with."

Printed Name: Michael Zamorski / Tom Hunter

Signature: George K. Larkin / Thomas Hunter Date: 7/2/97 , 6/25/97

Title: for Acting Area Manager / Vice President

MICHAEL ZAMORSKI
US DEPARTMENT OF ENERGY
PO BOX 5400
ALBUQUERQUE, NM 87185-5400

For State Water Board Use

# State Water Resources Control Board

**Division of Water Quality**
1001 I Street • Sacramento, California 95814 • (916) 341-5538
Mailing Address: P.O. Box 1977 • Sacramento, California • 95812-1977
FAX (916) 341-5543 • Internet Address: http://www.waterboards.ca.gov/stormwtr/index.html

**Linda S. Adams**
*Secretary for*
*Environmental Protection*

**Arnold Schwarzengger**
*Governor*


To: STORM WATER DISCHARGER

SUBJECT: CHECKLIST FOR SUBMITTING A NOTICE OF INTENT

In order for the State Water Resources Control Board to expeditiously process your Notice of Intent (NOI), the following items must be submitted to either of the addresses indicated below:

1. _____ NOI (please keep a copy for your files) with all applicable sections completed and original signature of the facility operator;

2. _____ Check made out to the "State Water Resources Control Board" with the appropriate fee. The regular fee is $**830.00** ($700 plus 18.5% surcharge).

3. _____ Site Map of the facility (see NOI instructions). DO NOT SEND BLUEPRINTS

U.S. Postal Service Address

State Water Resources Control Board
Division of Water Quality
Attn: Storm Water Section
P.O. Box 1977
Sacramento, CA 95812-1977

Overnight Mailing Address

State Water Resources Control Board
Division Of Water Quality
Attn: Storm Water, 15th Floor
1001 I Street
Sacramento, CA 95814

NOIs are processed in the order they are received. A NOI receipt letter will be mailed to the facility operator within approximately two weeks. Incomplete NOI submittals will be returned to the facility operator within the same timeframe and will specify the reason(s) for return. If you need a receipt letter by a specific date (for example, to provide to a local agency), we advise that you submit your NOI thirty (30) days prior to the date the receipt letter is needed.

Please do not call us to verify your NOI status. A copy of your NOI receipt letter will be available on our web page within twenty-four (24) hours of processing. Go to: http://www.waterboards.ca.gov/stormwtr/databases.html to retrieve an electronic copy of your NOI receipt letter. If you have any questions regarding this matter, please contact us at (916) 341-5538.

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**FOR**
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**FOR**

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**FOR**
**DISCHARGES OF STORM WATER ASSOCIATED WITH INDUSTRIAL ACTIVITIES**
**EXCLUDING CONSTRUCTION ACTIVITIES**

## BACKGROUND

In 1972, the Federal Water Pollution Control Act (also referred to as the Clean Water Act [CWA]) was amended to provide that the discharge of pollutants to waters of the United States from any point source is effectively prohibited unless the discharge is in compliance with an NPDES permit. The 1987 amendments to the CWA added Section 402(p) that establishes a framework for regulating municipal and industrial storm water discharges under the NPDES Program. On November 16, 1990, the U.S. Environmental Protection Agency (U.S. EPA) published final regulations that establish application requirements for storm water permits. The regulations require that storm water associated with industrial activity (storm water) that discharges either directly to surface waters or indirectly through municipal separate storm sewers must be regulated by an NPDES permit.

U.S. EPA developed a four-tier permit issuance strategy for storm water discharges associated with industrial activity as follows:

Tier I, Baseline Permitting--One or more general permits will be developed to initially cover the majority of storm water discharges associated with industrial activity.

Tier II, Watershed Permitting--Facilities within watersheds shown to be adversely impacted by storm water discharges associated with industrial activity will be targeted for individual or watershed-specific general permits.

Tier III, Industry-Specific Permitting--Specific industry categories will be targeted for individual or Industry-specific general permits.

Tier IV, Facility-Specific Permitting--A variety of factors will be used to target specific facilities for individual permits.

The regulations allow authorized states to issue general permits or individual permits to regulate storm water discharges.

Consistent with Tier I, Baseline Permitting, of the U.S. EPA permitting strategy, the State Water Board issued a statewide General Permit on November 19, 1991 that applied to all storm water discharges requiring a permit except construction activity. The monitoring requirements of this General Permit were amended September 17, 1992. A separate statewide general permit has been issued for construction activity.

To obtain authorization for continued and future storm water discharge under this General Permit, each facility operator must submit a Notice of Intent (NOI). This approach is consistent with the four-tier permitting strategy described in Federal regulations, i.e., Tier 1, Baseline Permitting. Tier 1, Baseline Permitting, enables the State to begin reducing pollutants in industrial storm water in the most efficient manner possible.

This General Permit generally requires facility operators to:

1. Eliminate unauthorized non-storm water discharges;
2. Develop and implement a storm water pollution prevention plan (SWPPP); and
3. Perform monitoring of storm water discharges and authorized non-storm water discharges.

## TYPES OF STORM WATER DISCHARGES COVERED BY THIS GENERAL PERMIT

This General Permit is intended to cover all new or existing storm water discharges and authorized non-storm water discharges from facilities required by Federal regulations to obtain a permit including those (1) facilities previously covered by the San Francisco Bay Regional Water Quality Control Board Order No. 92-011 (as amended by Order No. 92-116), (2) facilities designated by the Regional Water Quality Control Boards (Regional Water Boards), (3) facilities whose operators seek coverage under this General Permit, (4) and facilities required by future U.S. EPA storm water regulations.

The General Permit is intended to cover all facilities described in Attachment 1, whether the facility is primary or is auxiliary to the facility operator's function. For example, although a school district's primary function is education, a facility that it operates for vehicle maintenance of school buses is a transportation facility that is covered by this General Permit.

The definition of "storm water associated with industrial activity" is provided in Attachment 4, Definition 9, of this General Permit. Facilities that discharge storm water associated with industrial activity requiring a General Permit are listed by category in 40 Code of Federal Regulations (CFR) Section 122.26(b)(14) (Federal Register, Volume 55 on

Pages 48065-66) and in Attachment 1 of this General Permit. The facilities can be publicly or privately owned. General descriptions of these categories are:

1. Facilities subject to storm water effluent limitations guidelines, new source performance standards, or toxic pollutant effluent standards (40 CFR Subchapter N);

2. Manufacturing facilities;

3. Mining/oil and gas facilities;

4. Hazardous waste treatment, storage, or disposal facilities;

5. Landfills, land application sites, and open dumps that receive industrial waste;

6. Recycling facilities such as metal scrap yards, battery reclaimers, salvage yards, automobile yards;

7. Steam electric generating facilities;

8. Transportation facilities that conduct any type of vehicle maintenance such as fueling, cleaning, repairing, etc.;

9. Sewage treatment plants;

10. Construction activity (covered by a separate general permit); and

11. Certain facilities (often referred to as "light industry") where industrial materials, equipment, or activities are exposed to storm water.

For the most part, these facilities are identified in the Federal regulations by a Standard Industrial Classification (SIC).

Category 1 Dischargers

The following categories of facilities currently have storm water effluent limitation guidelines for at least one of their subcategories. They are cement manufacturing (40 CFR Part 411); feedlots (40 CFR Part 412); fertilizer manufacturing (40 CFR Part 418); petroleum refining (40 CFR Part 419); phosphate manufacturing (40 CFR Part 422); steam electric power generation (40 CFR Part 423); coal mining (40 CFR Part 434); mineral mining and processing (40 CFR Part 436); ore mining and dressing (40 CFR Part 440); and asphalt emulsion (40 CFR Part 443). A facility operator whose facility falls into one of these general categories should examine the effluent guidelines to determine if the facility is categorized in one of the subcategories that have storm water effluent guidelines. If

a facility is classified as one of those subcategories, that facility is subject to the standards listed in the CFR for that category and is subject to this General Permit. This General Permit contains additional requirements (see Section B.6.) for facilities with storm water effluent limitations guidelines.

Category 5 Dischargers

Inactive or closed landfills, land application sites, and open dumps that have received industrial wastes (Category 5) may be subject to this General Permit unless the storm water discharges from the sites are already regulated by an NPDES permit issued by the appropriate Regional Water Board. Facility operators of closed landfills that are regulated by waste discharge requirements (WDRs) may be required to comply with this General Permit. In some cases, it may be appropriate for closed landfills to be covered by the State Water Board's General Permit during closure activities. The Construction Activities General Permit should cover new landfill construction. Facility operators should contact their Regional Water Board to determine the appropriate permit coverage.

Category 10 Dischargers

Facility operators of Category 10 (light industry) facilities are not subject to this General Permit if they can certify that the following minimum conditions at their facilities are met:

1. All prohibited non-storm water discharges have been eliminated or otherwise permitted.

2. All areas of past exposure have been inspected and cleaned, as appropriate.

3. All materials related to industrial activity (including waste materials) are not exposed to storm water or authorized non-storm water discharges.

4. All industrial activities and industrial equipment are not exposed to storm water or authorized non-storm water discharges.

5. There is no exposure of materials associated with industrial activity through other direct or indirect pathways such as particulates from stacks and exhaust systems.

6. There is periodic re-evaluation of the facility to ensure Conditions 1, 3, 4, and 5 are continuously met.

Currently, facility operators that can certify that the above conditions are met are not required to notify the State Water

Board or Regional Water Board. These facility operators are advised to retain such certification documentation on site.

The Ninth Circuit Court of Appeals invalidated the exemption granted by U.S. EPA for storm water discharges from facilities in Category 11 that do not have exposure and remanded the regulation to U.S. EPA for further action. The State Water Board, at this time, is not requiring storm water discharges from facilities in Category 11 that do not have exposure to be covered by this General Permit. Instead, the State Water Board will await future U.S. EPA or court action clarifying the types of storm water discharges that must be permitted. If necessary, the State Water Board will reopen the General Permit to accommodate such a clarification.

Section 1068 of the Intermodal Surface Transportation Act of 1991 exempts municipal agencies serving populations of less than 100,000 from Phase I permit requirements for most facilities they operate (uncontrolled sanitary landfills, power plants, and airports are still required to be permitted in Phase I). Phase II of the Permit Program scheduled to begin August 7, 2001 will cover the facilities that are exempt from Phase I permit requirements.

## TYPES OF DISCHARGES NOT COVERED BY THIS GENERAL PERMIT

1. CONSTRUCTION ACTIVITY: Discharges from construction activity of five acres or more, including clearing, grading, and excavation. A separate general permit was adopted on August 20, 1992 for this industrial category.

2. FACILITIES WHICH HAVE NPDES PERMITS CONTAINING STORM WATER PROVISIONS: Some storm water discharges may be regulated by other individual or general NPDES permits issued by the State Water Board or the Regional Water Boards. This General Permit shall not regulate these discharges. When the individual or general NPDES permits for such discharges expire, the State Water Board or Regional Water Board may authorize coverage under this General Permit or another general NPDES permit, or may issue a new individual NPDES permit consistent with the Federal and State storm water regulations. Interested parties may petition the State Water Board or appropriate Regional Water Board to issue individual or General NPDES Permits. General Permits may be issued for a particular industrial group or watershed area.

3. FACILITIES DETERMINED INELIGIBLE BY REGIONAL WATER BOARDS: Regional Water Boards may determine that discharges from a facility or groups of facilities, otherwise eligible for coverage under this General Permit, have potential water quality impacts that may not be appropriately addressed by

this General Permit. In such cases, a Regional Water Board may require such discharges to be covered by an individual or general NPDES permit. Interested persons may petition the appropriate Regional Water Board to issue individual NPDES permits. The applicability of this General Permit to such discharges will be terminated upon adoption of an individual NPDES permit or a different general NPDES permit.

4. FACILITIES WHICH DO NOT DISCHARGE STORM WATER TO WATERS OF THE UNITED STATES: The discharges from the following facilities are not required to be permitted:

   a. FACILITIES THAT DISCHARGE STORM WATER TO MUNICIPAL SANITARY SEWER SYSTEMS: Facilities that discharge storm water to municipal sanitary sewer systems or combined sewer systems are not required by Federal regulations to be covered by an NPDES storm water permit or to submit an NOI to comply with this General Permit. (It should be noted that many municipalities have sewer use ordinances that prohibit storm drain connections to their sanitary sewers.)

   b. FACILITIES THAT DO NOT DISCHARGE STORM WATER TO SURFACE WATERS OR SEPARATE STORM SEWERS: Storm water that is captured and treated and/or disposed of with the facility's NPDES permitted process wastewater and storm water that is disposed of to evaporation ponds, percolation ponds, or combined sewer systems are not required to obtain a storm water permit. To avoid liability, the facility operator should be certain that no discharge of storm water to surface waters would occur under any circumstances.

5. MOST SILVICULTURAL ACTIVITIES: Storm water discharges from most silvicultural activities such as thinning, harvesting operations, surface drainage, or road construction and maintenance are exempt from this permit. Log sorting or log storage facilities that fall within SIC 2411 are required to be permitted.

6. MINING AND OIL AND GAS FACILITIES: Oil and gas facilities that have not released storm water resulting in a discharge of a reportable quantity (RQ) for which notification is or was required pursuant to 40 CFR Parts 110, 117, and 302 at any time after November 19, 1987 are not required to be permitted unless the industrial storm water discharge contributed to a violation of a water quality standard. Mining facilities that discharge storm water that does not come into contact with any overburden, raw materials, intermediate product, finished product, by-product, or waste product located at the facility are not required to be permitted. These facilities must be permitted if they have a new release of storm water resulting in a discharge of an RQ.

7. FACILITIES ON INDIAN LANDS: the U.S. EPA will regulate Discharges from facilities on Indian lands.

## NOTIFICATION REQUIREMENTS

Storm water discharges from facilities described in the section titled "Types of Storm Water Discharges Covered by This General Permit" must be covered by an NPDES permit. An NOI must be submitted by the facility operator for each individual facility to obtain coverage. Certification of the NOI signifies that the facility operator intends to comply with the provisions of the General Permit. Facility operators who have filed NOIs for the State Water Board Order No. 91-013-DWQ (as amended by Order No. 92-12-DWQ) or San Francisco Bay Regional Water Board Order No. 92-011 (as amended by Order No. 92-116) will be sent an abbreviated NOI soon after adopting this General Permit that must be completed and returned within 45 days of receipt. Where operations have discontinued and significant materials remain on site (such as at closed landfills), the landowner may be responsible for filing an NOI and complying with this General Permit. A landowner may also file an NOI for a facility if the landowner, rather than the facility operator(s), is responsible for compliance with this General Permit.

A facility operator that does not submit an NOI for a facility must submit an application for an individual NPDES permit. U.S. EPA's regulations [40 CFR 122.21 (a)] exclude facility operators covered by a general permit from requirements to submit an individual permit application unless required by the Regional Water Board. The NOI requirements of this General Permit are intended to establish a mechanism which can be used to establish a clear accounting of the number of facility operators complying with the General Permit, their identities, the nature of operations at the facilities, and location.

All facility operators filing an NOI after the adoption of this General Permit must comply with this General Permit. Existing facility operators who have filed NOIs prior to the adoption of this General Permit shall continue to complete the requirements of the previous General Permit through June 30, 1997 including submitting annual reports to the Regional Water Boards by July 1, 1997. Group Leaders are required to submit a 1996-97 Group Evaluation Report by August 1, 1997.

## DESCRIPTION OF GENERAL PERMIT CONDITIONS

Prohibitions

This General Permit authorizes storm water and authorized non-storm water discharges from facilities that are required to be covered by a storm water permit. This General Permit prohibits discharges of material other than storm water (non-storm water discharges) that are not authorized by the General Permit and discharges containing hazardous substances in storm water in excess of reportable quantities established at 40 CFR 117.3 and 40 CFR 302.4. Authorized non-storm water discharges are addressed in the Special Conditions of the General Permit.

Effluent Limitations

NPDES Permits for storm water discharges must meet all applicable provisions of Sections 301 and 402 of the CWA. These provisions require control of pollutant discharges using best available technology economically achievable (BAT) and best conventional pollutant control technology (BCT) to prevent and reduce pollutants and any more stringent controls necessary to meet water quality standards.

U.S. EPA regulations (40 CFR Subchapter N) establish effluent limitation guidelines for storm water discharges from facilities in ten industrial categories. For these facilities, compliance with the effluent limitation guidelines constitutes compliance with BAT and BCT for the specified pollutants and must be met to comply with this General Permit.

For storm water discharges from facilities not among the ten industrial categories listed in 40 CFR Subchapter N, it is not feasible at this time to establish numeric effluent limitations. The reasons why establishment of numeric effluent limitations is not feasible are discussed in detail in State Water Board Orders No. WQ 91-03 and WQ 91-04. Therefore, this General Permit allows the facility operator to implement best management practices (BMPs) to comply with the requirements of this General Permit. This approach is consistent with the U.S. EPA's August 1, 1996 "Interim Permitting Approach for Water Quality Based Effluent Limitations in Storm Water Permits".

Receiving Water Limitations

Storm water discharges shall not cause or contribute to a violation of an applicable water quality standard. The General Permit requires facility operators to reduce or prevent pollutants in storm water discharges and authorized non-storm water discharges through the development and implementation of BMPs which constitutes compliance with BAT and BCT and, in most cases, compliance with water quality standards. If receiving water quality standards are exceeded, facility operators are required to submit a written report providing additional BMPs that will be implemented to achieve water quality standards.

Storm Water Pollution Prevention Plans (SWPPPs)

All facility operators must prepare, retain on site, and implement an SWPPP. The SWPPP has two major objectives: (1) to help identify the sources of pollution that affect the quality of industrial storm water discharges and authorized non-storm water discharges, and (2) to describe and ensure the implementation of BMPs to reduce or prevent pollutants in industrial storm water discharges and authorized non-storm water discharges.

This General Permit requires development and implementation of an SWPPP emphasizing BMPs. This approach provides the flexibility necessary to establish appropriate BMPs for different types of industrial activities and pollutant sources. As this General Permit covers vastly different types of facilities, the State Water Board recognizes that there is no single best way of developing or organizing an SWPPP. The SWPPP requirements contain the essential elements that all facility operators must consider and address in the SWPPP. This General Permit's SWPPP requirements are more detailed than the previous general permit's SWPPP requirements, and the suggested order of the SWPPP elements have been rearranged (1) to correspond more closely with other storm water permits in effect throughout the country, and (2) to generally follow a more logical path. Facility operators that have already developed and implemented SWPPPs under previous general permits are required to review the SWPPP's requirements contained in this General Permit and then review their existing SWPPP for adequacy. If the existing SWPPP adequately identifies and assesses all potential sources of pollutants and describes the appropriate BMPs necessary to reduce or prevent pollutants, the facility operator is not required to revise the existing SWPPP.

One of the major elements of the SWPPP is the elimination of unauthorized non-storm water discharges to the facility's storm drain system. Unauthorized non-storm water discharges can be generated from a wide variety of potential pollutant sources. They include waters from the rinsing or washing of vehicles, equipment, buildings, or pavement; materials that have been improperly disposed of or dumped, and spilled; or leaked materials. Unauthorized non-storm water discharges can contribute a significant pollutant load to receiving waters. Measures to control spills, leakage, and dumping can often be addressed through BMPs. Unauthorized non-storm water discharges may enter the storm drain system via conveyances such as floor drains. All conveyances should be evaluated to determine whether they convey unauthorized non-storm water discharges to the storm drain system. Unauthorized non-storm water discharges (even when commingled with storm water) shall be eliminated or covered by a separate NPDES Permit.

There are many non-storm water discharges that, under certain conditions, should not contain pollutants associated with

industrial activity (i.e., air conditioning condensate, potable water line testing, landscaping overflow, etc.). Item D, Special Conditions, provides the conditions where certain listed non-storm water discharges are authorized by this General Permit.

Monitoring Program

The General Permit requires development and implementation of a monitoring program. The objectives of the monitoring program are to (1) demonstrate compliance with the General Permit, (2) aid in the implementation of the SWPPP, and (3) measure the effectiveness of the BMPs in reducing or preventing pollutants in storm water discharges and authorized non-storm water discharges.

All facility operators (with the exception of inactive mining operations) are required to:

1. Perform visual observations of storm water discharges and authorized storm water discharges.

2. Collect and analyze samples of storm water discharges. Analysis must include pH, total suspended solids (TSS), total organic carbon (TOC), specific conductance, toxic chemicals, and other pollutants which are likely to be present in storm water discharges in significant quantities, and those parameters listed in Table D of this General Permit. The Table D parameters are those listed in the U.S. EPA Multi-Sector General Permit. Facility operators subject to Federal storm water effluent limitation guidelines in 40 CFR Subchapter N must also sample and analyze for any pollutant specified in the appropriate category of 40 CFR Subchapter N.

Facility operators are not required to collect samples or perform visual observations during adverse climatic conditions. Sample collection and visual observations are required only during scheduled facility operating hours. Visual observations are required only during daylight hours. Facility operators that are unable to collect any of the required samples or visual observations because of the above circumstances must provide documentation to the Regional Water Board in their annual report.

Facility operators may be exempt from performing sampling and analysis if they: (1) do not have areas of industrial activity exposed to storm water, (2) receive an exemption from a local agency which has jurisdiction over the storm sewer system, or (3) receive an exemption from the appropriate Regional Water Board. Facility operators must always perform sampling and analysis for any pollutant specified in storm water effluent limitation guidelines.

This General Permit contains a new procedure where facility operators, if they meet certain minimum conditions, may certify compliance with the General Permit and reduce the number of

sampling events required to be sampled for the remaining term of the General Permit. Each Regional Water Board may develop instructions, guidance, and checklists to assist facility operators to complete sampling reduction requests.

Local agencies that wish to provide sampling and analysis exemptions or reductions to facility operators within their jurisdiction shall develop a certification program that clearly indicates the certification procedures and criteria used by the local agency. At a minimum, these programs should include site inspections, a review of the facility operator's SWPPP, and a review of other records such as monitoring data, receiving water data, etc. The certification program shall be approved by the local Regional Water Board before implementation.

Alternative Monitoring

Facility operators are required to develop a facility-specific monitoring program that satisfies both the minimum monitoring program requirements and the objectives of the monitoring program. Some facility operators have indicated that cost-effective alternative monitoring programs can be developed that provide equivalent or more accurate indicators of pollutants and/or BMP performance than a monitoring program based upon the minimum monitoring program requirements. An example of such an alternative monitoring program would be one that identifies sample locations at or near pollutant sources rather than sampling an entire drainage area where the storm water discharge has been diluted with storm water from areas with little or no industrial activity.

The State Water Board does not want to preclude facility operators from developing better, and perhaps more cost-effective, monitoring programs. This General Permit allows facility operators to submit alternative monitoring programs for approval by the Regional Water Board. For individual facilities, these proposals must be facility specific and demonstrate how the alternative monitoring program will result in an equivalent or more accurate indicator of pollutants and/or BMP effectiveness. Facility operators with similar industrial activities may also propose alternative monitoring programs for approval by the Regional Water Boards. These proposals must demonstrate how the alternative monitoring program will result in an equivalent or more accurate indicator of pollutants and/or BMP effectiveness for all of the participating facilities.

Facility operators shall continue to comply with the existing monitoring program requirements until receiving approval by the Regional Water Board.

Group Monitoring

Each facility operator may either perform sampling and analysis individually or participate in a group monitoring program. A group monitoring program may be developed either by a group leader representing a group of similar facilities or by a local agency which holds a storm water permit for a municipal separate storm sewer system for industrial facilities within its jurisdiction. The group leader or local agency responsible for the group monitoring program must schedule all participating facilities to sample two storm events over the life of this General Permit. Facility operators subject to Federal effluent limitations guidelines in 40 CFR Subchapter N must individually sample and analyze for pollutants listed in the appropriate Federal regulations.

Participants within a group may be located within the jurisdiction of more than one Regional Water Board. Multi-Regional Water Board groups must receive the approval of the State Water Board Executive Director (with the concurrence of the appropriate Regional Water Boards).

Each group leader or local agency responsible for group sampling must: (1) provide guidance or training so that the monitoring is done correctly, (2) recommend appropriate BMPs to reduce or prevent pollutants in storm water discharges and authorized non-storm water discharges from group participants, (3) evaluate and report the monitoring data to the State Water Board and/or the appropriate Regional Water Board(s), and (4) conduct two on-site inspections at each facility over the five year term of this General Permit to evaluate facility compliance and recommend BMPs to achieve compliance with this General Permit. The group leader or local agency may designate, hire, or train inspectors to conduct these inspections that are or are not directly affiliated with the group leader or local agency. It is the group leader's or local agency's responsibility to select inspectors that are capable of evaluating each facility's compliance with the General Permit and can recommend appropriate BMPs. All group monitoring plans are subject to State Water Board and/or Regional Water Board(s) review. Consistent with the four-tier permitting strategy described in the Federal regulations, the Regional Water Board(s) may evaluate the data and results from group monitoring to establish future permitting decisions. As appropriate, the State Water Board and/or the Regional Water Board(s) may terminate or require substantial amendment to the group monitoring plans. The State Water Board and/or the Regional Water Board(s) may terminate a facility's participation in group monitoring or require additional monitoring activities.

Retention of Records

The facility operator is required to retain records of all monitoring information, copies of all reports required by this General Permit, and records of all data used to complete the NOI for a period of five years from the date of measurement, report, or monitoring activity. This period may be extended by the State and/or Regional Water Boards. All records are public documents and must be provided to the Regional Water Boards on request.

Watershed Management

The State and Regional Water Boards are undertaking a focussed effort in watershed management throughout the State. In reissuing this General Permit, the State Water Board recognizes both the evolving nature of watershed management and the long-term desirability of structuring monitoring programs to support the Watershed Management Initiative. Therefore, the amended monitoring and reporting provisions provide flexibility for individual facility operators or groups of facility operators to propose and participate in, subject to Regional Water Board approval, watershed monitoring programs in lieu of some or all of the monitoring requirements contained in this General Permit.

Facility Operator Compliance Responsibilities

This General Permit has been written to encourage individual facility operators to develop their own SWPPP and monitoring programs. Many facility operators, however, choose to obtain compliance assistance either by hiring a consultant on an individual basis or by participating in a group monitoring plan. Regardless of how a facility operator chooses to pursue compliance, it is the facility operator that is responsible for compliance with this General Permit.

The State Water Board recognizes that industrial activities and operating conditions at many facilities change over time. In addition, new and more effective BMPs are being developed by various facility operators and by industrial groups. The SWPPP and monitoring program requirements include various inspections, reviews, and observations all of which recognize, encourage, and mandate an iterative self-evaluation process that is necessary to consistently comply with this General Permit. In general, facility operators that develop and implement SWPPPs that comply with this General Permit should not be penalized when discovering minor violations through this iterative self-evaluation process. The General Permit provides facility operators up to 90 days to revise and implement the SWPPP to correct such violations.

**STATE WATER RESOURCES CONTROL BOARD (STATE WATER BOARD)**
**WATER QUALITY ORDER NO. 97-03-DWQ**
**NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)**
**GENERAL PERMIT NO. CAS000001 (GENERAL PERMIT)**

# WASTE DISCHARGE REQUIREMENTS (WDRS) FOR DISCHARGES OF STORM WATER ASSOCIATED WITH INDUSTRIAL ACTIVITIES EXCLUDING CONSTRUCTION ACTIVITIES

The State Water Board finds that:

1. Federal regulations for storm water discharges were issued by the U.S. Environmental Protection Agency (U.S. EPA) on November 16, 1990 (40 Code of Federal Regulations [CFR] Parts 122, 123, and 124). The regulations require operators of specific categories of facilities where discharges of storm water associated with industrial activity (storm water) occur to obtain an NPDES permit and to implement Best Available Technology Economically Achievable (BAT) and Best Conventional Pollutant Control Technology (BCT) to reduce or prevent pollutants associated with industrial activity in storm water discharges and authorized non-storm discharges.

2. This General Permit shall regulate storm water discharges and authorized non-storm water discharges from specific categories of industrial facilities identified in Attachment 1, storm water discharges and authorized non-storm water discharges from facilities as designated by the Regional Water Quality Control Boards (Regional Water Boards), and storm water discharges and authorized non-storm water discharges from other facilities seeking General Permit coverage. This General Permit may also regulate storm water discharges and authorized non-storm water discharges from facilities as required by U.S. EPA regulations. This General Permit shall regulate storm water discharges and authorized non-storm water discharges previously regulated by San Francisco Bay Regional Water Board Order, No.92-11 (as amended by Order No. 92-116). This General Permit excludes storm water discharges and non-storm water discharges that are regulated by other individual or general NPDES permits, storm water discharges and non-storm water discharges from construction activities, and storm water discharges and non-storm water discharges excluded by the Regional Water Boards for coverage by this General Permit. Attachment 2 contains the addresses and telephone numbers of each Regional Water Board office.

3. To obtain coverage for storm water discharges and authorized non-storm water discharges pursuant to this General Permit, operators of facilities (facility operators) must submit a Notice of Intent (NOI), in accordance with the Attachment 3

instructions, and appropriate annual fee to the State Water Board. This includes facility operators that have participated in U.S. EPA's group application process.

4. This General Permit does not preempt or supersede the authority of local agencies to prohibit, restrict, or control storm water discharges and authorized non-storm water discharges to storm drain systems or other water-courses within their jurisdictions as allowed by State and Federal law.

5. If an individual NPDES permit is issued to a facility operator otherwise subject to this General Permit or an alternative NPDES general permit is subsequently adopted which covers storm water discharges and/or authorized non-storm water discharges regulated by this General Permit, the applicability of this General Permit to such discharges is automatically terminated on the effective date of the individual NPDES permit or the date of approval for coverage under the subsequent NPDES general permit.

6. Effluent limitations and toxic and effluent standards established in Sections 208(b), 301, 302, 303(d), 304, 306, 307, and 403 of the Federal Clean Water Act (CWA), as amended, are applicable to storm water discharges and authorized non-storm water discharges regulated by this General Permit.

7. This action to adopt an NPDES general permit is exempt from the provisions of the California Environmental Quality Act (Public Resources Code Section 21100, et seq.) in accordance with Section 13389 of the California Water Code.

8. Federal regulations (40 CFR Subchapter N) establish effluent limitations guidelines for storm water discharges from some facilities in ten industrial categories.

9. For facilities which do not have established effluent limitation guidelines for storm water discharges in 40 CFR Subchapter N, it is not feasible at this time to establish numeric effluent limitations. This is due to the large number of discharges and the complex nature of storm water discharges. This is also consistent with the U.S. EPA's August 1, 1996 "Interim Permitting Approach for Water Quality Based Effluent Limitations in Storm Water Permits."

10. Facility operators are required to comply with the terms and conditions of this General Permit. Compliance with the terms and conditions of this General Permit constitutes compliance with BAT/BCT requirements and with requirements to achieve water quality standards. This includes the development and implementation of an effective Storm Water Pollution Prevention Plan (SWPPP) to reduce or prevent pollutants associated with industrial activity in storm water discharges and authorized non-storm water discharges.

11. Best Management Practices (BMPs) to reduce or prevent pollutants associated with industrial activity in storm water discharges and authorized non-storm water discharges are appropriate where numeric effluent limitations are infeasible, and the implementation of BMPs is adequate to achieve compliance with BAT/BCT and with water quality standards.

12. The State Water Board has adopted a Watershed Management Initiative that encourages watershed management throughout the State. This General Permit recognizes the Watershed Management Initiative by supporting the development of watershed monitoring programs authorized by the Regional Water Boards.

13. Following adoption of this General Permit, the Regional Water Boards shall enforce its provisions.

14. Following public notice in accordance with State and Federal laws and regulations, the State Water Board held a public hearing on November 12, 1996 and heard and considered all comments pertaining to this General Permit. A response to all significant comments has been prepared and is available for public review.

15. This Order is an NPDES General Permit in compliance with Section 402 of the CWA and shall take effect upon adoption by the State Water Board.

16. All terms that are defined in the CWA, U.S. EPA storm water regulations and the Porter-Cologne Water Quality Control Act will have the same definition in this General Permit unless otherwise stated.

IT IS HEREBY ORDERED that all facility operators required to be regulated by this General Permit shall comply with the following:

A. DISCHARGE PROHIBITIONS:

1. Except as allowed in Special Conditions (D.1.) of this General Permit, materials other than storm water (non-storm water discharges) that discharge either directly or indirectly to waters of the United States are prohibited. Prohibited non-storm water discharges must be either eliminated or permitted by a separate NPDES permit.

2. Storm water discharges and authorized non-storm water discharges shall not cause or threaten to cause pollution, contamination, or nuisance.

B. EFFLUENT LIMITATIONS:

1. Storm water discharges from facilities subject to storm water effluent limitation guidelines in Federal regulations (40 CFR

Subchapter N) shall not exceed the specified effluent limitations.

2. Storm water discharges and authorized non-storm water discharges regulated by this General Permit shall not contain a hazardous substance equal to or in excess of a reportable quantity listed in 40 CFR Part 117 and/or 40 CFR Part 302.

3. Facility operators covered by this General Permit must reduce or prevent pollutants associated with industrial activity in storm water discharges and authorized non-storm water discharges through implementation of BAT for toxic and non-conventional pollutants and BCT for conventional pollutants. Development and implementation of an SWPPP that complies with the requirements in Section A of the General Permit and that includes BMPs that achieve BAT/BCT constitutes compliance with this requirement.

C. RECEIVING WATER LIMITATIONS:

1. Storm water discharges and authorized non-storm water discharges to any surface or ground water shall not adversely impact human health or the environment.

2. Storm water discharges and authorized non-storm water discharges shall not cause or contribute to an exceedance of any applicable water quality standards contained in a Statewide Water Quality Control Plan or the applicable Regional Water Board's Basin Plan.

3. A facility operator will not be in violation of Receiving Water Limitation C.2. as long as the facility operator has implemented BMPs that achieve BAT/BCT and the following procedure is followed:

a. The facility operator shall submit a report to the appropriate Regional Water Board that describes the BMPs that are currently being implemented and additional BMPs that will be implemented to prevent or reduce any pollutants that are causing or contributing to the exceedance of water quality standards. The report shall include an implementation schedule. The Regional Water Board may require modifications to the report.

b. Following approval of the report described above by the Regional Water Board, the facility operator shall revise its SWPPP and monitoring program to incorporate the additional BMPs that have been and will be implemented, the implementation schedule, and any additional monitoring required.

4. A facility operator shall be in violation of this General Permit if he/she fails to do any of the following:

a. Submit the report described above within 60 days after either the facility operator or the Regional Water Board determines that discharges are causing or contributing to an exceedance of an applicable water quality standard;

b. Submit a report that is approved by the Regional Water Board; or

c. Revise its SWPPP and monitoring program as required by the approved report.

D. SPECIAL CONDITIONS

1. Non-Storm Water Discharges

a. The following non-storm water discharges are authorized by this General Permit provided that they satisfy the conditions specified in Paragraph b. below: fire hydrant flushing; potable water sources, including potable water related to the operation, maintenance, or testing of potable water systems; drinking fountain water; atmospheric condensates including refrigeration, air conditioning, and compressor condensate; irrigation drainage; landscape watering; springs; ground water; foundation or footing drainage; and sea water infiltration where the sea waters are discharged back into the sea water source.

b. The non-storm water discharges as provided in Paragraph a. above are authorized by this General Permit if all the following conditions are met:

i. The non-storm water discharges are in compliance with Regional Water Board requirements.

ii. The non-storm water discharges are in compliance with local agency ordinances and/or requirements.

iii. BMPs are specifically included in the SWPPP to (1) prevent or reduce the contact of non-storm water discharges with significant materials or equipment and (2) minimize, to the extent practicable, the flow or volume of non-storm water discharges.

iv. The non-storm water discharges do not contain significant quantities of pollutants.

v. The monitoring program includes quarterly visual observations of each non-storm water discharge and its sources to ensure that BMPs are being implemented and are effective.

vi. The non-storm water discharges are reported and described annually as part of the annual report.

c. The Regional Water Board or its designee may establish additional monitoring programs and reporting requirements for any non-storm water discharge authorized by this General Permit.

d. Discharges from firefighting activities are authorized by this General Permit and are not subject to the conditions of Paragraph b. above.

E. PROVISIONS

1. All facility operators seeking coverage by this General Permit must submit an NOI for each of the facilities they operate. Facility operators filing an NOI after the adoption of this General Permit shall use the NOI form and instructions (Attachment 3) attached to this General Permit. Existing facility operators who have filed an NOI pursuant to State Water Board Order No. 91-013-DWQ (as amended by Order No. 92-12-DWQ) or San Francisco Bay Regional Water Board Order No. 92-11 (as amended by Order No. 92-116) shall submit an abbreviated NOI form provided by the State Water Board. The abbreviated NOI form shall be submitted within 45 days of receipt.

2. Facility operators who have filed an NOI, pursuant to State Water Board Order No. 91-013-DWQ (as amended by Order No. 92-12-DWQ) or San Francisco Bay Regional Water Board Order No. 92-11 (as amended by Order No. 92-116), shall continue to implement their existing SWPPP and shall implement any necessary revisions to their SWPPP in accordance with Section A of this General Permit in a timely manner, but in no case later than August 1, 1997. Facility operators beginning industrial activities after adoption of this General Permit must develop and implement an SWPPP in accordance with Section A of this General Permit when the industrial activities begin.

3. Facility operators who have filed an NOI, pursuant to State Water Board Order No. 91-013-DWQ (as amended by Order No. 92-12-DWQ) or San Francisco Bay Regional Water Board Order No. 92-11 (as amended by Order No. 92-116), shall continue to implement their existing Monitoring Program and shall implement any necessary revisions to their Monitoring Program in accordance with Section B of the General Permit in a timely manner, but in no case later than August 1, 1997. Facility operators beginning industrial activities after adoption of this General Permit must develop and implement a Monitoring Program in

accordance with Section B of this General Permit when industrial activities begin.

4. Facility operators of feedlots as defined in 40 CFR Part 412 that are in full compliance with Section 2560 to Section 2565, Title 23, California Code of Regulations (Chapter 15) will be in compliance with all effluent limitations and prohibitions contained in this General Permit. Facility operators of feedlots that comply with Chapter 15, however, must perform monitoring in compliance with the requirements of Section B.4.d. and B.14. of this General Permit. Facility operators of feedlots must also comply with any Regional Water Board WDRs or NPDES general permit regulating their storm water discharges.

5. All facility operators must comply with lawful requirements of municipalities, counties, drainage districts, and other local agencies regarding storm water discharges and non-storm water discharges entering storm drain systems or other watercourses under their jurisdiction, including applicable requirements in municipal storm water management programs developed to comply with NPDES permits issued by the Regional Water Boards to local agencies.

6. All facility operators must comply with the standard provisions and reporting requirements for each facility covered by this General Permit contained in Section C, Standard Provisions.

7. Facility operators that operate facilities with co-located industrial activities (facilities that have industrial activities that meet more than one of the descriptions in Attachment 1) that are contiguous to one another are authorized to file a single NOI to comply with the General Permit. Storm water discharges and authorized non-storm water discharges from the co-located industrial activities are authorized if the SWPPP and Monitoring Program addresses each co-located industrial activity.

8. Upon reissuance of a successor NPDES general permit by the State Water Board, the facility operators subject to this reissued General Permit may be required to file an NOI.

9. Facility operators may request to terminate their coverage under this General Permit by filing a Notice of Termination (NOT) with the Regional Water Board. The NOT shall provide all documentation requested by the Regional Water Board. The facility operator will be notified when the NOT has been approved. Should the NOT be denied, facility operators are responsible for continued compliance with the requirements of this General Permit.

10. Facility operators who have filed an NOI, pursuant to State Water Board Order No. 91-013-DWQ (as amended by Order No. 92-12) or San Francisco Bay Regional Water Board Order No. 92-11 (as amended by Order No. 92-116) shall:

    a. Complete the 1996-97 activities required by those general permits. These include, but are not limited to, conducting any remaining visual observations, sample collection, annual site inspection, annual report submittal, and (for group monitoring leaders) Group Evaluation Reports; and

    b. Comply with the requirements of this General Permit no later than August 1, 1997.

11. If the Regional Water Board determines that a discharge may be causing or contributing to an exceedance of any applicable water quality standards contained in a Statewide Water Quality Control Plan or the applicable Regional Water Board's Basin Plan, the Regional Water Board may order the facility operator to comply with the requirements described in Receiving Water Limitation C.3. The facility operator shall comply with the requirements within the time schedule established by the Regional Water Board.

12. If the facility operator determines that its storm water discharges or authorized non-storm water discharges are causing or contributing to an exceedance of any applicable water quality standards, the facility operator shall comply with the requirements described in Receiving Water Limitation C.3.

13. State Water Board Order No. 91-013-DWQ (as amended by Order No. 92-12-DWQ) and San Francisco Bay Regional Water Board Order No. 91-011 (as amended by Order No. 92-116) are hereby rescinded.

F. REGIONAL WATER BOARD AUTHORITIES

1. Following adoption of this General Permit, Regional Water Boards shall:

    a. Implement the provisions of this General Permit, including, but not limited to, reviewing SWPPPs, reviewing annual reports, conducting compliance inspections, and taking enforcement actions.

    b. Issue other NPDES general permits or individual NPDES storm water permits as they deem appropriate to individual facility operators, facility operators of specific categories of industrial activities, or facility operators in a watershed or geographic area. Upon issuance of such NPDES permits by a Regional Water Board, the affected facility operator shall no longer

be regulated by this General Permit. Any new NPDES permit issued by the Regional Water Board may contain different requirements than the requirements of this General Permit.

2. Regional Water Boards may provide guidance to facility operators on the SWPPP and the Monitoring Program and reporting implementation.

3. Regional Water Boards may require facility operators to conduct additional SWPPP and Monitoring Program and reporting activities necessary to achieve compliance with this General Permit.

4. Regional Water Boards may approve requests from facility operators whose facilities include co-located industrial activities that are not contiguous within the facilities (e.g., some military bases) to comply with this General Permit under a single NOI. Storm water discharges and authorized non-storm water discharges from the co-located industrial activities and from other sources within the facility that may generate significant quantities of pollutants are authorized provided the SWPPP and Monitoring Program addresses each co-located industrial activity and other sources that may generate significant quantities of pollutants.

CERTIFICATION

The undersigned, Administrative Assistant to the State Water Board, does hereby certify that the foregoing is a full, true, and correct copy of an order duly and regularly adopted at a meeting of the State Water Resources Control Board held on April 17, 1997.

AYE: John P. Caffrey
John W. Brown
James M. Stubchaer
Marc Del Piero
Mary Jane Forster

NO: None

ABSENT: None

ABSTAIN: None

Maureen Marché

Administrative Assistant to the Board

SECTION A: STORM WATER POLLUTION PREVENTION PLAN REQUIREMENTS

1. *Implementation Schedule*

A storm water pollution prevention plan (SWPPP) shall be developed and implemented for each facility covered by this General Permit in accordance with the following schedule.

a. Facility operators beginning industrial activities before October 1, 1992 shall develop and implement the SWPPP no later than October 1, 1992. Facility operators beginning industrial activities after October 1, 1992 shall develop and implement the SWPPP when industrial activities begin.

b. Existing facility operators that submitted a Notice of Intent (NOI), pursuant to State Water Resources Control Board (State Water Board) Order No. 91-013-DWQ (as amended by Order No. 92-12) or San Francisco Bay Regional Water Quality Control Board (Regional Water Board) Order No. 92-11 (as amended by Order No. 92-116), shall continue to implement their existing SWPPP and shall implement any necessary revisions to their SWPPP in a timely manner, but in no case later than August 1, 1997.

2. *Objectives*

The SWPPP has two major objectives: (a) to identify and evaluate sources of pollutants associated with industrial activities that may affect the quality of storm water discharges and authorized non-storm water discharges from the facility; and (b) to identify and implement site-specific best management practices (BMPs) to reduce or prevent pollutants associated with industrial activities in storm water discharges and authorized non-storm water discharges. BMPs may include a variety of pollution prevention measures or other low-cost and pollution control measures. They are generally categorized as non-structural BMPs (activity schedules, prohibitions of practices, maintenance procedures, and other low-cost measures) and as structural BMPs (treatment measures, run-off controls, over-head coverage.) To achieve these objectives, facility operators should consider the five phase process for SWPPP development and implementation as shown in Table A.

The SWPPP requirements are designed to be sufficiently flexible to meet the needs of various facilities. SWPPP requirements that are not applicable to a facility should not be included in the SWPPP.

A facility's SWPPP is a written document that shall contain a compliance activity schedule, a description of industrial activities and pollutant sources, descriptions of BMPs, drawings, maps, and relevant copies or references of parts of other plans. The SWPPP shall be revised whenever appropriate and shall be readily available for review by facility employees or Regional Water Board inspectors.

3. *Planning and Organization*

a. *Pollution Prevention Team*

The SWPPP shall identify a specific individual or individuals and their positions within the facility organization as members of a storm water pollution prevention team responsible for developing the SWPPP, assisting the facility manager in SWPPP implementation and revision, and conducting all monitoring program activities required in Section B of this General Permit. The SWPPP shall clearly identify the General Permit related responsibilities, duties, and activities of each team member. For small facilities, storm water pollution prevention teams may consist of one individual where appropriate.

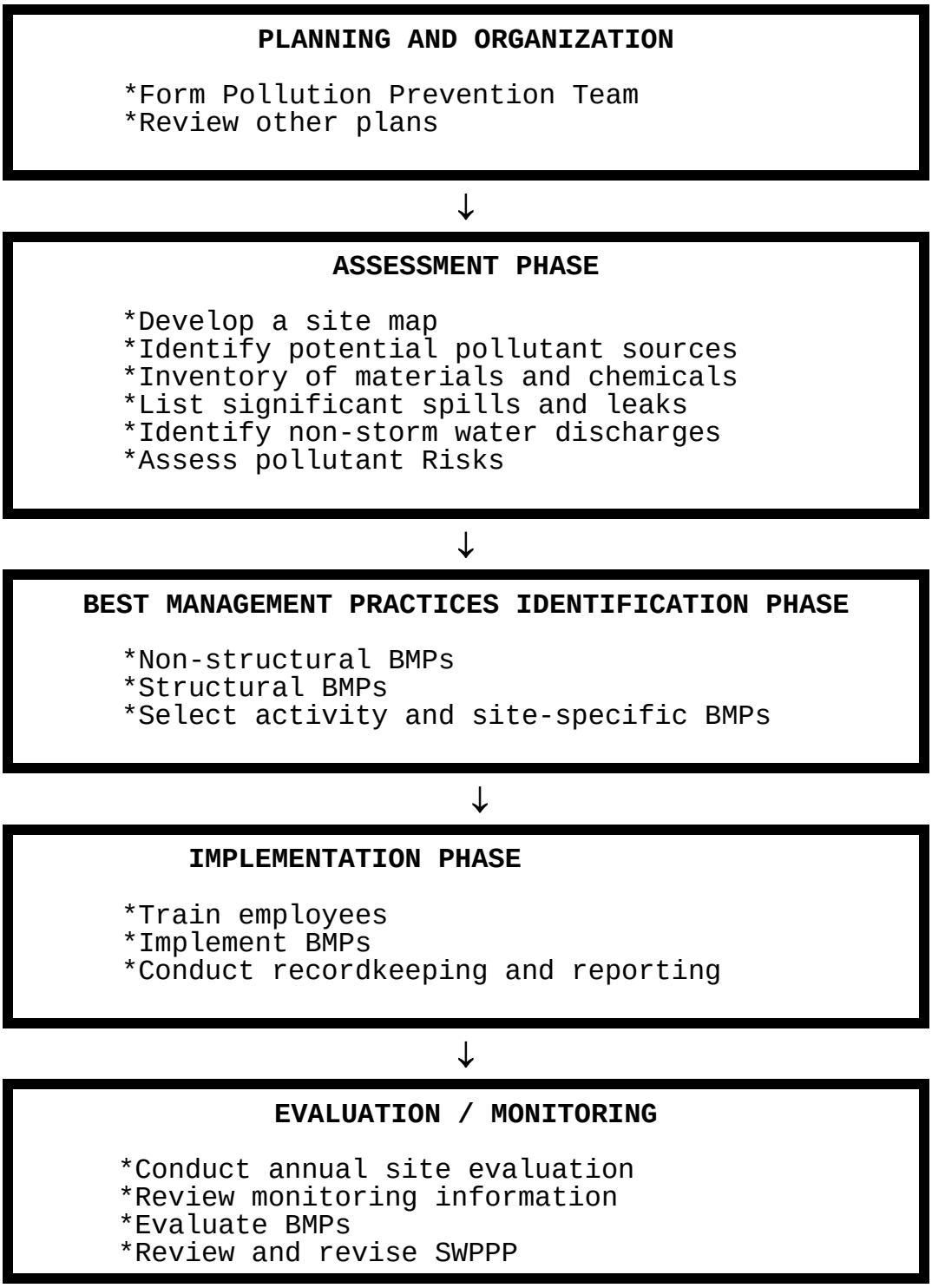
b. *Review Other Requirements and Existing Facility Plans*

The SWPPP may incorporate or reference the appropriate elements of other regulatory requirements. Facility operators should review all local, State, and Federal requirements that impact, complement, or are consistent with the requirements of this General Permit. Facility operators should identify any existing facility plans that contain storm water pollutant control measures or relate to the requirements of this General Permit. As examples, facility operators whose facilities are subject to Federal Spill Prevention Control and Countermeasures' requirements should already have instituted a plan to control spills of certain hazardous materials. Similarly, facility operators whose facilities are subject to air quality related permits and regulations may already have evaluated industrial activities that generate dust or particulates.

*4. Site Map*

The SWPPP shall include a site map. The site map shall be provided on an 8-½ x 11 inch or larger sheet and include notes, legends, and other data as appropriate to ensure that the site map is clear and understandable. If necessary, facility operators may provide the required information on multiple site maps.

**TABLE A**
**FIVE PHASES FOR DEVELOPING AND IMPLEMENTING INDUSTRIAL STORM WATER POLLUTION PREVENTION PLANS**




The following information shall be included on the site map:

a. The facility boundaries; the outline of all storm water drainage areas within the facility boundaries; portions of the drainage area impacted by run-on from surrounding areas; and direction of flow of each drainage area, on-site surface water bodies, and areas of soil erosion. The map shall also identify nearby water bodies (such as rivers, lakes, and ponds) and municipal storm drain inlets

where the facility's storm water discharges and authorized non-storm water discharges may be received.

b. The location of the storm water collection and conveyance system, associated points of discharge, and direction of flow. Include any structural control measures that affect storm water discharges, authorized non-storm water discharges, and run-on. Examples of structural control measures are catch basins, berms, detention ponds, secondary containment, oil/water separators, diversion barriers, etc.

c. An outline of all impervious areas of the facility, including paved areas, buildings, covered storage areas, or other roofed structures.

d. Locations where materials are directly exposed to precipitation and the locations where significant spills or leaks identified in Section A.6.a.iv. below have occurred.

e. Areas of industrial activity. This shall include the locations of all storage areas and storage tanks, shipping and receiving areas, fueling areas, vehicle and equipment storage/maintenance areas, material handling and processing areas, waste treatment and disposal areas, dust or particulate generating areas, cleaning and rinsing areas, and other areas of industrial activity which are potential pollutant sources.

*5. List of Significant Materials*

The SWPPP shall include a list of significant materials handled and stored at the site. For each material on the list, describe the locations where the material is being stored, received, shipped, and handled, as well as the typical quantities and frequency. Materials shall include raw materials, intermediate products, final or finished products, recycled materials, and waste or disposed materials.

*6. Description of Potential Pollutant Sources*

a. The SWPPP shall include a narrative description of the facility's industrial activities, as identified in Section A.4.e above, associated potential pollutant sources, and potential pollutants that could be discharged in storm water discharges or authorized non-storm water discharges. At a minimum, the following items related to a facility's industrial activities shall be considered:

i. Industrial Processes

Describe each industrial process, the type, characteristics, and quantity of significant materials used in or resulting from the process, and a description of the manufacturing, cleaning, rinsing, recycling, disposal, or other activities related to the process. Where applicable, areas protected by containment structures and the corresponding containment capacity shall be described.

ii. Material Handling and Storage Areas

Describe each handling and storage area, type, characteristics, and quantity of significant materials handled or stored, description of the shipping, receiving, and loading procedures, and the spill or leak prevention and response procedures. Where applicable, areas protected by containment structures and the corresponding containment capacity shall be described.

iii. Dust and Particulate Generating Activities

Describe all industrial activities that generate dust or particulates that may be deposited within the facility's boundaries and identify their discharge locations; the characteristics of dust and particulate pollutants; the approximate quantity of dust and particulate pollutants that may be deposited within the facility boundaries; and a description of the primary areas of the facility where dust and particulate pollutants would settle.

iv. Significant Spills and Leaks

Describe materials that have spilled or leaked in significant quantities in storm water discharges or non-storm water discharges since April 17, 1994. Include toxic chemicals (listed in 40 CFR, Part 302) that have been discharged to storm water as reported on U.S. Environmental Protection Agency (U.S. EPA) Form R, and oil and hazardous substances in excess of reportable quantities (see 40 Code of Federal Regulations [CFR], Parts 110, 117, and 302).

The description shall include the type, characteristics, and approximate quantity of the material spilled or leaked, the cleanup or remedial actions that have occurred or are planned, the approximate remaining quantity of materials that may be exposed to storm water or non-storm water

discharges, and the preventative measures taken to ensure spill or leaks do not reoccur. Such list shall be updated as appropriate during the term of this General Permit.

v. Non-Storm Water Discharges

Facility operators shall investigate the facility to identify all non-storm water discharges and their sources. As part of this investigation, all drains (inlets and outlets) shall be evaluated to identify whether they connect to the storm drain system.

All non-storm water discharges shall be described. This shall include the source, quantity, frequency, and characteristics of the non-storm water discharges and associated drainage area.

Non-storm water discharges that contain significant quantities of pollutants or that do not meet the conditions provided in Special Conditions D. are prohibited by this General Permit (Examples of prohibited non-storm water discharges are contact and non-contact cooling water, boiler blowdown, rinse water, wash water, etc.). Non-storm water discharges that meet the conditions provided in Special Condition D. are authorized by this General Permit. The SWPPP must include BMPs to prevent or reduce contact of non-storm water discharges with significant materials or equipment.

vi. Soil Erosion

Describe the facility locations where soil erosion may occur as a result of industrial activity, storm water discharges associated with industrial activity, or authorized non-storm water discharges.

b. The SWPPP shall include a summary of all areas of industrial activities, potential pollutant sources, and potential pollutants. This information should be summarized similar to Table B. The last column of Table B, "Control Practices", should be completed in accordance with Section A.8. below.

*7. <u>Assessment of Potential Pollutant Sources</u>*

a. The SWPPP shall include a narrative assessment of all industrial activities and potential pollutant sources as described in A.6. above to determine:

i. Which areas of the facility are likely sources of

pollutants in storm water discharges and authorized non-storm water discharges, and

ii. Which pollutants are likely to be present in storm water discharges and authorized non-storm water discharges. Facility operators shall consider and evaluate various factors when performing this assessment such as current storm water BMPs; quantities of significant materials handled, produced, stored, or disposed of; likelihood of exposure to storm water or authorized non-storm water discharges; history of spill or leaks; and run-on from outside sources.

b. Facility operators shall summarize the areas of the facility that are likely sources of pollutants and the corresponding pollutants that are likely to be present in storm water discharges and authorized non-storm water discharges.

Facility operators are required to develop and implement additional BMPs as appropriate and necessary to prevent or reduce pollutants associated with each pollutant source. The BMPs will be narratively described in Section 8 below.

*8. Storm Water Best Management Practices*

The SWPPP shall include a narrative description of the storm water BMPs to be implemented at the facility for each potential pollutant and its source identified in the site assessment phase (Sections A.6. and 7. above). The BMPs shall be developed and implemented to reduce or prevent pollutants in storm water discharges and authorized non-storm water discharges. Each pollutant and its source may require one or more BMPs. Some BMPs may be implemented for multiple pollutants and their sources, while other BMPs will be implemented for a very specific pollutant and its source.

# TABLE B
## EXAMPLE
## ASSESSMENT OF POTENTIAL POLLUTION SOURCES AND CORRESPONDING BEST MANAGEMENT PRACTICES
## SUMMARY

| Area | Activity | Pollutant Source | Pollutant | Best Management Practices |
|---|---|---|---|---|
| Vehicle & Equipment Fueling | Fueling | Spills and leaks during delivery | fuel oil | - Use spill and overflow protection<br>- Minimize run-on of storm water into the fueling area<br>- Cover fueling area<br>- Use dry cleanup methods rather than hosing down area<br>- Implement proper spill prevention control program<br>- Implement adequate preventative maintenance program to preventive tank and line leaks<br>- Inspect fueling areas regularly to detect problems before they occur<br>- Train employees on proper fueling, cleanup, and spill response techniques. |
| | | Spills caused by topping off fuel tanks | fuel oil | |
| | | Hosing or washing down fuel area | fuel oil | |
| | | Leaking storage tanks | fuel oil | |
| | | Rainfall running off fueling area, and rainfall running onto and off fueling area | fuel oil | |

The description of the BMPs shall identify the BMPs as (1) existing BMPs, (2) existing BMPs to be revised and implemented, or (3) new BMPs to be implemented. The description shall also include a discussion on the effectiveness of each BMP to reduce or prevent pollutants in storm water discharges and authorized non-storm water discharges. The SWPPP shall provide a summary of all BMPs implemented for each pollutant source. This information should be summarized similar to Table B.

Facility operators shall consider the following BMPs for implementation at the facility:

a. Non-Structural BMPs

Non-structural BMPs generally consist of processes, prohibitions, procedures, schedule of activities, etc., that prevent pollutants associated with industrial activity from contacting with storm water discharges and authorized non-storm water discharges. They are considered low technology, cost-effective measures. Facility operators should consider all possible non-structural BMPs options before considering additional structural BMPs (see Section A.8.b. below). Below is a list of non-structural BMPs that should be considered:

i. Good Housekeeping

Good housekeeping generally consist of practical procedures to maintain a clean and orderly facility.

ii. Preventive Maintenance

Preventive maintenance includes the regular inspection and maintenance of structural storm water controls (catch basins, oil/water separators, etc.) as well as other facility equipment and systems.

iii. Spill Response

This includes spill clean-up procedures and necessary clean-up equipment based upon the quantities and locations of significant materials that may spill or leak.

iv. Material Handling and Storage

This includes all procedures to minimize the potential for spills and leaks and to minimize exposure of significant materials to storm water and authorized non-storm water discharges.

v. Employee Training

This includes training of personnel who are responsible for (1) implementing activities identified in the SWPPP, (2) conducting inspections, sampling, and visual observations, and (3) managing storm water. Training should address topics such as spill response, good housekeeping, and material handling procedures, and actions necessary to implement all BMPs identified in the SWPPP. The SWPPP shall identify periodic dates for such training. Records shall be maintained of all training sessions held.

vi. Waste Handling/Recycling

This includes the procedures or processes to handle, store, or dispose of waste materials or recyclable materials.

vii. Recordkeeping and Internal Reporting

This includes the procedures to ensure that all records of inspections, spills, maintenance activities, corrective actions, visual observations, etc., are developed, retained, and provided, as necessary, to the appropriate facility personnel.

viii. Erosion Control and Site Stabilization

This includes a description of all sediment and erosion control activities. This may include the planting and maintenance of vegetation, diversion of run-on and runoff, placement of sandbags, silt screens, or other sediment control devices, etc.

ix. Inspections

This includes, in addition to the preventative maintenance inspections identified above, an inspection schedule of all potential pollutant sources. Tracking and follow-up procedures shall be described to ensure adequate corrective actions are taken and SWPPPs are made.

x. Quality Assurance

This includes the procedures to ensure that all elements of the SWPPP and Monitoring Program are adequately conducted.

b. Structural BMPs

Where non-structural BMPs as identified in Section A.8.a. above are not effective, structural BMPs shall be considered. Structural BMPs generally consist of structural devices that reduce or prevent pollutants in storm water discharges and authorized non-storm water discharges. Below is a list of structural BMPs that should be considered:

i. Overhead Coverage

This includes structures that provide horizontal coverage of materials, chemicals, and pollutant sources from contact with storm water and authorized non-storm water discharges.

ii. Retention Ponds

This includes basins, ponds, surface impoundments, bermed areas, etc. that do not allow storm water to discharge from the facility.

iii. Control Devices

This includes berms or other devices that channel or route run-on and runoff away from pollutant sources.

iv. Secondary Containment Structures

This generally includes containment structures around storage tanks and other areas for the purpose of collecting any leaks or spills.

v. Treatment

This includes inlet controls, infiltration devices, oil/water separators, detention ponds, vegetative swales, etc. that reduce the pollutants in storm water discharges and authorized non-storm water discharges.

9. <u>Annual Comprehensive Site Compliance Evaluation</u>

The facility operator shall conduct one comprehensive site compliance evaluation (evaluation) in each reporting period (July 1-June 30). Evaluations shall be conducted within 8-16 months of each other. The SWPPP shall be revised, as appropriate, and the revisions implemented within 90 days of the evaluation. Evaluations shall include the following:

a. A review of all visual observation records, inspection records, and sampling and analysis results.

b. A visual inspection of all potential pollutant sources for evidence of, or the potential for, pollutants entering the drainage system.

c. A review and evaluation of all BMPs (both structural and non-structural) to determine whether the BMPs are adequate, properly implemented and maintained, or whether additional BMPs are needed. A visual inspection of equipment needed to implement the SWPPP, such as spill response equipment, shall be included.

d. An evaluation report that includes, (i) identification of personnel performing the evaluation, (ii) the date(s) of the evaluation, (iii) necessary SWPPP revisions, (iv) schedule, as required in Section A.10.e, for implementing SWPPP revisions, (v) any incidents of non-compliance and the corrective actions taken, and (vi) a certification that the facility operator is in compliance with this General Permit. If the above certification cannot be provided, explain in the evaluation report why the facility operator is not in compliance with this General Permit. The evaluation report shall be submitted as part of the annual report, retained for at least five years, and signed and certified in accordance with Standard Provisions 9. and 10. of Section C. of this General Permit.

10. *SWPPP General Requirements*

a. The SWPPP shall be retained on site and made available upon request of a representative of the Regional Water Board and/or local storm water management agency (local agency) which receives the storm water discharges.

b. The Regional Water Board and/or local agency may notify the facility operator when the SWPPP does not meet one or more of the minimum requirements of this Section. As requested by the Regional Water Board and/or local agency, the facility operator shall submit an SWPPP revision and implementation schedule that meets the minimum requirements of this section to the Regional Water Board and/or local agency that requested the SWPPP revisions. Within 14 days after implementing the required SWPPP revisions, the facility operator shall provide written certification to the Regional Water Board and/or local agency that the revisions have been implemented.

c. The SWPPP shall be revised, as appropriate, and implemented prior to changes in industrial activities which (i) may significantly increase the quantities of pollutants in storm water discharge, (ii) cause a new area of industrial activity at the facility to be exposed to storm water, or (iii) begin an industrial activity which would introduce a new pollutant source at the facility.

d. Other than as provided in Provisions B.11, B.12, and E.2 of the General Permit, the SWPPP shall be revised and implemented in a timely manner, but in no case more than 90 days after a facility operator determines that the SWPPP is in violation of any requirement(s) of this General Permit.

e. When any part of the SWPPP is infeasible to implement by the deadlines specified in Provision E.2 or Sections A.1, A.9, A.10.c, and A.10.d of this General Permit due to proposed significant structural changes, the facility operator shall submit a report to the Regional Water Board prior to the applicable deadline that (i) describes the portion of the SWPPP that is infeasible to implement by the deadline, (ii) provides justification for a time extension, (iii) provides a schedule for completing and implementing that portion of the SWPPP, and (iv) describes the BMPs that will be implemented in the interim period to reduce or prevent pollutants in storm water discharges and authorized non-storm water discharges. Such reports are subject to Regional Water Board approval and/or modifications. Facility operators shall provide written notification to the Regional Water Board within 14 days after the SWPPP revisions are implemented.

f. The SWPPP shall be provided, upon request, to the Regional Water Board. The SWPPP is considered a report that shall be available to the public by the Regional Water Board under Section 308(b) of the Clean Water Act.

SECTION B. MONITORING PROGRAM AND REPORTING REQUIREMENTS

1. *Implementation Schedule*

Each facility operator shall develop a written monitoring program for each facility covered by this General Permit in accordance with the following schedule:

a. Facility operators beginning industrial activities before October 1, 1992 shall develop and implement a monitoring program no later than October 1, 1992. Facility operators beginning operations after October 1, 1992 shall develop and implement a monitoring program when the industrial activities begin.

b. Facility operators that submitted a Notice Of Intent (NOI) pursuant to State Water Resources Control Board (State Water Board) Order No. 91-013-DWQ (as amended by Order No. 92-12) or San Francisco Bay Regional Water Quality Control Board (Regional Water Board) Order No. 92-11 (as amended by Order No. 92-116), shall continue to implement their existing monitoring program and implement any necessary revisions to their monitoring program in a timely manner, but in no case later than August 1, 1997. These facility operators may use the monitoring results conducted in accordance with those expired general permits to satisfy the pollutant/parameter reduction requirements in Section B.5.c., Sampling and Analysis Exemptions and Reduction certifications in Section B.12., and Group Monitoring Sampling credits in B.15.k. For facilities beginning industrial activities after the adoption of this General Permit, the monitoring program shall be developed and implemented when the facility begins the industrial activities.

2. *Objectives*

The objectives of the monitoring program are to:

a. Ensure that storm water discharges are in compliance with the Discharge Prohibitions, Effluent Limitations, and Receiving Water Limitations specified in this General Permit.

b. Ensure practices at the facility to reduce or prevent pollutants in storm water discharges and authorized non-storm water discharges are evaluated and revised to meet changing conditions.

c. Aid in the implementation and revision of the SWPPP required by Section A of this General Permit.

d. Measure the effectiveness of best management practices (BMPs) to prevent or reduce pollutants in storm water

discharges and authorized non-storm water discharges. Much of the information necessary to develop the monitoring program, such as discharge locations, drainage areas, pollutant sources, etc., should be found in the Storm Water Pollution Prevention Plan (SWPPP). The facility's monitoring program shall be a written, site-specific document that shall be revised whenever appropriate and be readily available for review by employees or Regional Water Board inspectors.

3. *Non-storm Water Discharge Visual Observations*

a. Facility operators shall visually observe all drainage areas within their facilities for the presence of unauthorized non-storm water discharges;

b. Facility operators shall visually observe the facility's authorized non-storm water discharges and their sources;

c. The visual observations required above shall occur quarterly, during daylight hours, on days with no storm water discharges, and during scheduled facility operating hours[1]. Quarterly visual observations shall be conducted in each of the following periods: January-March, April-June, July-September, and October-December. Facility operators shall conduct quarterly visual observations within 6-18 weeks of each other.

d. Visual observations shall document the presence of any discolorations, stains, odors, floating materials, etc., as well as the source of any discharge. Records shall be maintained of the visual observation dates, locations observed, observations, and response taken to eliminate unauthorized non-storm water discharges and to reduce or prevent pollutants from contacting non-storm water discharges. The SWPPP shall be revised, as necessary, and implemented in accordance with Section A of this General Permit.

4. *Storm Water Discharge Visual Observations*

a. With the exception of those facilities described in Section B.4.d. below, facility operators shall visually

[1] "Scheduled facility operating hours" are the time periods when the facility is staffed to conduct any function related to industrial activity, but excluding time periods where only routine maintenance, emergency response, security, and/or janitorial services are performed.

observe storm water discharges from one storm event per month during the wet season (October 1-May 30). These visual observations shall occur during the first hour of discharge and at all discharge locations. Visual observations of stored or contained storm water shall occur at the time of release.

b. Visual observations are only required of storm water discharges that occur during daylight hours that are preceded by at least three (3) working days[2] without storm water discharges and that occur during scheduled facility operating hours.

c. Visual observations shall document the presence of any floating and suspended material, oil and grease, discolorations, turbidity, odor, and source of any pollutants. Records shall be maintained of observation dates, locations observed, observations, and response taken to reduce or prevent pollutants in storm water discharges. The SWPPP shall be revised, as necessary, and implemented in accordance with Section A of this General Permit.

d. Feedlots (subject to Federal effluent limitations guidelines in 40 Code of Federal Regulations [CFR] Part 412) that are in compliance with Sections 2560 to 2565, Article 6, Chapter 15, Title 23, California Code of Regulations, and facility operators with storm water containment facilities shall conduct monthly inspections of their containment areas to detect leaks and ensure maintenance of adequate freeboard. Records shall be maintained of the inspection dates, observations, and any response taken to eliminate leaks and to maintain adequate freeboard.

5. *Sampling and Analysis*

a. Facility operators shall collect storm water samples during the first hour of discharge from (1) the first storm event of the wet season, and (2) at least one other storm event in the wet season. All storm water discharge locations shall be sampled. Sampling of stored or contained storm water shall occur at the time the stored or contained storm water is released. Facility operators that do not collect samples from the first storm event of the wet season are still required to collect samples from two other storm events of the wet season and shall explain in the Annual Report why the first storm event was not sampled.

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[2] Three (3) working days may be separated by non-working days such as weekends and holidays provided that no storm water discharges occur during the three (3) working days and the non-working days.

b. Sample collection is only required of storm water discharges that occur during scheduled facility operating hours and that are preceded by at least (3) three working days without storm water discharge.

c. The samples shall be analyzed for:

i. Total suspended solids (TSS) pH, specific conductance, and total organic carbon (TOC). Oil and grease (O&G) may be substituted for TOC; and

ii. Toxic chemicals and other pollutants that are likely to be present in storm water discharges in significant quantities. If these pollutants are not detected in significant quantities after two consecutive sampling events, the facility operator may eliminate the pollutant from future sample analysis until the pollutant is likely to be present again; and

iii. Other analytical parameters as listed in Table D (located at the end of this Section). These parameters are dependent on the facility's standard industrial classification (SIC) code. Facility operators are not required to analyze a parameter listed in Table D when the parameter is not already required to be analyzed pursuant to Section B.5.c.i. and ii. or B.6 of this General Permit, and either of the two following conditions are met: (1) the parameter has not been detected in significant quantities from the last two consecutive sampling events, or (2) the parameter 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 of the facilities industrial activities, potential pollutant sources, and SWPPP. Facility operators that do not analyze for the applicable Table D parameters shall certify in the Annual Report that the above conditions have been satisfied.

iv. Other parameters as required by the Regional Water Board.

6. *Facilities Subject to Federal Storm Water Effluent Limitation Guidelines*

Facility operators with facilities subject to Federal storm water effluent limitation guidelines, in addition to the requirements in Section B.5. above, must complete the following:

a. Collect and analyze two samples for any pollutant specified in the appropriate category of 40 CFR Subchapter N. The sampling and analysis exemptions and reductions described in Section B.12. of this General Permit do not apply to these pollutants.

b. Estimate or calculate the volume of storm water discharges from each drainage area;

c. Estimate or calculate the mass of each regulated pollutant as defined in the appropriate category of 40 CFR Subchapter N; and

d. Identify the individual(s) performing the estimates or calculations in accordance with Subsections b. and c. above.

7. *Sample Storm Water Discharge Locations*

a. Facility operators shall visually observe and collect samples of storm water discharges from all drainage areas that represent the quality and quantity of the facility's storm water discharges from the storm event.

b. If the facility's storm water discharges are commingled with run-on from surrounding areas, the facility operator should identify other visual observation and sample collection locations that have not been commingled by run-on and that represent the quality and quantity of the facility's storm water discharges from the storm event.

c. If visual observation and sample collection locations are difficult to observe or sample (e.g., sheet flow, submerged outfalls), facility operators shall identify and collect samples from other locations that represent the quality and quantity of the facility's storm water discharges from the storm event.

d. Facility operators that determine that the industrial activities and BMPs within two or more drainage areas are substantially identical may either (i) collect samples from a reduced number of substantially identical

drainage areas, or (ii) collect samples from each substantially identical drainage area and analyze a combined sample from each substantially identical drainage area. Facility operators must document such a determination in the annual report.

8. *Visual Observation and Sample Collection Exceptions*

Facility operators are required to be prepared to collect samples and conduct visual observations at the beginning of the wet season (October 1) and throughout the wet season

until the minimum requirements of Sections B.4. and B.5. are completed with the following exceptions:

a. A facility operator is not required to collect a sample and conduct visual observations in accordance with Section B.4 and Section B.5 due to dangerous weather conditions, such as flooding, electrical storm, etc., when storm water discharges begin after scheduled facility operating hours or when storm water discharges are not preceded by three working days without discharge. Visual observations are only required during daylight hours. Facility operators that do not collect the required samples or visual observations during a wet season due to these exceptions shall include an explanation in the Annual Report why the sampling or visual observations could not be conducted.

b. A facility operator may conduct visual observations and sample collection more than one hour after discharge begins if the facility operator determines that the objectives of this Section will be better satisfied. The facility operator shall include an explanation in the Annual Report why the visual observations and sample collection should be conducted after the first hour of discharge.

9. *Alternative Monitoring Procedures*

Facility operators may propose an alternative monitoring program that meets Section B.2 monitoring program objectives for approval by the Regional Water Board. Facility operators shall continue to comply with the monitoring requirements of this Section and may not implement an alternative monitoring plan until the alternative monitoring plan is approved by the Regional Water Board. Alternative monitoring plans are subject to modification by the Regional Water Boards.

10. *Monitoring Methods*

a. Facility operators shall explain how the facility's monitoring program will satisfy the monitoring program objectives of Section B.2. This shall include:

i. Rationale and description of the visual observation methods, location, and frequency.

ii. Rationale and description of the sampling methods, location, and frequency; and

iii. Identification of the analytical methods and corresponding method detection limits used to detect pollutants in storm water discharges. This shall include justification that the method detection limits are adequate to satisfy the objectives of the monitoring program.

b. All sampling and sample preservation shall be in accordance with the current edition of "Standard Methods for the Examination of Water and Wastewater" (American Public Health Association). All monitoring instruments and equipment (including a facility operator's own field instruments for measuring pH and Electro Conductivity) shall be calibrated and maintained in accordance with manufacturers' specifications to ensure accurate measurements. All laboratory analyses must be conducted according to test procedures under 40 CFR Part 136, unless other test procedures have been specified in this General Permit or by the Regional Water Board. All metals shall be reported as total metals. With the exception of analysis conducted by facility operators, all laboratory analyses shall be conducted at a laboratory certified for such analyses by the State Department of Health Services. Facility operators may conduct their own sample analyses if the facility operator has sufficient capability (qualified employees, laboratory equipment, etc.) to adequately perform the test procedures.

11. *Inactive Mining Operations*

Inactive mining operations are defined in Attachment 1 of this General Permit. Where comprehensive site compliance evaluations, non-storm water discharge visual observations, storm water discharge visual observations, and storm water sampling are impracticable, facility operators of inactive mining operations may instead obtain certification once every three years by a Registered Professional Engineer that an SWPPP has been prepared for the facility and is being implemented in accordance with the requirements of this General Permit. By means of these certifications, the Registered Professional Engineer having examined the facility and being familiar with the provisions of this General Permit shall attest that the SWPPP has been prepared in accordance with good engineering practices. Facility operators of mining operations who cannot obtain a certification because of noncompliance must notify the appropriate Regional Water Board and, upon request, the local agency which receives the storm water discharge.

12. *Sampling and Analysis* Exemptions and Reductions

A facility operator who qualifies for sampling and analysis exemptions, as described below in Section B.12.a.i., or who qualifies for reduced sampling and analysis, as described below in Section B.12.b., must submit the appropriate certifications and required documentation to the Regional Water Boards prior to the wet season (October 1) and recertify as part of the Annual Report submittal. A facility operator that qualifies for either the Regional Water Board or local agency certification programs, as described below in Section B.12.a.ii. and iii., shall submit certification and documentation in accordance with the requirements of those programs. Facility operators who provide certifications in accordance with this Section are still required to comply with all other monitoring program and reporting requirements. Facility operators shall prepare and submit their certifications using forms and instructions provided by the State Water Board, Regional Water Board, or local agency or shall submit their information on a form that contains equivalent information. Facility operators whose facility no longer meets the certification conditions must notify the Regional Water Boards (and local agency) within 30 days and immediately comply with the Section B.5. sampling and analysis requirements. Should a Regional Water Board (or local agency) determine that a certification does not meet the conditions set forth below, facility operators must immediately comply with the Section B.5. sampling and analysis requirements.

a. Sampling and Analysis Exemptions

A facility operator is not required to collect and analyze samples in accordance with Section B.5. if the facility operator meets all of the conditions of one of the following certification programs:

i. No Exposure Certification (NEC)

This exemption is designed primarily for those facilities where all industrial activities are conducted inside buildings and where all materials stored and handled are not exposed to storm water. To qualify for this exemption, facility operators must certify that their facilities meet all of the following conditions:

(1) All prohibited non-storm water discharges have been eliminated or otherwise permitted.

(2) All authorized non-storm water discharges have been identified and addressed in the SWPPP.

(3) All areas of past exposure have been inspected and cleaned, as appropriate.

(4) All significant materials related to industrial activity (including waste materials) are not exposed to storm water or authorized non-storm water discharges.

(5) All industrial activities and industrial equipment are not exposed to storm water or authorized non-storm water discharges.

(6) There is no exposure of storm water to significant materials associated with industrial activity through other direct or indirect pathways such as from industrial activities that generate dust and particulates.

(7) There is periodic re-evaluation of the facility to ensure conditions (1), (2), (4), (5), and (6) above are continuously met. At a minimum, re-evaluation shall be conducted once a year.

ii. Regional Water Board Certification Programs

The Regional Water Board may grant an exemption to the Section B.5. Sampling and Analysis Requirements if it determines a facility operator has met the conditions set forth in a Regional Water Board certification program. Regional Water Board certification programs may include conditions to (1) exempt facility operators whose facilities infrequently discharge storm water to waters of the United States, and (2) exempt facility operators

that demonstrate compliance with the terms and conditions of this General Permit.

iii. Local Agency Certifications

A local agency may develop a local agency certification program. Such programs must be approved by the Regional Water Board. An approved local agency program may either grant an exemption

from the Section B.5. Sampling and Analysis Requirements or reduce the frequency of sampling if it determines that a facility operator has demonstrated compliance with the terms and conditions of this General Permit.

b. Sampling and Analysis Reduction

i. A facility operator may reduce the number of sampling events required to be sampled for the remaining term of this General Permit if the facility operator provides certification that the following conditions have been met:

(1) The facility operator has collected and analyzed samples from a minimum of six storm events from all required drainage areas;

(2) All prohibited non-storm water discharges have been eliminated or otherwise permitted;

(3) The facility operator demonstrates compliance with the terms and conditions of the General Permit for the previous two years (i.e., completed Annual Reports, performed visual observations, implemented appropriate BMPs, etc.);

(4) The facility operator demonstrates that the facility's storm water discharges and authorized non-storm water discharges do not contain significant quantities of pollutants; and

(5) Conditions (2), (3), and (4) above are expected to remain in effect for a minimum of one year after filing the certification.

ii. Unless otherwise instructed by the Regional Water Board, facility operators shall collect and analyze samples from two additional storm events (or one additional storm event when certification filed for the wet season beginning October 1, 2001) during the remaining term of this General Permit in accordance with Table C below. Facility operators shall collect samples of the first

storm event of the wet season. Facility operators that do not collect samples from the first storm event of the wet season shall collect samples from another storm event during the same wet season. Facility operators that do not collect a sample in a required wet season shall collect the sample from another storm event in the next wet season. Facility operators shall explain in the Annual Report why the first storm event of a wet season was not sampled or a sample was not taken from any storm event in accordance with the Table C schedule.

Table C
REDUCED MONITORING SAMPLING SCHEDULE

| Facility Operator Filing Sampling Reduction Certification By | Samples Shall be Collected and Analyzed in These Wet Seasons | |
|---|---|---|
| | Sample 1 | Sample 2 |
| Oct. 1, 1997 | Oct. 1, 1997-May 31, 1998 | Oct. 1, 1999-May 31, 2000 |
| Oct. 1, 1998 | Oct. 1, 1998-May 31, 1999 | Oct. 1, 2000-May 31, 2001 |
| Oct. 1, 1999 | Oct. 1, 1999-May 31, 2000 | Oct. 1, 2001-May 31, 2002 |
| Oct. 1, 2000 | Oct. 1, 2000-May 31, 2001 | Oct. 1, 2001-May 31, 2002 |
| Oct. 1, 2001 | Oct. 1, 2001-May 31, 2002 | - |

13. *Records*

Records of all storm water monitoring information and copies of all reports (including the Annual Reports) required by this General Permit shall be retained for a period of at least five years. These records shall include:

a. The date, place, and time of site inspections, sampling, visual observations, and/or measurements;

b. The individual(s) who performed the site inspections, sampling, visual observations, and or measurements;

c. Flow measurements or estimates (if required by Section B.6);

d. The date and approximate time of analyses;

e. The individual(s) who performed the analyses;

f. Analytical results, method detection limits, and the analytical techniques or methods used;

g. Quality assurance/quality control records and results;

h. Non-storm water discharge inspections and visual observations and storm water discharge visual observation records (see Sections B.3. and 4.);

i. Visual observation and sample collection exception records (see Section B.5.a, 7.d, 8, and 12.b.ii.);
j. All calibration and maintenance records of on-site instruments used;

k. All Sampling and Analysis Exemption and Reduction certifications and supporting documentation (see Section B.12);

l. The records of any corrective actions and follow-up activities that resulted from the visual observations.

14. *Annual Report*

All facility operators shall submit an Annual Report by July 1 of each year to the Executive Officer of the Regional Water Board responsible for the area in which the facility is located and to the local agency (if requested).

The report shall include a summary of visual observations and sampling results, an evaluation of the visual observation and sampling and analysis results, laboratory reports, the Annual Comprehensive Site Compliance Evaluation Report required in Section A.9., an explanation of why a facility did not implement any activities required by the General Permit (if not already included in the Evaluation Report), and records specified in Section B.13.i. The method detection limit of each analytical parameter shall be included. Analytical results that are less than the method detection limit shall be reported as "less than the method detection limit." The Annual Report shall be signed and certified in accordance with Standard Provisions 9. and 10. of Section C of this General Permit. Facility operators shall prepare and submit their Annual Reports using the annual report forms provided by the State Water Board or Regional Water Board or shall submit their information on a form that contains equivalent information.

15. *Group Monitoring*

Facility operators may participate in group monitoring as described below. A facility operator that participates in group monitoring shall develop and implement a written site-specific SWPPP and monitoring program in accordance with the General Permit and must satisfy any group monitoring requirements. Group monitoring shall be subject to the following requirements:

a. A group monitoring plan (GMP) shall be developed and implemented by a group leader representing a group of

similar facility operators regulated by this General Permit or by a local agency which holds an NPDES permit (local agency permittee) for a municipal separate storm sewer system. GMPs with participants that discharge storm water within the boundaries of a single Regional Water Board shall be approved by that Regional Water Board. GMPs with participants that discharge storm water within the boundaries of multiple Regional Water Boards shall be approved by the State Water Board. The State Water Board and/or Regional Water Board(s) may disapprove a facility's participation in a GMP or require a GMP participant to conduct additional monitoring activities.

b. Each GMP participant shall collect and analyze samples from at least two storm events in accordance with Section B.5. over the five-year period of this General Permit. The two storm event minimum applies to new and existing members. The group leader or local agency permittee shall schedule sampling to meet the following conditions: (i) to evenly distribute the sample collection over the five-year term of this General Permit, and (ii) to collect samples from the two storm events at each participant's facility in different and non-consecutive wet seasons. New participants who join in Years 4 and 5 of this General Permit are not subject to Condition (ii) above. Group leaders shall explain in the annual Group Evaluation Report why any scheduled samples were not collected and reschedule the sampling so that all required samples are collected during the term of this General Permit.

c. The group leader or local agency permittee must have the appropriate resources to develop and implement the GMP. The group leader or local agency permittee must also have the authority to terminate any participant who is not complying with this General Permit and the GMP.

d. The group leader or local agency permittee is responsible for:

   i. Developing, implementing, and revising the GMP;

   ii. Developing and submitting an annual Group Evaluation Report to the State Water Board and/or Regional Water Board by August 1 of each year that includes:

      (1) An evaluation and summary of all group monitoring data,

      (2) An evaluation of the overall performance of the GMP participants in complying with this General Permit and the GMP,

(3) Recommended baseline and site-specific BMPs that should be considered by each participant based upon Items (1) and (2) above, and

(4) A copy of each evaluation report and recommended BMPs as required in Section B.15.d.v. below.

iii. Recommending appropriate BMPs to reduce or prevent pollutants associated with industrial activities in storm water discharges and authorized non-storm water discharges;

iv. Assisting each participant in completing their Annual Comprehensive Site Compliance Evaluation and Annual Report;

v. Conducting a minimum of two on-site inspections of each participant's facility (it is recommended that these inspections be scheduled during the Annual Comprehensive Site Compliance Evaluation) during the term of this General Permit to evaluate the participant's compliance with this General Permit and the GMP, and to recommend any additional BMPs necessary to achieve compliance with this General Permit. Participants that join in Years 4 and 5 shall be scheduled for one evaluation. A copy of the evaluation and recommended BMPs shall be provided to the participants;

vi. Submitting a GMP (or revisions, as necessary), to the appropriate Regional Water Board(s) and State Water Board no later than September 1, 1997 (or August 1 in subsequent years). Once approved, a group leader or local agency permittee shall submit a letter of intent by August 1 of each year to continue the approved GMP. The letter of intent must include a roster of participants, participant's Waste Discharge Identification number (WDID#), updated sampling schedules, and any other revisions to the GMP;

vii. Revising the GMP as instructed by the Regional Water Board or the State Water Board; and

viii. Providing the State Water Board and/or Regional Water Board with quarterly updates of any new or deleted participants and corresponding changes in the sampling and inspection schedule.

e. The GMP shall:

i. Identify the participants of the GMP by name, location, and WDID number;

ii. Include a narrative description summarizing the industrial activities of participants of the GMP and explain why the participants, as a whole, have sufficiently similar industrial activities and BMPs to be covered by a group monitoring plan;

iii. Include a list of typical potential pollutant sources associated with the group participant's facilities and recommended baseline BMPs to prevent or reduce pollutants associated with industrial activity in the storm water discharges and authorized non-storm water discharges;

iv. Provide a five-year sampling and inspection schedule in accordance with Subsections b. and d.v. above.

v. Identify the pollutants associated with industrial activity that shall be analyzed at each participant's facility in accordance with Section B.5. The selection of these pollutants shall be based upon an assessment of each facility's potential pollutant sources and likelihood that pollutants associated with industrial activity will be present in storm water discharges and authorized non-storm water discharges in significant quantities.

f. Sampling and analysis shall be conducted in accordance with the applicable requirements of this Section.

g. Unless otherwise instructed by the Regional Water Board or the State Water Board Executive Director, the GMPs shall be implemented at the beginning of the wet season (October 1).

h. All participants in an approved GMP that have not been selected to sample in a particular wet season are required to comply with all other monitoring program and reporting requirements of this Section including the submittal of an Annual Report by July 1 of each year to the appropriate Regional Water Board.

i. GMP participants subject to Federal storm water effluent limitation guidelines must perform the monitoring described in Section B.6. and submit the results of the monitoring to the appropriate Regional Water Board within the facility operator's Annual Report.

j. GMPs and Group Evaluation Reports should be prepared in accordance with State Water Board (or Regional Water Board) guidance.

k. GMP participants may receive Sampling and Analysis Reduction sampling credit in accordance with the following conditions:

i. Current or prior participants (group participants) of approved GMPs, who have not collected and analyzed samples from six storm events as required in Section B.7.b.i.(1), may substitute credit earned through participation in a GMP for up to four of the six required storm events. Credits for GMP participation shall be calculated as follows:

(1) Credit may only be earned in years of participation where the GMP participant was not scheduled to sample and the GMP was approved.

(2) One credit will be earned for each year of valid GMP participation.

(3) One additional credit may be earned for each year the overall GMP sample collection performance is greater than 75 percent.

ii. GMP participants substituting credit as calculated above shall provide proof of GMP participation and certification that all the conditions in Section B.12.b.i. have been met. GMP participants substituting credit in accordance with Section B.15.k.i.(3) shall also provide GMP sample collection performance documentation.

iii. GMP participants that qualify for Sampling and Analysis Reduction and have already sampled a storm event after October 1, 1997 shall only be required to sample one additional storm event during the remainder of this General Permit in accordance with the "Sample 2" schedule (or "Sample 1" schedule when certification filed for the wet season beginning October 1, 2001) in Table C of this Section.

n. Group leaders shall furnish, within 60 days of receiving a request from the State Water Board or Regional Water Board, any GMP information and documentation necessary to verify the Section B.15.k. sampling credits. Group leaders may also provide this information and documentation to the group participants.

16. *Watershed Monitoring Option*

Regional Water Boards may approve proposals to substitute watershed monitoring for some or all of the requirements of this Section if the Regional Water Board finds that the watershed monitoring will provide substantially similar monitoring information in evaluating facility operator compliance with the requirements of this General Permit.

## TABLE D
## ADDITIONAL ANALYTICAL PARAMETERS

| Subsector | SIC | Activity Represented | Parameters |
|---|---|---|---|
| **SECTOR A. TIMBER PRODUCTS** | | | |
| A1 | 2421 | General Sawmills and Planing Mills | **COD;TSS;Zn** |
| A2 | 2491 | Wood Preserving | **As;Cu** |
| A3 | 2411 | Log Storage and Handling | **TSS** |
| A4 | 2426 | Hardwood Dimension and Flooring Mills | **COD;TSS** |
| A4 | 2429 | Special Product Sawmills, Not Elsewhere Classified | **COD;TSS** |
| A4 | 243X | Millwork, Veneer, Plywood, and Structural Wood | **COD;TSS** |
| A4 | (except 2434--Wood Kitchen Cabinet Manufacturers) | | |
| A4 | 244X | Wood Containers | **COD;TSS** |
| A4 | 245X | Wood Buildings and Mobile Homes | **COD;TSS** |
| A4 | 2493 | Reconstituted Wood Products | **COD;TSS** |
| A4 | 2499 | Wood Products, Not Elsewhere Classified | |
| **SECTOR B. PAPER AND ALLIED PRODUCTS MANUFACTURING** | | | |
| B1 | 261X | Pulp Mills | |
| B2 | 262X | Paper Mills | |
| B3 | 263X | Paperboard Mills | **COD** |
| B4 | 265X | Paperboard Containers and Boxes | |
| B5 | 267X | Converted Paper and Paperboard Products, Except Containers and Boxes | |
| **SECTOR C. CHEMICAL AND ALLIED PRODUCTS MANUFACTURING** | | | |
| C1 | 281X | Industrial Inorganic Chemicals | **Al;Fe;N+N** |
| C2 | 282X | Plastics Materials and Synthetic Resins, Synthetic Rubber, Cellulosic, and Other Manmade Fibers Except Glass | **Zn** |
| C3 | 283X | Drugs | |
| C4 | 284X | Soaps, Detergents, and Cleaning Preparations; Perfumes, Cosmetics, and Other Toilet Preparations | **N+N;Zn** |
| C5 | 285X | Paints, Varnishes, Lacquers, Enamels, and Allied Products | |
| C6 | 286X | Industrial Organic Chemicals | |
| C7 | 287X | Nitrogenous and Phosphatic Basic Fertilizers, Mixed Fertilizer, Pesticides, and Other Agricultural Chemicals | **Fe;N+N;Pb;Zn;P** |
| C8 | 289X | Miscellaneous Chemical Products | |
| | 3952 | Inks and Paints, Including China Painting Enamels, India Ink, (limited to list) Drawing Ink, Platinum Paints for Burnt Wood or Leather Work, Paints for China Painting, Artist's Paints, and Artist's Watercolors | |
| **SECTOR D. ASPHALT PAVING/ROOFING MATERIALS MANUFACTURERS AND LUBRICANT MANUFACTURERS** | | | |
| D1 | 295X | Asphalt Paving and Roofing Materials | **TSS** |
| D2 | 2992 | Lubricating Oils and Greases | |

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Parameter Names

| | | | | |
|---|---|---|---|---|
| Al - Aluminum | Cd - Cadmium | Cu - Copper | Mg - Magnesium | BOD - Biochemical Oxygen Demand |
| As - Arsenic | CN - Cyanide | Fe - Iron | Ag - Silver | N + N - Nitrate & Nitrite Nitrogen |
| $NH_3$- Ammonia | Hg - Mercury | P - Phosphorus | Se - Selenium | Pb - Lead |
| Zn - Zinc | TSS -Total Suspended Solids | COD - Chemical Oxygen Demand | | |

| Subsector | SIC | Activity Represented | Parameters |
|---|---|---|---|

**SECTOR E. GLASS, CLAY, CEMENT, CONCRETE, AND GYPSUM PRODUCT MANUFACTURING**

| | | | |
|---|---|---|---|
| E1 | 3211 | Flat Glass | |
| E1 | 322X | Glass and Glassware, Pressed or Blown | |
| E1 | 323X | Glass Products Made of Purchased Glass | |
| E2 | 3241 | Hydraulic Cement | |
| E3 | 325X | Structural Clay Products | **Al** |
| E3 | 326X | Pottery and Related Products | **Al** |
| E3 | 3297 | Non-Clay Refractories | **Al** |
| E4 | 327X | Concrete, Gypsum, and Plaster Products (Except Lime) (except 3274). | **TSS;Fe** |
| E4 | 3295 | Minerals and Earths, Ground, or Otherwise Treated | **TSS;Fe** |

**SECTOR F. PRIMARY METALS**

| | | | |
|---|---|---|---|
| F1 | 331X | Steel Works, Blast Furnaces, Rolling & Finishing Mill | **Al;Zn** |
| F2 | 332X | Iron and Steel Foundries | **Al;TSS;Cu;Fe;Zn** |
| F3 | 333X | Primary Smelting and Refining of Nonferrous Metals | |
| F4 | 334X | Secondary Smelting and Refining of Nonferrous Metals | |
| F5 | 335X | Rolling, Drawing, and Extruding of Nonferrous Metals | **Cu;Zn** |
| F6 | 336X | Nonferrous Foundries (Castings) | **Cu;Zn** |
| F7 | 339X | Miscellaneous Primary Metal Products | |

**SECTOR G. METAL MINING (ORE MINING AND DRESSING) EXCEPT INACTIVE METAL MINING ACTIVITIES ON FEDERAL LANDS WHERE AN OPERATOR CANNOT BE IDENTIFIED**

| | | | |
|---|---|---|---|
| G1 | 101X | Iron Ores | |
| G2 | 102X | Copper Ores | **TSS;COD;N+N** |
| G3 | 103X | Lead and Zinc Ores | |
| G4 | 104X | Gold and Silver Ores | |
| G5 | 106X | Ferroalloy Ores, Except Vanadium | |
| G6 | 108X | Metal Mining Services | |
| G7 | 109X | Miscellaneous Metal Ores | |

**SECTOR H. COAL MINES AND COAL MINING-RELATED FACILITIES**

| | | | |
|---|---|---|---|
| NA | 12XX | Coal Mines and Coal Mining-Related Facilities | **TSS;Al;Fe** |

**SECTOR I. COAL MINES AND COAL MINING-RELATED FACILITIES**

| | | | |
|---|---|---|---|
| I1 | 131X | Crude Petroleum and Natural Gas | |
| I2 | 132X | Natural Gas Liquids | |
| I3 | 138X | Oil and Gas Field Services | |

**SECTOR J. MINERAL MINING AND DRESSING EXCEPT INACTIVE MINERAL MINING ACTIVITIES OCCURRING ON FEDERAL LANDS WHERE AN OPERATOR CANNOT BE IDENTIFIED**

| | | | |
|---|---|---|---|
| J1 | 141X | Dimension Stone | **TSS** |
| J1 | 142X | Crushed and Broken Stone, Including Rip Rap | **TSS** |
| J1 | 148X | Nonmetallic Minerals, Except Fuels | **TSS** |
| J2 | 144X | Sand and Gravel | **TSS;N+N** |
| J3 | 145X | Clay, Ceramic, and Refractory Materials | |
| J4 | 147X | Chemical and Fertilizer Mineral Mining | |
| J4 | 149X | Miscellaneous Nonmetallic Minerals, Except Fuels | |

| Subsector | SIC | Activity Represented | Parameters |
|---|---|---|---|
| **SECTOR K. HAZARDOUS WASTE TREATMENT STORAGE OR DISPOSAL FACILITIES** | | | |
| NA | 4953 | Hazardous Waste Treatment Storage or Disposal | **$NH_3$;Mg;COD;As Cd;CN;Pb Hg;Se;**Ag |
| **SECTOR L. LANDFILLS AND LAND APPLICATION SITES** | | | |
| NA | 4953 | Landfills and Land Application Sites That Receive or Have Received Industrial Wastes, Except Inactive Landfills or Land Applications Sites Occurring on Federal Lands Where an Operator Cannot be Identified | **TSS;Fe** |
| **SECTOR M. AUTOMOBILE SALVAGE YARDS** | | | |
| NA | 5015 | Facilities Engaged in Dismantling or Wrecking Used Motor Vehicles for Parts Recycling or Resale and for Scrap | **TSS;Fe;Pb;Al** |
| **SECTOR N. SCRAP RECYCLING FACILITIES** | | | |
| NA | 5093 | Processing, Reclaiming, and Wholesale Distribution of Scrap and Waste Materials | **TSS;Fe;Pb Al;Cu;Zn;COD** |
| **SECTOR O. STEAM ELECTRIC GENERATING FACILITIES** | | | |
| NA | 4911 | Steam Electric Power Generating Facilities | **Fe** |
| **SECTOR P. LAND TRANSPORTATION FACILITIES THAT HAVE VEHICLE AND EQUIPMENT MAINTENANCE SHOPS AND/OR EQUIPMENT CLEANING OPERATIONS** | | | |
| P1 | 40XX | Railroad Transportation | |
| P2 | 41XX | Local and Highway Passenger Transportation | |
| P3 | 42XX | Motor Freight Transportation and Warehousing | |
| P4 | 43XX | United States Postal Service | |
| P5 | 5171 | Petroleum Bulk Stations and Terminals | |
| **SECTOR Q. WATER TRANSPORTATION FACILITIES THAT HAVE VEHICLE (VESSEL) & EQUIPMENT MAINTENANCE SHOPS AND/OR EQUIPMENT CLEANING OPERATIONS** | | | |
| NA | 44XX | Water Transportation | **Al;Fe;Pb;Zn** |
| **SECTOR R. SHIP AND BOAT BUILDING OR REPAIRING YARDS** | | | |
| NA | 373X | Ship and Boat Building or Repairing Yards | |
| **SECTOR S. AIR TRANSPORTATION FACILITIES** | | | |
| NA | 45XX | Air Transportation Facilities That Have Vehicle Maintenance Ships, Material Handing Facilities, Equipment Cleaning Operations, or Airport and/or Aircraft Deicing/Anti-icing Operations | **BOD;COD;$NH_3$;pH** |

| Subsector | SIC | Activity Represented | Parameters |
|---|---|---|---|
| **SECTOR T. TREATMENT WORKS** | | | |
| NA | 4952 | Treatment Works Treating Domestic Sewage or Any Other Sewage Sludge or Wastewater Treatment Device or System Used in the Storage, treatment, recycling, or Reclamation of Municipal or Domestic Sewage with a Design Flow of 1.0 MGD or More or Required to Have an Approved Pretreatment Program | |
| **SECTOR U. FOOD AND KINDRED PRODUCTS** | | | |
| U1 | 201X | Meat Products | |
| U2 | 202X | Dairy Products | |
| U3 | 203X | Canned, Frozen and Preserved Fruits, Vegetables and Food Specialties | |
| U4 | 204X | Grain Mill Products | **TSS** |
| U5 | 205X | Bakery Products | |
| U6 | 206X | Sugar and Confectionery Products | |
| U7 | 207X | Fats and Oils | **BOD;COD;TSS;N+N** |
| U8 | 208X | Beverages | |
| U9 | 209X | Miscellaneous Food Preparations and Kindred Products | |
| NA | 21XX | Tobacco Products | |
| **SECTOR V. TEXTILE MILLS, APPAREL, AND OTHER FABRIC PRODUCT MANUFACTURING** | | | |
| V1 | 22XX | Textile Mill Products | |
| V2 | 23XX | Apparel and Other Finished Products Made From Fabrics and Similar Materials | |
| **SECTOR W. FURNITURE AND FIXTURES** | | | |
| NA | 25XX | Furniture and Fixtures | |
| NA | 2434 | Wood Kitchen Cabinets | |
| **SECTOR X. PRINTING AND PUBLISHING** | | | |
| NA | 2732 | Book Printing | |
| NA | 2752 | Commercial Printing, Lithographic | |
| NA | 2754 | Commercial Printing, Gravure | |
| NA | 2759 | Commercial Printing, Nor Elsewhere Classified | |
| NA | 2796 | Platemaking and Related Services | |
| SECTOR Y. RUBBER, MISCELLANEOUS PLASTIC PRODUCTS, AND MISC. MANUFACTURING INDUSTRIES | | | |
| Y1 | 301X | Tires and Inner Tubes | **Zn** |
| Y1 | 302X | Rubber and Plastics Footwear | **Zn** |
| Y1 | 305X | Gaskets, Packing, and Sealing Devices and Rubber and Plastics Hose and Belting | **Zn** |
| Y1 | 306X | Fabricated Rubber Products, Not Elsewhere Classified | **Zn** |
| Y2 | 308X | Miscellaneous Plastics Products | |

| Subsector | SIC | Activity Represented | Parameters |
|---|---|---|---|
| Y2 | 393X | Musical Instruments | |
| Y2 | 394X | Dolls, Toys, Games, and Sporting and Athletic Goods | |
| Y2 | 395X | Pens, Pencils, and Other Artists' Materials | |
| Y2 | 396X | Costume Jewelry, Costume Novelties, Buttons, and Miscellaneous Notions, Except Precious Metal | |
| Y2 | 399X | Miscellaneous Manufacturing Industries | |
| **SECTOR Z. LEATHER TANNING AND FINISHING** | | | |
| NA | 311X | Leather Tanning and Finishing | |
| NA | NA | Facilities that Make Fertilizer Solely From Leather Scraps and Leather Dust | |
| **SECTOR AA. FABRICATED METAL PRODUCTS** | | | |
| AA1 | 3429 | Hardware, Not Elsewhere Classified | **Zn;N+N;Fe;Al** |
| AA1 | 3441 | Fabricated Structural Metal | **Zn;N+N;Fe;Al** |
| AA1 | 3442 | Metal Doors, Sash, Frames, Molding, and Trim | **Zn;N+N;Fe;Al** |
| AA1 | 3443 | Fabricated Plate Work (Boiler Shops) | **Zn;N+N;Fe;Al** |
| AA1 | 3444 | Sheet Metal Work | **Zn;N+N;Fe;Al** |
| AA1 | 3451 | Screw Machine Products | **Zn;N+N;Fe;Al** |
| AA1 | 3452 | Bolts, Nuts, Screws, Rivets, and Washers | **Zn;N+N;Fe;Al** |
| AA1 | 3462 | Iron and Steel Forgings | **Zn;N+N;Fe;Al** |
| AA1 | 3471 | Electroplating, Plating, Polishing, Anodizing, and Coloring | **Zn;N+N;Fe;Al** |
| AA1 | 3494 | Valves and Pipe Fittings, Not Elsewhere Classified | **Zn;N+N;Fe;Al** |
| AA1 | 3496 | Miscellaneous Fabricated Wire Products | **Zn;N+N;Fe;Al** |
| AA1 | 3499 | Fabricated Metal Products, Not Elsewhere Classified | **Zn;N+N;Fe;Al** |
| AA1 | 391X | Jewelry, Silverware, and Plated Ware | **Zn;N+N;Fe;Al** |
| AA2 | 3479 | Coating, Engraving, and Allied Services | **Zn;N+N** |
| **SECTOR AB. TRANSPORTATION EQUIPMENT, INDUSTRIAL OR COMMERCIAL MACHINERY** | | | |
| NA | 35XX | Industrial and Commercial Machinery (except 357X Computer and Office Equipment) | |
| NA | 37XX | Transportation Equipment (except 373X Ship and Boat Building and Repairing | |
| **SECTOR AC. ELECTRONIC, ELECTRICAL. PHOTOGRAPHIC, AND OPTICAL GOODS** | | | |
| NA | 36XX | Electronic and Other Electrical Equipment and Components, Except Computer Equipment | |
| NA | 38XX | Measuring, Analyzing, and Controlling Instruments; Photographic, Medical, and Optical Goods; Watches and Clocks | |
| NA | 357X | Computer and Office Equipment | |

Section C: STANDARD PROVISIONS

1. Duty to Comply

The facility operator must comply with all of the conditions of this General Permit. Any General Permit noncompliance constitutes a violation of the Clean Water Act (CWA) and the Porter-Cologne Water Quality Control Act and is grounds for (a) enforcement action for (b) General Permit termination, revocation and reissuance, or modification or (c) denial of a General Permit renewal application.

The facility operator shall comply with effluent standards or prohibitions established under Section 307(a) of the CWA for toxic pollutants within the time provided in the regulations that establish these standards or prohibitions, even if this General Permit has not yet been modified to incorporate the requirement.

2. General Permit Actions

This General Permit may be modified, revoked and reissued, or terminated for cause. The filing of a request by the facility operator for a General Permit modification, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance does not stay any General Permit condition.

If any toxic effluent standard or prohibition (including any schedule of compliance specified in such effluent standard or prohibition) is promulgated under Section 307(a) of the CWA for a toxic pollutant which is present in the discharge and that standard or prohibition is more stringent than any limitation on the pollutant in this General Permit, this General Permit shall be modified or revoked and reissued to conform to the toxic effluent standard or prohibition, and the facility operator so notified.

3. Need to Halt or Reduce Activity not a Defense

It shall not be a defense for a facility operator in an enforcement action that it would have been necessary to halt or reduce the general permitted activity in order to maintain compliance with the conditions of this General Permit.

4. Duty to Mitigate

The facility operator shall take all responsible steps to minimize or prevent any discharge in violation of this General Permit which has a reasonable likelihood of adversely affecting human health or the environment.

5. Proper Operation and Maintenance

The facility operator at all times shall properly operate and maintain any facilities and systems of treatment and control (and related appurtenances) which are installed or used by the facility operator to achieve compliance with the conditions of this General Permit and with the requirements of storm water pollution prevention plans (SWPPPs). Proper operation and maintenance also include adequate laboratory controls and appropriate quality assurance procedures. Proper operation and maintenance may require the operation of backup or auxiliary facilities or similar systems installed by a facility operator when necessary to achieve compliance with the conditions of this General Permit.

6. Property Rights

This General Permit does not convey any property rights of any sort, or any exclusive privileges, nor does it authorize any injury to private property or any invasion of personal rights, nor any infringement of Federal, State, or local laws or regulations.

7. Duty to Provide Information

The facility operator shall furnish the Regional Water Quality Control Board (Regional Water Board), State Water Resources Control Board (State Water Board), U.S. Environmental Protection Agency (U.S. EPA), or local storm water management agency, within a reasonable time specified by the agencies, any requested information to determine compliance with this General Permit. The facility operator shall also furnish, upon request, copies of records required to be kept by this General Permit.

8. Inspection and Entry

The facility operator shall allow the Regional Water Board, State Water Board, U.S. EPA, and local storm water management agency, upon the presentation of credentials and other documents as may be required by law, to:

a. Enter upon the facility operator's premises where a regulated facility or activity is located or conducted or where records must be kept under the conditions of this General Permit;

b. Have access to and copy at reasonable times any records that must be kept under the conditions of this General Permit;

c. Inspect at reasonable times any facilities or equipment (including monitoring and control equipment) that are related to or may impact storm water discharge or authorized non-storm water discharge; and

d. Conduct monitoring activities at reasonable times for the purpose of ensuring General Permit compliance.

9. Signatory Requirements

a. All Notices of Intent (NOIs) submitted to the State Water Board shall be signed as follows:

(1) For a corporation: by a responsible corporate officer. For the purpose of this section, a responsible corporate officer means: (a) a president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy or decision-making functions for the corporation; or (b) the manager of the facility if authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures;

(2) For a partnership or sole proprietorship: by a general partner or the proprietor, respectively; or

(3) For a municipality, State, Federal, or other public agency: by either a principal executive officer or ranking elected official. The principal executive officer of a Federal agency includes the chief executive officer of the agency or the senior executive officer having responsibility for the overall operations of a principal geographic unit of the agency (e.g., Regional Administrators of U.S. EPA).

b. All reports, certifications, or other information required by the General Permit or requested by the Regional Water Board, State Water Board, U.S. EPA, or local storm water management agency shall be signed by a person described above or by a duly authorized representative. A person is a duly authorized representative only if:

(1) The authorization is made in writing by a person described above and retained as part of the SWPPP.

(2) The authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility or activity, such as the position of manager, operator, superintendent, or position of equivalent responsibility or an individual or position having overall responsibility for named position.)

(3) If an authorization is no longer accurate because a different individual or position has responsibility for the overall operation of the facility, a new authorization must be attached to the SWPPP prior to submittal of any reports, certifications, or information signed by the authorized representative.

10. Certification

Any person signing documents under Provision 9. above shall make the following certification:

"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 persons 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."

11. Reporting Requirements

a. Planned changes: The facility operator shall give advance notice to the Regional Water Board and local storm water management agency of any planned physical alteration or additions to the general permitted facility. Notice is required under this provision only when the alteration or addition could significantly change the nature or increase the quantity of pollutants discharged.

b. Anticipated noncompliance: The facility operator will give advance notice to the Regional Water Board and local storm water management agency of any planned changes at the permitted facility which may result in noncompliance with General Permit requirements.

c. Compliance schedules: Reports of compliance or noncompliance with or any progress reports on interim and final requirements contained in any compliance schedule of this General Permit shall be submitted no later than 14 days following each scheduled date.

d. Noncompliance reporting: The facility operator shall report any noncompliance at the time monitoring reports are submitted. The written submission shall contain (1) a description of the noncompliance and its cause; (2) the period of noncompliance, including exact dates and times, and if the noncompliance has not been corrected, the anticipated time it is expected to continue; and (3) steps taken or planned to reduce and prevent recurrence of the noncompliance.

12. Oil and Hazardous Substance Liability

Nothing in this General Permit shall be construed to preclude the institution of any legal action or relieve the facility operator from any responsibilities, liabilities, or penalties to which the facility operator is or may be subject under Section 311 of the CWA.

13. Severability

The provisions of this General Permit are severable; and if any provision of this General Permit or the application of any provision of this General Permit to any circumstance is held invalid, the application of such provision to other circumstances and the remainder of this General Permit shall not be affected thereby.

14. Reopener Clause

This General Permit may be modified, revoked, and reissued, or terminated for cause due to promulgation of amended regulations, receipt of U.S. EPA guidance concerning regulated activities, judicial decision, or in accordance with 40 CFR 122.62, 122.63, 122.64, and 124.5. This General Permit may be reopened to modify the provisions regarding authorized non-storm water discharges specified in Section D. Special Conditions.

15. Penalties for Violations of General Permit Conditions.

a. Section 309 of the CWA provides significant penalties for any person who violates a General Permit condition

implementing Sections 301, 302, 306, 307 308, 318, or 405 of the CWA, or any General Permit condition or limitation implementing any such section in a General Permit issued under Section 402. Any person who violates any General Permit condition of this General Permit is subject to a civil penalty not to exceed $25,000 per day of such violation, as well as any other appropriate sanction provided by Section 309 of the CWA.

b. The Porter-Cologne Water Quality Control Act also provides for civil and criminal penalties in some cases greater than those under the CWA.

16. Availability

A copy of this General Permit shall be maintained at the facility and be available at all times to the appropriate facility personnel and to Regional Water Board and local agency inspectors.

17. Transfers

This General Permit is not transferable from one facility operator to another facility operator nor may it be transferred from one location to another location. A new facility operator of an existing facility must submit an NOI in accordance with the requirements of this General Permit to be authorized to discharge under this General Permit.

18. Continuation of Expired General Permit

This General Permit continues in force and effect until a new general permit is issued or the State Water Board rescinds the General Permit. Facility operators authorized to discharge under the expiring general permit are required to file an NOI to be covered by the reissued General Permit.

19. Penalties for Falsification of Reports

Section 309(c)(4) of the CWA provides that any person who knowingly makes any false material statement, representation, or certification in any record or other document submitted or required to be maintained under this General Permit, including reports of compliance or noncompliance shall, upon conviction, be punished by a fine of not more than $10,000 or by imprisonment for not more than two years, or by both.

# FACILITIES COVERED BY THIS GENERAL PERMIT

Industrial facilities include Federal, State, municipally owned, and private facilities from the following categories:

1. FACILITIES SUBJECT TO STORM WATER EFFLUENT LIMITATIONS GUIDELINES, NEW SOURCE PERFORMANCE STANDARDS, OR TOXIC POLLUTANT EFFLUENT STANDARDS (40 Code of Federal Regulations (CFR) SUBCHAPTER N). Currently, categories of facilities subject to storm water effluent limitations guidelines are Cement Manufacturing (40 CFR Part 411), Feedlots (40 CFR Part 412), Fertilizer Manufacturing (40 CFR Part 418), Petroleum Refining (40 CFR Part 419), Phosphate Manufacturing (40 CFR Part 422), Steam Electric (40 CFR Part 423), Coal Mining (40 CFR Part 434), Mineral Mining and Processing (40 CFR Part 436), Ore Mining and Dressing (40 CFR Part 440), and Asphalt Emulsion (40 CFR Part 443).

2. MANUFACTURING FACILITIES: Standard Industrial Classifications (SICs) 24 (except 2434), 26 (except 265 and 267), 28 (except 283 and 285) 29, 311, 32 (except 323), 33, 3441, and 373.

3. OIL AND GAS/MINING FACILITIES: SICs 10 through 14 including active or inactive mining operations (except for areas of coal mining operations meeting the definition of a reclamation area under 40 CFR 434.11(l) because of performance bond issued to the facility by the appropriate Surface Mining Control and Reclamation Act (SMCRA) authority has been released, or except for area of non-coal mining operations which have been released from applicable State or Federal reclamation requirements after December 17, 1990); oil and gas exploration, production, processing, or treatment operations; or transmission facilities that discharge storm water contaminated by contact with or that has come into contact with any overburden, raw material, intermediate products, finished products, by-products, or waste products located on the site of such operations. Inactive mining operations are mined sites that are not being actively mined but which have an identifiable facility operator. Inactive mining sites do not include sites where mining claims are being maintained prior to disturbances associated with the extraction, beneficiation, or processing of mined material; or sites where minimal activities are undertaken for the sole purpose of maintaining a mining claim.

4. HAZARDOUS WASTE TREATMENT, STORAGE, OR DISPOSAL FACILITIES: Includes those operating under interim status or a general permit under Subtitle C of the Federal Resource, Conservation, and Recovery Act (RCRA).

5. LANDFILLS, LAND APPLICATION SITES, AND OPEN DUMPS: Sites that receive or have received industrial waste from any of

the facilities covered by this General Permit, sites subject to regulation under Subtitle D of RCRA, and sites that have accepted wastes from construction activities (construction activities include any clearing, grading, or excavation that results in disturbance of five acres or more).

6. RECYCLING FACILITIES: SICs 5015 and 5093. These codes include metal scrapyards, battery reclaimers, salvage yards, motor vehicle dismantlers and wreckers, and recycling facilities that are engaged in assembling, breaking up, sorting, and wholesale distribution of scrap and waste material such as bottles, wastepaper, textile wastes, oil waste, etc.

7. STEAM ELECTRIC POWER GENERATING FACILITIES: Includes any facility that generates steam for electric power through the combustion of coal, oil, wood, etc.

8. TRANSPORTATION FACILITIES: SICs 40, 41, 42 (except 4221-25), 43, 44, 45, and 5171 which have vehicle maintenance shops, equipment cleaning operations, or airport deicing operations. Only those portions of the facility involved in vehicle maintenance (including vehicle rehabilitation, mechanical repairs, painting, fueling, and lubrication) or other operations identified herein that are associated with industrial activity.

9. SEWAGE OR WASTEWATER TREATMENT WORKS: Facilities used in the storage, treatment, recycling, and reclamation of municipal or domestic sewage, including land dedicated to the disposal of sewage sludge that are located within the confines of the facility with a design flow of one million gallons per day or more or required to have an approved pretreatment program under 40 CFR Part 403. Not included are farm lands, domestic gardens, or lands used for sludge management where sludge is beneficially reused and which are not physically located in the confines of the facility, or areas that are in compliance with Section 405 of the Clean Water Act.

10. MANUFACTURING FACILITIES WHERE INDUSTRIAL MATERIALS, EQUIPMENT, OR ACTIVITIES ARE <u>EXPOSED</u> TO STORM WATER: SICs 20, 21, 22, 23, 2434, 25, 265, 267, 27, 283, 285, 30, 31 (except 311), 323, 34 (except 3441), 35, 36, 37 (except 373), 38, 39, and 4221-4225.

***STORM WATER CONTACTS FOR***
***THE STATE AND REGIONAL WATER BOARDS***

**See Storm Water Contacts at:**
**http://www.waterboards.ca.gov/stormwtr/contact.html**

# NOTICE OF INTENT (NOI) INSTRUCTIONS

**TO COMPLY WITH STATE WATER RESOURCES CONTROL BOARD WATER QUALITY ORDER NO. 97-03-DWQ NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) GENERAL PERMIT NO. CAS000001**

## Who Must Submit

The facility operator must submit an NOI for each industrial facility that is required by U.S. Environmental Protection Agency (U.S.EPA) regulations to obtain a storm water permit. The required industrial facilities are listed in Attachment 1 of the General Permit and are also listed in 40 Code of Federal Regulations Section 122.26(b)(14).

The facility operator is typically the owner of the business or operation where the industrial activities requiring a storm water permit occur. The facility operator is responsible for all permit related activities at the facility.

Where operations have discontinued and significant materials remain on site (such as at closed landfills), the landowner may be responsible for filing an NOI and complying with this General Permit. Landowners may also file an NOI for a facility if the landowner, rather than the facility operator, is responsible for compliance with this General Permit.

## How and Where to Apply

The completed NOI form, a site map, and appropriate fee must be mailed to the State Water Resources Control Board (State Water Board) at the following address:

State Water Resources Control Board
Division of Water Quality
P.O. Box 1977
Sacramento, CA 95812-1977
Attn: Storm Water Permitting Unit

**Please Note: Do not send the original or copies of the NOI submittal to the Regional Water Quality Control Board (Regional Water Board).** The original NOI will be forwarded to the Regional Water Board after processing.

**Do not send a copy of your Storm Water Pollution Prevention Plan (SWPPP) with your NOI submittal.** Your SWPPP is to be kept on site and made available for review upon request.

**When to Apply**

Facility operators of existing facilities must file an NOI in accordance with these instructions by March 30, 1992. Facility

operators of new facilities (those beginning operations after March 30, 1992) must file an NOI in accordance with these instructions at least 14 days prior to the beginning of operations.

Once the completed NOI, site map, and appropriate fee have been submitted to the State Water Board, your NOI will be processed and you will be issued a receipt letter with a Waste Discharge Identification (WDID) Number. Please refer to this number when you contact either the State or Regional Water Boards.

**Fees**

The total annual fee is $830. Checks should be made payable to: SWRCB

**Change of Information**

If the information provided on the NOI or site map changes, you should report the changes to the State Water Board using an NOI form. Section I of the line-by-line instructions includes information regarding changes to the NOI.

**Questions**

If you have any questions completing the NOI, please call the appropriate Regional Water Board (Attachment 2) or the State Water Board at (916) 341-5538.

## NOI LINE-BY-LINE INSTRUCTIONS

Please type or print your responses on the NOI. Please complete the NOI form in its entirety and sign the certification.

**Section I--NOI STATUS**

Check box "A" if this is a new NOI registration.

Check box "B" if you are reporting changes to the NOI (e.g., new contact person, phone number, mailing address). Include the facility WDID #. Highlight all the information that has been changed.

Please note that a change of information **does not** apply to a change of facility operator or a change in the location of the facility. These changes require a Notice of Termination (NOT) and submittal of a new NOI and annual fee. Contact the State Water Board or Regional Water Boards for more information on the NOT Form and instructions.

Regardless of whether you are submitting a new or revised NOI, you must complete the NOI in its entirety and the NOI must be signed.

**Section II--Facility Operator Information**

Part A: The facility operator is the legal entity that is responsible for all permit related compliance activities at the facility. In most cases, the facility operator is the owner of the business or operation where the industrial activity occurs. Give the legal name and the address of the person, firm, public organization, or any other entity that is responsible for complying with the General Permit.

Part B: Check the box that indicates the type of operation.

**Section III--Facility Site Information**

Part A: Enter the facility's official or legal name and provide the address. Facilities that do not have a street address must provide cross-streets or parcel numbers. Do not include a P.O. Box address in Part A.

Part B: Enter the mailing address of the facility if different than Part A. This address may be a P.O. Box.

The contact person should be the plant or site manager who is familiar with the facility and responsible for overseeing compliance of the General Permit requirements.

Part C: Enter the total size of the facility in either acres or square feet. Also include the percentage of the site that is impervious (areas that water cannot soak into the ground, such as concrete, asphalt, and rooftops).

Part D: Determine the Standard Industrial Classification (SIC) code which best identifies the industrial activity that is taking place at the facility. This information can be obtained by referring to the Standard Industrial Classification Manual prepared by the Federal Office of Management and Budget which is available at public libraries. The code you determine should identify the industrial activity that requires you to submit the NOI. (For example, if the business is high school education and the activity is school bus maintenance, the code you choose would be bus maintenance, not education.) Most facilities have only one code; however, additional spaces are provided for those facilities that have more than one activity.

Part E: Identify the title of the industrial activity that requires you to submit the NOI (e.g., the title of SIC Code 2421 is Sawmills and Planing Mills, General). If you cannot identify the title, provide a description of the regulated activity(s).

**Section IV--Address for Correspondence**

Correspondence relative to the permit will be mailed occasionally. Check the box which indicates where you would like such correspondence delivered. If you want correspondence sent to another contact person or address different than indicated in Section II or Section III then include the information on an extra sheet of paper.

**Section V--Billing Address Information**

To continue coverage under the General Permit, the annual fee must be paid. Use this section to indicate where the annual fee invoices should be mailed. Enter the billing address if different than the address given in Sections II or III.

**Section VI--Receiving Water Information**

Provide the name of the receiving water where storm water discharge flows from your facility. A description of each option is included below.

1. Directly to waters of the United States: Storm water discharges directly from the facility to a river, creek, lake, ocean, etc. Enter the name of the receiving water (e.g., Boulder Creek).

2. Indirectly to waters of the United States: Storm water discharges over adjacent properties or right-of-ways prior to discharging to waters of the United States. Enter the name of the closest receiving water (e.g., Clear Creek).

**Section VII--Implementation of Permit Requirements**

Parts A and B: Check the boxes that best describe the status of the Storm Water Pollution Prevention Plan (SWPPP) and the Monitoring Program.

Part C: Check yes or no to questions 1 through 4. If you answer no to any question, you need to assign a person to these tasks immediately.

As a permit holder you are required to have an SWPPP and Monitoring Program in place prior to the beginning of facility operations. Failure to do so is in direct violation of the General Permit. Do not send a copy of your SWPPP with your NOI submittal.

Please refer to Sections A and B of the General Permit for additional information regarding the SWPPP and Monitoring Program.

**Section VIII--Site Map**

Provide a "to scale" drawing of the facility and its immediate surroundings. Include as much detail about the site as possible. At a minimum, indicate buildings, material handling and storage areas, roads, names of adjacent streets, storm water discharge points, sample collection points, and a north arrow. Whenever

possible limit the map to a standard size sheet of paper (8.5" x 11" or 11" x 17"). **Do not send blueprints** unless you are sending one page and it meets the size limits as defined above.

A location map may also be included, especially in cases where the facility is difficult to find, but are not to be submitted as a substitute for the site map. The location map can be created from local street maps and U.S. Geological Survey (USGS) quadrangle maps, etc.

A revised site map must be submitted whenever there is a significant change in the facility layout (e.g., new building, change in storage locations, boundary change, etc.).

**Section IX--Certification**

This section should be read by the facility operator. The certification provides assurances that the NOI and site map were completed by the facility operator in an accurate and complete fashion and with the knowledge that penalties exist for providing false information. It also requires the Responsible Party to certify that the provisions in the General Permit will be complied with.

The NOI must be signed by:

**For a Corporation**: a responsible corporate officer (or authorized individual).

**For a Partnership or Sole Proprietorship**: a general partner or the proprietor, respectively.

**For a Municipality, State, or other non-Federal Public Agency:** either a principal executive officer or ranking elected official.

**For a Federal Agency:** either the chief or senior executive officer of the agency.

State of California
State Water Resources Control Board

# NOTICE OF INTENT

TO COMPLY WITH THE TERMS OF THE
GENERAL PERMIT TO DISCHARGE STORM WATER
ASSOCIATED WITH **INDUSTRIAL ACTIVITY** (WQ ORDER No. 97-03-DWQ)
(*Excluding Construction Activities*)

## SECTION I. NOI STATUS (please check only one box)

A. [ ] New Permittee B. [ ] Change of Information WDID # |___|___|___|___|___|___|___|___|___|___|___|

## SECTION II. FACILITY OPERATOR INFORMATION (See instructions)

| | | |
|---|---|---|
| A. NAME: \|_\|_\|_\|_\|_\|_\|_\|_\|_\|_\|_\|_\|_\|_\|_\|_\|_\|_\|_\|_\|_\|_\|_\|_\|_\|_\|_\|_\|_\|_\|_\| | | Phone: \|___\|___\|-- \|___\|___\|-- \|___\|___\|___\| |
| Mailing Address: \|_\|_\|_\|_\|_\|_\|_\|_\|_\|_\|_\|_\|_\|_\|_\|_\|_\|_\|_\|_\|_\|_\|_\|_\|_\|_\|_\|_\|_\|_\|_\|_\|_\| | | |
| City: \|_\|_\|_\|_\|_\|_\|_\|_\|_\|_\|_\|_\|_\|_\|_\|_\|_\|_\|_\|_\|_\|_\|_\|_\|_\|_\|_\|_\|_\|_\|_\|_\| | State: \|_\| | Zip Code: \|_\|_\|_\|_\|_\|-- \|_\|_\|_\|_\| |
| Contact Person: \|_\|_\|_\|_\|_\|_\|_\|_\|_\|_\|_\|_\|_\|_\|_\|_\|_\|_\|_\|_\|_\|_\|_\|_\|_\|_\|_\|_\|_\|_\|_\|_\|_\| | | |
| B. OPERATOR TYPE: (check one) 1.[ ] Private Individual 2.[ ]Business 3.[ ]Municipal 4.[ ]State 5.[ ]Federal 6.[ ]Other | | |

## SECTION III. FACILITY SITE INFORMATION

| | | |
|---|---|---|
| A. FACILITY NAME \|_\|_\|_\|_\|_\|_\|_\|_\|_\|_\|_\|_\|_\|_\|_\|_\|_\|_\|_\|_\|_\|_\|_\|_\|_\|_\|_\|_\|_\|_\|_\| | | Phone: \|___\|___\|-- \|___\|___\|-- \|___\|___\|___\| |
| Facility Location: \|_\|_\|_\|_\|_\|_\|_\|_\|_\|_\|_\|_\|_\|_\|_\|_\|_\|_\|_\|_\|_\|_\|_\|_\|_\|_\|_\|_\|_\|_\|_\|_\|_\| | | County: \|_\|_\|_\|_\|_\|_\|_\|_\|_\|_\|_\|_\|_\|_\| |
| City: \|_\|_\|_\|_\|_\|_\|_\|_\|_\|_\|_\|_\|_\|_\|_\|_\|_\|_\|_\|_\|_\|_\|_\|_\|_\|_\|_\|_\|_\|_\|_\|_\| | State: C \| A | Zip Code: \|_\|_\|_\|_\|_\|-- \|_\|_\|_\|_\| |
| B. MAILING ADDRESS: \|_\|_\|_\|_\|_\|_\|_\|_\|_\|_\|_\|_\|_\|_\|_\|_\|_\|_\|_\|_\|_\|_\|_\|_\|_\|_\|_\|_\|_\|_\|_\|_\|_\| | | |
| City: \|_\|_\|_\|_\|_\|_\|_\|_\|_\|_\|_\|_\|_\|_\|_\|_\|_\|_\|_\|_\|_\|_\|_\|_\|_\|_\|_\|_\|_\|_\|_\|_\| | State: \|_\| | Zip Code: \|_\|_\|_\|_\|_\|-- \|_\|_\|_\|_\| |
| Contact Person: \|_\|_\|_\|_\|_\|_\|_\|_\|_\|_\|_\|_\|_\|_\|_\|_\|_\|_\|_\|_\|_\|_\|_\|_\|_\|_\|_\|_\|_\|_\|_\|_\|_\| | | |
| C. FACILITY INFORMATION ( check one) Total Size of Site: _____ Acres [ ] Sq. Ft. [ ] | | Percent of Site Impervious (*including rooftops*) \|_____\| % |

D. SIC CODE(S) OF REGULATED ACTIVITY: E. REGULATED ACTIVITY (*describe each SIC code*)**:**

1. |_\|_\|_\|_\| |_\|_\|_\|_\|_\|_\|_\|_\|_\|_\|_\|_\|_\|_\|_\|_\|_\|_\|_\|

## SECTION IV. ADDRESS FOR CORRESPONDENCE

| | | |
|---|---|---|
| [ ] Facility Operator Mailing Address (Section II) | [ ] Facility Mailing Address (Section III, B.) | [ ] Both |

## SECTION V. BILLING ADDRESS INFORMATION

SEND BILL TO: [ ] Facility Operator Mailing Address (Section II) [ ] Facility Mailing Address (Section III, B.) [ ] Other (*enter information below*)

| | | |
|---|---|---|
| Name: | | Phone: ___ -- ___ -- ____ |
| Mailing Address: | | |
| City: | State: ___ | Zip Code: _____ -- ____ |
| Contact Person: | | |

## SECTION VI. RECEIVING WATER INFORMATION

Your facility's storm water discharges flow: (*check one*) [ ] Directly OR [ ] Indirectly to waters of the United States.

Name of receiving water: _____
(river, lake, stream, ocean, etc.)

## SECTION VII. IMPLEMENTATION OF PERMIT REQUIREMENTS

A. STORM WATER POLLUTION PREVENTION PLAN (SWPPP) (*check one*)
[ ] A SWPPP has been prepared for this facility and is available for review.
[ ] A SWPPP will be prepared and ready for review by (enter date): ____/____/____.

B. MONITORING PROGRAM (check one)
[ ] A Monitoring Program has been prepared for this facility and is available for review.
[ ] A Monitoring Program will be prepared and ready for review by (enter date): ____/____/____.

C. PERMIT COMPLIANCE RESPONSIBILITY
Has a person been assigned responsibility for:

1. Inspecting the facility throughout the year to identify any potential pollution problems? ..... ____YES ____NO
2. Collecting storm water samples and having them analyzed?..... ____YES ____NO
3. Preparing and submitting an annual report by July 1 of each year? ..... ____YES ____NO
4. Eliminating discharges other than storm water (*such as equipment or vehicle wash-water*) into the storm drain?..... ____YES ____NO

## SECTION VIII. SITE MAP

I HAVE ENCLOSED A SITE MAP YES[ ] A new NOI submitted without a site map will be rejected.

## SECTION IX. CERTIFICATION

"I certify under penalty of law that this document and all attachments were prepared under my direction and supervision in accordance with a system designed to assure 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 persons 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. In addition, I certify that I have read the entire General Permit, including all attachments, and agree to comply with and be bound by all of the provisions, requirements, and prohibitions of the permit, including the development and implementation of a Storm Water Pollution Pervention Plan and a Monitoring Program Plan will be complied with."

Printed Name: _____

Signature: _____ Date _____

Title: _____

**DEFINITIONS**

1. "Best Management Practices" ("BMPs") means schedules of activities, prohibitions of practices, maintenance procedures, and other management practices to prevent or reduce the pollution of waters of the United States. BMPs also include treatment measures, operating procedures, and practices to control facility site runoff, spillage or leaks, sludge or waste disposal, or drainage from raw material storage. BMPs may include any type of pollution prevention and pollution control measure necessary to achieve compliance with this General Permit.

2. Clean Water Act (CWA) means the Federal Water Pollution Control Act enacted by Public Law 92-500 as amended by Public Laws 95-217, 95-576, 96-483, and 97-117; 33 USC. 1251 et seq.

3. "Facility" is a collection of industrial processes discharging storm water associated with industrial activity within the property boundary or operational unit.

4. "Non-Storm Water Discharge" means any discharge to storm sewer systems that is not composed entirely of storm water.

5. "Significant Materials" includes, but is not limited to: raw materials; fuels; materials such as solvents, detergents, and plastic pellets; finished materials such as metallic products; raw materials used in food processing or production; hazardous substances designated under Section 101(14) of Comprehensive Environmental Response, Compensation, and Liability Act (CERLCA); any chemical the facility is required to report pursuant to Section 313 of Title III of Superfund Amendments and Reauthorization Act (SARA); fertilizers; pesticides; and waste products such as ashes, slag, and sludge that have the potential to be released with storm water discharges.

6. "Significant Quantities" is the volume, concentrations, or mass of a pollutant that can cause or threaten to cause pollution, contamination, or nuisance; adversely impact human health or the environment; and/or cause or contribute to a violation of any applicable water quality standards for the receiving water.

7. "Significant Spills" includes, but is not limited to: releases of oil or hazardous substances in excess of reportable quantities under Section 311 of the CWA (see 40 CFR 110.10 and 117.21) or Section 102 of CERCLA (see 40 CFR 302.4).

8. "Storm water" means storm water runoff, snow melt runoff, and storm water surface runoff and drainage. It excludes infiltration and runoff from agricultural land.

9. "Storm Water Associated with Industrial Activity" means the discharge from any conveyance which is used for collecting and conveying storm water and which is directly related to manufacturing, processing, or raw materials storage areas at an industrial plant. The term does not include discharges from facilities or activities excluded from the NPDES program. For the facilities identified in Categories 1 through 9 of Attachment 1 of this General Permit, the term includes, but is not limited to, storm water discharges from industrial plant yards; immediate access roads and rail lines used or traveled by carriers of raw materials; manufactured products, waste material, or by-products used or created by the facility; material handling sites; refuse sites; sites used for the application or disposal of process wastewaters (as defined at 40 CFR Part 401); sites used for the storage and maintenance of material handling equipment; sites used for residual treatment, storage, or disposal; shipping and receiving areas; manufacturing buildings; storage areas (including tank farms) for raw materials, and intermediate and finished products; and areas where industrial activity has taken place in the past and significant materials remain and are exposed to storm water.

   For the facilities identified in Category 10 of Attachment 1 of this General Permit, the term only includes storm water discharges from all areas listed in the previous sentence where material handling equipment or activities, raw materials, intermediate products, final products, waste materials, by-products, or industrial machinery <u>are exposed to storm water</u>.

   Material handling activities include the: storage, loading and unloading, transportation, or conveyance of any raw material, intermediate product, finished product, by-product, or waste product. The term excludes areas located on plant lands separate from the plant's industrial activities, such as office buildings and accompanying parking lots as long as the drainage from the excluded areas is not mixed with storm water drained from the above described areas. Industrial facilities (including industrial facilities that are federally, State, or municipally owned or operated that meet the description of the facilities listed in this paragraph) include those facilities designated under 40 CFR 122.26(a)(1)(v).

# ACRONYM LIST

| | |
|---|---|
| BAT | Best Available Technology Economically Achievable |
| BCT | Best Conventional Pollutant Control Technology |
| BMPs | Best Management Practices |
| CERCLA | Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (Federal Superfund) |
| CFR | Code of Federal Regulations |
| CWA | Clean Water Act |
| General Permit | General Industrial Activities Storm Water Permit |
| GMP | Group Monitoring Plan |
| NEC | No Exposure Certification |
| NOI | Notice of Intent |
| NOT | Notice of Termination |
| NPDES | National Pollutant Discharge Elimination System |
| O&G | Oil and Grease |
| RCRA | Resource, Conservation, and Recovery Act |
| Regional Water Board | Regional Water Quality Control Board |
| RQ | Reportable Quantity |
| SARA | Superfund Amendments and Reauthorization Act of 1986 |
| SIC | Standard Industrial Classification |
| SMCRA | Surface Mining Control and Reclamation Act |
| SPCC | Spill Prevention Control and Countermeasures |
| State Water Board | State Water Resources Control Board |
| SWPPP | Storm Water Pollution Prevention Plan |
| TOC | Total Organic Carbon |
| TSS | Total Suspended Solids |
| U.S. EPA | U.S. Environmental Protection Agency |
| WDID | Waste Discharger Identification |
| WDRs | Waste Discharge Requirements |

# APPENDIX B

Small Municipal MS4 General Permit

STATE WATER RESOURCES CONTROL BOARD (SWRCB)
WATER QUALITY ORDER NO. 2003 – 0005 – DWQ

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)
GENERAL PERMIT NO. CAS000004

# WASTE DISCHARGE REQUIRMENTS (WDRS)
# FOR
# STORM WATER DISCHARGES FROM
# SMALL MUNICIPAL SEPARATE STORM SEWER SYSTEMS (GENERAL PERMIT)

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- Attachment 6: Instructions for Completing the Notice of Intent to Comply with the General Permit for the Discharge of Storm Water From Small MS4s
- Attachment 7: Notice of Intent to Comply with the General Permit for the Discharge of Storm Water From Small MS4s
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FACT SHEET
FOR
STATE WATER RESOURCES CONTROL BOARD (SWRCB)
WATER QUALITY ORDER NO. 2003 – 0005 – DWQ

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)
GENERAL PERMIT NO. CAS000004

WASTE DISCHARGE REQUIREMENTS (WDRS)
FOR
STORM WATER DISCHARGES FROM
SMALL MUNICIPAL SEPARATE STORM SEWER SYSTEMS (GENERAL PERMIT)

## BACKGROUND

In 1972, the federal Water Pollution Control Act (also referred to as the Clean Water Act [CWA]) was amended to provide that the discharge of pollutants to waters of the United States from any point source is unlawful unless the discharge is in compliance with a NPDES permit. The 1987 amendments to CWA added section 402(p), which established a framework for regulating storm water discharges under the NPDES Program. Subsequently, in 1990, the U.S. Environmental Protection Agency (U.S. EPA) promulgated regulations for permitting storm water discharges from industrial sites (including construction sites that disturb five acres or more) and from municipal separate storm sewer systems (MS4s) serving a population of 100,000 people or more. These regulations, known as the Phase I regulations, require operators of medium and large MS4s to obtain storm water permits. On December 8, 1999, U.S. EPA promulgated regulations, known as Phase II, requiring permits for storm water discharges from Small MS4s and from construction sites disturbing between one and five acres of land. This General Permit regulates storm water discharges from Small MS4s.

An "MS4" is a conveyance or system of conveyances (including roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, man-made channels, or storm drains): (i) designed or used for collecting or conveying storm water; (ii) which is not a combined sewer; and (iii) which is not part of a Publicly Owned Treatment Works (POTW). [See Title 40, Code of Federal Regulations (40 CFR) §122.26(b)(8).]

A "Small MS4" is an MS4 that is not permitted under the municipal Phase I regulations, and which is "owned or operated by the United States, a State, city, town, borough, county, parish, district, association, or other public body (created by or pursuant to State law) having jurisdiction over disposal of sewage, industrial wastes, storm water, or other wastes, including special districts under State law such as a sewer district, flood control district or drainage district, or similar entity…." (40 CFR §122.26(b)(16)). Small MS4s *include systems similar to separate storm sewer systems in municipalities, such as systems at military bases, large hospital or prison complexes, and highways and other thoroughfares, but do not include separate storm sewers in*

*very discrete areas, such as individual buildings*. This permit refers to MS4s that operate throughout a community as "traditional MS4s" and MS4s that are similar to traditional MS4s but operated at a separate campus or facility as "non-traditional MS4s."

Federal regulations allow two permitting options for storm water discharges (individual permits and general permits). SWRCB elected to adopt a statewide general permit for Small MS4s in order to efficiently regulate numerous storm water discharges under a single permit. In certain situations a storm water discharge may be more appropriately and effectively regulated by an individual permit, a region-specific general permit, or by inclusion in an existing Phase I permit. In these situations, the Regional Water Quality Control Board (RWQCB) Executive Officer will direct the Small MS4 operator to submit the appropriate application, in lieu of a Notice of Intent (NOI) to comply with the terms of this General Permit. In these situations, the individual or regional permits will govern, rather than this General Permit.

NINTH CIRCUIT COURT RULING

On January 14, 2003, the Ninth Circuit Court issued its decision in *Environmental Defense Center v. EPA*. This ruling upheld the Phase II regulations on all but three of the 20 issues contested. In summary, the court determined that applications for general permit coverage (including the NOI and Storm Water Management Program [SWMP]) must be made available to the public, the applications must be reviewed and determined to meet the Maximum Extent Practicable standard by the permitting authority before coverage commences, and there must be a process to accommodate public hearings. This General Permit is consistent with the ruling. Should the ruling be revised or vacated in the future, SWRCB may modify the General Permit.

ENTITIES SUBJECT TO THIS GENERAL PERMIT

This General Permit regulates discharges of storm water from "regulated Small MS4s." A "regulated Small MS4" is defined as a Small MS4 that discharges to a water of the United States (U.S.) or to another MS4 regulated by an NPDES permit, and which is designated in one of the following ways:

1. Automatically designated by U.S. EPA pursuant to 40 CFR section 122.32(a)(1) because it is located within an urbanized area defined by the Bureau of the Census (see Attachment 1); or

2. Traditional Small MS4s that serve cities, counties, and unincorporated areas that are designated by SWRCB or RWQCB after consideration of the following factors:

    a. High population density – High population density means an area with greater than 1,000 residents per square mile. Also to be considered in this definition is a high density created by a non-residential population, such as tourists or commuters.

    b. High growth or growth potential – If an area grew by more than 25 percent between 1990 and 2000, it is a high growth area. If an area anticipates a growth rate of more than 25 percent over a 10-year period ending prior to the end of the first permit term, it has high growth potential.

c. Significant contributor of pollutants to an interconnected permitted MS4 – A Small MS4 is interconnected with a separately permitted MS4 if storm water that has entered the Small MS4 is allowed to flow directly into a permitted MS4. In general, if the Small MS4 discharges more than 10 percent of its storm water to the permitted MS4, or its discharge makes up more than 10 percent of the other permitted MS4's total storm water volume, it is a significant contributor of pollutants to the permitted MS4. In specific cases, the MS4s involved or third parties may show that the 10 percent threshold is inappropriate for the MS4 in question.

d. Discharge to sensitive water bodies – Sensitive water bodies are receiving waters, which are a priority to protect. They include the following:

- those listed as providing or known to provide habitat for threatened or endangered species;
- those used for recreation that are subject to beach closings or health warnings; or
- those listed as impaired pursuant to CWA section 303(d) due to constituents of concern in urban runoff (these include biochemical oxygen demand [BOD], sediment, pathogens, petroleum hydrocarbons, heavy metals, floatables, polycyclic aromatic hydrocarbons [PAHs], trash, and other constituents that are found in the MS4 discharge).

Additional criteria to qualify as a sensitive water body may exist and may be determined by SWRCB or RWQCB on a case-by-case basis.

e. Significant contributor of pollutants to waters of the U.S. – Specific conditions presented by the MS4 may lead to significant pollutant loading to waters of the U.S. that are otherwise unregulated or inadequately regulated. An example of such a condition may be the presence of a large transportation industry.

These factors are to be considered when evaluating whether a Small MS4 should be regulated pursuant to this General Permit. An MS4 and the population that it serves need not meet all of the factors to be designated. SWRCB designates a number of Small MS4s according to these criteria through this General Permit (see Attachment 2).

Non-traditional Small MS4s may also be designated to seek permit coverage. These include non-traditional MS4s that are located within or discharge to a permitted MS4 and those that pose significant water quality threats. In general, these are storm water systems serving public campuses (including universities, community colleges, primary schools, and other publicly owned learning institutions with campuses), military bases, and prison and hospital complexes within or adjacent to other regulated MS4s, or which pose significant water quality threats. SWRCB considered designating non-traditional Small MS4s when adopting this General Permit. However, the *Environmental Defense Center* ruling requires that SWRCB and RWQCBs change their procedures for implementing this General Permit. In compliance with that decision, each

NOI and SWMP must be reviewed and approved, and in some cases considered in a public hearing, prior to the Small MS4 obtaining coverage under the General Permit. Therefore, SWRCB is delaying making these designations and the General Permit does not designate any non-traditional MS4s. A list of non-traditional MS4s that are anticipated to be designated within this permit term is included in Attachment 3 of this General Permit. These or other non-traditional MS4s may be designated by SWRCB or RWQCB at any time subsequent to the adoption of this General Permit.

The criteria selected to designate Small MS4s to be regulated are based on the potential to impact water quality due to conditions influencing discharges into their system or due to where they discharge. Some of the definitions provide "cut-off numbers." Although there is no regulatory standard that mandates which numbers to use, dividing lines must be established in order to effectively use them as criteria.

Specifically, the high growth factor uses 25 percent growth over ten years. The average growth (based on county data from the Census) in California between 1990 and 2000 was 15.8 percent. The standard deviation was 9.9. Growth rates outside one standard deviation are more than 25.7 percent. The standard deviation is generally an indication of the spread of data. In defining the high growth factor, the standard deviation was used because it sets the limits within which most areas of California fall. County data was used because it was consistently available, whereas 1990 populations for several of the cities and places were not readily available. Additionally, county data gives a broader picture of the growth dynamics in California. Because the data is not normally distributed, 68 percent of the data points do not necessarily fall within one standard deviation of the mean. It does, however, provide a number in which to compare city and place growth rates to the average growth rate of California. The number was rounded to 25 percent for ease of application and with the understanding that it is an approximation.

The significant contributor of pollutants to an interconnected permitted MS4 definition uses a volume value of 10 percent, with the assumption that storm water contains pollutants. This is meant to capture flows that may affect water quality or the permit compliance status of another MS4, but exclude incidental flows between communities.

APPLICATION REQUIREMENTS

Regulated Small MS4s, automatically designated because they are within an urbanized area (Attachment 1), must submit to the appropriate RWQCB by August 8, 2003 a complete application package. A complete package includes an NOI (Attachment 7), a complete SWMP (one hard copy and one electronic copy in Word or PDF format), and an appropriate fee.

The August 8, 2003 deadline is an administrative deadline to comply with the General Permit. Section 122.33(c)(1) of 40 CFR required automatically designated Small MS4s to submit an application by March 10, 2003. Those applications received from Small MS4s that submitted applications to comply with the federal deadline will be considered as an application to meet the requirements of this General Permit. If the application package is deemed complete by the RWQCB staff, it will be posted on the internet and made available for public review and public hearing if requested subsequent to permit adoption.

Regulated Small MS4s that are traditional MS4s designated by the SWRCB or RWQCB must submit to the appropriate RWQCB, within 180 days of notification of designation (or at a later

date stated by SWRCB or RWQCB), an NOI (Attachment 7), a complete SWMP (one hard copy and one electronic copy in Word or PDF format), and an appropriate fee. Those traditional MS4s identified in Attachment 2 of this General Permit are being notified of their designation by SWRCB upon adoption of this General Permit. They must, therefore, submit their NOI and SWMP by October 27, 2003.

Regulated Small MS4s that are non-traditional MS4s designated by SWRCB or RWQCB, including those in Attachment 3, must submit to the appropriate RWQCB, within 180 days of notification of designation (or at a later date stated by SWRCB or RWQCB), an NOI (Attachment 7), a complete SWMP (one hard copy and one electronic copy in Word or PDF format), and an appropriate fee.

Regulated Small MS4s relying entirely on Separate Implementing Entities (SIEs) that are also permitted, to implement their entire storm water programs are not required to submit a SWMP if the SIE being relied on has an approved SWMP. Proof of SWMP approval, such as a copy of the RWQCB letter, must be submitted to the RWQCB by the applying Small MS4, along with the NOI and an appropriate fee.

Regulated Small MS4s that fail to obtain coverage under this General Permit or another NPDES permit for storm water discharges will be in violation of the CWA and the Porter-Cologne Water Quality Control Act.

Receipt of applications deemed complete by RWQCB staff will be acknowledged on SWRCB's website at http://www.swrcb.ca.gov/stormwtr/index.html for a minimum of 60 days. When a SWMP is received by an RWQCB, those members of the public that have indicated they would like to receive notice, will receive an email from RWQCB staff that a SWMP has been received. During this 60-day public review period, a member of the public may request a copy of the SWMP and request that a public hearing be held by RWQCB. If a public hearing is requested, the hearing itself will be public noticed for a minimum of 30 days. If no hearing is requested, the RWQCB Executive Officer will notify the regulated MS4 that it has obtained permit coverage only after RWQCB staff has reviewed the SWMP and has determined that the SWMP meets the MEP standard established in this permit.

Attachment 8 lists RWQCB contact information for questions and submittals.

## GENERAL PERMIT REQUIREMENTS

### Prohibitions

This General Permit effectively prohibits the discharge of materials other than storm water that are not "authorized non-storm water discharges" (see General Permit § D.2.c) or authorized by a separate NPDES permit. This General Permit also incorporates discharge prohibitions contained in Statewide Water Quality Control Plans and Regional Water Quality Control Plans (Basin Plans).

Effluent Limitations

Permittees must implement Best Management Practices (BMPs) that reduce pollutants in storm water runoff to the technology-based standard of Maximum Extent Practicable (MEP) to protect water quality. In accordance with 40 CFR section 122.44(k)(2), the inclusion of BMPs in lieu of numeric effluent limitations is appropriate in storm water permits.

Discharges shall not contain reportable quantities of hazardous substance as established at 40 CFR section 117.3 or 40 CFR section 302.4.

Preparation of SWMP

This General Permit requires regulated Small MS4s to:

1. Develop and implement a SWMP that describes BMPs, measurable goals, and timetables for implementation in the following six program areas (Minimum Control Measures):

   Public Education

   The Permittee must educate the public in its permitted jurisdiction about the importance of the storm water program and the public's role in the program.

   Public Participation

   The Permittee must comply with all State and local notice requirements when implementing a public involvement/participation program.

   Illicit Discharge Detection and Elimination

   The Permittee must adopt and enforce ordinances or take equivalent measures that prohibit illicit discharges. The Permittee must also implement a program to detect illicit discharges.

   Construction Site Storm Water Runoff Control

   The Permittee must develop a program to control the discharge of pollutants from construction sites greater than or equal to one acre in size within its permitted jurisdiction. The program must include inspections of construction sites and enforcement actions against violators.

   Post Construction Storm Water Management

   The Permittee must require long-term post-construction BMPs that protect water quality and control runoff flow, to be incorporated into development and significant redevelopment projects. Post-construction programs are most efficient when they stress (i) low impact design; (ii) source controls; and (iii) treatment controls.

   For non-traditional MS4s that seek coverage under this Permit, implementation of this

control measure will not require redesign of projects under active construction at the time of designation or for K-12 school or community college facilities that have been submitted to the Department of General Services, Division of the State Architect before adoption of the permit, and which receive final approval from the State Allocation Board or the Public Works Board, as appropriate on or before December 31, 2004. SWMP must, however, specify how the control measure will be implemented within five years of designation.

Pollution Prevention/Good Housekeeping for Municipal Operations

The Permittee must examine its own activities and develop a program to prevent the discharge of pollutants from these activities. At a minimum, the program must educate staff on pollution prevention, and minimize pollutant sources.

2. Reduce its discharge of pollutants to the MEP.

3. Annually report on the progress of SWMP implementation.

Development and Implementation of SWMP

SWMP must describe how pollutants in storm water runoff will be controlled and describe BMPs that address the six Minimum Control Measures. Each BMP must have accompanying measurable goals that will be achieved during the permit term, or within five years of designation if designated subsequent to permit adoption, as a means of determining program compliance and accomplishments and as an indicator of potential program effectiveness. The measurable goals should be definable tasks such as number of outreach presentations to make, number of radio spots to purchase, or percentage of pollutant loading to reduce (other examples of measurable goals can be found on U.S. EPA's web-site at http://cfpub.epa.gov/npdes/stormwater/measurablegoals/index.cfm). This approach provides the flexibility to target an MS4's problem areas while working within the existing organization.

It is not anticipated that the SWMP be fully implemented upon submittal with the NOI. It is the intent of this General Permit that SWMPs submitted with the NOI contain sufficient information such that RWQCB staff and interested parties understand the BMPs that will be implemented or will be developed and implemented over the course of the General Permit term or, for Small MS4s designated subsequent to permit adoption, over a five–year period from designation. It is also expected that SWMPs will protect water quality, contain measurable goals and schedules, and assign responsible parties for each BMP. It is anticipated that the SWMP initially submitted may be revised or modified based on review of RWQCB staff or on comments provided by interested parties in accordance with Provisions G and H.19 of the General Permit.

For example, it may be proposed that a storm water logo be developed (or an existing one modified) by the end of the first year; an ordinance prohibiting non-storm water discharges be adopted by the end of the second year; a survey of non-storm water discharges throughout the city be completed by the end of the second year; a brochure targeting the restaurant community regarding proper practices to eliminate non-storm water discharges be developed or obtained by the end of the fourth year; and the brochure be distributed to 25 percent of the restaurants

within the city during health department inspections by the end of the fifth year. (This example mentions only one activity each year. In fact, numerous activities will occur throughout the permit term that ensure that a SWMP addressing all six Minimum Control Measures is implemented by the end of the permit term, or within five years of designation for Small MS4s designated subsequent to adoption of the Permit.)

The main goal of this General Permit is to protect water quality from the impacts of storm water runoff from Small MS4s. The intent is that storm water quality impacts will be considered in all aspects of a municipality's activities and that multiple departments within the municipality will work together to implement storm water BMPs. For instance, the planning department may work with the public works department when considering projects and their potential storm water impacts. Also, the health department can work with public works in a complementary manner to spread a consistent message about illicit discharges.

Many of the activities that a municipality already does can be recognized as a benefit to storm water or can be modified to add a storm water quality twist. A critical element of SWMP development is an assessment of activities already being conducted. For example, many communities already have a household hazardous waste program, which can be assumed to reduce illicit discharges to the MS4. Likewise, they examine potential flooding impacts of new development. This process can be modified to also examine water quality impacts as well as quantity.

Similarly, the Minimum Control Measures emphasize working with the public to prevent pollution during their everyday activities as well as to gain support for program funding. The MS4 has the flexibility to target specific segments of its residential or employee population in ways that are most appropriate for that particular segment. Taken together, the suite of public education approaches an MS4 takes can create a robust multimedia campaign that has a single message, which is threaded throughout the community through implementation of BMPs in the six program areas.

For links to information on how to implement each of the Minimum Control Measures, including sample ordinances that address the respective Minimum Control Measures, please see SWRCB's internet site at http://www.swrcb.ca.gov/stormwtr/municipal.html. Additionally, in accordance with 40 CFR section 122.34(d)(2), SWRCB provides U.S. EPA's menu of BMPs to consider when developing a SWMP. This menu is available on U.S. EPA's internet site at http://cfpub1.epa.gov/npdes/stormwater/swphase2.cfm?program_id=6. The menu provides examples of BMPs and associated measurable goals; however, other BMPs and measurable goals may be used.

MEP

MEP is the technology-based standard established by Congress in CWA section 402(p)(3)(B)(iii) that municipal dischargers of storm water must meet. Technology-based standards establish the level of pollutant reductions that dischargers must achieve. MEP is generally a result of emphasizing pollution prevention and source control BMPs as the first lines of defense in

combination with structural and treatment methods where appropriate serving as additional lines of defense. The MEP approach is an ever evolving, flexible, and advancing concept, which considers technical and economic feasibility. As knowledge about controlling urban runoff continues to evolve, so does that which constitutes MEP. The individual and collective activities elucidated in the MS4's SWMP become its proposal for reducing or eliminating pollutants in storm water to the MEP. The way in which MEP is met may vary between communities.

The MEP standard applies to all regulated MS4s, including those in Phase I and Small MS4s regulated by this General Permit. Consistent with U.S. EPA guidance, the MEP standard in California is applied so that a first-round storm water permit requires BMPs that will be expanded or better-tailored in subsequent permits. In choosing BMPs, the major focus is on technical feasibility, but cost, effectiveness, and public acceptance are also relevant. If a Permittee chooses only the most inexpensive BMPs, it is likely that MEP has not been met. If a Permittee employs all applicable BMPs except those that are not technically feasible in the locality, or whose cost exceeds any benefit to be derived, it would meet the MEP standard. MEP requires Permittees to choose effective BMPs, and to reject applicable BMPs only where other effective BMPs will serve the same purpose, the BMPs are not technically feasible, or the cost is prohibitive. (See SWRCB Order WQ 2000-11, http://www.swrcb.ca.gov/resdec/wqorders/2000/00wqo.html.)

Generally, in order to meet MEP, communities that have greater water quality impacts must put forth a greater level of effort. Alternatively, for similar water quality conditions, communities should put forth an equivalent level of effort. However, because larger communities have greater resources (both financial resources as well as existing related programs that can help in implementing storm water quality programs), it may appear that they have more robust storm water programs. Additionally, because storm water programs are locally driven and local conditions vary, some BMPs may be more effective in one community than in another. A community that has a high growth rate would derive more benefit on focusing on construction and post-construction programs than on an illicit connection program because illicit connections are more prevalent in older communities.

In accordance with the Ninth Circuit Court ruling, prior to obtaining permit coverage, SWMPs will be evaluated for compliance with the MEP standard by the RWQCB Executive Officer or, if requested, considered for approval in a public hearing conducted by RWQCB.

Many Phase I MS4s have been permitted under storm water regulations for more than ten years and have had that time to develop programs intended to reduce pollutants in their storm water discharge to MEP. It is understood that storm water quality programs and regulations are new to the entities that will be regulated under this General Permit. Therefore, it is anticipated that this General Permit term will serve as a "ramping-up" period and that programs implemented by Phase II communities will not necessarily conform to programs implemented by Phase I communities. Despite this understanding, however, many of the lessons learned and information developed by Phase I communities is available to smaller communities as a guide and may be used by Phase II communities.

By the expiration date of this General Permit, traditional and non-traditional Small MS4s serving a population of 50,000 people or more, or that are subject to high growth, must require specific design standards as part of their post-construction program (as outlined in Attachment 4 of this General Permit, or a functionally equivalent program that is acceptable to the appropriate RWQCB), and they must comply with water quality standards through implementing better-tailored BMPs in an iterative process. These more stringent requirements are applied to communities that are larger and, therefore, capable of a more extensive storm water program, and to communities that are fast growing, and therefore may have greater impacts on storm water runoff associated with construction and the loss of pervious lands. Studies have found the amount of impervious surface in a community is strongly correlated with the community's water quality. New development and redevelopment result in increased impervious surfaces in a community. The design standards in Attachment 4 focus on mitigating the impacts caused by increased impervious surfaces through establishing minimum BMP requirements that stress (i) low impact design; (ii) source controls; and (iii) treatment controls. The design standards include minimum sizing criteria for treatment controls and establish maintenance requirements.

BMPs that may be used to comply with the design standards can be found in U.S. EPA's Toolbox of BMPs at http://cfpub1.epa.gov/npdes/stormwater/swphase2.cfm?program_id=6. Additionally, some RWQCBs may have lists of approved references and resources.

Small MS4s designated subsequent to permit adoption have five years from designation to achieve compliance with the Supplemental Provisions. Attachment 5 provides a list of communities that SWRCB anticipates being subject to the provisions in Attachment 4.

Receiving Water Limitations

Attachment 4 establishes receiving water limitations that apply to larger and fast-growing regulated Small MS4s that are required to comply with Supplemental Provisions of this General Permit. This permit allows regulated Small MS4s up to five years to fully implement their SWMPs. Therefore, regulated Small MS4s must begin to comply with the receiving water limitations iterative process once their plans are fully implemented. The receiving water limitation language provided in this General Permit is identical to the language established in SWRCB Water Quality Order WQ-99-05 adopted by SWRCB on June 17, 1999. As interpreted in SWRCB Water Quality Order WQ-2001-15, adopted by SWRCB on November 15, 2001, the receiving water limitations in this General Permit do not require strict compliance with water quality standards. SWRCB language requires that SWMPs be designed to achieve compliance with water quality standards over time, through an iterative approach requiring improved BMPs. Upon full implementation of the SWMP, exceedances of water quality standards must be addressed through the iterative process.

Reporting Requirements

The Permittee must track and assess its program to ensure BMP effectiveness and must conform to other monitoring requirements that may be imposed by RWQCB.

The Permittee is required to submit annual reports to the appropriate RWQCB by September 15th of each year (for Small MS4s designated with the adoption of this permit, the first annual report is to be submitted in 2004), or as otherwise required by the RWQCB Executive Officer. Among other things, the Permittee shall evaluate its compliance with permit conditions, evaluate and assess the effectiveness of its BMPs, summarize the results of any monitoring performed, summarize the activities planned for the next reporting cycle, and, if necessary, propose changes to SWMP.

Monitoring

Inspections, as a form of visual monitoring, are important to a storm water program. Inspections of storm water runoff and infrastructure (such as drop inlets, basins, and gutters) can say a lot about the effectiveness and needs of a storm water program. Through inspections, non-storm water discharges can be discovered and subsequently stopped, maintenance needs can be identified, and visual pollutants and erosion problems can be detected. Inspections of facilities are also important for public education and outreach, to ensure proper BMP implementation and maintenance, and to detect non-storm water discharges. Additionally, chemical monitoring can be used to involve the public through citizen monitoring groups, detect pollutants, identify and target pollutants of concern, illustrate water quality improvements and permit compliance, and participate in total maximum daily load (TMDL) development and implementation.

Monitoring environmental indicators through bio-assessments or other less technical methods may also be a key component of a program. Although it may be more challenging, it is also very valuable because it is the "final product," not just for a storm water program but for the broader environmental health of a community.

More specifically, the objectives of a monitoring program may include:

- Assessing compliance with this General Permit;
- Measuring and improving the effectiveness of SWMP;
- Assessing the chemical, physical, and biological impacts on receiving waters resulting from urban runoff;
- Characterizing storm water discharges;
- Identifying sources of pollutants; and
- Assessing the overall health and evaluating long-term trends in receiving water quality.

While only inspections of construction sites, as part of the Construction Site Storm Water Runoff Control Minimum Control Measure, are specifically required, as elucidated above, other monitoring tasks may be appropriate in a storm water program. Also, the RWQCB can require additional monitoring.

Termination of Coverage

A Permittee may terminate coverage if: a new operator has assumed responsibility for the regulated Small MS4; the Permittee has ceased operation of its MS4; or all discharge of runoff from the Small MS4 has been eliminated. To terminate coverage, the Permittee must submit to RWQCB a written request for permit termination.

Reliance on a SIE

A Permittee may rely on a separate entity to implement one or more of the six Minimum Control Measures, if the separate entity can appropriately and adequately address the storm water issues of the Permittee. To do this, both entities must agree to the arrangement, and the Permittee must comply with the applicable parts of the SIE's program. The arrangement is subject to the approval of the RWQCB Executive Officer.

In accordance with section 122.35(a)(3), the Permittee remains responsible for compliance with its permit obligations if SIE fails to implement the control measure(s) (or component thereof). Therefore, the entities are encouraged to enter into a legally binding agreement to minimize any uncertainty about compliance with the permit.

If the Permittee relies on an SIE to implement all six Minimum Control Measures and SIE also has a storm water permit, the Permittee relying on SIE must still submit an NOI, appropriate fee, proof that SIE's SWMP has been approved by RWQCB or its staff, and certification of the arrangement. However, the Permittee is not required to develop or submit a SWMP or annual reports, unless requested to do so by the RWQCB Executive Officer. The arrangement is subject to the approval of the RWQCB Executive Officer.

School districts present an example of where an SIE arrangement may be appropriate, either by forming an agreement with a city or with an umbrella agency, such as the County Office of Education. Because schools provide a large audience for storm water education, as part of the agreement, the two entities may coordinate an education program. An individual school or a school district may agree to provide a one-hour slot for all the second and fifth grade classes during which the city would bring in its own storm water presentation. Alternatively, the school could agree to teach a lesson in conjunction with an outdoor education science project, which may also incorporate a public involvement component. Additionally, the school and the city or Office of Education may arrange to have the school's maintenance staff attend the other entity's training sessions.

Retention of Records

The Permittee is required to retain records of all monitoring information and copies of all reports required by this General Permit for a period of at least five years from the date generated. This period may be extended by request of SWRCB or RWQCB.

Role of RWQCBs

RWQCBs and their staff will review and decide whether to approve SWMPs and, where requested, conduct public hearings on NOIs and SWMPs. Upon approval, they will notify Permittees that they have obtained permit coverage. They will also oversee implementation and compliance with this General Permit. As appropriate, they will review reports, require modification to SWMPs and other submissions, impose region-specific monitoring requirements, conduct inspections, take enforcement actions against violators of this General Permit, and make additional designations of regulated Small MS4s pursuant to this General Permit. They may also issue individual permits to regulated Small MS4s, and alternative general permits to categories of regulated Small MS4s. Upon issuance of such permits by an RWQCB, this General Permit shall no longer regulate the affected Small MS4s.

The Permittee and RWQCB are encouraged to work together to accomplish the goals of the storm water program. Specifically, they can coordinate the oversight of construction and industrial sites. For example, Permittees are required to implement a construction program. This program must include procedures for construction site inspection and enforcement. Construction sites disturbing an acre of land or more are also subject to inspections by RWQCB under the Statewide General Permit for Discharges of Storm Water Associated with Construction Activity. U.S. EPA intended to provide a structure that requires permitting through the federal CWA while at the same time achieving local oversight of construction projects. A structured plan review process and field enforcement at the local level, which is also required by this General Permit, were cited in the preamble to the Phase II regulations as the most effective components of a construction program.

Similarly, as part of the illicit discharge detection and elimination program, the Permittee may inspect facilities that are permitted by the Statewide General Permit for Discharges of Storm Water Associated with Industrial Activity and subject to RWQCB inspections.

The Small MS4 and RWQCB are encouraged to coordinate efforts and use each of their enforcement tools in the most effective manner. For instance, the Small MS4 may identify a construction site operator that is not in compliance with the local requirements and the Construction General Permit. The Small MS4 may establish a fee for re-inspection if a site is out of compliance. If education efforts and the inspection fee fail to bring the site into compliance, the Small MS4 may contact RWQCB and arrange a dual inspection and start enforcement procedures under the CWA if compliance is not achieved.

Relationship Between the Small MS4 Permit and the General Permit for Discharges of Storm Water Associated with Industrial Activity (Industrial Permit)

Some MS4 operators may also have facilities that are subject to the Industrial Permit. While the intent of both of these permits is to reduce pollutants in storm water, neither permit's requirements totally encompass the other. This General Permit requires that MS4 operators address six Minimum Control Measures, while the Industrial Permit requires the development and implementation of Storm Water Pollution Prevention Plans (SWPPP) for certain "industrial" activities as well as requiring specific visual and chemical monitoring. In the Preamble to the Phase II regulations, U.S. EPA notes that for a combination permit to be acceptable, it must contain all of the requirements for each permit. Further, "when viewed in its entirety, a

combination permit, which by necessity would need to contain all elements of otherwise separate industrial and MS4 permit requirements, and require NOI information for each separate industrial activity, may have few advantages when compared to obtaining separate MS4 and industrial general permit coverage."

Where the permits do overlap, one program may reference the other. More specifically, the Good Housekeeping for Municipal Operations Minimum Control Measure requires evaluation of municipal operations, some of which may be covered under the Industrial Permit. The development and implementation of SWPPP under the Industrial Permit will likely satisfy the Good Housekeeping requirements for those industrial activities. SWMP may incorporate by reference the appropriate SWPPP.

There may be instances where a non-traditional MS4 has, under the Industrial Permit, obtained coverage for the entire facility (rather than only those areas where industrial activities occur) and has developed a SWPPP that addresses the six Minimum Control Measures required by this General Permit. In these instances, the non-traditional Small MS4 is not required to obtain coverage under this General Permit. The entity should, in such cases, provide to the appropriate RWQCB documentation that its SWPPP addresses the six Minimum Control Measures.

**STATE WATER RESOURCES CONTROL BOARD (SWRCB)**
**WATER QUALITY ORDER NO. 2003 - 0005 – DWQ**

**NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)**
**GENERAL PERMIT NO. CAS00000X**

# WASTE DISCHARGE REQUIREMENTS (WDRs) FOR STORM WATER DISCHARGES FROM SMALL MUNICIPAL SEPARATE STORM SEWER SYSTEMS (MS4s) (GENERAL PERMIT)

SWRCB finds that:

1. Urban runoff is a leading cause of pollution throughout California.

2. Pollutants of concern found in urban runoff include sediments, non-sediment solids, nutrients, pathogens, oxygen-demanding substances, petroleum hydrocarbons, heavy metals, floatables, polycyclic aromatic hydrocarbons (PAHs), trash, and pesticides and herbicides.

3. During urban development, two important changes occur. First, where no urban development has previously occurred, natural vegetated pervious ground cover is converted to impervious surfaces such as paved highways, streets, rooftops, and parking lots. Natural vegetated soil can both absorb rainwater and remove pollutants providing a very effective purification process. Because pavement and concrete can neither absorb water nor remove pollutants, the natural purification characteristics of the land are lost. Second, urban development creates new pollutant sources as human population density increases and brings with it proportionately higher levels of vehicle emissions, vehicle maintenance wastes, municipal sewage, pesticides, household hazardous wastes, pet wastes, trash, etc., which can be washed into the MS4. As a result of these two changes, the runoff leaving a developed urban area may be significantly greater in volume, velocity, and/or pollutant load than pre-development runoff from the same area.

4. A higher percentage of impervious area correlates to a greater pollutant loading, resulting in turbid water, nutrient enrichment, bacterial contamination, organic matter loads, toxic compounds, temperature increases, and increases of trash or debris.

5. Pollutants present in storm water can have damaging effects on both human health and aquatic ecosystems. In addition, the increased flows and volumes of storm water discharged from impervious surfaces resulting from development can significantly impact beneficial uses of aquatic ecosystems due to physical modifications of watercourses, such as bank erosion and widening of channels.

6. When water quality impacts are considered during the planning stages of a project, new development and many redevelopment projects can more efficiently incorporate measures to protect water quality.

7. On December 8, 1999, the U.S. Environmental Protection Agency (EPA) promulgated regulations under authority of the Clean Water Act (CWA) section 402(p)(6). These regulations require SWRCB to issue NPDES storm water permits to operators of small municipal separate storm sewer systems (Small MS4s) that discharge to waters of the U.S.

8. Of the Small MS4s defined by federal regulations, only "regulated Small MS4s" must obtain a permit. Title 40 of the Code of Federal Regulations (40 CFR) section 122.32(a) describes regulated Small MS4s as those traditional Small MS4s located within an urbanized area as determined by the latest Decennial Census by the Bureau of the Census and other Small MS4s that are designated by the permitting authority in accordance with designation criteria in Findings 10 and 11 below. Traditional Small MS4s within urbanized areas (Attachment 1) are automatically designated and are not subject to the designation criteria provided in Finding 10.

9. Section 123.35(b) of 40 CFR requires SWRCB to develop a process, as well as criteria, to designate Small MS4s as regulated Small MS4s.

10. In developing the designation criteria, factors were chosen to include parameters that may affect water quality. The following criteria will be considered in designating Small MS4s operated within a city or county as regulated Small MS4s.

    a. <u>High population density</u> – High population density means an area with greater than 1,000 residents per square mile. Also to be considered in this definition is a high density created by a non-residential population, such as tourists or commuters.

    b. <u>High growth or growth potential</u> – If an area grew by more than 25 percent between 1990 and 2000, it is a high growth area. If an area anticipates a growth rate of more than 25 percent over a 10-year period ending prior to the end of the first permit term, it has high growth potential.

    c. <u>Significant contributor of pollutants to an interconnected permitted MS4</u> – A Small MS4 is interconnected with a separately permitted MS4 if storm water that has entered the Small MS4 is allowed to flow directly into a permitted MS4. In general, if the Small MS4 discharges more than 10 percent of its storm water to the permitted MS4, or its discharge makes up more than 10 percent of the other permitted MS4's total storm water volume, it is a significant contributor of pollutants to the permitted MS4. In specific cases, the MS4s involved or third parties may show that the 10 percent threshold is inappropriate for the MS4 in question.

    d. <u>Discharge to sensitive water bodies</u> – Sensitive water bodies are receiving waters, which are a priority to protect. They include the following:

- those listed as providing or known to provide habitat for threatened or endangered species;

- those used for recreation that are subject to beach closings or health warnings; or

- those listed as impaired pursuant to CWA section 303(d) due to constituents of concern in urban runoff (these include biochemical oxygen demand (BOD), sediment, pathogens, oil and grease, and other constituents that are found in the MS4 discharge).

Additional criteria to qualify as a sensitive water body may exist and may be used by SWRCB or RWQCB on a case-by-case basis.

e. Significant contributor of pollutants to waters of the United States (U.S.) – Specific conditions presented by the MS4 may lead to significant pollutant loading to waters of the U.S. that are otherwise unregulated or inadequately regulated. An example of such a condition may be the presence of a large transportation industry.

This General Permit serves as notice to those Small MS4s on Attachment 2 that they are designated as regulated Small MS4s by the SWRCB at the time of permit adoption.

11. Section 122.26(b)(16)(iii) of 40 CFR defines systems that are similar to separate storm sewer systems in cities and counties, such as systems at military bases, large hospital or prison complexes, and highways and other thoroughfares as Small MS4s. In this General Permit these types of Small MS4s are referred to as non-traditional MS4s that may be designated as regulated Small MS4s and required to seek coverage under this General Permit or coverage under a separate permit. Non-traditional MS4s often operate storm sewers that are similar to traditional MS4s operated by cities or counties and discharge the same types of pollutants that are typically associated with urban runoff.

12. This permit does not designate any non-traditional MS4s. SWRCB or RWQCB may designate non-traditional MS4s at any time subsequent to the adoption of this General Permit. Non-traditional MS4s that may be designated at a future date include, but are not limited to, those listed in Attachment 3 of this General Permit.

13. Non-traditional Small MS4 entities that are designated, but whose entire facilities are subject to the NPDES General Permit for the Discharge of Storm Water Associated with Industrial Activities and whose Storm Water Pollution Prevention Plan (SWPPP) addresses all six Minimum Control Measures described in this General Permit, are not required to obtain coverage under this General Permit. Such entities must present documentation to the appropriate RWQCB, showing that they meet the requirements for exclusion from coverage.

14. This General Permit requires regulated Small MS4s (Permittees) to develop a Storm Water Management Program (SWMP) designed to reduce the discharge of pollutants to the Maximum Extent Practicable (MEP) and to protect water quality. Upon approval of SWMP by the Regional Water Quality Control Board (RWQCB) or its Executive Officer,

the Permittees obtain coverage under this General Permit. This General Permit requires implementation of SWMP.

15. SWMP will be available for public review and comment and may be subject to a public hearing if requested prior to approval.

16. Permittees can satisfy the requirements through effective implementation of a SWMP, which must contain Best Management Practices (BMPs) that address six Minimum Control Measures. SWMP must incorporate measurable goals and time schedules of implementation.

17. The MEP standard is an ever-evolving, flexible, and advancing concept, which considers technical and economic feasibility. As knowledge about controlling urban runoff continues to evolve, so does that which constitutes MEP. Reducing the discharge of storm water pollutants to MEP in order to protect beneficial uses requires review and improvement, which includes seeking new opportunities. To do this, the Permittee must conduct and document evaluation and assessment of each relevant element of its program and revise activities, control measures, BMPs, and measurable goals, as necessary to meet MEP.

18. This General Permit includes Supplemental Provisions that apply to traditional and non-traditional Small MS4s serving a population of 50,000 people or more, or that are subject to high growth. These requirements address post-construction requirements and compliance with water quality standards. These Supplemental Provisions are similar to requirements for Medium and Large MS4s (Phase I), and are appropriate because larger Small MS4s are able to have more robust storm water programs and fast-growing Small MS4s may cause greater impacts to water quality.

19. The Receiving Water Limitations language contained in Attachment 4 is identical to the language established in SWRCB Water Quality Order WQ-99-05 adopted by the SWRCB on June 17, 1999. As interpreted in SWRCB Water Quality Order WQ-2001-15, adopted by the SWRCB on November 15, 2001, the receiving water limitations in this General Permit do not require strict compliance with water quality standards, but instead require compliance with water quality standards over time, through an iterative approach requiring improved BMPs.

20. The post-construction requirements, or Design Standards, contained in Attachment 4 are consistent with Order WQ-2000-11 adopted by SWRCB on October 5, 2000.

21. The purpose of the annual performance review is to evaluate (1) SWMP's effectiveness; (2) the implementation of SWMP (3) status of measurable goals; (4) effectiveness of BMPs; and (5) improvement opportunities to achieve MEP.

22. To apply for permit coverage authorizing storm water discharges to surface waters pursuant to this General Permit, the Permittees must submit a complete application package to the appropriate RWQCB. An application package includes a Notice of Intent

(NOI) to comply with the terms of this General Permit, appropriate fee (in accordance with the most recent fee schedule[1]), and SWMP. Permittees relying entirely on separately permitted Separate Implementing Entities (SIEs) to implement their entire programs are not required to submit a SWMP if the SIE being relied on has an approved SWMP. Attachment 8 gives contact information for each RWQCB.

23. Upon receipt of a complete permit application, the application will be public noticed for thirty days on SWRCB's website. During the public notice period, a member of the public may request that a public hearing be conducted by RWQCB. If no public hearing is requested, the application may be approved by the RWQCB Executive Officer. Permittees obtain coverage under the General Permit only after the SWMP has been approved.

24. Each Permittee is individually responsible for adoption and enforcement of ordinances and/or policies, implementation of identified control measures/BMPs needed to prevent or reduce pollutants in storm water, and for allocation of funds for the capital, operation and maintenance, and enforcement expenditures necessary to implement and enforce such control measures/BMPs within its jurisdiction. Enforcement actions concerning this General Permit will be pursued only against the individual Permittee responsible for specific violations of this General Permit.

25. In accordance with 40 CFR section 122.28(b)(3), a RWQCB may issue an individual MS4 NPDES Permit to a Permittee otherwise subject to this General Permit, or adopt an alternative general permit that covers storm water discharges regulated by this General Permit. The applicability of this General Permit is automatically terminated on the effective date of the individual permit or the date of approval for coverage under the alternative general permit.

26. Certain BMPs implemented or required by Permittees for urban runoff management may create a habitat for vectors (e.g., mosquitoes and rodents) if not properly designed or maintained. Close collaboration and cooperative effort between the Permittees, local vector control agencies, RWQCB staff, and the State Department of Health Services is necessary to identify and implement appropriate vector control measures that minimize potential nuisances and public health impacts resulting from vector breeding.

27. This General Permit may be reopened and modified if the decision *in Environmental Defense Center v. EPA* is revised or vacated.

28. This NPDES Permit is consistent with the antidegradation policies of 40 CFR section 131.12, SWRCB Resolution 68-16, and RWQCBs' individual Basin Plans. Implementing storm water quality programs that address the six Minimum Control Measures in previously unregulated areas will decrease the pollutant loading to the receiving waters and improve water quality.

[1] California Code of Regulations. Title 23. Division 3. Chapter 9 Waste Discharge Reports and Requirements. Article 1 Fees.

29. Following public notice in accordance with State and federal laws and regulations, SWRCB, in public hearings on December 2, 2002 and April 30, 2003, heard and considered all comments. SWRCB has prepared written responses to all significant comments.

30. This action to adopt an NPDES Permit is exempt from the provisions of the California Environmental Quality Act (Public Resources Code § 21100, et seq.) in accordance with section 13389 of the Porter-Cologne Water Quality Control Act (Porter-Cologne) (Division 7 of the California Water Code).

31. This NPDES Permit is in compliance with Part 402 of CWA and shall take effect 100 days after adoption by SWRCB. Once in effect, RWQCBs shall enforce the provisions herein.

IT IS HEREBY ORDERED that operators of Small MS4s subject to this General Permit shall comply with the following:

A. APPLICATION REQUIREMENTS

1. Deadlines for Application

a. By August 8, 2003, all Permittees automatically designated (see Attachment 1) must either apply for coverage under this General Permit (either individually or as a co-permittee), submit an application for an individual or alternative general Small MS4 permit (if applicable), or submit a joint application for modification of an existing large or medium MS4 permit (40 CFR §122.33(c)(1)).

Permittees that submitted complete application packages prior to the adoption of this General Permit to meet the federal regulation March 10, 2003 deadline have complied with this requirement and are not required to submit a duplicate application package.

b. By October 27, 2003, traditional Small MS4s designated according to Finding 10 (see Attachment 2), must either apply for coverage under this General Permit (either individually or as a co-permittee), submit an application for an individual or alternative general Small MS4 permit, or submit a joint application for modification of an existing large or medium MS4 permit (40 CFR §122.33(c)(2)). Written notices will be sent to designated parties subsequent to adoption of this General Permit.

c. Non-traditional Small MS4s, or other Small MS4s, which are designated by RWQCB or SWRCB after adoption of this General Permit must apply for coverage under this General Permit (either individually or as a co-

permittee), submit a complete application for an individual or alternative general Small MS4 permit, or submit a joint application for modification of an existing large or medium MS4 permit (40 CFR §122.33(c)(2)). Applications must be submitted within 180 days of designation unless a later date is provided in the designation letter.

2. General Permit Application

To obtain coverage under this General Permit, submit to the appropriate RWQCB a completed NOI (Attachment 7), a complete SWMP (one hard copy and one electronic copy in Word or PDF format), and appropriate fee. SWMP shall meet all the requirements of Section D of this General Permit. Permittees relying entirely on SIEs pursuant to Provision D.6 and permitted under the NPDES program are not required to submit a SWMP.

3. General Permit Coverage

Permit coverage will be in effect upon the completion of the following:

a. The Permittee has submitted a complete permit application to the appropriate RWQCB,

b. Receipt of a complete application is noticed for a minimum of 60 days and copies provided to the public for review and comment upon request,

c. The proposed SWMP has been reviewed by RWQCB staff, and

d. SWMP has been approved by the RWQCB Executive Officer, or approved by RWQCB in a public hearing, if requested.

## B. DISCHARGE PROHIBITIONS

1. Discharges of waste that are prohibited by Statewide Water Quality Control Plans or applicable Regional Water Quality Control Plans (Basin Plans) are prohibited.

2. Discharges from the MS4s regulated under this General Permit that cause or threaten to cause nuisance are prohibited.

3. Discharges of material other than storm water to waters of the U.S. or another permitted MS4 must be effectively prohibited, except as allowed under Provision D.2.c, or as otherwise authorized by a separate NPDES permit.

C. EFFLUENT LIMITATIONS

1. Permittees must implement BMPs that reduce pollutants in storm water to the technology-based standard of MEP.

2. Storm water discharges regulated by this General Permit shall not contain a hazardous substance in amounts equal to or in excess of a reportable quantity listed in 40 CFR Part 117 or 40 CFR Part 302.

D. STORM WATER MANAGEMENT PROGRAM REQUIREMENTS

The Permittee shall maintain, implement, and enforce an effective SWMP, and develop adequate legal authority to implement and enforce the SWMP, designed to reduce the discharge of pollutants from the permitted MS4 to MEP and to protect water quality. SWMP shall serve as the framework for identification, assignment, and implementation of control measures/BMPs. The Permittee shall implement SWMP and shall subsequently demonstrate its effectiveness and provide for necessary and appropriate revisions, modifications, and improvements to reduce pollutants in storm water discharges to the MEP. SWMP shall be fully implemented by the expiration of this General Permit, or within five years of designation for Small MS4s designated subsequent to Permit adoption, with reasonable progress made towards implementation throughout the term of the General Permit. Existing programs that have storm water quality benefits can be identified in the SWMP and be a part of a Permittee's storm water program.

SWMP shall be revised to incorporate any new or modified BMPs or measurable goals developed through the Permittee's annual reporting process. The Permittee shall incorporate changes required by or acceptable to the RWQCB Executive Officer into applicable annual revisions to SWMP and adhere to its implementation.

1. The Permittee shall maintain, implement, and enforce an effective SWMP designed to reduce the discharge of pollutants from the regulated Small MS4 to the MEP and to protect water quality.

2. SWMP must describe BMPs, and associated measurable goals, that will fulfill the requirements of the following six Minimum Control Measures.

   a. **Public Education and Outreach on Storm Water Impacts**
   The Permittee must implement a public education program to distribute educational materials to the community or conduct equivalent outreach activities about the impacts of storm water discharges on water bodies and the steps that the public can take to reduce pollutants in storm water runoff. For non-traditional Permittees, the employee/user population may serve as "the public" to target for outreach and involvement.

Non-traditional Small MS4s that discharge into medium and large MS4 may integrate public education and outreach program with the existing MS4 public education and outreach programs.

b. **Public Involvement/Participation**
The Permittee must at a minimum comply with State and local public notice requirements when implementing a public involvement/participation program.

c. **Illicit Discharge Detection and Elimination**
The Permittee must:

1) Develop, implement, and enforce a program to detect and eliminate illicit discharges (as defined at 40 CFR §122.26(b)(2)) into the regulated Small MS4;

2) Develop, if not already completed, a storm sewer system map, showing the location of all outfalls and the names and locations of all waters of the U.S. that receive discharges from those outfalls;

3) To the extent allowable under State or local law, effectively prohibit, through ordinance, or other regulatory mechanism, non-storm water discharges into the MS4 and implement appropriate enforcement procedures and actions;

4) Develop and implement a plan to detect and address non-storm water discharges, including illegal dumping, to the system that are not authorized by a separate NPDES permit;

5) Inform public employees, businesses, and the general public of the hazards that are generally associated with illegal discharges and improper disposal of waste; and

6) Address the following categories of non-storm water discharges or flows (i.e., authorized non-storm water discharges) only where they are identified as significant contributors of pollutants to the Small MS4:

1. water line flushing;
2. landscape irrigation;
3. diverted stream flows;
4. rising ground waters;
5. uncontaminated ground water infiltration (as defined at 40 CFR §35.2005(20)) to separate storm sewers;
6. uncontaminated pumped ground water;
7. discharges from potable water sources;
8. foundation drains;
9. air conditioning condensation;
10. irrigation water;
11. springs;
12. water from crawl space pumps;
13. footing drains;
14. lawn watering;
15. individual residential car washing;
16. flows from riparian habitats and wetlands; and
17. dechlorinated swimming pool discharges.

Discharges or flows from fire fighting activities are excluded from the effective prohibition against non-storm water and need only be addressed where they are identified as significant sources of pollutants to waters of the U.S.

If a RWQCB Executive Officer determines that any individual or class of non-storm water discharge(s) listed above may be a significant source of pollutants to waters of the U.S. or physically interconnected MS4, or poses a threat to water quality standards (beneficial uses), the RWQCB Executive Officer may require the appropriate Permittee(s) to monitor and submit a report and to implement BMPs on the discharge.

d. **Construction Site Storm Water Runoff Control**

The Permittee must develop, implement, and enforce a program to reduce pollutants in any storm water runoff to the Small MS4 from construction activities that result in a land disturbance of greater than or equal to one acre. Reduction of storm water discharges from construction activity disturbing less than one acre must be included in your program if that construction activity is part of a larger common plan of development or sale that would disturb one acre or more. The program must include the development and implementation of, at a minimum:

1) An ordinance or other regulatory mechanism to require erosion and sediment controls, as well as sanctions, or other effective mechanisms, to ensure compliance, to the extent allowable under State, or local law;

2) Requirements for construction site operators to implement appropriate erosion and sediment control BMPs;

3) Requirements for construction site operators to control waste such as discarded building materials, concrete truck washout, chemicals, litter, and sanitary waste at the construction site that may cause adverse impacts to water quality;

4) Procedures for site plan review which incorporate consideration of potential water quality impacts;

5) Procedures for receipt and consideration of information submitted by the public; and

6) Procedures for site inspection and enforcement of control measures.

e. **Post-Construction Storm Water Management in New Development and Redevelopment**

The Permittee must:

1) Develop, implement, and enforce a program to address storm water runoff from new development and redevelopment projects that disturb greater than or equal to one acre, including projects less than one acre that are part of a larger common plan of development or sale, that discharge into the Small MS4 by ensuring that controls are in place that would prevent or minimize water quality impacts;

2) Develop and implement strategies, which include a combination of structural and/or non-structural BMPs appropriate for your community;

3) Use an ordinance or other regulatory mechanism to address post-construction runoff from new development and redevelopment projects to the extent allowable under State or local law For those Small MS4s described in Supplemental Provision E below, the requirements must at least include the design standards contained in Attachment 4 of this General Permit or a functionally equivalent program that is acceptable to the appropriate RWQCB; and

4) Ensure adequate long-term operation and maintenance of BMPs.

The General Permit does not require redesign of K-12 school or community college facilities that have been submitted to the Department of General Services, Division of the State Architect before adoption of the permit, and which receive final approval from the State Allocation Board or the Public Works Board, as appropriate, on or before December 31, 2004.

f. **Pollution Prevention/Good Housekeeping for Municipal Operations**
The Permittee must:

1) Develop and implement an operation and maintenance program that includes a training component and has the ultimate goal of preventing or reducing pollutant runoff from municipal operations; and

2) Using training materials that are available from U.S. EPA, the State, or other organizations, the program must include employee training to prevent and reduce storm water pollution from activities such as park and open space maintenance, fleet building maintenance, new construction and land disturbances, and storm water system maintenance.

3. SWMP must identify the measurable goals for each of the BMPs, including, as appropriate, the months and years for scheduled actions, including interim milestones and the frequency of the action.

4. SWMP must identify the person or persons who will implement or coordinate SWMP, as well as each Minimum Control Measure.

5. Termination of coverage

A Permittee may terminate coverage if a new operator has assumed responsibility for the MS4, the Permittee has ceased operation of the MS4, or the Permittees has eliminated discharges from the MS4. To terminate coverage, the Permittee must submit a written request to the RWQCB.

6. Reliance on a SIE

The Permittee may rely on a SIE to satisfy one or more of the permit obligations, if the separate entity can appropriately and adequately address the storm water issues of the Permittee. The Permittee must describe the arrangement in the SWMP and the arrangement is subject to the approval of the RWQCB Executive Officer. The other entity must agree to implement the control measure(s), or components thereof, to achieve compliance with the General Permit. The Permittee remains responsible for compliance with this General Permit if the SIE fails to implement the control measure(s).

If the Permittee relies on an SIE to implement all six Minimum Control Measures and the SIE also has a storm water permit issued by SWRCB or RWQCB, the Permittee relying on the SIE must still submit an NOI, appropriate fee, and certification of the arrangement. The Permittee must note this fact in the NOI and provide proof that the SIE has an approved SWMP, but is not required to maintain a SWMP nor submit annual reports.

7. Outfalls not identified in the storm sewer system map required by Provision D.2.c.2), but constructed within the permitted area during the term of this General Permit to receiving waters identified in the NOI, shall not be considered a material change in character, location, or volume of the permitted discharge, and shall be allowed under the terms of this General Permit without permit application or permit modification, provided that the following information be provided in the subsequent annual report:

   a. Receiving water name;

   b. Storm sewer system map of added area;

   c. Certification that SWMP shall be amended to include the drainage area.

E. SUPPLEMENTAL PROVISIONS

Those regulated traditional and non-traditional Small MS4s serving a population over 50,000 or that are subject to high growth (at least 25 percent over ten years) must comply with the requirements in Attachment 4 of this General Permit. Compliance is required upon full implementation of the Small MS4s' storm water management plan.

Attachment 5 provides a list of communities that SWRCB anticipates being subject to the provisions in Attachment 4.

F. REPORTING REQUIREMENTS AND MONITORING

1. Reporting

   The Permittee must submit annual reports to the appropriate RWQCB by September 15th of each year (for Small MS4s designated with the adoption of this permit, the first annual report is to be submitted in 2004), or as otherwise required by the RWQCB Executive Officer, unless exempted under Provision D.6. The report shall summarize the activities performed throughout the reporting period (July 1 through June 30) and must include:

   a. The status of compliance with permit conditions;

   b. An assessment of the appropriateness and effectiveness of the identified BMPs;

   c. Status of the identified measurable goals;

   d. Results of information collected and analyzed, including monitoring data, if any, during the reporting period;

e. A summary of the storm water activities the Permittee plans to undertake during the next reporting cycle;

f. Any proposed change(s) to SWMP along with a justification of why the change(s) are necessary; and

g. A change in the person or persons implementing and coordinating SWMP.

2. RWQCB may impose additional monitoring requirements, which may include a reporting component. RWQCBs may adopt such requirements on an individual or group basis.

3. Recordkeeping

The Permittee must keep records required by this General Permit for at least five years or the duration of the General Permit if continued. The RWQCB Executive Officer may specify a longer time for record retention. The Permittee must submit the records to the RWQCB Executive Officer upon request. The Permittee must make the records, including the permit and SWMP, available to the public during regular business hours.

G. RWQCB AUTHORITIES

RWQCBs will review and approve SWMPs prior to permit coverage being in effect and will conduct public hearings of individual permit applications upon request. Where there is no hearing, the Executive Officer may approve the SWMP. RWQCBs will also oversee compliance with this General Permit. Oversight may include, but is not limited to, reviewing reports, requiring modification to SWMPs and other submissions, imposing region-specific monitoring requirements, conducting inspections, taking enforcement actions against violators of this General Permit, and making additional designations of Permittees pursuant with the criteria described in this General Permit and Fact Sheet. The RWQCBs may also issue individual permits to regulated Small MS4s, and alternative general permits to categories of regulated Small MS4s. Upon issuance of such permits by an RWQCB, this General Permit shall no longer regulate the affected Small MS4(s).

H. STANDARD PROVISIONS

1. General Authority

Three of the minimum control measures (illicit discharge detection and elimination, and the two construction-related measures) require enforceable controls on third party activities to ensure successful implementation of the measure. Some non-traditional operators, however, may not have the necessary legal regulatory authority to adopt these enforceable controls. As in the case of

local governments that lack such authority, non-traditional MS4s are expected to utilize the authority they do possess and to seek cooperative arrangements.

2. Duty to Comply

   The Permittee must comply with all of the conditions of this General Permit. Any permit noncompliance constitutes a violation of CWA and the Porter-Cologne and is grounds for enforcement action and/or removal from General Permit coverage. In the event that the Permittee is removed from coverage under the General Permit, the Permittee will be required to seek coverage under an individual or alternative general permit.

3. General Permit Actions

   This General Permit may be modified, revoked and reissued, or terminated for cause. The filing of a request by the Permittee for a General Permit modification, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance does not nullify any General Permit condition.

   If any toxic effluent standard or prohibition (including any schedule of compliance specified in such effluent standard or prohibition) is promulgated under section 307(a) of CWA for a toxic pollutant which is present in the discharge and that standard or prohibition is more stringent than any limitation on the pollutant in this General Permit, this General Permit shall be modified or revoked and reissued to conform to the toxic effluent standard or prohibition and Permittee so notified.

4. Noncompliance Reporting

   Permittees who cannot certify compliance and/or who have had other instances of noncompliance shall notify the appropriate RWQCB within 30 days. Instances of noncompliance resulting in emergencies (i.e., that endanger human health or the environment) shall be reported orally to the RWQCB within 24 hours from the time the discharger becomes aware of the circumstance and in writing to the RWQCB within five days of the occurrence. The notification shall identify the noncompliance event and an initial assessment of any impact caused by the event, describe the actions necessary to achieve compliance, and include a time schedule indicating when compliance will be achieved. The time schedule and corrective measures are subject to modification by the RWQCB Executive Officer.

5. Need to Halt or Reduce Activity Not a Defense

   It shall not be a defense for the Permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this General Permit.

6. Duty to Mitigate

   The Permittee shall take all responsible steps to minimize or prevent any discharge in violation of this General Permit that has a reasonable likelihood of adversely affecting human health or the environment.

7. Proper Operation and Maintenance

   The Permittee shall at all times properly operate and maintain any facilities and systems of treatment and control (and related appurtenances) which are installed or used by the Permittee to achieve compliance with the conditions of this General Permit and with the requirements of SWMP. Proper operation and maintenance also includes adequate laboratory controls and appropriate quality assurance procedures. Proper operation and maintenance may require the operation of backup or auxiliary facilities or similar systems installed by the Permittee when necessary to achieve compliance with the conditions of this General Permit.

8. Property Rights

   This General Permit does not convey any property rights of any sort or any exclusive privileges, nor does it authorize any injury to private property or any invasion of personal rights, nor does it authorize any infringement of federal, State, or local laws or regulations.

9. Duty to Provide Information

   The Permittee shall furnish RWQCB, SWRCB, or U.S. EPA, during normal business hours, any requested information to determine compliance with this General Permit. The Permittee shall also furnish, upon request, copies of records required to be kept by this General Permit.

10. Inspection and Entry

    The Permittee shall allow RWQCB, SWRCB, U.S. EPA, or an authorized representative of RWQCB, SWRCB, or U.S. EPA, upon the presentation of credentials and other documents as may be required by law, to:

    a. Enter upon the Permittee's premises during normal business hours where a regulated facility or activity is located or conducted, or where records must be kept under the conditions of this General Permit;

    b. Access and copy, during normal business hours, any records that must be kept under the conditions of this General Permit within a reasonable time from notification;

c. Inspect during normal business hours any municipal facilities; and

d. Sample or monitor at reasonable times for the purpose of assuring General Permit compliance.

11. Signatory Requirements

All NOIs, SWMPs, certifications, reports, or other information prepared in accordance with this General Permit submitted to SWRCB or RWQCB shall be signed by either a principal executive officer, ranking elected official, or duly authorized representative. The principal executive officer of a Federal agency includes the chief executive officer of the agency or the senior executive officer having responsibility for the overall operations of a principal geographic unit of the agency (e.g., Regional Administrator of U.S. EPA).

12. Certification

Any person signing documents under Section H.11 above shall make the following certification:

*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 assure 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 persons directly responsible for gathering the information, to the best of my knowledge and belief, the information submitted is 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.*

13. Anticipated Noncompliance

The Permittee will give advance notice to the RWQCB and local storm water management agency of any planned changes in the regulated Small MS4 activity that may result in noncompliance with General Permit requirements.

14. Penalties for Falsification of Reports

Section 309(c)(4) of CWA provides that any person who knowingly makes any false material statement, representation, or certification in any record or other document submitted or required to be maintained under this General Permit, including reports of compliance or noncompliance, shall upon conviction, be punished by a fine of not more than $10,000 or by imprisonment for not more than two years or by both.

15. Penalties for Violations of Permit Conditions

    a. Part 309 of CWA provides significant penalties for any person who violates a permit condition implementing Parts 301, 302, 306, 307, 308, 318, or 405 of CWA or any permit condition or limitation implementing any such section in a permit issued under Part 402. Any person who violates any permit condition of this General Permit is subject to a civil penalty not to exceed $27,500 per calendar day of such violation, as well as any other appropriate sanction provided by Part 309 of CWA.

    b. Porter-Cologne also provides for administrative, civil, and criminal penalties, which in some cases are greater than those under CWA.

16. Oil and Hazardous Substance Liability

    Nothing in this General Permit shall be construed to preclude the institution of any legal action against the Permittee or relieve the Permittee from any responsibilities, liabilities, or penalties to which the Permittee is or may be subject to under Part 311 of CWA.

17. Severability

    The provisions of this General Permit are severable; and, if any provision of this General Permit or the application of any provision of this General Permit to any circumstance is held invalid, the application of such provision to other circumstances and the remainder of this General Permit shall not be affected thereby.

18. Reopener Clause

    This General Permit may be modified, revoked and reissued, or terminated for cause due to promulgation of amended regulations, or otherwise in accordance with 40 CFR sections 122.62, 122.63, 122.64, and 124.5.

19. Availability

    A copy of this General Permit and SWMP shall be made available for public review.

20. Transfers

    This General Permit is not transferable. A Permittee must submit written notification to the appropriate RWQCB to terminate coverage of this General Permit.

21. Continuation of Expired Permit

This General Permit expires five years from the date of adoption. This General Permit continues in force and in effect until a new General Permit is issued or the SWRCB rescinds this General Permit. Only those Small MS4s authorized to discharge under the expiring General Permit are covered by the continued General Permit.

CERTIFICATION

The undersigned, Clerk to the Board, does hereby certify that the foregoing is a full, true, and correct copy of an order duly and regularly adopted at a meeting of SWRCB held on April 30, 2003.

AYE: Arthur G. Baggett, Jr.
Peter S. Silva
Richard Katz
Gary M. Carlton

NO: None

ABSENT: None

ABSTAIN: None

Maureen Marché
Clerk to the Board

Operators of Municipal Separate Storm Sewer Systems that serve areas within urbanized areas are automatically designated as regulated Small MS4s. These include the following areas. (For cities, the permit area boundary is the city boundary. For counties, permit boundaries must at least be inclusive of urbanized areas. The boundaries must be proposed in the permit application and may be developed in conjunction with the applicable regional water quality control board.)

**Region 1**
City of Cotati
Graton, County of Sonoma
City of Healdsburg
City of Rohnert Park
City of Sebastapool
Town of Windsor
County of Sonoma

**Region 2**
City of Belvedere
City of Benicia
Black Point-Green Point, County of Marin
Town of Corte Madera
Town of Fairfax
City of Larkspur
Lucas Valley-Marinwood, County of Marin
City of Mill Valley
City of Napa
City of Novato
City of Petaluma
Town of Ross
Town of San Anselmo
City of San Francisco (those areas not served by a CSO)
City of San Rafael
City of Sausalito
City of Tamalpais-Homestead Valley
City of Tiburon
Woodacre, County of Marin
County of Napa
County of Marin
County of Solano
County of Sonoma
County of San Francisco (those areas not served by a CSO)

**Region 3**
Aptos, County of Santa Cruz
City of Atascadero
Ben Lomand, County of Santa Cruz
Boulder Creek, County of Santa Cruz

City of Capitola
City of Carmel-by-the-Sea
Carmel Valley Village, County of Monterey
City of Carpinteria
Castroville, County of Monterey
Coralitos, County of Santa Cruz
City of Del Ray Oaks
Felton, County of Santa Cruz
City of Gilroy
Goleta, County of Santa Barbara
Isla Vista, County of Santa Barbara
Las Lomas, County of Santa Cruz
Live Oak, County of Santa Cruz
City of Lompoc
City of Marina
Montecito, County of Santa Barbara
City of Monterey
City of Morgan Hill
Nipomo, County of San Luis Obispo
Orcutt, County of Santa Barbara
City of Pacific Grove
Pajaro, County of Monterey
City of Paso Robles
Pebble Beach, County of Monterey
Prunedale, Count of Monterey
City of San Luis Obispo
City of Sand City
San Martin, County of Santa Clara
City of Santa Barbara
City of Santa Cruz
City of Santa Maria
City of Scotts Valley
City of Seaside
Soquel, County of Santa Cruz
Summerland, County of Santa Cruz
City of Watsonville
Templeton, County of San Luis Obispo
Vandenberg Village, County of Santa Barbara
County of Monterey
County of San Luis Obispo
County of Santa Barbara
County of Santa Clara
County of Santa Cruz

**Region 5**
City of Anderson
City of Atwater
City of Auburn

Bondelle Ranchos, County of Madera
City of Ceres
City of Chico
City of Davis
City of Delhi
El Dorado Hills, County of El Dorado
Empire, County of Stanislaus
City of Exeter
City of Farmersville
French Camp, County of San Joaquin
Goshen, County of Tulare
Granite Bay, County of Placer
City of Hughson
Kennedy, County of San Joaquin
Keyes, County of Stanislaus
City of Lathrop
Linda, County of Yuba
City of Lodi
Town of Loomis
City of Madera
Madera Acres, County of Madera
City of Manteca
City of Marysville
City of Merced
Morada, County of San Joaquin
North Auburn, County of Placer
North Woodbridge, County of San Joaquin
Olivehurst, County of Yuba
City of Porterville
City of Redding
City of Ripon
City of Riverbank
City of Rocklin
City of Roseville
Salida, County of Stanislaus
City of Shasta Lake
Strathmore, County of Tulare
South Yuba City, County of Sutter
City of Tracy
City of Turlock
City of Vacaville
City of Visalia
City of West Sacramento
City of Winton
City of Yuba City
County of Butte
County of Madera
County of Merced

County of Placer
County of San Joaquin
County of Shasta
County of Solano
County of Stanislaus
County of Sutter
County of Tulare
County of Yolo
County of Yuba

**Region 6**
City of Apple Valley
City of Hesperia
City of Lancaster
City of Palmdale
City of Victorville
County of San Bernadino
County of Los Angeles

**Region 7**
City of El Centro
Heber, County of Imperial
City of Imperial
County of Imperial

Operators of Municipal Separate Storm Sewer Systems that serve areas that are designated by the State Water Resources Control Board or Regional Water Quality Control Board in accordance with the designation criteria contained in the General Permit are regulated Small MS4s. These include, but are not limited to, the following areas. (For cities, the permit area boundary is the city boundary. For counties, permit boundaries must at least be inclusive of urbanized areas. The boundaries must be proposed in the permit application and may be developed in conjunction with the applicable regional water quality control board.)

**Region 1**

| Area | Justification | Details |
|---|---|---|
| City of Arcata | • Discharge Into A Sensitive Water Body<br>• High Population Density | • Mad River which is on the 303(d) list for sediment/turbidity<br>• Urban cluster |
| City of Eureka | • Discharge Into A Sensitive Water Body<br>• High Population Density | • Elk River and Freshwater Creek which are listed on the 303(d) list for sedimentation/siltation<br>• Urban cluster |
| City of Fort Bragg | • Discharge Into A Sensitive Water Body<br>• High Population Density | • Noyo River which is listed for sedimentation/siltation<br>• Urban cluster |
| City of Fortuna | • Discharge Into A Sensitive Water Body<br>• High Population Density | • Eel River which is on the 303(d) list for sedimentation/siltation and temperature<br>• Urban cluster |
| McKinleyville, County of Humboldt | • Discharge Into A Sensitive Water Body<br>• High Population Density | • Mad River which is on the 303(d) list for sedimentation/siltation and turbidity<br>• Urban cluster |
| City of Ukiah | • Discharge Into A Sensitive Water Body<br>• High Population Density | • Russian River which is listed for sedimentation/siltation<br>• Urban cluster |
| County of Mendocino | • Discharge Into A Sensitive Water Body<br>• High Population Density | • Russian River which is listed for sedimentation/siltation<br>• Urban cluster<br>• |

**Region 2**

| Area | Justification | Details |
|---|---|---|
| City of Calistoga | • Discharge Into A Sensitive Water Body<br>• High Population Density | • Napa River, which is on the 303(d) list for sediment, nutrients, and pathogens<br>• Urban cluster |
| City of St. Helena | • Discharge Into A Sensitive Water Body<br>• High Population Density | • Napa River, which is on the 303(d) list for sediment, nutrients, and pathogens<br>• Urban cluster |
| City of Sonoma | • Discharge Into A Sensitive Water Body<br>• High Population Density | • Sonoma Creek, which is on the 303(d) list for sediment, nutrients, and pathogens<br>• Urban cluster |
| Town of Yountville | • Discharge Into A Sensitive Water Body<br>• High Population Density | • Napa River, which is on the 303(d) list for sediment, nutrients, and pathogens<br>• Urban cluster |

**Region 3**

| Area | Justification | Details |
|---|---|---|
| City of Arroyo Grande | • High Population Density | • Tourism, Urban cluster |
| Baywood-Los Osos, County of San Luis Obispo | • Discharge Into A Sensitive Water Body<br>• High Population Density | • Morro Bay which is on the 303(d) list for sediments<br>• Urban cluster |
| City of Buellton | • Discharge Into A Sensitive Water Body<br>• High Population Density | • Santa Ynez River, which is on the 303(d) list for nutrients and sediment<br>• Urban cluster |
| Cambria, County of San Luis Obispo | • Discharge Into A Sensitive Water Body<br>• High Population Density | • Marine Sanctuary<br>• Urban cluster |
| City of Greenfield | • Discharge Into A Sensitive Water Body<br>• High Growth Rate<br>• High Population Density | • Salinas River, which is listed for sediment and salinity/TDS/chlorides<br>• 68.6% over 10 years<br>• Urban cluster |
| City of Grover Beach | • High Population Density | • Tourism, Urban cluster |
| City of Hollister | • Discharge Into A Sensitive Water Body<br>• High Growth Rate<br>• High Population Density | • San Benito River, which is listed for sediment<br>• 79.1% over 10 years<br>• Urban cluster |
| City of King City | • Discharge Into A Sensitive | • Salinas River, which is listed |

| | | |
|---|---|---|
| | Water Body<br>• High Growth Rate<br>• High Population Density | for sediment and salinity/TDS/chlorides<br>• 45.3% over 10 years<br>• Urban cluster |
| | • | • |
| Los Olivos, County of Santa Barbara | • Discharge Into A Sensitive Water Body<br>• High Population Density | • Santa Ynez River, which is on the 303(d) list for nutrients and sediment<br>• Urban Cluster |
| City of Morro Bay | • Discharge Into A Sensitive Water Body<br>• High Population Density | • Morro Bay, which is on the 303(d) list for sediments<br>• Urban cluster |
| Oceano, County of San Luis Obispo | • High Population Density | • Tourism, Urban cluster |
| City of Pismo Beach | • High Population Density | • Tourism, Urban cluster |
| Santa Ynez, County of Santa Barbara | • Discharge Into A Sensitive Water Body<br>• High Population Density | • Santa Ynez River, which is on the 303(d) list for nutrients and sediment<br>• Urban cluster |
| Shell Beach, County of San Luis Obispo | • High Population Density | • Tourism |
| City of Soledad | • Discharge Into A Sensitive Water Body<br>• High Growth Rate<br>• High Population Density | • Salinas River, which is listed for sediment and salinity/TDS/chlorides<br>• 57.6% over 10 years<br>• Urban cluster |
| City of Solvang | • Discharge Into A Sensitive Water Body<br>• High Population Density | • Santa Ynez River, which is on the 303(d) list for nutrients and sediment<br>• Urban cluster<br>• Tourism |

**Region 5**

| Area | Justification | Details |
|---|---|---|
| City of Clearlake | • Discharge Into A Sensitive Water Body<br>• High Population Density | • Clear Lake which is on the 303(d) list for mercury and nutrients<br>• Urbanized cluster |
| City of Dixon | • High Growth Or Growth Potential<br>• High Population Density | • 54.8% over 10 years<br>• Urban cluster |
| City of Grass Valley | • Discharge To Sensitive Water Bodies<br>• High Growth Potential | • Receiving waters support threatened and endangered species |

| | | |
|---|---|---|
| | • High Population Density | • Urban cluster |
| City of Hanford | • Urbanized Area in corrected census data | • Urbanized Area in corrected census data |
| City of Kingsburg | • Discharge To Sensitive Water Bodies<br>• High Population Density | • Kings River, used for recreation and agriculture supply<br>• Urban cluster |
| City of Lakeport | • Discharge To Sensitive Water Bodies<br>• High Population Density | • Clear Lake which is on the 303(d) list for mercury and nutrients<br>• Urban cluster |
| City of Lemoore | • Urbanized Area in corrected census data | • Urbanized Area in corrected census data |
| City of Lincoln | • Discharge To Sensitive Water Bodies<br>• High Growth And Growth Potential<br>• High Population Density | • Receiving waters support threatened and endangered species<br>• 54.6% over 10 years and continuing at 15% per year<br>• Urban cluster |
| City of Los Baños | • Discharge Into A Sensitive Water Body<br>• High Growth<br>• High Population Density | • Los Baños Canal which is used for agriculture supply and flows into a water of the U.S.<br>• 78.2% growth over 10 years<br>• Urban cluster |
| City of Oakdale | • Discharge To Sensitive Water Body<br>• High Growth<br>• High Population Density | • Stanislaus River which is on the 303(d) list for pesticides and unknown toxicity<br>• 29.6% over 10 years<br>• Urban cluster |
| City of Patterson | • Discharge To Sensitive Water Body<br>• High Growth<br>• High Population Density | • San Joaquin river which is on the 303(d) list for pesticides, and unknown toxicity<br>• 34.5% over 10 years<br>• Urban cluster |
| City of Placerville | • Discharge To Sensitive Water Body<br>• High Population Density | • Receiving waters support threatened and endangered species<br>• Urban cluster |
| City of Reedley | • Discharge Into Sensitive Water Body<br>• High Population Density | • Kings River, used for recreation and agriculture supply<br>• Urban cluster |
| City of Rio Vista | • Discharge To Sensitive Water Body | • Sacramento River, Delta, which is on the 303(d) list |

| | | |
|---|---|---|
| | • High Population Growth Potential<br>• High Population Density | for pesticides, mercury, and unknown toxicity<br>• 210% projected growth between 2000 and 2010<br>• Urban cluster |
| City of Selma | • Discharge To Sensitive Water Bodies<br>• High Population Density | • Discharge to Consolidated Irrigation Canal, which is tributary to Kings River, used for recreation and agriculture supply<br>• Urban cluster |
| City of Tulare | • High Growth<br>• Contributor Of Pollutants To Waters Of The U.S.<br>• High Population Density | • 32.3% growth over 10 years<br>• High population, approaching "urbanized area"<br>• Urban cluster |
| City of Woodland | • Significant Contributor Of Pollutants To Waters Of The U.S.<br>• High Population Density<br>• Discharge To Sensitive Water Bodies | • 49,151 people at the time of the census, essentially the same threat as an urbanized area<br>• Urban cluster<br>• Contact recreation |
| County of Kings | • Urbanized Area in corrected census data | • Urbanized Area in corrected census data |
| County of Lake | • Discharge To Sensitive Water Bodies<br>• High Population Density | • Clear Lake which is on the 303(d) list for mercury and nutrients<br>• Urban cluster |

**Region 7**

| Area | Justification | Details |
|---|---|---|
| City of Brawley | • Discharge To Sensitive Water Body<br>• High Population Density | • New River which is on the 303(d) list for bacteria, nutrients, pesticides, and sedimentation<br>• Urban cluster |
| City of Calexico | • Discharge To Sensitive Water Body<br>• High Population Density | • New River which is on the 303(d) list for bacteria, nutrients, pesticides, and sedimentation<br>• Urban cluster |

# Non-Traditional Small MS4s

**Attachment 3**
**WQO# 2003 – 0005 – DWQ**

**Non-traditional Small MS4s anticipated to be designated in the future will include the following entities.**

| Region | Agency | Facility | Address | City, State, ZIP |
|---|---|---|---|---|
| 1 | California Community Colleges | College of the Redwoods | 7351 Tompkins Hill Road | Eureka, CA 95501-9301 |
| 1 | California Community Colleges | Mendocino College | 1000 Hensley Creek Rd. PO Box 3000 | Ukiah, CA 95482-0300 |
| 1 | California Community Colleges | Santa Rosa Junior College - Santa Rosa Campus | 1501 Mendocino Avenue | Santa Rosa, CA 95401-4395 |
| 1 | California State University | Humboldt State University | 1 Harpst Street | Arcata, CA 95521-8299 |
| 1 | California State University | Sonoma State University | 1801 East Cotati Ave. | Rohnert Park, CA 94928-3609 |
| 1 | District Agricultural Association | Humboldt County Fairgrounds | 3750 Harris Street | Eureka, CA |
| 1 | District Agricultural Association | Mendocino County Fairgrounds | 1055 North State Street | Ukiah, CA |
| 1 | School District, Alexander Valley Union Elementary | | 8511 Hwy. 128 | Healdsburg, CA 95448-9020 |
| 1 | School District, Arcata Elementary | | 1435 Buttermilk Lane | Arcata, CA 95521- |
| 1 | School District, Bellevue Union Elementary | | 3223 Primrose Ave. | Santa Rosa, CA 95407-7723 |
| 1 | School District, Bennett Valley Union Elementary | | 2250 Mesquite Dr. | Santa Rosa, CA 95405-8310 |
| 1 | School District, Cotati-Rohnert Park Unified | | 1601 E Cotati Ave. | Rohnert Park, CA 94928-3606 |
| 1 | School District, Eureka City Unified | | 3200 Walford Ave. | Eureka, CA 95503-4887 |
| 1 | School District, Fieldbrook Elementary | | 4070 Fieldbrook Road | Arcata, CA 95521-9709 |
| 1 | School District, Fort Bragg Unified | | 312 S. Lincoln St. | Fort Bragg, CA 95437-4416 |
| 1 | School District, Fortuna Union Elementary | | 843 L St. | Fortuna, CA 95540-1921 |
| 1 | School District, Fortuna Union High | | 379 12th St. | Fortuna, CA 95540-2357 |
| 1 | School District, Freshwater Elementary | | 75 Greenwood Heights Dr. | Eureka, CA 95503-9569 |
| 1 | School District, Garfield Elementary | | 2200 Freshwater Road | Eureka, CA 95503-9562 |
| 1 | School District, Gravenstein Union Elementary | | 3840 Twig Ave. | Sebastopol, CA 95472-5750 |
| 1 | School District, Healdsburg Unified | | 925 University St. | Healdsburg, CA 95448-3528 |
| 1 | School District, Mark West Union Elementary | | 305 Mark West Springs Road | Santa Rosa, CA 95404-1101 |
| 1 | School District, McKinleyville Union Elementary | | 2275 Central Ave. | McKinleyville, CA 95519-3611 |
| 1 | School District, Oak Grove Union Elementary | | 5285 Hall Road | Santa Rosa, CA 95401-5566 |
| 1 | School District, Pacific Union Elementary | | 3001 Janes Road | Arcata, CA 95521-4701 |
| 1 | School District, Piner-Olivet Union Elementary | | 3450 Coffey Lane | Santa Rosa, CA 95403-1919 |
| 1 | School District, Rincon Valley Union Elementary | | 1000 Yulupa Ave. | Santa Rosa, CA 95405-7020 |
| 1 | School District, Rohnerville Elementary | | 3850 Rohnerville Road | Fortuna, CA 95540-3122 |
| 1 | School District, Roseland Elementary | | 950 Sebastopol Road | Santa Rosa, CA 95407-6829 |
| 1 | School District, Santa Rosa Elementary | | 211 Ridgway Ave. | Santa Rosa, CA 95401-4320 |
| 1 | School District, Santa Rosa High | | 211 Ridgway Ave. | Santa Rosa, CA 95401-4320 |
| 1 | School District, Sebastopol Union Elementary | | 7905 Valentine Ave. | Sebastopol, CA 95472-3214 |
| 1 | School District, South Bay Union Elementary | | 5248 Vance Ave. | Eureka, CA 95503-6351 |
| 1 | School District, Twin Hills Union Elementary | | 700 Water Trough Road | Sebastopol, CA 95472-3917 |
| 1 | School District, Ukiah Unified | | 925 N. State St. | Ukiah, CA 95482-3411 |
| 1 | School District, West Side Union Elementary | | 1201 Felta Road | Healdsburg, CA 95448-9476 |
| 1 | School District, West Sonoma County Union High | | 462 Johnson St. | Sebastopol, CA 95472- |

| Region | Agency | Facility | Address | City, State, ZIP |
|---|---|---|---|---|
| 1 | School District, Windsor Unified | | 9291 Old Redwood Hwy. #300 C | Windsor, CA 95492-9217 |
| 1 | School District, Wright Elementary | | 4385 Price Ave. | Santa Rosa, CA 95407-6550 |
| 2 | Bureau of Prisons | FCI Dublin | 5701 8th Street - Camp Parks | Dublin, CA 94568 |
| 2 | California Air National Guard | 129th Rescue Wing | PO Box 103 | Moffett Airfield, CA 94035-5006 |
| 2 | California Community Colleges | Canada College | 4200 Farm Hill Boulevard | Redwood City, CA 94061-1099 |
| 2 | California Community Colleges | Chabot College | 25555 Hesperian Blvd PO Box 5001 | Hayward, CA 94545-5001 |
| 2 | California Community Colleges | City College of San Francisco | 50 Phelan Avenue, E200 | San Francisco, CA 94112-1898 |
| 2 | California Community Colleges | College of Alameda | 555 Atlantic Avenue | Alameda, CA 94501-2109 |
| 2 | California Community Colleges | College of San Mateo | 1700 West Hillsdale Boulevard | San Mateo, CA 94402-3784 |
| 2 | California Community Colleges | Contra Costa College | 2600 Mission Bell Drive | San Pablo, CA 94806-3195 |
| 2 | California Community Colleges | DeAnza College | 21250 Stevens Creek Boulevard | Cupertino, CA 95014-5797 |
| 2 | California Community Colleges | Diablo Valley College | 321 Golf Club Road | Pleasant Hill, CA 94523-1544 |
| 2 | California Community Colleges | Evergreen Valley College | 3095 Yerba Buena Road | San Jose, CA 95135-1598 |
| 2 | California Community Colleges | Foothill College | 12345 El Monte Road | Los Altos Hills, CA 94022-4599 |
| 2 | California Community Colleges | Laney College | 900 Fallon Street | Oakland, CA 94607-4893 |
| 2 | California Community Colleges | Las Positas College | 3033 Collier Canyon Road | Livermore, CA 94550-7650 |
| 2 | California Community Colleges | Los Medanos College | 2700 East Leland Road | Pittsburg, CA 94565-5197 |
| 2 | California Community Colleges | Merritt College | 12500 Campus Drive | Oakland, CA 94619-3196 |
| 2 | California Community Colleges | Mission College | 3000 Mission College Boulevard | Santa Clara, CA 95054-1897 |
| 2 | California Community Colleges | Napa Valley College | 2277 Napa Vallejo Highway | Napa, CA 94558-6236 |
| 2 | California Community Colleges | Ohlone College | 43600 Mission Boulevard | Fremont, CA 94539-0911 |
| 2 | California Community Colleges | San Jose City College | 2100 Moorpark Avenue | San Jose, CA 95128-2799 |
| 2 | California Community Colleges | Santa Rosa Junior College - Petaluma Campus | 680 Sonoma Mountain Parkway | Petaluma, CA 94952 |
| 2 | California Community Colleges | Skyline College | 3300 College Drive | San Bruno, CA 94066-1662 |
| 2 | California Community Colleges | Solano Community College | 4000 Suisun Valley Road | Suisun City, CA 94585-3197 |
| 2 | California Community Colleges | Vista College | 2020 Milvia Street | Berkeley, CA 94704-1183 |
| 2 | California Community Colleges | West Valley College | 14000 Fruitvale Avenue | Saratoga, CA 95070-5699 |
| 2 | California State University | California State University Hayward | 25800 Carlos Bee Blvd | Hayward, CA 94542 |
| 2 | California State University | California State University Maritime | 200 Maritime Academy Drive | Vallejo, CA 94590 |
| 2 | California State University | CSU Maritime Academy | 200 MARITIME | Vallejo, CA |
| 2 | California State University | SF State University | 1600 Holloway Avenue | San Francisco, CA 94132 |
| 2 | Corrections, Dept of | San Quentin State Prison | | San Quentin, CA 94964 |
| 2 | Defense, Department of | Camp Parks | Bldg 790 Reserve Forces Training Area | Dublin, CA 94568-5201 |
| 2 | Defense, Department of | Concord Naval Weapons Station | 10 Delta St | Concord, CA 94520-5100 |
| 2 | Defense, Department of | Oakland Army Base | | , CA |
| 2 | Defense, Department of | Onizuka Air Station | 1080 Lockheed Martin Way Box 41 | Sunnyvale, CA 94089-1237 |
| 2 | Defense, Department of | San Bruno Naval Facility | 900 Commodore Drive | San Bruno, CA 94066-5006 |
| 2 | Defense, Department of | Santa Clara Naval Reserve Center | 500 Shenandoah Plaza, P.O. Box 128, M | Mountain View, CA 94035-0128 |
| 2 | Defense, Department of | Travis Air Force Base | 60 Support Group | Travis AFB, CA 94535-5049 |
| 2 | Developmental Services, Dept of | Agnews Devolopmental Center East & West | 3500 Zanker Road | San Jose, CA |
| 2 | District Agricultural Association | Napa County Fairgrounds | 575 Third Street | Napa, CA |
| 2 | District Agricultural Association | Sonoma-Marin Fair | Fairgrounds Dr | Petaluma, CA |

| Region | Agency | Facility | Address | City, State, ZIP |
|---|---|---|---|---|
| 2 | Education, Dept of | Calif. School for the Blind | 500 Walnut Ave. | Fremont, CA 94536-4365 |
| 2 | Education, Dept of | Calif. School for the Deaf | 39350 Gallaudet Dr. | Fremont, CA 94538-2308 |
| 2 | Energy, Dept of | Sandia National Labs., CA Pgms. | P.O. Box 969, MS-9221 | Livermore, CA 94550 |
| 2 | Health Services, Dept of | Fairfield Animal Facility | 6250 Lambie Road | Suisun City, CA |
| 2 | Menatl Health, Dept of | Napa State Hospital | 2100 Napa-Vallejo Hwy | Napa, CA |
| 2 | NASA | Moffett Federal Air Field | NASA - AMES, MS 218-1 | Moffett Airfield, CA 94035 |
| 2 | Port of Oakland | | 530 Water Street | Oakland, CA 94607 |
| 2 | Presido Trust | | 34 Graham Street PO Box 29052 | San Franciso, CA 94129-0052 |
| 2 | Rehabilitation, Dept of | Center for the Blind | 400 Adams Street | Albany, CA |
| 2 | San Mateo Union High School District | | 650 N. Delaware St. | San Mateo, CA 94401-1795 |
| 2 | School District, Acalanes Union High | | 1212 Pleasant Hill Road | Lafayette, CA 94549-2623 |
| 2 | School District, Alameda City Unified | | 2200 Central Ave. | Alameda, CA 94501-4450 |
| 2 | School District, Albany City Unified | | 904 Talbot Ave. | Albany, CA 94706-2020 |
| 2 | School District, Alum Rock Union Elementary | | 2930 Gay Ave. | San Jose, CA 95127-2322 |
| 2 | School District, Bayshore Elementary | | 1 Martin St. | Daly City, CA 94014-1603 |
| 2 | School District, Belmont-Redwood Shores Elementary | | 2960 Hallmark Dr. | Belmont, CA 94002-2943 |
| 2 | School District, Benicia Unified | | 350 East K St. | Benicia, CA 94510-3437 |
| 2 | School District, Berkeley Unified | | 2134 Martin Luther King, Jr. W | Berkeley, CA 94704-1109 |
| 2 | School District, Berryessa Union Elementary | | 1376 Piedmont Road | San Jose, CA 95132-2427 |
| 2 | School District, Brisbane Elementary | | 1 Solano St. | Brisbane, CA 94005-1342 |
| 2 | School District, Burlingame Elementary | | 1825 Trousdale Dr | Burlingame, CA 94010-4509 |
| 2 | School District, Cabrillo Unified | | 498 Kelly Ave. | Half Moon Bay, CA 94019-1636 |
| 2 | School District, Calistoga Joint Unified | | 1520 Lake St. | Calistoga, CA 94515-1605 |
| 2 | School District, Cambrian Elementary | | 4115 Jacksol Dr. | San Jose, CA 95124-3312 |
| 2 | School District, Campbell Union Elementary | | 155 N. Third St. | Campbell, CA 95008-2044 |
| 2 | School District, Campbell Union High | | 3235 Union Ave. | San Jose, CA 95124-2009 |
| 2 | School District, Canyon Elementary | | 187 Pinehurst Road | Canyon, CA 94516-0187 |
| 2 | School District, Castro Valley Unified | | 4430 Alma Ave. | Castro Valley, CA 94546-0146 |
| 2 | School District, Cinnabar Elementary | | 286 Skillman Lane | Petaluma, CA 94975-0399 |
| 2 | School District, Cupertino Union Elementary | | 10301 Vista Dr. | Cupertino, CA 95014-2040 |
| 2 | School District, Dixie Elementary | | 380 Nova Albion Way | San Rafael, CA 94903-3523 |
| 2 | School District, Dublin Unified | | 7471 Larkdale Ave. | Dublin, CA 94568-1500 |
| 2 | School District, Dunham Elementary | | 4111 Roblar Road | Petaluma, CA 94952-9202 |
| 2 | School District, East Side Union High | | 830 N. Capitol Ave. | San Jose, CA 95133-1316 |
| 2 | School District, Emery Unified | | 4727 San Pablo Ave. | Emeryville, CA 94608-3035 |
| 2 | School District, Evergreen Elementary | | 3188 Quimby Road | San Jose, CA 95148-3022 |
| 2 | School District, Fairfield-Suisun Unified | | 1975 Pennsylvania Ave. | Fairfield, CA 94533- |
| 2 | School District, Franklin-McKinley Elementary | | 645 Wool Creek Dr. | San Jose, CA 95112-2617 |
| 2 | School District, Fremont Unified | | 4210 Technology Dr. | Fremont, CA 94537-5008 |
| 2 | School District, Fremont Union High | | 589 W. Fremont Ave. | Sunnyvale, CA 94087- |
| 2 | School District, Hayward Unified | | 24411 Amador St. | Hayward, CA 94540-0001 |
| 2 | School District, Hillsborough City Elementary | | 300 El Cerrito Ave. | Hillsborough, CA 94010-6818 |

| Region | Agency | Facility | Address | City, State, ZIP |
|---|---|---|---|---|
| 2 | School District, Jefferson Elementary | | 101 Lincoln Ave. | Daly City, CA 94015-3934 |
| 2 | School District, Jefferson Union High | | 699 Serramonte Blvd.,Suite 100 | Daly City, CA 94015-4132 |
| 2 | School District, John Swett Unified | | 341 #B (Selby) | Crockett, CA 94525- |
| 2 | School District, La Honda-Pescadero Unified | | 620 North St | Pescadero, CA 94060-0189 |
| 2 | School District, Lafayette Elementary | | 3477 School St. | Lafayette, CA 94549-1029 |
| 2 | School District, Laguna Joint Elementary | | 3286 Chileno Valley Road | Petaluma, CA 94952-9428 |
| 2 | School District, Laguna Salada Union Elementary | | 375 Reina del Mar | Pacifica, CA 94044-3052 |
| 2 | School District, Lakeside Joint Elementary | | 19621 Black Road | Los Gatos, CA 95030-9522 |
| 2 | School District, Larkspur Elementary | | 230 Doherty Dr. | Larkspur, CA 94939- |
| 2 | School District, Las Lomitas Elementary | | 1011 Altschul Ave. | Menlo Park, CA 94025-6706 |
| 2 | School District, Liberty Elementary | | 170 Liberty Road | Petaluma, CA 94952-1074 |
| 2 | School District, Lincoln Elementary | | 1300 Hicks Valley Road | Petaluma, CA 94952-9407 |
| 2 | School District, Livermore Valley Joint Unified | | 685 E. Jack London Blvd. | Livermore, CA 94550-1800 |
| 2 | School District, Loma Prieta Joint Union Elementary | | 23800 Summit Road | Los Gatos, CA 95033-4054 |
| 2 | School District, Los Altos Elementary | | 201 Covington Road | Los Altos, CA 94024-4030 |
| 2 | School District, Los Gatos Union Elementary | | 15766 Poppy Lane | Los Gatos, CA 95030-3228 |
| 2 | School District, Los Gatos-Saratoga Joint Union High | | 17421 Farley Road West | Los Gatos, CA 95030-3308 |
| 2 | School District, Luther Burbank Elementary | | 4 Wabash Ave. | San Jose, CA 95128-1931 |
| 2 | School District, Martinez Unified | | 921 Susana St. | Martinez, CA 94553-1848 |
| 2 | School District, Menlo Park City Elementary | | 181 Encinal Ave. | Atherton, CA 94027-3102 |
| 2 | School District, Mill Valley Elementary | | 411 Sycamore Ave. | Mill Valley, CA 94941-2231 |
| 2 | School District, Millbrae Elementary | | 555 Richmond Dr. | Millbrae, CA 94030-1600 |
| 2 | School District, Milpitas Unified | | 1331 E. Calaveras Blvd. | Milpitas, CA 95035-5707 |
| 2 | School District, Montebello Elementary | | 15101 Montebello Road | Cupertino, CA 95014-5431 |
| 2 | School District, Moraga Elementary | | 1540 School St. | Moraga, CA 94556-0158 |
| 2 | School District, Moreland Elementary | | 4710 Campbell Ave. | San Jose, CA 95130-1709 |
| 2 | School District, Mountain View-Los Altos Union High | | 1299 Bryant Ave. | Mountain View, CA 94040-4527 |
| 2 | School District, Mountain View-Whisman Elementary | | 750 A San Pierre Way | Mountain View, CA 94043- |
| 2 | School District, Mt. Diablo Unified | | 1936 Carlotta Dr. | Concord, CA 94519-1358 |
| 2 | School District, Mt. Pleasant Elementary | | 3434 Marten Ave. | San Jose, CA 95148- |
| 2 | School District, Napa Valley Unified | | 2425 Jefferson St. | Napa, CA 94558-4931 |
| 2 | School District, New Haven Unified | | 34200 Alvarado-Niles Road | Union City, CA 94587-4402 |
| 2 | School District, Newark Unified | | 5715 Musick Ave. | Newark, CA 94560-0385 |
| 2 | School District, Novato Unified | | 1015 Seventh St. | Novato, CA 94945-2205 |
| 2 | School District, Oak Grove Elementary | | 6578 Santa Teresa Blvd. | San Jose, CA 95119-1204 |
| 2 | School District, Oakland Unified | | 1025 Second Ave. | Oakland, CA 94606-2212 |
| 2 | School District, Old Adobe Union Elementary | | 845 Crinella Dr. | Petaluma, CA 94954-4450 |
| 2 | School District, Orchard Elementary | | 921 Fox Lane | San Jose, CA 95131- |
| 2 | School District, Orinda Union Elementary | | 8 Altarinda Road | Orinda, CA 94563-2603 |
| 2 | School District, Palo Alto Unified | | 25 Churchill Ave. | Palo Alto, CA 94306-1005 |
| 2 | School District, Petaluma City Elementary | | 200 Douglas St. | Petaluma, CA 94952-2575 |
| 2 | School District, Petaluma Joint Union High | | 200 Douglas St. | Petaluma, CA 94952-2575 |

| Region | Agency | Facility | Address | City, State, ZIP |
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| 2 | School District, Piedmont City Unified | | 760 Magnolia Ave. | Piedmont, CA 94611-4047 |
| 2 | School District, Pittsburg Unified | | 2000 Railroad Ave. | Pittsburg, CA 94565-3830 |
| 2 | School District, Pleasanton Unified | | 4665 Bernal Ave. | Pleasanton, CA 94566-7449 |
| 2 | School District, Portola Valley Elementary | | 4575 Alpine Road | Portola Valley, CA 94028-8040 |
| 2 | School District, Ravenswood City Elementary | | 2160 Euclid Ave. | East Palo Alto, CA 94303-1703 |
| 2 | School District, Redwood City Elementary | | 750 Bradford St. | Redwood City, CA 94063-1727 |
| 2 | School District, Reed Union Elementary | | 105A Avenida Miraflores | Tiburon, CA 94920- |
| 2 | School District, Ross Elementary | | Lagunitas and Allen Aves. | Ross, CA 94957-1058 |
| 2 | School District, Ross Valley Elementary | | 46 Green Valley Court | San Anselmo, CA 94960-1112 |
| 2 | School District, San Bruno Park Elementary | | 500 Acacia Ave. | San Bruno, CA 94066-4298 |
| 2 | School District, San Carlos Elementary | | 826 Chestnut St. | San Carlos, CA 94070-3802 |
| 2 | School District, San Francisco Unified | | 135 Van Ness Ave. | San Francisco, CA 94102-5207 |
| 2 | School District, San Jose Unified | | 855 Lenzen Ave. | San Jose, CA 95126-2736 |
| 2 | School District, San Leandro Unified | | 14735 Juniper St. | San Leandro, CA 94579-1222 |
| 2 | School District, San Lorenzo Unified | | 15510 Usher St. | San Lorenzo, CA 94580- |
| 2 | School District, San Mateo-Foster City Elementary | | 300 28th Ave. | San Mateo, CA 94402-0058 |
| 2 | School District, San Rafael City Elementary | | 310 Nova Albion Way | San Rafael, CA 94903- |
| 2 | School District, San Rafael City High | | 310 Nova Albione | San Rafael, CA 94903-3500 |
| 2 | School District, San Ramon Valley Unified | | 699 Old Orchard Dr. | Danville, CA 94526-4331 |
| 2 | School District, Santa Clara Unified | | 1889 Lawrence Road | Santa Clara, CA 95052-0397 |
| 2 | School District, Saratoga Union Elementary | | 20460 Forrest Hills Dr. | Saratoga, CA 95070-6020 |
| 2 | School District, Sausalito Elementary | | 630 Nevada St. | Sausalito, CA 94965-1654 |
| 2 | School District, Sequoia Union High | | 480 James Ave. | Redwood City, CA 94062-1041 |
| 2 | School District, Sonoma Valley Unified | | 721 W. Napa St. | Sonoma, CA 95476-6412 |
| 2 | School District, St. Helena Unified | | 465 Main St. | St. Helena, CA 94574-2159 |
| 2 | School District, Sunnyvale Elementary | | 819 W. Iowa Ave. | Sunnyvale, CA 94088-3217 |
| 2 | School District, Sunol Glen Unified | | Main & Bond Sts. | Sunol, CA 94586-0569 |
| 2 | School District, Tamalpais Union High | | 395 Doherty Dr. | Larkspur, CA 94977-0605 |
| 2 | School District, Two Rock Union Elementary | | 5001 Spring Hill Road | Petaluma, CA 94952-9639 |
| 2 | School District, Union Elementary | | 5175 Union Ave. | San Jose, CA 95124-5434 |
| 2 | School District, Union Joint Elementary | | 5300 Red Hill Road | Petaluma, CA 94952- |
| 2 | School District, Vallejo City Unified | | 211 Valle Vista | Vallejo, CA 94590-3256 |
| 2 | School District, Walnut Creek Elementary | | 960 Ygnacio Valley Road | Walnut Creek, CA 94596-3892 |
| 2 | School District, Waugh Elementary | | 880 Maria Dr. | Petaluma, CA 94954-6837 |
| 2 | School District, West Contra Costa Unified | | 1108 Bissell Ave. | Richmond, CA 94801-3135 |
| 2 | School District, Wilmar Union Elementary | | 3775 Bodega Ave. | Petaluma, CA 94952-8023 |
| 2 | School District, Woodside Elementary | | 3195 Woodside Road | Woodside, CA 94062-2552 |
| 2 | Transportation, Department of | Alameda Coast Guard Integrated Support Command | MLCP "VS" Bldg 50-8, Coast Guard Isla | Alameda, CA 94501 |
| 2 | Transportation, Department of | Petaluma Coast Guard Training Center | 599 Tomales Rd | Petaluma, CA 94952-5000 |
| 2 | University of California | Berkeley Laboratory | 1 Cyclotron Road MS-65 | Berkeley, CA 94720 |
| 2 | University of California | Lawrence Livermore National Laboratory | 7000 East Ave. | Livermore, CA 94550-9234 |
| 2 | University of California | The University of California, San Francisco | | San Francisco, CA 94143 |

| Region | Agency | Facility | Address | City, State, ZIP |
|---|---|---|---|---|
| 2 | University of California | University of California Berkeley | Department/Office Name | Berkeley, CA 94720 |
| 2 | Veteran Affairs | Martinez Center for Rehab & Extended Care | 150 Muir Rd. | Martinez, CA 94553 |
| 2 | Veteran Affairs | San Francisco VA Medical Center | 4150 Clement Street | San Francisco, CA 94121-1598 |
| 2 | Veteran Affairs | VA Northern California Health Care System | 150 Muir Rd. | Martinez, CA 94553 |
| 2 | Veteran Affairs | VA Palo Alto Health Care System | 3801 Miranda Avenue | Palo Alto, CA 94304-290 |
| 3 | Bureau of Prisons | FCI Lompoc | 3600 Guard Road | Lompoc, CA 93436 |
| 3 | Bureau of Prisons | USP Lompoc | 3901 Klein Boulevard | Lompoc, CA 93436 |
| 3 | California Army National Guard | Camp Roberts | ATTN: CACR-DIS | Camp Roberts, CA 93451-5000 |
| 3 | California Army National Guard | Camp San Luis Obispo | PO Box 4360 | San Luis Obispo, CA 93403-4360 |
| 3 | California Community Colleges | Allan Hancock College | 800 South College Drive | Santa Maria, CA 93454-6368 |
| 3 | California Community Colleges | Cabrillo College | 6500 Soquel Drive | Aptos, CA 95003-3119 |
| 3 | California Community Colleges | Cuesta College | PO Box 8106 | San Luis Obispo, CA 93403-8106 |
| 3 | California Community Colleges | Gavilan College | 5055 Santa Teresa Blvd. | Gilroy, CA 95020-9599 |
| 3 | California Community Colleges | Hartnell College | 156 Homestead Avenue | Salinas, CA 93901-1697 |
| 3 | California Community Colleges | Monterey Peninsula College | 980 Fremont Street | Monterey, CA 93940-4799 |
| 3 | California Community Colleges | Santa Barbara City College | 721 Cliff Drive | Santa Barbara, CA 93109-2394 |
| 3 | California State University | California Polytechnic State University | 1 Grand Ave. | San Luis Obispo, CA 93407 |
| 3 | California State University | California State Monerey Bay | 100 Canpus Center | Seaside, CA 93955 |
| 3 | California Youth Authority | Ben Lomond Youth Conservation Camp | 13575 Empire Grade | Santa Cruz, CA |
| 3 | California Youth Authority | El Paso de Robles Youth Correctional Facility | Airport Road | Paso Robles, CA |
| 3 | Corrections, Dept of | California Men's Colony | Highway 1 | San Luis Obispo, CA 93409-8101 |
| 3 | Corrections, Dept of | Correctional Training Facility | Highway 101 North | Soledad, CA 93960-0686 |
| 3 | Corrections, Dept of | Salinas Valley State Prison | PO Box 1020 | Soledad, CA 93960-1020 |
| 3 | Defense, Department of | Camp San Luis Obispo | PO Box 4360 | San Luis Obispo, CA 93403-4360 |
| 3 | Defense, Department of | Defense Language Institute Foreign Language Center and | Bldg 4463 Giggling Rd. | Presido of Monterey, CA 93941-5777 |
| 3 | Defense, Department of | Fort Hunter Liggett | AFRC-FMH-CDR | Fort Hunter Liggett, CA 93928-7000 |
| 3 | Defense, Department of | Naval Postgraduate School Monterey Bay | 1 University Circle | Monterey, CA 93943-5001 |
| 3 | Defense, Department of | Vandenberg Air Force Base | 30 CES/CEZ, 806 13th St. Suite 116 | Vandenberg Air Force Base, CA 93437-5242 |
| 3 | District Agricultural Association | Earl Warren Showgrounds (National Horse Show) | 3400 Calle Real | Santa Barbara, CA |
| 3 | District Agricultural Association | Monterey County Fairgrounds | 2004 Fairground Road | Monterey, CA |
| 3 | District Agricultural Association | San Luis Obispo County Fairgrounds | 2198 Riverside Avenue | Paso Robles, CA |
| 3 | District Agricultural Association | Santa Cruz County Fairgounds | 2601 Eest Lake Avenue | Watsonville, CA |
| 3 | District Agricultural Association | Santa Maria Fairpark | 937 S Thornburg Street | Santa Maria, CA |
| 3 | Mental Health, Dept of | Atascadero State Hospital | 10333 El Camino Real | Atascadero, CA |
| 3 | School District, Alisal Union Elementary | | 1205 E. Market St. | Salinas, CA 93905-2831 |
| 3 | School District, Atascadero Unified | | 5601 West Mall | Atascadero, CA 93422-4234 |
| 3 | School District, Ballard Elementary | | 2425 School St. | Solvang, CA 93463-9709 |
| 3 | School District, Bitterwater-Tully Union Elementary | | Lonoak Rt. | King City, CA 93930- |
| 3 | School District, Blochman Union Elementary | | 4949 Foxen Canyon Road | Santa Maria, CA 93454-9666 |
| 3 | School District, Bonny Doon Union Elementary | | 1492 Pine Flat Road | Santa Cruz, CA 95060-9711 |

| Region | Agency | Facility | Address | City, State, ZIP |
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| 3 | School District, Buellton Union Elementary | | 301 Second St. | Buellton, CA 93427-0075 |
| 3 | School District, Carmel Unified | | 4380 Carmel Valley Road | Carmel, CA 93922-2700 |
| 3 | School District, Carpinteria Unified | | 1400 Lindon Ave. | Carpinteria, CA 93013-1414 |
| 3 | School District, Cayucos Elementary | | 2950 Santa Rosa Creek Road | Cambria, CA 93428-3506 |
| 3 | School District, Cienega Union Elementary | | 11936 Cienega Road | Hollister, CA 95023-9697 |
| 3 | School District, Coast Unified | | 2950 Santa Rosa Creek Road | Cambria, CA 93428-3506 |
| 3 | School District, Cold Spring Elementary | | 2243 Sycamore Canyon Road | Santa Barbara, CA 93108-1909 |
| 3 | School District, College Elementary | | 3325 Pine St. | Santa Ynez, CA 93460-0188 |
| 3 | School District, Gilroy Unified | | 7810 Arroyo Circle | Gilroy, CA 95020-7313 |
| 3 | School District, Goleta Union Elementary | | 401 N. Fairview Ave. | Goleta, CA 93117-1732 |
| 3 | School District, Graves Elementary | | 15 McFadden Road | Salinas, CA 93908- |
| 3 | School District, Greenfield Union Elementary | | 493 El Camino Real | Greenfield, CA 93927- |
| 3 | School District, Happy Valley Elementary | | 3125 Branciforte Dr. | Santa Cruz, CA 95065-9775 |
| 3 | School District, Hollister School District | | 2690 Cienega Rd | Hollister, CA 95023- |
| 3 | School District, Hope Elementary | | 3970 la Colina Road | Santa Barbara, CA 93110-1563 |
| 3 | School District, King City Joint Union High | | 800 Broadway | King City, CA 93930-3326 |
| 3 | School District, King City Union Elementary | | 800 Broadway | King City, CA 93930-2984 |
| 3 | School District, Lagunita Elementary | | 975 San Juan Grade Road | Salinas, CA 93907-8438 |
| 3 | School District, Live Oak Elementary | | 984-1 Bostwick Lane | Santa Cruz, CA 95062-1756 |
| 3 | School District, Live Oak Unified | | 2201 Pennington Road | Live Oak, CA 95953-2469 |
| 3 | School District, Lompoc Unified | | 1301 North A St. | Lompoc, CA 93438-8000 |
| 3 | School District, Los Olivos Elementary | | 2540 Alamo Pintado Ave. | Los Olivos, CA 93441-0208 |
| 3 | School District, Lucia Mar Unified | | 602 Orchard St. | Arroyo Grande, CA 93420-4000 |
| 3 | School District, Mission Union Elementary | | 36825 Foothill Road | Soledad, CA 93960-9656 |
| 3 | School District, Montecito Union Elementary | | 385 San Ysidro Road | Santa Barbara, CA 93108-2131 |
| 3 | School District, Monterey Peninsula Unified | | 700 Pacific St. | Monterey, CA 93942-1031 |
| 3 | School District, Morgan Hill Unified | | 15600 Concord Circle | Morgan Hill, CA 95037-7110 |
| 3 | School District, Mountain Elementary | | 3042 Old San Jose Road | Soquel, CA 95073-9752 |
| 3 | School District, North County Joint Union Elementary | | 500 Spring Grove Road | Hollister, CA 95023-9366 |
| 3 | School District, Nuestro Elementary | | 3934 Broadway Road | Live Oak, CA 95953-9401 |
| 3 | School District, Orcutt Union Elementary | | Soares & Dyer Sts. | Orcutt, CA 93457-2310 |
| 3 | School District, Pacific Grove Unified | | 555 Sinex Ave. | Pacific Grove, CA 93950-4320 |
| 3 | School District, Pajaro Valley Joint Unified | | 294 Greenvalley Rd | Watsonville, CA 95076- |
| 3 | School District, Paso Robles Joint Unified | | 800 Niblick Road | Paso Robles, CA 93447-7010 |
| 3 | School District, Salinas City Elementary | | 431 W. Alisal St. | Salinas, CA 93901-1624 |
| 3 | School District, Salinas Union High | | 431 W. Alisal St. | Salinas, CA 93901-1624 |
| 3 | School District, San Benito High | | 1220 Monterey St. | Hollister, CA 95023-4708 |
| 3 | School District, San Lorenzo Valley Unified | | 6134 Hwy. 9 | Felton, CA 95018-9704 |
| 3 | School District, San Luis Coastal Unified | | 1500 Lizzie St. | San Luis Obispo, CA 93401-3099 |
| 3 | School District, Santa Barbara Elementary | | 720 Santa Barbara St. | Santa Barbara, CA 93101- |
| 3 | School District, Santa Barbara High | | 720 Santa Barbara St. | Santa Barbara, CA 93101- |
| 3 | School District, Santa Cruz City Elementary | | 2931 Mission St. | Santa Cruz, CA 95060- |

| Region | Agency | Facility | Address | City, State, ZIP |
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| 3 | School District, Santa Cruz City High | | 2931 Mission St. | Santa Cruz, CA 95060-5709 |
| 3 | School District, Santa Maria Joint Union High | | 2560 Skyway Dr. | Santa Maria, CA 93455- |
| 3 | School District, Santa Maria-Bonita Elementary | | 708 S. Miller St. | Santa Maria, CA 93454-6230 |
| 3 | School District, Santa Rita Union Elementary | | 57 Russell Road | Salinas, CA 93906-4325 |
| 3 | School District, Santa Ynez Valley Union High | | 2975 E. Hwy. 246 | Santa Ynez, CA 93460- |
| 3 | School District, Scotts Valley Unified | | 4444 Scotts Valley Dr., Ste 5B | Scotts Valley, CA 95066-4529 |
| 3 | School District, Soledad Unified | | 335 Market St. | Soledad, CA 93960- |
| 3 | School District, Solvang Elementary | | 565 Atterdag Road | Solvang, CA 93463-2690 |
| 3 | School District, Soquel Union Elementary | | 620 Monterey Ave. | Capitola, CA 95010-3618 |
| 3 | School District, Southside Elementary | | 4991 Southside Road | Hollister, CA 95023-9637 |
| 3 | School District, Templeton Unified | | 960 Old County Road | Templeton, CA 93465-9419 |
| 3 | School District, Washington Union Elementary | | 43 San Benancio Canyon Rd | Salinas, CA 93908- |
| 3 | University of California | UC Santa Barbara | | Santa Barbara, CA 93106 |
| 3 | University of California | University of California, Santa Cruz | 1156 High Street | Santa Cruz, CA 95064 |
| 4 | Bureau of Prisons | CCM Long Beach | 535 N. Alameda Street | Los Angeles, CA 90012 |
| 4 | Bureau of Prisons | FCI Terminal Island | 1299 Seaside Avenue | Terminal Island, CA 90731 |
| 4 | California Air National Guard | Channel Island Air National Guard Base | 100 Mulcahey Dr | Port Hueneme, CA 93041-4002 |
| 4 | California Community Colleges | Cerritos College | 11110 Alondra Boulevard | Norwalk, CA 90650-6269 |
| 4 | California Community Colleges | Citrus College | 1000 West Foothill Boulevard | Glendora, CA 91741-1899 |
| 4 | California Community Colleges | College Of The Canyons | 26455 N. Rockwell Canyon Road | Santa Clarita, CA 91355-1899 |
| 4 | California Community Colleges | Compton College | 1111 East Artesia Boulevard | Compton, CA 90221-5393 |
| 4 | California Community Colleges | East Los Angeles College | 1301 Avenida Cesar Chavez | Monterey Park, CA 91754-6099 |
| 4 | California Community Colleges | El Camino College | 16007 Crenshaw Boulevard | Torrance, CA 90506-0002 |
| 4 | California Community Colleges | Glendale Community College | 1500 North Verdugo Road | Glendale, CA 91208-2894 |
| 4 | California Community Colleges | Long Beach City College | 4901 East Carson Street | Long Beach, CA 90808-1706 |
| 4 | California Community Colleges | Los Angeles City College | 855 North Vermont Avenue | Los Angeles, CA 90029-3590 |
| 4 | California Community Colleges | Los Angeles Harbor College | 1111 Figueroa Place | Wilmington, CA 90744-2397 |
| 4 | California Community Colleges | Los Angeles Mission College | 13356 Eldridge Avenue | Sylmar, CA 91342-3200 |
| 4 | California Community Colleges | Los Angeles Pierce College | 6201 Winnetka Avenue | Woodland Hills, CA 91371-0001 |
| 4 | California Community Colleges | Los Angeles Southwest College | 1600 West Imperial Highway | Los Angeles, CA 90047-4899 |
| 4 | California Community Colleges | Los Angeles Trade-Tech College | 400 West Washington Boulevard | Los Angeles, CA 90015-4108 |
| 4 | California Community Colleges | Los Angeles Valley College | 5800 Fulton Avenue | Van Nuys, CA 91401-4096 |
| 4 | California Community Colleges | Moorpark College | 7075 Campus Road | Moorpark, CA 93201-1695 |
| 4 | California Community Colleges | Mt. San Antonio College | 1100 North Grand Avenue | Walnut, CA 91789-1399 |
| 4 | California Community Colleges | Oxnard College | 4000 South Rose Avenue | Oxnard, CA 93033-6699 |
| 4 | California Community Colleges | Pasadena City College | 1570 East Colorado Boulevard | Pasadena, CA 91106-2003 |
| 4 | California Community Colleges | Rio Hondo College | 3600 Workman Mill Road | Whittier, CA 90601-1699 |
| 4 | California Community Colleges | Santa Monica College | 1900 Pico Boulevard | Santa Monica, CA 90405-1628 |
| 4 | California Community Colleges | Ventura College | 4667 Telegraph Road | Ventura, CA 93003-3899 |
| 4 | California Community Colleges | West Los Angeles College | 4800 Freshman Drive | Culver City, CA 90230-3500 |
| 4 | California State University | California State Polytechnic University, Pomona | 3801 West Temple Avenue | Pomona, CA 91768 |
| 4 | California State University | California State University Channel Islands | One University Drive | Camarillo, CA 93012 |

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| 4 | California State University | California State University Dominguez Hills | 1000 E. Victoria Street | Carson, CA 90747 |
| 4 | California State University | California State University Long Beach | 1250 Bellflower Blvd. | Long Beach, CA 90840 |
| 4 | California State University | California State University Los Angeles | 5151 State University Drive | Los Angeles, CA 90032-4226 |
| 4 | California State University | California State University Northridge | 18111 Nordhoff Street | Northridge, CA 91330 |
| 4 | California Youth Authority | Fred C. Nelles Youth Correcitonal Facility | 11850 E Whittier | Whittier, CA |
| 4 | California Youth Authority | Southern Youth Correctional Reception Center and Clinic | 13200 S Bloomfield Ave | Norwalk, CA |
| 4 | California Youth Authority | Ventura Youth Correctional Facility | 3100 Wright Rd | Camarillo, CA |
| 4 | Defense, Department of | Corona Naval Station | P.O. Box 5000 | Corona, CA 92878-5000 |
| 4 | Defense, Department of | Los Angeles Air Force Base | 61 ABG/CEZV, 2420 Vela Way Suite 14 | El Segundo, CA 90245 |
| 4 | Defense, Department of | Naval Auxiliary Landing Field, San Clemente Island | 33000 Nixie Way Bldg 50, Suite 326 | San Diego, CA 92147-5110 |
| 4 | Defense, Department of | Naval Base Ventura County | | , CA |
| 4 | Defense, Department of | Port Hueneme Naval Facility | 4363 Missile Way | Port Hueneme, CA 93043-4307 |
| 4 | Defense, Department of | San Nicholas Island Naval Facility | NAWS-890000E | Point Mugu, CA 93042-5001 |
| 4 | Devlopmental Services, Dept of | Lanterman Developmental Center | 3530 West Pomona Blvd | Pomona, CA |
| 4 | District Agricultural Association | Ventura County Fairgrounds | 10 West Harbor Blvd | Ventura, CA |
| 4 | Mental Health, Dept of | Metropolitan State Hospital | 11401 Bloomfield Avenue | Norwalk, CA |
| 4 | School District, ABC Unified | | 16700 Norwalk Blvd. | Cerritos, CA 90703-1838 |
| 4 | School District, Acton-Agua Dulce Unified | | 32248 N. Crown Valley Road | Acton, CA 93510-0068 |
| 4 | School District, Alhambra City Elementary | | 15 W. Alhambra Road | Alhambra, CA 91802-2110 |
| 4 | School District, Alhambra City High | | 15 W. Alhambra Road | Alhambra, CA 91802-2110 |
| 4 | School District, Arcadia Unified | | 234 Campus Dr. | Arcadia, CA 91007-6902 |
| 4 | School District, Azusa Unified | | 546 S. Citrus Ave. | Azusa, CA 91702-0500 |
| 4 | School District, Baldwin Park Unified | | 3699 N. Holly Ave. | Baldwin Park, CA 91706-5397 |
| 4 | School District, Bassett Unified | | 904 N. Willow Ave. | La Puente, CA 91746-1615 |
| 4 | School District, Bellflower Unified | | 16703 S. Clark Ave. | Bellflower, CA 90706-5203 |
| 4 | School District, Beverly Hills Unified | | 255 S. Lasky Dr. | Beverly Hills, CA 90212-3644 |
| 4 | School District, Bonita Unified | | 115 W. Allen Ave. | San Dimas, CA 91773-1437 |
| 4 | School District, Briggs Elementary | | 14438 W. Telegraph Road | Santa Paula, CA 93060-3088 |
| 4 | School District, Burbank Unified | | 1900 W Olive Ave | Burbank, CA 91506 |
| 4 | School District, Castaic Union Elementary | | 28131 Livingston Ave. | Valencia, CA 91355- |
| 4 | School District, Centinela Valley Union High | | 14901 S. Inglewood Ave. | Lawndale, CA 90260-1251 |
| 4 | School District, Charter Oak Unified | | 20240 Cienega Ave. | Covina, CA 91723-0009 |
| 4 | School District, Claremont Unified | | 2080 N. Mountain Ave. | Claremont, CA 91711-2643 |
| 4 | School District, Compton Unified | | 604 S. Tamarind Ave. | Compton, CA 90220-3826 |
| 4 | School District, Conejo Valley Unified | | 1400 E. Janss Road | Thousand Oaks, CA 91362-2133 |
| 4 | School District, Covina-Valley Unified | | 519 E. Badillo St. | Covina, CA 91723-0269 |
| 4 | School District, Culver City Unified | | 4034 Irving Pl. | Culver City, CA 90232-2810 |
| 4 | School District, Downey Unified | | 11627 Brookshire Ave. | Downey, CA 90241-7017 |
| 4 | School District, Duarte Unified | | 1620 Huntington Dr. | Duarte, CA 91010-2534 |
| 4 | School District, East Whittier City Elementary | | 14535 E. Whittier Blvd. | Whittier, CA 90605-2130 |
| 4 | School District, El Monte City Elementary | | 3540 N. Lexington Ave. | El Monte, CA 91731-2684 |
| 4 | School District, El Monte Union High | | 3537 Johnson Ave. | El Monte, CA 91731-3290 |

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|---|---|---|---|---|
| 4 | School District, El Rancho Unified | | 9333 Loch Lomond Dr. | Pico Rivera, CA 90660-2913 |
| 4 | School District, El Segundo Unified | | 641 Sheldon St. | El Segundo, CA 90245-3036 |
| 4 | School District, Fillmore Unified | | 627 Sespe Ave. | Fillmore, CA 93016-0697 |
| 4 | School District, Garvey Elementary | | 2730 N. del Mar | Rosemead, CA 91770-3026 |
| 4 | School District, Glendale Unified | | 223 N. Jackson St. | Glendale, CA 91206-4334 |
| 4 | School District, Glendora Unified | | 500 N. Loraine Ave. | Glendora, CA 91741-2964 |
| 4 | School District, Hacienda la Puente Unified | | 15959 E. Gale Ave. | City Of Industry, CA 91716- |
| 4 | School District, Hawthorne Elementary | | 14120 S. Hawthorne Blvd. | Hawthorne, CA 90250- |
| 4 | School District, Hermosa Beach City Elementary | | 1645 Valley Dr. | Hermosa Beach, CA 90254-2921 |
| 4 | School District, Hueneme Elementary | | 205 North Ventura Road | Port Hueneme, CA 93041-3065 |
| 4 | School District, Inglewood Unified | | 401 S. Inglewood Ave. | Inglewood, CA 90301-2501 |
| 4 | School District, La Canada Unified | | 5039 Palm Dr. | La Canada, CA 91011-1518 |
| 4 | School District, Las Virgenes Unified | | 4111 N. Las Virgenes Road | Calabasas, CA 91302-1929 |
| 4 | School District, Lawndale Elementary | | 4161 W. 147th St. | Lawndale, CA 90260-1709 |
| 4 | School District, Lennox Elementary | | 10319 S. Firmona Ave. | Lennox, CA 90304-1419 |
| 4 | School District, Little Lake City Elementary | | 10515 S. Pioneer Blvd. | Santa Fe Springs, CA 90670-3703 |
| 4 | School District, Long Beach Unified | | 1515 Hughes Way | Long Beach, CA 90810-1839 |
| 4 | School District, Los Angeles Unified | | 450 N. Grand Ave. | Los Angeles, CA 90012-2100 |
| 4 | School District, Los Nietos Elementary | | 8324 S. Westman Ave., Whittier | Whittier, CA 90606- |
| 4 | School District, Lowell Joint | | 11019 Valley Home Ave. | Whittier, CA 90603-3042 |
| 4 | School District, Lynwood Unified | | 11321 Bullis Road | Lynwood, CA 90262-3600 |
| 4 | School District, Manhattan Beach Unified | | 1230 Rosecrans Suite 400 | Manhattan Beach, CA 90266-2478 |
| 4 | School District, Mesa Union Elementary | | 3901 N. Mesa School Road | Somis, CA 93066-9734 |
| 4 | School District, Monrovia Unified | | 325 E. Huntington Dr. | Monrovia, CA 91016-3585 |
| 4 | School District, Montebello Unified | | 123 S. Montebello Blvd. | Montebello, CA 90640-4729 |
| 4 | School District, Moorpark Unified | | 30 Flory Ave. | Moorpark, CA 93021-1862 |
| 4 | School District, Mountain View Elementary | | 3320 Gilman Road | El Monte, CA 91732-3226 |
| 4 | School District, Mupu Elementary | | 4410 N. Ojai Road | Santa Paula, CA 93060-9681 |
| 4 | School District, Newhall Elementary | | 25375 Orchard Village, Ste. 200 | Valencia, CA 91355-3055 |
| 4 | School District, Norwalk-La Mirada Unified | | 12820 Pioneer Blvd. | Norwalk, CA 90650-2894 |
| 4 | School District, Ocean View Elementary | | 2382 Etting Road | Oxnard, CA 93033-6864 |
| 4 | School District, Ojai Unified | | 414 E. Ojai Ave. | Ojai, CA 93024-0878 |
| 4 | School District, Oxnard Elementary | | 1051 South A St. | Oxnard, CA 93030-7442 |
| 4 | School District, Oxnard Union High | | 309 South K St. | Oxnard, CA 93030-5212 |
| 4 | School District, Palos Verdes Peninsula Unified | | 3801 Via la Selva | Palos Verdes Estates, CA 90274-1119 |
| 4 | School District, Paramount Unified | | 15110 California Ave. | Paramount, CA 90723-4320 |
| 4 | School District, Pasadena Unified | | 351 S. Hudson Ave. | Pasadena, CA 91101-3507 |
| 4 | School District, Pleasant Valley Elementary | | 600 Temple Ave. | Camarillo, CA 93010-4835 |
| 4 | School District, Pomona Unified | | 800 S. Garey Ave | Pomona, CA 91769-2900 |
| 4 | School District, Redondo Beach Unified | | 1401 Inglewood Ave. | Redondo Beach, CA 90278-3912 |
| 4 | School District, Rio Elementary | | 3300 Cortez St. | Oxnard, CA 93030-1309 |

| Region | Agency | Facility | Address | City, State, ZIP |
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| 4 | School District, Rosemead Elementary | | 3907 Rosemead Blvd. | Rosemead, CA 91770-2041 |
| 4 | School District, Rowland Unified | | 1830 Nogales St. | Rowland Heights, CA 91748- |
| 4 | School District, San Gabriel Unified | | 102 E. Broadway | San Gabriel, CA 91776-4500 |
| 4 | School District, San Marino Unified | | 1665 West Dr. | San Marino, CA 91108-2594 |
| 4 | School District, Santa Clara Elementary | | 20030 E. Telegraph Road | Santa Paula, CA 93060-9691 |
| 4 | School District, Santa Monica-Malibu Unified | | 1651 16th St. | Santa Monica, CA 90404-3891 |
| 4 | School District, Santa Paula Elementary | | 201 S. Steckel Dr. | Santa Paula, CA 93061-0710 |
| 4 | School District, Santa Paula Union High | | 500 E. Santa Barbara St. | Santa Paula, CA 93060-2633 |
| 4 | School District, Saugus Union Elementary | | 24930 Avenue Stanford . | Santa Clarita, CA 91355-1272 |
| 4 | School District, Simi Valley Unified | | 875 E. Cochran | Simi Valley, CA 93065-0999 |
| 4 | School District, Somis Union Elementary | | 5268 North St. | Somis, CA 93066-0900 |
| 4 | School District, South Pasadena Unified | | 1020 El Centro St. | South Pasadena, CA 91030-3118 |
| 4 | School District, South Whittier Elementary | | 10120 Painter Ave. | Whittier, CA 90605-0037 |
| 4 | School District, Sulphur Springs Union Elementary | | 17866 Sierra Hwy. | Canyon Country, CA 91351-1671 |
| 4 | School District, Temple City Unified | | 9700 Las Tunas Drive | Temple City, CA 91780- |
| 4 | School District, Torrance Unified | | 2335 Plaza del Amo | Torrance, CA 90501-3420 |
| 4 | School District, Valle Lindo Elementary | | 1431 N. Central Ave. | South El Monte, CA 91733-3388 |
| 4 | School District, Ventura Unified | | 120 E. Santa Clara St. | Ventura, CA 93001-2716 |
| 4 | School District, Walnut Valley Unified | | 880 S. Lemon Ave. | Walnut, CA 91789-2931 |
| 4 | School District, West Covina Unified | | 1717 W. Merced Ave. | West Covina, CA 91790-3406 |
| 4 | School District, Whittier City Elementary | | 7211 S. Whittier Ave. | Whittier, CA 90602-1123 |
| 4 | School District, Whittier Union High | | 9401 S. Painter Ave. | Whittier, CA 90605-2798 |
| 4 | School District, William S. Hart Union High | | 21515 Redview Dr. | Santa Clarita, CA 91350-2948 |
| 4 | School District, Wiseburn Elementary | | 13530 Aviation Blvd. | Hawthorne, CA 90250-6462 |
| 4 | Science Center, California | California Science Center | 700 State Drive | Los Angeles, CA |
| 4 | University of California | UCLA | 405 Hilgard Avenue Box 951361 | Los Angeles, CA 90095-1361 |
| 4 | Veteran Affairs | Long Beach VA Medical Center | 5901 E. 7th Street | Long Beach, CA 90822 |
| 4 | Veteran Affairs | VA Greater Los Angeles Healthcare System (GLA) | 11301 Willshire Boulevard | Los Angeles, CA 90073 |
| 5F | Bureau of Prisons | USP Atwater | PO Box 019000 | Atwater, CA 95301 |
| 5F | California Air National Guard | 144th Fighter Wing | 5323 East McKinley Avenue | Fresno, CA 93727-2199 |
| 5F | California Air National Guard | Fresno Air National Guard Base | 5323 E McKinley Ave | Fresno, CA 93727 |
| 5F | California Community Colleges | Bakersfield College | 1801 Panorama Drive | Bakersfield, CA 93305-1299 |
| 5F | California Community Colleges | College of the Sequoias | 915 South Mooney Boulevard | Visalia, CA 93277-2234 |
| 5F | California Community Colleges | Fresno City College | 1101 E. University Avenue | Fresno, CA 93741-0001 |
| 5F | California Community Colleges | Merced College | 3600 M Street | Merced, CA 95348-2898 |
| 5F | California Community Colleges | Porterville College | 100 East College Avenue | Porterville, CA 93257-5901 |
| 5F | California Community Colleges | Reedley College | 995 N. Reed Avenue | Reedley, CA 93654-2099 |
| 5F | California State University | California State University Bakersfield | 9001 Stockdale Highway | Bakersfield, CA 93311-1099 |
| 5F | Defense, Department of | Lemoore Naval Air Station | 751 Enterprise Ave | Lemoore NAS, CA 93246 |
| 5F | Developmental Services, Dept of | Porterville Developmental Center | 26501 AVE 140 | Porterville, CA |
| 5F | District Agricultural Association | Kern County Fairgrounds | 1142 South P Street | Bakersfield, CA |
| 5F | District Agricultural Association | Kings County Fairgrounds | 810 S 10th Ave | Hanford, CA |

| Region | Agency | Facility | Address | City, State, ZIP |
|---|---|---|---|---|
| 5F | District Agricultural Association | Madera County Fairgournds | 1850 W Cleveland | Madera, CA |
| 5F | District Agricultural Association | Merced County Fairgrounds | 900 Martin Luther King | Merced, CA |
| 5F | District Agricultural Association | The Big Fresno Fair | 1121 Chance Ave | Fresno, CA |
| 5F | District Agricultural Association | Tulare County Fairgrounds | 215 Martin Luther King | Tulare, CA |
| 5F | School District, Alta Vista Elementary | | 2293 E. Crabtree Ave. | Porterville, CA 93257-5225 |
| 5F | School District, American Union Elementary | | 2801 W. Adams Ave. | Fresno, CA 93706-9601 |
| 5F | School District, Atwater Elementary | | 1401 Broadway Ave. | Atwater, CA 95301- |
| 5F | School District, Bakersfield City Elementary | | 1300 Baker St. | Bakersfield, CA 93305-4326 |
| 5F | School District, Beardsley Elementary | | 1001 Roberts Lane | Bakersfield, CA 93308-4503 |
| 5F | School District, Buena Vista Elementary | | 21660 Road 60 | Tulare, CA 93274-9470 |
| 5F | School District, Burton Elementary | | 264 N. Westwood St. | Porterville, CA 93257-2542 |
| 5F | School District, Central Unified | | 4605 N. Polk Ave. | Fresno, CA 93722-5334 |
| 5F | School District, Central Union Elementary | | 15783 18th Ave. | Lemoore, CA 93245-9742 |
| 5F | School District, Citrus South Tule Elementary | | 31374 Success Valley Dr. | Porterville, CA 93257-9638 |
| 5F | School District, Clay Joint Elementary | | 12449 S. Smith Ave. | Kingsburg, CA 93631-9717 |
| 5F | School District, Clovis Unified | | 1450 Herndon Ave. | Clovis, CA 93611-0567 |
| 5F | School District, Delhi Unified | | 9715 Hinton Ave. | Delhi, CA 95315-0338 |
| 5F | School District, Delta View Joint Union Elementary | | 1201 Lacey Blvd. | Hanford, CA 93230-9306 |
| 5F | School District, Edison Elementary | | 9600 Eucalyptus Dr. | Bakersfield, CA 93306-6781 |
| 5F | School District, Exeter Union Elementary | | 134 South E St. | Exeter, CA 93221- |
| 5F | School District, Exeter Union High | | 134 South E St. | Exeter, CA 93221- |
| 5F | School District, Fairfax Elementary | | 1500 S. Fairfax Road | Bakersfield, CA 93307-3151 |
| 5F | School District, Farmersville Unified | | 281 S. Farmersville Blvd. | Farmersville, CA 93223-1833 |
| 5F | School District, Fresno Unified | | Ed. Cntr., Tulare & M Sts | Fresno, CA 93721- |
| 5F | School District, Fruitvale Elementary | | 7311 Rosedale Hwy. | Bakersfield, CA 93308-5738 |
| 5F | School District, General Shafter Elementary | | 1316 Shafter Road | Bakersfield, CA 93313-9766 |
| 5F | School District, Golden Valley Unified | | 37479 Avenue 12 | Madera, CA 93638- |
| 5F | School District, Greenfield Union Elementary | | 1624 Fairview Road | Bakersfield, CA 93307-5512 |
| 5F | School District, Hanford Elementary | | 714 N. White St. | Hanford, CA 93232- |
| 5F | School District, Hanford Joint Union High | | 120 E. Grangeville Road | Hanford, CA 93230-3067 |
| 5F | School District, Hope Elementary | | 816 W. Teapot Dome Ave. | Porterville, CA 93257-9465 |
| 5F | School District, Island Union Elementary | | 7799 21st Ave. | Lemoore, CA 93245-9673 |
| 5F | School District, Kern Union High | | 5801 Sundale Ave | Bakersfield, CA 93309-2924 |
| 5F | School District, Kings Canyon Joint Unified | | 675 W. Manning Ave. | Reedley, CA 93654-2427 |
| 5F | School District, Kings River Union Elementary | | 3961 Ave. 400 | Kingsburg, CA 93631-9660 |
| 5F | School District, Kings River-Hardwick Union Elementary | | 10300 Excelsior Ave. | Hanford, CA 93230-9108 |
| 5F | School District, Kingsburg Joint Union Elementary | | 1310 Stroud Ave. | Kingsburg, CA 93631-1000 |
| 5F | School District, Kingsburg Joint Union High | | 1900 18th Ave. | Kingsburg, CA 93631-1629 |
| 5F | School District, Kit Carson Union Elementary | | 9895 Seventh Ave. | Hanford, CA 93230-8802 |
| 5F | School District, Lakeside Union Elementary | | 9100 Jersey Ave. | Hanford, CA 93230-9560 |
| 5F | School District, Lakeside Union School | | 14535 Old River Rd. | Bakersfield, CA 93311-9756 |
| 5F | School District, Lemoore Union Elementary | | 100 Vine St. | Lemoore, CA 93245-3418 |

| Region | Agency | Facility | Address | City, State, ZIP |
|---|---|---|---|---|
| 5F | School District, Lemoore Union High | | 101 E. Bush St. | Lemoore, CA 93245-3601 |
| 5F | School District, Liberty Elementary | | 11535 Ave. 264 | Visalia, CA 93277-9483 |
| 5F | School District, Los Banos Unified | | 1717 S. 11th St. | Los Banos, CA 93635-4800 |
| 5F | School District, Madera Unified | | 1902 Howard Road | Madera, CA 93637-5123 |
| 5F | School District, McSwain Union Elementary | | 926 N. Scott Road | Merced, CA 95340-8893 |
| 5F | School District, Merced City Elementary | | 444 W. 23rd St. | Merced, CA 95340-3723 |
| 5F | School District, Merced Union High | | Olive Ave. & G St. | Merced, CA 95344-0147 |
| 5F | School District, Monroe Elementary | | 11842 S. Chestnut Ave. | Fresno, CA 93725-9618 |
| 5F | School District, Norris Elementary | | 6940 Calloway Dr. | Bakersfield, CA 93312-9005 |
| 5F | School District, Oak Valley Union Elementary | | 24500 Road 68 | Tulare, CA 93274-9607 |
| 5F | School District, Orange Center Elementary | | 3530 S. Cherry Ave. | Fresno, CA 93706-5615 |
| 5F | School District, Outside Creek Elementary | | 26452 Road 164 | Visalia, CA 93292-9740 |
| 5F | School District, Pacific Union Elementary | | 2065 E. Bowles Ave. | Fresno, CA 93725-9630 |
| 5F | School District, Palo Verde Union Elementary | | 9637 Ave. 196 | Tulare, CA 93274-9529 |
| 5F | School District, Panama Buena Vista Union Elementary | | 4200 Ashe Road | Bakersfield, CA 93313-2029 |
| 5F | School District, Pioneer Union Elementary | | 8810 14th Ave. | Hanford, CA 93230-9677 |
| 5F | School District, Plainsburg Union Elementary | | 3708 S. Plainsburg Road | Merced, CA 95340-9557 |
| 5F | School District, Pleasant View Elementary | | 14004 Road 184 | Porterville, CA 93257-9214 |
| 5F | School District, Porterville Unified | | 600 West Grand Ave. | Porterville, CA 93257-2029 |
| 5F | School District, Rio Bravo-Greeley Union Elementary | | 6521 Enos Lane | Bakersfield, CA 93312-8721 |
| 5F | School District, Rockford Elementary | | 14983 Road 208 | Porterville, CA 93257-9318 |
| 5F | School District, Rosedale Union Elementary | | 2553 Old Farm Road | Bakersfield, CA 93312-3531 |
| 5F | School District, Selma Unified | | 3036 Thompson Ave. | Selma, CA 93662-2497 |
| 5F | School District, Standard Elementary | | 1200 N. Chester Ave. | Bakersfield, CA 93308-3521 |
| 5F | School District, Stone Corral Elementary | | 15590 Ave. 383 | Visalia, CA 93292-9545 |
| 5F | School District, Strathmore Union Elementary | | 23024 Ave. 198 | Strathmore, CA 93267-0247 |
| 5F | School District, Strathmore Union High | | 22568 Ave. 196 | Strathmore, CA 93267-0114 |
| 5F | School District, Sundale Union Elementary | | 13990 Ave. 240 | Tulare, CA 93274-9563 |
| 5F | School District, Sunnyside Union Elementary | | 21644 Ave. 196 | Strathmore, CA 93267-9795 |
| 5F | School District, Tulare City Elementary | | 600 N. Cherry Ave. | Tulare, CA 93274-2920 |
| 5F | School District, Tulare Joint Union High | | 426 N. Blackstone | Tulare, CA 93274-4449 |
| 5F | School District, Vineland Elementary | | 14713 Weedpatch Hwy. | Bakersfield, CA 93307-9653 |
| 5F | School District, Visalia Unified | | 5000 W Cypress Ave. | Visalia, CA 93277-8300 |
| 5F | School District, Washington Colony Elementary | | 130 E. Lincoln Ave. | Fresno, CA 93706-6043 |
| 5F | School District, Washington Union High | | 6041 S. Elm Ave. | Fresno, CA 93706-6099 |
| 5F | School District, Waukena Joint Union Elementary | | 19113 Road 28 | Tulare, CA 93274- |
| 5F | School District, Weaver Union Elementary | | 3076 E. Childs Ave. | Merced, CA 95340-9583 |
| 5F | School District, West Fresno Elementary | | 2888 S. Ivy St. | Fresno, CA 93706-5513 |
| 5F | School District, West Park Elementary | | 2695 S. Valentine Ave. | Fresno, CA 93706-9042 |
| 5F | School District, Woodville Elementary | | 16541 Road 168 | Porterville, CA 93257-9205 |
| 5F | University of California | University of California, Merced | 1170 W. Olive Avenue Suite I | Merced, CA 95348-1959 |
| 5F | Veteran Affairs | VA Central California Health Care System | 2615 E. Clinton Avenue | Fresno, CA 93703 |

| Region | Agency | Facility | Address | City, State, ZIP |
|---|---|---|---|---|
| 5R | California Community Colleges | Shasta College | 11555 Old Oregon Trail PO Box 496006 | Redding, CA 96049-6006 |
| 5R | California State University | California State University Chico | 400 West First Street | Chico, CA 95929 |
| 5R | District Agricultural Association | Shasta County Fairgrounds | 1890 Briggs Street | Anderson, CA |
| 5R | District Agricultural Association | Silver Dollar Fairgrounds | 2357 Fair Street | Chico, CA |
| 5R | School District, Anderson Union High | | 1471 Ferry St. | Anderson, CA 96007-3313 |
| 5R | School District, Cascade Union Elementary | | 1645 W. Mill St. | Anderson, CA 96007-3226 |
| 5R | School District, Chico Unified | | 1163 E. Seventh St. | Chico, CA 95928-5903 |
| 5R | School District, Columbia Elementary | | 10142 Old Oregon Trail Road | Redding, CA 96003-7995 |
| 5R | School District, Durham Unified | | 9420 Putney Dr. | Durham, CA 95938-0300 |
| 5R | School District, Enterprise Elementary | | 1155 Mistletoe Lane | Redding, CA 96002-0749 |
| 5R | School District, Gateway Unified | | 4411 Mountain Lakes Blvd. | Redding, CA 96003-1446 |
| 5R | School District, Grant Elementary | | 8835 Swasey Dr. | Redding, CA 96001-9722 |
| 5R | School District, Happy Valley Union Elementary | | 16300 Cloverdale Road | Anderson, CA 96007- |
| 5R | School District, Pacheco Union Elementary | | 7433 Pacheco Rd | Redding, CA 96002-4603 |
| 5R | School District, Redding Elementary | | 5885 E. Bonnyview Road | Redding, CA 96099-2418 |
| 5R | School District, Shasta Union High | | 2200 Eureka way Suite B | Redding, CA 96001- |
| 5S | California Air National Guard | 162nd Combat Communications Group | 3900 Roseville Road | North Highlands, CA 95660-5794 |
| 5S | California Community Colleges | American River College | 4700 College Oak Drive | Sacramento, CA 95841-4286 |
| 5S | California Community Colleges | Cosumnes River College | 8401 Center Parkway | Sacramento, CA 95823-5799 |
| 5S | California Community Colleges | Modesto Junior College | 435 College Avenue | Modesto, CA 95350-5800 |
| 5S | California Community Colleges | Sacramento City College | 3835 Freeport Boulevard | Sacramento, CA 95822-1386 |
| 5S | California Community Colleges | San Joaquin Delta College | 5151 Pacific Avenue | Stockton, CA 95207-6370 |
| 5S | California Community Colleges | Sierra College | 5000 Rocklin Road | Rocklin, CA 95677-3397 |
| 5S | California Community Colleges | Yuba College | 2088 North Beale Road | Marysville, CA 95901-7699 |
| 5S | California State University | California State University Sacramento | 6000 J Street | Sacramento, CA 95819 |
| 5S | California State University | California State University Stanislaus | 801 West Monte Vista Ave | Turlock, CA 95382 |
| 5S | California Youth Authority | Northern California Youth Correctional Center | 7650 Newcastle Rd | Stockton, CA |
| 5S | California Youth Authority | Northern Youth Correctional Reception Center and Clinic | 3001 Ramona Ave | Sacramento, CA |
| 5S | Corrections, Dept of | California Medical Facility | 1600 California Dr | Vacaville, CA 95696-2000 |
| 5S | Corrections, Dept of | CSP, Sacramento | PO Box 29 | Represa, CA 95671 |
| 5S | Corrections, Dept of | CSP, Solano County | 2100 Peabody Road | Vacaville, CA 95696-4000 |
| 5S | Corrections, Dept of | Deuel Vocational Institution | 23500 Kasson Road | Tracy, CA 95378-0004 |
| 5S | Corrections, Dept of | Folsom State Prison | 300 Prison Road | Represa, CA 95671 |
| 5S | Corrections, Dept of | Northern California Women's Facility | 7150 East Arch Road | Stockton, CA 95213-9006 |
| 5S | Defense, Department of | Beale Air Force Base | 9 CES/CEV 6601 B Street | Beale AFB, CA 95903-1708 |
| 5S | Defense, Department of | Defense Distribution San Joaquin | PO Box 960001 | Stockton, CA 95296-0002 |
| 5S | Defense, Department of | McClellan Air Force Base | 3237 Peacekeeper Way Suite 1 | McClellan AFB, CA 95652-1044 |
| 5S | Defense, Department of | Stockton Naval Communications Station | 305 Fyffe Ave | Stockton, CA 95203-4920 |
| 5S | District Agricultural Association | Contra Costa County Fairgrounds | 1201 West 10th Street | Antioch, CA |
| 5S | District Agricultural Association | Dixon May Fair | 655 S First Street | Dixon, CA |
| 5S | District Agricultural Association | Gold Country Fairgrounds | 1273 High Street | Auburn, CA |
| 5S | District Agricultural Association | Lake County Fairgrounds | 401 Martin Street | Lakeport, CA |

| Region | Agency | Facility | Address | City, State, ZIP |
|---|---|---|---|---|
| 5S | District Agricultural Association | Nevada County Fairgrounds | 11228 McCourtney Road | Grass Valley, CA |
| 5S | District Agricultural Association | San Joaquin County Fairgrounds | 1658 S Airport Way | Stockton, CA |
| 5S | District Agricultural Association | Stanislaus County Fairgrounds | 900 N Broadway | Turlock, CA |
| 5S | District Agricultural Association | Sutter County Fairgrounds | 442 Franklin Ave | Yuba City, CA |
| 5S | District Agricultural Association | Yolo County Fairgrounds | Hwy 113 & Gibson Rd | Woodland, CA |
| 5S | Exposition & State Fair, California | California Exposition & State Fair | 1600 Exposition Blvd | Sacramento, CA |
| 5S | School District, Ackerman Elementary | | 13777 Bowman Road | Auburn, CA 95603-3147 |
| 5S | School District, Antioch Unified | | 510 G St. | Antioch, CA 94509-0904 |
| 5S | School District, Arcohe Union Elementary | | 11755 Ivie Road | Herald, CA 95638-0093 |
| 5S | School District, Auburn Union Elementary | | 55 College Way | Auburn, CA 95603- |
| 5S | School District, Brentwood Union Elementary | | 255 Guthrie Lane | Brentwood, CA 94513-1610 |
| 5S | School District, Center Joint Unified | | 8408 Watt Ave. | Antelope, CA 95843-9116 |
| 5S | School District, Ceres Unified | | 2503 Lawrence St | Ceres, CA 95307-0307 |
| 5S | School District, Chatom Union Elementary | | 7201 Clayton Ave. | Turlock, CA 95380-9352 |
| 5S | School District, Chicago Park Elementary | | 15725 Mt Olive Road | Grass Valley, CA 95945-7906 |
| 5S | School District, Clear Creek Elementary | | 17700 McCourtney Road | Grass Valley, CA 95949-7636 |
| 5S | School District, Davis Joint Unified | | 526 B St. | Davis, CA 95616-3811 |
| 5S | School District, Del Paso Heights Elementary | | 3780 Rosin Court, Suite 270 | Sacramento, CA 95834-1646 |
| 5S | School District, Dixon Unified | | 305 N. Almond St. | Dixon, CA 95620-2702 |
| 5S | School District, Dry Creek Joint Elementary | | 9707 Cook Riolo Road | Roseville, CA 95747-9793 |
| 5S | School District, El Dorado Union High | | 4675 Missouri Flat Road | Placerville, CA 95619- |
| 5S | School District, Elk Grove Unified | | 9510 Elk Grove-Florin Road | Elk Grove, CA 95624-1801 |
| 5S | School District, Elverta Joint Elementary | | 8920 Elwyn Ave. | Elverta, CA 95626-9217 |
| 5S | School District, Empire Union Elementary | | 116 N. McClure Road | Modesto, CA 95357-1329 |
| 5S | School District, Eureka Union Elementary | | 5477 Eureka Road | Granite Bay, CA 95746-8808 |
| 5S | School District, Folsom-Cordova Unified | | 125 East Bidwell St. | Folsom, CA 95630-3241 |
| 5S | School District, Franklin Elementary | | 332 N. Township Road | Yuba City, CA 95993-9629 |
| 5S | School District, Galt Joint Union Elementary | | 1018 C St. Suite 210 | Galt, CA 95632- |
| 5S | School District, Galt Joint Union High | | 145 N. Lincoln Way | Galt, CA 95632-1720 |
| 5S | School District, Gold Oak Union Elementary | | 3171 Pleasant Valley Road | Placerville, CA 95667-7836 |
| 5S | School District, Gold Trail Union Elementary | | 1575 Old Ranch Road | Placerville, CA 95667-8929 |
| 5S | School District, Grant Joint Union High | | 1333 Grand Ave. | Sacramento, CA 95838-3697 |
| 5S | School District, Grass Valley Elementary | | 10840 Gilmore Way | Grass Valley, CA 95945-5409 |
| 5S | School District, Hart-Ransom Union Elementary | | 3920 Shoemake Ave. | Modesto, CA 95358-8577 |
| 5S | School District, Holt Union Elementary | | 1545 S. Holt Road | Stockton, CA 95206-9618 |
| 5S | School District, Hughson Unified | | 7419 East Whitmore Ave. | Hughson, CA 95326- |
| 5S | School District, Jefferson Elementary | | 7500 W. Linne Road | Tracy, CA 95376-9278 |
| 5S | School District, Keyes Union Elementary | | 5465 Seventh St. | Keyes, CA 95328-0549 |
| 5S | School District, Knightsen Elementary | | 1923 Delta Road | Knightsen, CA 94548-0265 |
| 5S | School District, Lakeport Unified | | 100 Lange St. | Lakeport, CA 95453-3297 |
| 5S | School District, Lammersville Elementary | | 16555 W. Von Sosten Road | Tracy, CA 95376-7220 |
| 5S | School District, Liberty Union High | | 20 Oak St. | Brentwood, CA 94513-1379 |

| Region | Agency | Facility | Address | City, State, ZIP |
|---|---|---|---|---|
| 5S | School District, Lincoln Unified | | 2010 W. Swain Road | Stockton, CA 95207-4055 |
| 5S | School District, Lodi Unified | | 1305 E. Vine St. | Lodi, CA 95240-3148 |
| 5S | School District, Loomis Union Elementary | | 3290 Humphrey Road | Loomis, CA 95650-9043 |
| 5S | School District, Manteca Unified | | 2901 E. Louise Ave. | Manteca, CA 95336-0032 |
| 5S | School District, Marysville Joint Unified | | 1919 B St. | Marysville, CA 95901-3731 |
| 5S | School District, Modesto City Elementary | | 426 Locust St. | Modesto, CA 95351-2631 |
| 5S | School District, Modesto City High | | 426 Locust St. | Modesto, CA 95351-2631 |
| 5S | School District, Mother Lode Union Elementary | | 3783 Forni Road | Placerville, CA 95667-6207 |
| 5S | School District, Natomas Unified | | 1515 Sports Dr., Suite 1 | Sacramento, CA 95834-1905 |
| 5S | School District, Nevada Joint Union High | | 11645 Ridge Road | Grass Valley, CA 95945-5024 |
| 5S | School District, New Jerusalem Elementary | | 31400 S. Koster Road | Tracy, CA 95376-8824 |
| 5S | School District, North Sacramento Elementary | | 670 Dixieanne Ave. | Sacramento, CA 95815-3023 |
| 5S | School District, Oakdale Joint Unified | | 168 S. Third Ave. | Oakdale, CA 95361-3935 |
| 5S | School District, Oakley Union Elementary | | 91 Mercedes Lane | Oakley, CA 94561- |
| 5S | School District, Paradise Elementary | | 3361 California Ave. | Modesto, CA 95358-8337 |
| 5S | School District, Patterson Joint Unified | | 200 N. Seventh St. | Patterson, CA 95363-0547 |
| 5S | School District, Placer Union High | | 13000 New Airport Road | Auburn, CA 95604-5048 |
| 5S | School District, Placerville Union Elementary | | 1032 Thompson Way | Placerville, CA 95667-5713 |
| 5S | School District, Pleasant Ridge Union Elementary | | 22580 Kingston Lane | Grass Valley, CA 95949-7706 |
| 5S | School District, Plumas Elementary | | 2743 Plumas-Arboga Road | Marysville, CA 95901-9638 |
| 5S | School District, Rio Linda Union Elementary | | 627 L St. | Rio Linda, CA 95673-3430 |
| 5S | School District, Ripon Unified | | 304 N. Acacia Ave. | Ripon, CA 95366-2404 |
| 5S | School District, River Delta Joint Unified | | 445 Montezuma | Rio Vista, CA 94571-1651 |
| 5S | School District, Riverbank Unified | | 6715 7th St. | Riverbank, CA 95367-2345 |
| 5S | School District, Robla Elementary | | 5248 Rose St. | Sacramento, CA 95838-1633 |
| 5S | School District, Rocklin Unified | | 5035 Meyers St. | Rocklin, CA 95677-2811 |
| 5S | School District, Roseville City Elementary | | 1000 Darling Way | Roseville, CA 95678-4341 |
| 5S | School District, Roseville Joint Union High | | 1750 Cirby Way | Roseville, CA 95661-5520 |
| 5S | School District, Sacramento City Unified | | 520 Capitol Mall | Sacramento, CA 95812-2271 |
| 5S | School District, Salida Union Elementary | | 5250 Tamara Way | Salida, CA 95368-9226 |
| 5S | School District, San Juan Unified | | 3738 Walnut Ave. | Carmichael, CA 95609-0477 |
| 5S | School District, Shiloh Elementary | | 6633 Paradise Road | Modesto, CA 95358-9253 |
| 5S | School District, Stanislaus Union Elementary | | 3601 Carver Road | Modesto, CA 95356-0926 |
| 5S | School District, Stockton City Unified | | 701 N. Madison St. | Stockton, CA 95202-1634 |
| 5S | School District, Sylvan Union Elementary | | 605 Sylvan Ave. | Modesto, CA 95350-1517 |
| 5S | School District, Tracy Joint Unified | | 315 East Eleventh St. | Tracy, CA 95376-4095 |
| 5S | School District, Turlock Joint Elementary | | 1574 E Canal Dr. | Turlock, CA 95381-1105 |
| 5S | School District, Turlock Joint Union High | | 1574 E Canal Dr. | Turlock, CA 95381-1105 |
| 5S | School District, Union Hill Elementary | | 10879 Bartlett Dr. | Grass Valley, CA 95945-8730 |
| 5S | School District, Vacaville Unified | | 751 School St. | Vacaville, CA 95688-3945 |
| 5S | School District, Washington Unified | | 930 West Acres Road | West Sacramento, CA 95691-3224 |
| 5S | School District, Western Placer Unified | | 810 J Street | Lincoln, CA 95648-1825 |

| Region | Agency | Facility | Address | City, State, ZIP |
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| 5S | School District, Woodland Joint Unified | | 630 Cottonwood St. | Woodland, CA 95695-3615 |
| 5S | School District, Yuba City Unified | | 750 Palora Ave. | Yuba City, CA 95991-3627 |
| 5S | University of California | The University of California, Davis | One Shields Avenue | Davis, CA 95616 |
| 5S | Veteran Affairs | Sacramento Medical Center @ Mather | 10535 Hospital Way | Sacramento, CA 95655 |
| 6A | School District, Lake Tahoe Unified | | 1021 Al Tahoe Blvd. | South Lake Tahoe, CA 96150-4426 |
| 6B | Bureau of Prisons | FCI Victorville | PO Box 5400 | Adelanto, CA 92301 |
| 6B | California Community Colleges | Antelope Valley College | 3041 West Avenue K | Lancaster, CA 93536-5426 |
| 6B | California Community Colleges | Victor Valley College | 18422 Bear Valley Road | Victorville, CA 92392-5849 |
| 6B | Corrections, Dept of | CSP, Los Angeles County | 44750 60th Street West | Lancaster, CA 93536-7620 |
| 6B | Defense, Department of | Production Flight Test Installation, Air Force Plant 42 | 2503 East Avenue P | Palmdale, CA 93550-2196 |
| 6B | District Agricultural Association | San Bernardino County Fairgrounds | 14800 Seventh Street | Victorville, CA |
| 6B | School District, Antelope Valley Union High | | 44811 North Sierra Hwy. | Lancaster, CA 93534-3226 |
| 6B | School District, Apple Valley Unified | | 22974 Bear Valley Road | Apple Valley, CA 92308-7423 |
| 6B | School District, Eastside Union Elementary | | 6742 E. Avenue H | Lancaster, CA 93535-7849 |
| 6B | School District, Hesperia Unified | | 9144 Third St. | Hesperia, CA 92345-3643 |
| 6B | School District, Lancaster Elementary | | 44711 N. Cedar Ave. | Lancaster, CA 93534-3210 |
| 6B | School District, Palmdale Elementary | | 39139 10th St. East. | Palmdale, CA 93550-3419 |
| 6B | School District, Victor Elementary | | 15579 Eighth St. | Victorville, CA 92392-3348 |
| 6B | School District, Victor Valley Union High | | 16350 Mojave Dr. | Victorville, CA 92392-3655 |
| 6B | School District, Westside Union Elementary | | 46809 N. 70th St. West | Lancaster, CA 93535-7836 |
| 6B | School District, Wilsona Elementary | | 18050 East Ave. O | Palmdale, CA 93591-3800 |
| 7 | California Community Colleges | College of the Desert | 43 500 Monterey Avenue | Palm Desert, CA 92260-2499 |
| 7 | School District, Banning Unified | | 161 W. Williams St. | Banning, CA 92220-4746 |
| 7 | School District, Brawley Elementary | | 261 D St. | Brawley, CA 92227-1912 |
| 7 | School District, Brawley Union High | | 480 N. Imperial Ave. | Brawley, CA 92227-1625 |
| 7 | School District, Calexico Unified | | 901 Andrade Ave. | Calexico, CA 92232-0792 |
| 7 | School District, Central Union High | | 1001 Brighton Ave. | El Centro, CA 92243-3110 |
| 7 | School District, Coachella Valley Unified | | 87-225 Church St. | Thermal, CA 92274-0847 |
| 7 | School District, Desert Sands Unified | | 47-950 Dune Palms Rd | La Quinta, CA 92253-4000 |
| 7 | School District, El Centro Elementary | | 1256 Broadway | El Centro, CA 92243-2317 |
| 7 | School District, Imperial Unified | | 219 North E Street | Imperial, CA 92254 |
| 7 | School District, Palm Springs Unified | | 333 S. Farrell Dr. | Palm Springs, CA 92262-7905 |
| 8 | California Air National Guard | 163rd Air Refueling Wing | 1620 Graeber Street, #6 | March Field, CA 92518-1614 |
| 8 | California Army National Guard | Los Alamitos AFRC | Lexington Dr | Los Alamitos, CA 90720 |
| 8 | California Community Colleges | Chaffey College | 5885 Haven Avenue | Rancho Cucamonga, CA 91737-3002 |
| 8 | California Community Colleges | Coastline Community College | 11460 Warner Avenue | Fountain Valley, CA 92708-2597 |
| 8 | California Community Colleges | Crafton Hills College | 11711 Sand Canyon Road | Yucaipa, CA 92399-1799 |
| 8 | California Community Colleges | Cypress College | 9200 Valley View Street | Cypress, CA 90630-5897 |
| 8 | California Community Colleges | Fullerton College | 321 East Chapman Avenue | Fullerton, CA 92832-2095 |
| 8 | California Community Colleges | Golden West College | 15744 Goldenwest Street | Huntington Beach, CA 92647 0592 |
| 8 | California Community Colleges | Irvine Valley College | 5500 Irvine Center Drive | Irvine, CA 92720-4399 |

| Region | Agency | Facility | Address | City, State, ZIP |
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| 8 | California Community Colleges | Mt. San Jacinto College | 1499 North State Street | San Jacinto, CA 92583-2399 |
| 8 | California Community Colleges | Orange Coast College | 2701 Fairview Road PO Box 5005 | Costa Mesa, CA 92628-5005 |
| 8 | California Community Colleges | Riverside Community College | 4800 Magnolia Avenue | Riverside, CA 92506-1293 |
| 8 | California Community Colleges | San Bernardino Valley College | 701 S. Mt. Vernon Avenue | San Bernardino, CA 92410-2798 |
| 8 | California Community Colleges | Santa Ana College | 1530 W. 17th Street | Santa Ana, CA 92706-3398 |
| 8 | California Community Colleges | Santiago Canyon College | 8045 E. Chapman Avenue | Orange, CA 92869-4512 |
| 8 | California State University | California State University Fullerton | P.O. Box 34080 | Fullerton, CA 92834 |
| 8 | California State University | California State University San Bernardino | 5500 University Parkway | San Bernardino, CA 92407 |
| 8 | California Youth Authority | Heman G. Stark Youth Correctional Facility | 15180 Eculid Ave | Chino, CA |
| 8 | Corrections, Dept of | California Institution for Men | 14901 Central Avenue | Chino, CA 91710 |
| 8 | Corrections, Dept of | California Institution for Women | 16756 Chino-Corona Road | Corona, CA 92878-6000 |
| 8 | Corrections, Dept of | California Rehabilitation Center | 5th & Western | Norco, CA 91760 |
| 8 | Defense, Department of | March Air Reserve Base | 2145 Graeber St, Ste 117 | March ARB, CA 92518-1671 |
| 8 | Defense, Department of | Naval Warfare Assessment Sation | 2300 Fifth St | Norco, CA 91760 |
| 8 | Defense, Department of | Seal Beach Naval Weapons Station | 800 Seal Beach Blvd | Seal Beach, CA 90740-5000 |
| 8 | Developmental Services, Dept of. | Fairview Developmental Center | 2501 Harbor Blvd | Cotsa Mesa, CA |
| 8 | District Agricultural Association | Orange County Fairgrounds | 88 Fair Drive | Costa Mesa, CA |
| 8 | Education, Dept of | Calif. School for the Deaf | 3044 Horace St. | Riverside, CA 92506-4498 |
| 8 | Mental Health, Dept of | Patton State Hospital | 3102 e Highland Ave | Patton, CA |
| 8 | School District, Alta Loma Elementary | | 9340 Baseline Road | Alta Loma, CA 91701-5821 |
| 8 | School District, Alvord Unified | | 10365 Keller Ave | Riverside, CA 92505-1349 |
| 8 | School District, Anaheim Elementary | | 1001 S. East St. | Anaheim, CA 92805-5749 |
| 8 | School District, Anaheim Union High | | 501 Crescent Way | Anaheim, CA 92803-3520 |
| 8 | School District, Bear Valley Unified | | 42271 Moonridge Road | Big Bear Lake, CA 92315-1529 |
| 8 | School District, Beaumont Unified | | 500 Grace Ave. | Beaumont, CA 92223-0187 |
| 8 | School District, Brea-Olinda Unified | | Number One Civic Cntr. | Brea, CA 92821-9990 |
| 8 | School District, Buena Park Elementary | | 6885 Orangethorpe Ave. | Buena Park, CA 90620-1348 |
| 8 | School District, Central Elementary | | 10601 Church St., Suite 112 | Rancho Cucamonga, CA 91730-6863 |
| 8 | School District, Centralia Elementary | | 6625 la Palma Ave. | Buena Park, CA 90620-2859 |
| 8 | School District, Chaffey Joint Union | | 211 W. Fifth St. | Ontario, CA 91762-1698 |
| 8 | School District, Chino Valley Unified | | 5130 Riverside Dr. | Chino, CA 91710-4130 |
| 8 | School District, Colton Joint Unified | | 1212 Valencia Dr. | Colton, CA 92324-1798 |
| 8 | School District, Corona-Norco Unified | | 2820 Clark Ave. | Norco, CA 91760-1903 |
| 8 | School District, Cucamonga Elementary | | 8776 Archibald Ave. | Rancho Cucamonga, CA 91730-4698 |
| 8 | School District, Cypress Elementary | | 9470 Moody St. | Cypress, CA 90630-2919 |
| 8 | School District, Etiwanda Elementary | | 6061 East Ave. | Etiwanda, CA 91739-0248 |
| 8 | School District, Fontana Unified | | 9680 Citrus Ave. | Fontana, CA 92335-5571 |
| 8 | School District, Fountain Valley Elementary | | 17210 Oak St. | Fountain Valley, CA 92708-3405 |
| 8 | School District, Fullerton Elementary | | 1401 W. Valencia Dr. | Fullerton, CA 92633-3938 |
| 8 | School District, Fullerton Joint Union High | | 1051 W. Bastanchury Road | Fullerton, CA 92833-2247 |

| Region | Agency | Facility | Address | City, State, ZIP |
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| 8 | School District, Garden Grove Unified | | 10331 Stanford Ave. | Garden Grove, CA 92840-6351 |
| 8 | School District, Hemet Unified | | 2350 W. Latham Ave. | Hemet, CA 92545-3632 |
| 8 | School District, Huntington Beach City Elementary | | 20451 Craimer Lane | Huntington Beach, CA 92646-0071 |
| 8 | School District, Huntington Beach Union High | | 10251 Yorktown Ave. | Huntington Beach, CA 92646-2999 |
| 8 | School District, Irvine Unified | | 5050 Barranca Parkway | Irvine, CA 92604-4652 |
| 8 | School District, Jurupa Unified | | 3924 Riverview Dr. | Riverside, CA 92509-6611 |
| 8 | School District, La Habra City Elementary | | 500 N. Walnut St. | La Habra, CA 90633-0307 |
| 8 | School District, Lake Elsinore Unified | | 545 Chaney St. | Lake Elsinore, CA 92530-2723 |
| 8 | School District, Los Alamitos Unified | | 10293 Bloomfield St. | Los Alamitos, CA 90720-2264 |
| 8 | School District, Magnolia Elementary | | 2705 W. Orange Ave. | Anaheim, CA 92804-3203 |
| 8 | School District, Menifee Union Elementary | | 30205 Menifee Road | Menifee, CA 92584-8109 |
| 8 | School District, Moreno Valley Unified | | 25634 Alessandro Blvd. | Moreno Valley, CA 92553-4306 |
| 8 | School District, Mountain View Elementary | | 2585 S. Archibald Ave. | Ontario, CA 91761-8146 |
| 8 | School District, Newport-Mesa Unified | | 2985-A Bear St. | Costa Mesa, CA 92626- |
| 8 | School District, Nuview Union Elementary | | 29780 Lakeview Ave. | Nuevo, CA 92567-9261 |
| 8 | School District, Ocean View Elementary | | 17200 Pinehurst Lane | Huntington Beach, CA 92647-5569 |
| 8 | School District, Ontario-Montclair Elementary | | 950 West D St. | Ontario, CA 91762-3026 |
| 8 | School District, Orange Unified | | 1401 N. Handy St. | Orange, CA 92856- |
| 8 | School District, Perris Elementary | | 143 E. First St. | Perris, CA 92570-2113 |
| 8 | School District, Perris Union High | | 155 E. Fourth St. | Perris, CA 92570-2124 |
| 8 | School District, Placentia-Yorba Linda Unified | | 1301 E. Orangethorpe Ave. | Placentia, CA 92670-5302 |
| 8 | School District, Redlands Unified | | 20 W. Lugonia | Redlands, CA 92373-1508 |
| 8 | School District, Rialto Unified | | 182 E. Walnut Ave. | Rialto, CA 92376-3530 |
| 8 | School District, Riverside Unified | | 3380 14th St. | Riverside, CA 92516-2800 |
| 8 | School District, Romoland Elementary | | 25900 Leon Road | Homeland, CA 92548- |
| 8 | School District, San Bernardino City Unified | | 777 North F St. | San Bernardino, CA 92410-3017 |
| 8 | School District, San Jacinto Unified | | 2045 S. San Jacinto Ave. | San Jacinto, CA 92583-5626 |
| 8 | School District, Santa Ana Unified | | 1601 E. Chestnut Ave. | Santa Ana, CA 92701-6322 |
| 8 | School District, Savanna Elementary | | 1330 S. Knott Ave. | Anaheim, CA 92804-4711 |
| 8 | School District, Tustin Unified | | 300 South C St. | Tustin, CA 92780-3695 |
| 8 | School District, Upland Unified | | 390 N. Euclid Ave. | Upland, CA 91785-1239 |
| 8 | School District, Val Verde Unified | | 975 E. Morgan Road | Perris, CA 92571-3103 |
| 8 | School District, Westminster Elementary | | 14121 Cedarwood Ave. | Westminster, CA 92683-4482 |
| 8 | School District, Yucaipa-Calimesa Jt. Unified | | 12797 Third St. | Yucaipa, CA 92399-4544 |
| 8 | University of California | University of California, Irvine | | Irvine, CA 92697 |
| 8 | University of California | University of California, Riverside | 900 University Avenue | Riverside, CA 92521 |
| 8 | Veteran Affairs | Jerry L. Pettis Memorial VA Medical Center | 11201 Benton Street | Loma Linda, CA 92357 |
| 9 | Bureau of Prisons | MCC San Diego | 808 Union Street | San Diego, CA 92101-6078 |
| 9 | California Community Colleges | Cuyamaca College | 900 Rancho San Diego Parkway | El Cajon, CA 92019-4304 |
| 9 | California Community Colleges | Grossmont College | 8800 Grossmont College Drive | El Cajon, CA 92020-1799 |
| 9 | California Community Colleges | MiraCosta College | 1 Barnard Drive | Oceanside, CA 92056-3899 |
| 9 | California Community Colleges | Palomar College | 1140 West Mission Road | San Marcos, CA 92069-1487 |

| Region | Agency | Facility | Address | City, State, ZIP |
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| 9 | California Community Colleges | Saddleback College | 28000 Marguerite Parkway | Mission Viejo, CA 92692-3699 |
| 9 | California Community Colleges | San Diego City College | 1313 12th Avenue | San Diego, CA 92101-4787 |
| 9 | California Community Colleges | San Diego Mesa College | 7250 Mesa College Drive | San Diego, CA 92111-4996 |
| 9 | California Community Colleges | San Diego Miramar College | 10440 Black Mountain Road | San Diego, CA 92126-2999 |
| 9 | California Community Colleges | Southwestern College | 900 Otay Lakes Road | Chula Vista, CA 91910-7299 |
| 9 | California State University | California State University San Marcos | 333 S. Twin Oaks Valley Rd. | San Marcos, CA 92096 |
| 9 | California State University | San Diego State University | 5500 Campanile Drive | San Diego, CA 92182 |
| 9 | Corrections, Dept of | R J Donovan Correctional Facility at Rock Mountain | 480 Alta Road | San Diego, CA 92179 |
| 9 | Defense, Department of | Camp Pendleton Marine Corps Base | PO Box 555010 | Camp Pendleton, CA 92055-5010 |
| 9 | Defense, Department of | Fleet & Industrial Supply Center, Pt. Loma | 937 N Harbor Dr | San Diego, CA 92132-0002 |
| 9 | Defense, Department of | Fleet and Industrial Supply Center, Broadway Complex | 33000 Nixie Way Bldg 50, Suite 326 | San Diego, CA 92147-5110 |
| 9 | Defense, Department of | Fleet Anti-Submarine Warfare Training Center, Pacific | 33000 Nixie Way Bldg 50, Suite 326 | San Diego, CA 92147-5110 |
| 9 | Defense, Department of | Fleet Combat Training Center, Pacific | 33000 Nixie Way Bldg 50, Suite 326 | San Diego, CA 92147-5110 |
| 9 | Defense, Department of | Magnetic Silencing Facility | 33000 Nixie Way Bldg 50, Suite 326 | San Diego, CA 92147-5110 |
| 9 | Defense, Department of | Miramar Marine Corps Air Station | PO Box 452013 | San Diego, CA 92145 |
| 9 | Defense, Department of | Mission Gorge Recreational Facility | 33000 Nixie Way Bldg 50, Suite 326 | San Diego, CA 92147-5110 |
| 9 | Defense, Department of | Naval Air Station, North Island | 33000 Nixie Way Bldg 50, Suite 326 | San Diego, CA 92147-5110 |
| 9 | Defense, Department of | Naval Amphibious Base, Coronado | 33000 Nixie Way Bldg 50, Suite 326 | San Diego, CA 92147-5110 |
| 9 | Defense, Department of | Naval Medical Center, San Diego | 34800 Bob Wilson Drive | San Diego, CA 92134 |
| 9 | Defense, Department of | Naval Outlying Landing Field, Imperial Beach | 33000 Nixie Way, Building 50, Suite 326 | San Diego, CA 92147-5110 |
| 9 | Defense, Department of | Naval Radio Receiving Facility | 33000 Nixie Way, Building 50, Suite 326 | San Diego, CA 92147-5110 |
| 9 | Defense, Department of | Naval Station, San Diego | 3455 Senn Rd | San Diego, CA 92136-5084 |
| 9 | Defense, Department of | Naval Submarine Base, San Diego | 140 Sylvester Rd | San Diego, CA 92106-5200 |
| 9 | Defense, Department of | Naval Weapon Station, Fallbrook | 700 Ammunition Rd | Fallbrook, CA 92028-3187 |
| 9 | Defense, Department of | Navy Public Works Center, Taylor Street Facility | 33000 Nixie Way Bldg 50, Suite 326 | San Diego, CA 92147-5110 |
| 9 | Defense, Department of | San Diego Marine Corps Recruit Depot | 1600 Henderson Ave #120 | San Diego, CA 92140-5001 |
| 9 | Defense, Department of | Space and Naval Warfare Systems Center, Old Town Cam | | San Diego, CA |
| 9 | Defense, Department of | Space and Naval Warfare Systems Center, Point Loma Ca | | San Diego, CA |
| 9 | District Agricultural Association | San Diego County Fairgrounds | 2260 Jimmy Durante Blvd | Del Mar, CA |
| 9 | School District, Alpine Union Elementary | | 1323 Administration Way | Alpine, CA 91901-2104 |
| 9 | School District, Bonsall Union Elementary | | 31505 Old River Road | Bonsall, CA 92003-5112 |
| 9 | School District, Cajon Valley Union Elementary | | 189 Roanoke Road | El Cajon, CA 92022-1007 |
| 9 | School District, Capistrano Unified | | 32972 Calle Perfecto | San Juan Capistrano, CA 92675-4706 |
| 9 | School District, Carlsbad Unified | | 801 Pine Ave. | Carlsbad, CA 92008-2430 |
| 9 | School District, Chula Vista Elementary | | 84 East J St. | Chula Vista, CA 91910-6115 |
| 9 | School District, Coronado Unified | | 555 D Ave. | Coronado, CA 92118-1714 |
| 9 | School District, Dehesa Elementary | | 4612 Dehesa Road | El Cajon, CA 92019-2922 |
| 9 | School District, Del Mar Union Elementary | | 225 Ninth St. | Del Mar, CA 92014-2716 |
| 9 | School District, Encinitas Union Elementary | | 101 South Rancho Santa Fe Road | Encinitas, CA 92024-4308 |
| 9 | School District, Escondido Union Elementary | | 1330 E. Grand Ave. | Escondido, CA 92027-3099 |
| 9 | School District, Escondido Union High | | 302 N. Midway Dr. | Escondido, CA 92027-2741 |

| Region | Agency | Facility | Address | City, State, ZIP |
|---|---|---|---|---|
| 9 | School District, Fallbrook Union Elementary | | 321 N. Iowa St. | Fallbrook, CA 92088-0698 |
| 9 | School District, Fallbrook Union High | | S. Mission Road & Stage Coach L | Fallbrook, CA 92088-0368 |
| 9 | School District, Grossmont Union High | | 1100 Murray Dr. | La Mesa, CA 91944-1043 |
| 9 | School District, Jamul-Dulzura Union Elementary | | 14581 Lyons Valley Road | Jamul, CA 91935-3324 |
| 9 | School District, Julian Union Elementary | | 1704 Hwy. 78 | Julian, CA 92036-0337 |
| 9 | School District, Julian Union High | | 1656 Hwy. 78 | Julian, CA 92036-0417 |
| 9 | School District, La Mesa-Spring Valley | | 4750 Date Ave. | La Mesa, CA 91941-5214 |
| 9 | School District, Laguna Beach Unified | | 550 Blumont St. | Laguna Beach, CA 92651-2356 |
| 9 | School District, Lakeside Union Elementary | | 12335 Woodside Ave. | Lakeside, CA 92040-0578 |
| 9 | School District, Lemon Grove Elementary | | 8025 Lincoln St. | Lemon Grove, CA 91945-2515 |
| 9 | School District, Mountain Empire Unified | | 3291 Buckman Springs Road | Pine Valley, CA 91962-4003 |
| 9 | School District, Murrieta Valley Unified | | 41870 McAlby ct | Murrieta, CA 92562-7021 |
| 9 | School District, National Elementary | | 1500 N Ave. | National City, CA 91950-4827 |
| 9 | School District, Oceanside Unified | | 2111 Mission Ave. | Oceanside, CA 92054-2326 |
| 9 | School District, Poway Unified | | 13626 Twin Peaks Road | Poway, CA 92064-3034 |
| 9 | School District, Ramona City Unified | | 720 Ninth St. | Ramona, CA 92065-2348 |
| 9 | School District, Rancho Santa Fe Elementary | | 5927 la Granada | Rancho Santa Fe, CA 92067-0809 |
| 9 | School District, Saddleback Valley Unified | | 25631 Peter A Hartman Way | Mission Viejo, CA 92691- |
| 9 | School District, San Diego City Unified | | 4100 Normal St. | San Diego, CA 92103-2653 |
| 9 | School District, San Dieguito Union High | | 710 Encinitas Blvd. | Encinitas, CA 92024-3357 |
| 9 | School District, San Marcos Unified | | 1 Civic Center Dr., Suite 300 | San Marcos, CA 92069- |
| 9 | School District, San Pasqual Union Elementary | | 16666 San Pasqual Valley Road | Escondido, CA 92027-7001 |
| 9 | School District, San Ysidro Elementary | | 4350 Otay Mesa Road | San Ysidro, CA 92173-1617 |
| 9 | School District, Santee Elementary | | 9625 Cuyamaca St. | Santee, CA 92071-2674 |
| 9 | School District, Solana Beach Elementary | | 309 N. Rios Ave. | Solana Beach, CA 92075-1241 |
| 9 | School District, South Bay Union Elementary | | 601 Elm Ave. | Imperial Beach, CA 91932-2029 |
| 9 | School District, Spencer Valley Elementary | | 4414 Hwys. 78 and 79 | Santa Ysabel, CA 92070-0159 |
| 9 | School District, Sweetwater Union High | | 1130 Fifth Ave. | Chula Vista, CA 91911-2812 |
| 9 | School District, Temecula Valley Unified | | 31350 Rancho Vista Road | Temecula, CA 92592-6202 |
| 9 | School District, Vallecitos Elementary | | 5211 Fifth St. | Fallbrook, CA 92028-9795 |
| 9 | School District, Valley Center-Pauma Unified | | 28751 Cole Grade Rd. | Valley Center, CA 92082-6599 |
| 9 | School District, Vista Unified | | 1234 Arcadia Ave. | Vista, CA 92084-3404 |
| 9 | School District, Warner Unified | | 30951 Hwy. 79 | Warner Springs, CA 92086-0008 |
| 9 | University of California | University of California, San Diego | 9500 Gilman Dr. | La Jolla, CA 92093 |
| 9 | Veteran Affairs | VA San Diego Healthcare System | 3350 La Jolla Village Drive | San Diego, CA 92161 |

**Areas subject to high growth or serving a population of at least 50,000 must comply with the following provisions (for counties this threshold population applies to the population within the permit area).**

A. RECEIVING WATER LIMITATIONS

1. Discharges shall not cause or contribute to an exceedance of water quality standards contained in a Statewide Water Quality Control Plan, the California Toxics Rule (CTR), or in the applicable RWQCB Basin Plan.

2. The permittees shall comply with Receiving Water Limitations A.1 through timely implementation of control measures and other actions to reduce pollutants in the discharges in accordance with the SWMP and other requirements of this permit including any modifications. The SWMP shall be designed to achieve compliance with Receiving Water Limitations A.1. If exceedance(s) of water quality objectives or water quality standards (collectively, WQS) persist notwithstanding implementation of the SWMP and other requirements of this permit, the permittees shall assure compliance with Receiving Water Limitations A.1 by complying with the following procedure:

   a. Upon a determination by either the permittees or the RWQCB that discharges are causing or contributing to an exceedance of an applicable WQS, the permittees shall promptly notify and thereafter submit a report to the RWQCB that describes BMPs that are currently being implemented and additional BMPs that will be implemented to prevent or reduce any pollutants that are causing or contributing to the exceedance of WQSs. The report may be incorporated in the annual update to the SWMP unless the RWQCB directs an earlier submittal. The report shall include an implementation schedule. The RWQCB may require modifications to the report.

   b. Submit any modifications to the report required by the RWQCB within 30 days of notification.

   c. Within 30 days following approval of the report described above by the RWQCB, the permittees shall revise the SWMP and monitoring program to incorporate the approved modified BMPs that have been and will be implemented, implementation schedule, and any additional monitoring required.

   d. Implement the revised SWMP and monitoring program in accordance with the approved schedule.

   So long as the permittees have complied with the procedures set forth above and are implementing the revised SWMP, the permittees do not have to repeat the same procedure for continuing or recurring exceedances of the same receiving water limitations unless directed by the RWQCB to develop additional BMPs.

B. DESIGN STANDARDS

Regulated Small MS4s subject to this requirement must adopt an ordinance or other document to ensure implementation of the Design Standards included herein or a functionally equivalent program that is acceptable to the appropriate RWQCB. The ordinance or other document must be adopted and effective prior to the expiration of this General Permit or, for Small MS4s designated subsequent to the Permit adoption, within five years of designation as a regulated Small MS4.

All discretionary development and redevelopment projects that fall into one of the following categories are subject to these Design Standards. These categories are:

- Single-Family Hillside Residences
- 100,000 Square Foot Commercial Developments
- Automotive Repair Shops
- Retail Gasoline Outlets
- Restaurants
- Home Subdivisions with 10 or more housing units
- Parking lots 5,000 square feet or more or with 25 or more parking spaces and potentially exposed to storm water runoff

1. Conflicts With Local Practices
   Where provisions of the Design Standards conflict with established local codes or other regulatory mechanism, (e.g., specific language of signage used on storm drain stenciling), the Permittee may continue the local practice and modify the Design Standards to be consistent with the code or other regulatory mechanism, except that to the extent that the standards in the Design Standards are more stringent than those under local codes or other regulatory mechanism, such more stringent standards shall apply.

2. Design Standards Applicable to All Categories

   a. Peak Storm Water Runoff Discharge Rates
      Post-development peak storm water runoff discharge rates shall not exceed the estimated pre-development rate for developments where the increased peak storm water discharge rate will result in increased potential for downstream erosion.

   b. Conserve Natural Areas
      If applicable, the following items are required and must be implemented in the site layout during the subdivision design and approval process, consistent with applicable General Plan and Local Area Plan policies:

      1) Concentrate or cluster Development on portions of a site while leaving the remaining land in a natural undisturbed condition.
      2) Limit clearing and grading of native vegetation at a site to the minimum amount needed to build lots, allow access, and provide fire protection.
      3) Maximize trees and other vegetation at each site by planting additional vegetation, clustering tree areas, and promoting the use of native and/or drought tolerant plants.

4) Promote natural vegetation by using parking lot islands and other landscaped areas.
5) Preserve riparian areas and wetlands.

c. Minimize Storm Water Pollutants of Concern
Storm water runoff from a site has the potential to contribute oil and grease, suspended solids, metals, gasoline, pesticides, and pathogens to the storm water conveyance system. The development must be designed so as to minimize, to the maximum extent practicable, the introduction of pollutants of concern that may result in significant impacts, generated from site runoff of directly connected impervious areas (DCIA), to the storm water conveyance system as approved by the building official. Pollutants of concern consist of any pollutants that exhibit one or more of the following characteristics: current loadings or historic deposits of the pollutant are impacting the beneficial uses of a receiving water, elevated levels of the pollutant are found in sediments of a receiving water and/or have the potential to bioaccumulate in organisms therein, or the detectable inputs of the pollutant are at concentrations or loads considered potentially toxic to humans and/or flora and fauna.

In meeting this specific requirement, "minimization of the pollutants of concern" will require the incorporation of a BMP or combination of BMPs best suited to maximize the reduction of pollutant loadings in that runoff to the Maximum Extent Practicable. Those BMPs best suited for that purpose are those listed in the *California Storm Water Best Management Practices Handbook*s; *Caltrans Storm Water Quality Handbook: Planning and Design Staff Guid*e; *Manual for Storm Water Management in Washington Stat*e; *The Maryland Stormwater Design Manua*l; *Florida Development Manual: A Guide to Sound Land and Water Managemen*t; Denver *Urban Storm Drainage Criteria Manual, Volume 3 – Best Management Practices* and *Guidance Specifying Management Measures for Sources of Nonpoint Pollution in Coastal Waters* , USEPA Report No. EPA-840-B-92-002, as "likely to have significant impact" beneficial to water quality for targeted pollutants that are of concern at the site in question. However, it is possible that a combination of BMPs not so designated, may in a particular circumstance, be better suited to maximize the reduction of the pollutants.

d. Protect Slopes and Channels
Project plans must include BMPs consistent with local codes, ordinances, or other regulatory mechanism and the Design Standards to decrease the potential of slopes and/or channels from eroding and impacting storm water runoff:

1) Convey runoff safely from the tops of slopes and stabilize disturbed slopes.
2) Utilize natural drainage systems to the maximum extent practicable.
3) Stabilize permanent channel crossings.
4) Vegetate slopes with native or drought tolerant vegetation, as appropriate.
5) Install energy dissipaters, such as riprap, at the outlets of new storm drains, culverts, conduits, or channels that enter unlined channels in accordance with applicable specifications to minimize erosion, with the approval of all agencies

with jurisdiction, e.g., the U.S. Army Corps of Engineers and the California Department of Fish and Game.

e. Provide Storm Drain System Stenciling and Signage
Storm drain stencils are highly visible source controls that are typically placed directly adjacent to storm drain inlets. The stencil contains a brief statement that prohibits the dumping of improper materials into the storm water conveyance system. Graphical icons, either illustrating anti-dumping symbols or images of receiving water fauna, are effective supplements to the anti-dumping message. All storm drain inlets and catch basins within the project area must be stenciled with prohibitive language (such as: "NO DUMPING – DRAINS TO OCEAN") and/or graphical icons to discourage illegal dumping.· Signs and prohibitive language and/or graphical icons, which prohibit illegal dumping, must be posted at public access points along channels and creeks within the project area.· Legibility of stencils and signs must be maintained.

f. Properly Design Outdoor Material Storage Areas
Outdoor material storage areas refer to storage areas or storage facilities solely for the storage of materials. Improper storage of materials outdoors may provide an opportunity for toxic compounds, oil and grease, heavy metals, nutrients, suspended solids, and other pollutants to enter the storm water conveyance system. Where proposed project plans include outdoor areas for storage of materials that may contribute pollutants to the storm water conveyance system, the following Structural or Treatment BMPs are required:

1) Materials with the potential to contaminate storm water must be: (1) placed in an enclosure such as, but not limited to, a cabinet, shed, or similar structure that prevents contact with runoff or spillage to the storm water conveyance system; or (2) protected by secondary containment structures such as berms, dikes, or curbs.
2) The storage area must be paved and sufficiently impervious to contain leaks and spills.
3) The storage area must have a roof or awning to minimize collection of storm water within the secondary containment area.

g. Properly Design Trash Storage Areas
A trash storage area refers to an area where a trash receptacle or receptacles (dumpsters) are located for use as a repository for solid wastes. Loose trash and debris can be easily transported by the forces of water or wind into nearby storm drain inlets, channels, and/or creeks. All trash container areas must meet the following Structural or Treatment Control BMP requirements (individual single family residences are exempt from these requirements):

1) Trash container areas must have drainage from adjoining roofs and pavement diverted around the area(s).
2) Trash container areas must be screened or walled to prevent off-site transport of trash.

h. Provide Proof of Ongoing BMP Maintenance

Improper maintenance is one of the most common reasons why water quality controls will not function as designed or which may cause the system to fail entirely. It is important to consider who will be responsible for maintenance of a permanent BMP, and what equipment is required to perform the maintenance properly. As part of project review, if a project applicant has included or is required to include, Structural or Treatment Control BMPs in project plans, the Permittee shall require that the applicant provide verification of maintenance provisions through such means as may be appropriate, including, but not limited to legal agreements, covenants, CEQA mitigation requirements and/or Conditional Use Permits.

For all properties, the verification will include the developer's signed statement, as part of the project application, accepting responsibility for all structural and treatment control BMP maintenance until the time the property is transferred and, where applicable, a signed agreement from the public entity assuming responsibility for Structural or Treatment Control BMP maintenance. The transfer of property to a private or public owner must have conditions requiring the recipient to assume responsibility for maintenance of any Structural or Treatment Control BMP to be included in the sales or lease agreement for that property, and will be the owner's responsibility. The condition of transfer shall include a provision that the property owners conduct maintenance inspection of all Structural or Treatment Control BMPs at least once a year and retain proof of inspection. For residential properties where the Structural or Treatment Control BMPs are located within a common area which will be maintained by a homeowner's association, language regarding the responsibility for maintenance must be included in the project's conditions, covenants and restrictions (CC&Rs). Printed educational materials will be required to accompany the first deed transfer to highlight the existence of the requirement and to provide information on what storm water management facilities are present, signs that maintenance is needed, how the necessary maintenance can be performed, and assistance that the Permittee can provide. The transfer of this information shall also be required with any subsequent sale of the property.

If Structural or Treatment Control BMPs are located within a public area proposed for transfer, they will be the responsibility of the developer until they are accepted for transfer by the County or other appropriate public agency. Structural or Treatment Control BMPs proposed for transfer must meet design standards adopted by the public entity for the BMP installed and should be approved by the County or other appropriate public agency prior to its installation.

i. Design Standards for Structural or Treatment Control BMPs
The Permittees shall require that post-construction treatment control BMPs incorporate, at a minimum, either a volumetric or flow based treatment control design standard, or both, as identified below to mitigate (infiltrate, filter or treat) storm water runoff:

1) Volumetric Treatment Control BMP

a) The 85th percentile 24-hour runoff event determined as the maximized capture storm water volume for the area, from the formula recommended in Urban Runoff Quality Management, WEF Manual of Practice No. 23/ ASCE Manual of Practice No. 87, (1998); or
b) The volume of annual runoff based on unit basin storage water quality volume, to achieve 80 percent or more volume treatment by the method recommended in California Stormwater Best Management Practices Handbook – Industrial/ Commercial, (2003); or
c) The volume of runoff produced from a historical-record based reference 24-hour rainfall criterion for "treatment" that achieves approximately the same reduction in pollutant loads achieved by the 85th percentile 24-hour runoff event.

2) Flow Based Treatment Control BMP
   a) The flow of runoff produced from a rain event equal to at least two times the 85th percentile hourly rainfall intensity for the area; or
   b) The flow of runoff produced from a rain event that will result in treatment of the same portion of runoff as treated using volumetric standards above.

Limited Exclusion
Restaurants and Retail Gasoline Outlets, where the land area for development or redevelopment is less than 5,000 square feet, are excluded from the numerical Structural or Treatment Control BMP design standard requirement only.

3. Provisions Applicable to Individual Priority Project Categories

   a. 100,000 Square Foot Commercial Developments

      1) Properly Design Loading/Unloading Dock Areas
      Loading/unloading dock areas have the potential for material spills to be quickly transported to the storm water conveyance system. To minimize this potential, the following design criteria are required:

         a) Cover loading dock areas or design drainage to minimize run-on and runoff of storm water.
         b) Direct connections to storm drains from depressed loading docks (truck wells) are prohibited.

      2) Properly Design Repair/Maintenance Bays
      Oil and grease, solvents, car battery acid, coolant and gasoline from the repair/maintenance bays can negatively impact storm water if allowed to come into contact with storm water runoff. Therefore, design plans for repair bays must include the following:

a) Repair/maintenance bays must be indoors or designed in such a way that doesn't allow storm water runon or contact with storm water runoff.
b) Design a repair/maintenance bay drainage system to capture all washwater, leaks and spills. Connect drains to a sump for collection and disposal. Direct connection of the repair/maintenance bays to the storm drain system is prohibited. If required by local jurisdiction, obtain an Industrial Waste Discharge Permit.

3) Properly Design Vehicle/Equipment Wash Areas
The activity of vehicle/equipment washing/steam cleaning has the potential to contribute metals, oil and grease, solvents, phosphates, and suspended solids to the storm water conveyance system. Include in the project plans an area for washing/steam cleaning of vehicles and equipment. The area in the site design must be:

a) Self-contained and/ or covered, equipped with a clarifier, or other pretreatment facility, and
b) Properly connected to a sanitary sewer or other appropriately permitted disposal facility.

b. Restaurants

1) Properly Design Equipment/Accessory Wash Areas
The activity of outdoor equipment/accessory washing/steam cleaning has the potential to contribute metals, oil and grease, solvents, phosphates, and suspended solids to the storm water conveyance system. Include in the project plans an area for the washing/steam cleaning of equipment and accessories. This area must be:

a) Self-contained, equipped with a grease trap, and properly connected to a sanitary sewer.
b) If the wash area is to be located outdoors, it must be covered, paved, have secondary containment, and be connected to the sanitary sewer or other appropriately permitted disposal facility.

c. Retail Gasoline Outlets

1) Properly Design Fueling Area
Fueling areas have the potential to contribute oil and grease, solvents, car battery acid, coolant and gasoline to the storm water conveyance system. The project plans must include the following BMPs:

a) The fuel dispensing area must be covered with an overhanging roof structure or canopy. The canopy's minimum dimensions must be equal to or greater than the area within the grade break. The canopy must not drain onto the fuel dispensing area, and the canopy downspouts must be routed to prevent drainage across the fueling area.

b) The fuel dispensing area must be paved with Portland cement concrete (or equivalent smooth impervious surface), and the use of asphalt concrete shall be prohibited.
c) The fuel dispensing area must have a 2% to 4% slope to prevent ponding, and must be separated from the rest of the site by a grade break that prevents run-on of storm water to the extent practicable.
d) At a minimum, the concrete fuel dispensing area must extend 6.5 feet (2.0 meters) from the corner of each fuel dispenser, or the length at which the hose and nozzle assembly may be operated plus 1 foot (0.3 meter), whichever is less.

d. Automotive Repair Shops

1) Properly Design Fueling Area
Fueling areas have the potential to contribute oil and grease, solvents, car battery acid, coolant and gasoline to the storm water conveyance system. Therefore, design plans, which include fueling areas, must contain the following BMPs:

a. The fuel dispensing area must be covered with an overhanging roof structure or canopy. The canopy's minimum dimensions must be equal to or greater than the area within the grade break. The canopy must not drain onto the fuel dispensing area, and the canopy downspouts must be routed to prevent drainage across the fueling area.
b. The fuel dispensing area must be paved with Portland cement concrete (or equivalent smooth impervious surface), and the use of asphalt concrete shall be prohibited.
c. The fuel dispensing area must have a 2% to 4% slope to prevent ponding, and must be separated from the rest of the site by a grade break that prevents run-on of storm water to the extent practicable.
d. At a minimum, the concrete fuel dispensing area must extend 6.5 feet (2.0 meters) from the corner of each fuel dispenser, or the length at which the hose and nozzle assembly may be operated plus 1 foot (0.3 meter), whichever is less.

2) Properly Design Repair/Maintenance Bays
Oil and grease, solvents, car battery acid, coolant and gasoline from the repair/maintenance bays can negatively impact storm water if allowed to come into contact with storm water runoff. Therefore, design plans for repair bays must include the following:

a) Repair/maintenance bays must be indoors or designed in such a way that doesn't allow storm water run-on or contact with storm water runoff.
b) Design a repair/maintenance bay drainage system to capture all wash-water, leaks and spills. Connect drains to a sump for collection and disposal. Direct connection of the repair/maintenance bays to the storm drain system is

prohibited. If required by local jurisdiction, obtain an Industrial Waste Discharge Permit.

3) Properly Design Vehicle/Equipment Wash Areas
The activity of vehicle/equipment washing/steam cleaning has the potential to contribute metals, oil and grease, solvents, phosphates, and suspended solids to the storm water conveyance system. Include in the project plans an area for washing/steam cleaning of vehicles and equipment. This area must be:

   a) Self-contained and/or covered, equipped with a clarifier, or other pretreatment facility, and properly connected to a sanitary sewer or other appropriately permitted disposal facility.

4) Properly Design Loading/Unloading Dock Areas
Loading/unloading dock areas have the potential for material spills to be quickly transported to the storm water conveyance system. To minimize this potential, the following design criteria are required:

   a) Cover loading dock areas or design drainage to minimize run-on and runoff of storm water.
   b) Direct connections to storm drains from depressed loading docks (truck wells) are prohibited.

e. Parking Lots

1) Properly Design Parking Area
Parking lots contain pollutants such as heavy metals, oil and grease, and polycyclic aromatic hydrocarbons that are deposited on parking lot surfaces by motor-vehicles. These pollutants are directly transported to surface waters. To minimize the offsite transport of pollutants, the following design criteria are required:

   a) Reduce impervious land coverage of parking areas.
   b) Infiltrate or treat runoff.

2) Properly Design To Limit Oil Contamination and Perform Maintenance
Parking lots may accumulate oil, grease, and water insoluble hydrocarbons from vehicle drippings and engine system leaks:

   a) Treat to remove oil and petroleum hydrocarbons at parking lots that are heavily used (e.g. fast food outlets, lots with 25 or more parking spaces , sports event parking lots, shopping malls, grocery stores, discount warehouse stores).
   b) Ensure adequate operation and maintenance of treatment systems particularly sludge and oil removal, and system fouling and plugging prevention control.

4. Waiver

A Permittee may, through adoption of an ordinance, code, or other regulatory mechanism incorporating the treatment requirements of the Design Standards, provide for a waiver from the requirement if impracticability for a specific property can be established. A waiver of impracticability shall be granted only when all other Structural or Treatment Control BMPs have been considered and rejected as infeasible. Recognized situations of impracticability include, (i) extreme limitations of space for treatment on a redevelopment project, (ii) unfavorable or unstable soil conditions at a site to attempt infiltration, and (iii) risk of ground water contamination because a known unconfined aquifer lies beneath the land surface or an existing or potential underground source of drinking water is less than 10 feet from the soil surface. Any other justification for impracticability must be separately petitioned by the Permittee and submitted to the appropriate RWQCB for consideration. The RWQCB may consider approval of the waiver justification or may delegate the authority to approve a class of waiver justifications to the RWQCB EO. The supplementary waiver justification becomes recognized and effective only after approval by the RWQCB or the RWQCB EO. A waiver granted by a Permittee to any development or redevelopment project may be revoked by the RWQCB EO for cause and with proper notice upon petition.

5. Limitation on Use of Infiltration BMPs

Three factors significantly influence the potential for storm water to contaminate ground water. They are (i) pollutant mobility, (ii) pollutant abundance in storm water, (iii) and soluble fraction of pollutant. The risk of contamination of groundwater may be reduced by pretreatment of storm water. A discussion of limitations and guidance for infiltration practices is contained in, *Potential Groundwater Contamination from Intentional and Non-Intentional Stormwater Infiltration, Report No. EPA/600/R-94/051, USEPA (1994).*

In addition, the distance of the groundwater table from the infiltration BMP may also be a factor determining the risk of contamination. A water table distance separation of ten feet depth in California presumptively poses negligible risk for storm water not associated with industrial activity or high vehicular traffic.

Site specific conditions must be evaluated when determining the most appropriate BMP. Additionally, monitoring and maintenance must be provided to ensure groundwater is protected and the infiltration BMP is not rendered ineffective by overload. This is especially important for infiltration BMPs for areas of industrial activity or areas subject to high vehicular traffic [25,000 or greater average daily traffic (ADT) on main roadway or 15,000 or more ADT on any intersecting roadway]. In some cases pretreatment may be necessary.

6. Alternative Certification for Storm Water Treatment Mitigation

In lieu of conducting detailed BMP review to verify Structural or Treatment Control BMP adequacy, a Permittee may elect to accept a signed certification from a Civil Engineer or a Licensed Architect registered in the State of California, that the plan meets

the criteria established herein. The Permittee is encouraged to verify that certifying person(s) have been trained on BMP design for water quality, not more than two years prior to the signature date. Training conducted by an organization with storm water BMP design expertise (e.g., a University, American Society of Civil Engineers, American Society of Landscape Architects, American Public Works Association, or the California Water Environment Association) may be considered qualifying.

**Attachment 5**
**WQO# 2003 – 0005 – DWQ**

# Communities Anticipated to be Subject to Supplemental Provisions

| RWQCB | Area | Reason/Population |
|---|---|---|
| 1 | Windsor | High Growth |
| 2 | Clayton | High Growth |
| 2 | Marin County | 58563 |
| 2 | Napa | 72585 |
| 2 | Petaluma | 54548 |
| 2 | San Francisco | 776733 |
| 2 | San Rafael | 56063 |
| 3 | Greenfield | High Growth |
| 3 | Hollister | High Growth |
| 3 | King City | High Growth |
| 3 | Morgan Hill | High Growth |
| 3 | Nipomo | High Growth |
| 3 | Prunedale | High Growth |
| 3 | Santa Barbara | 92325 |
| 3 | Santa Barbara County | 140453 |
| 3 | Santa Cruz | 54593 |
| 3 | Santa Cruz County | 116783 |
| 3 | Santa Maria | 77423 |
| 3 | Soledad | High Growth |
| 3 | Watsonville | High Growth |
| 5F | Hanford | High Growth |
| 5F | Lemoore | High Growth |
| 5F | Los Banos | High Growth |
| 5F | Madera | High Growth |
| 5F | Merced | 63893 |
| 5F | Visalia | 91565 |
| 5R | Chico | 59954 |
| 5R | Chico | High Growth |
| 5R | Redding | 80865 |
| 5S | Davis | 60308 |
| 5S | Dixon | High Growth |
| 5S | El Dorado Hills | High Growth |
| 5S | Lathrop | High Growth |
| 5S | Lincoln | High Growth |
| 5S | Oakley | High Growth |
| 5S | Placer County | 75262 |
| 5S | Ripon | High Growth |
| 5S | Riverbank | High Growth |
| 5S | Rocklin | High Growth |

| RWQCB | Area | Reason/Population |
|---|---|---|
| 5S | Roseville | 79921 |
| 5S | Roseville | High Growth |
| 5S | Salida | High Growth |
| 5S | South Yuba City | High Growth |
| 5S | Stanislaus County | 67145 |
| 5S | Tracy | 56929 |
| 5S | Tracy | High Growth |
| 5S | Turlock | 55810 |
| 5S | Vacaville | 88625 |
| 6 | Apple Valley | 54239 |
| 6 | Hesperia | 62582 |
| 6 | Lancaster | 118718 |
| 6 | Palmdale | 116670 |
| 6 | Victorville | 64029 |
| 6B | Lake Los Angeles | High Growth |
| 6B | Palmdale | High Growth |
| 6B | Rosamond | High Growth |
| 6B | Victorville | High Growth |
| 7 | Calexico | High Growth |
| 7 | Rancho Mirage | High Growth |
| 5S | Lodi | 56999 |

# INSTRUCTIONS FOR COMPLETING THE NOTICE OF INTENT TO COMPLY WITH THE TERMS OF THE GENERAL PERMIT FOR STORM WATER DISCHARGES FROM SMALL MS4s (WATER QUALITY ORDER NO. 2003 – 0005 - DWQ)

## I. NOI STATUS

Check box "1" if this is a new NOI submittal. Check box "2" if you are reporting changes to the NOI (e.g., new contact person, phone number, mailing address). Include the facility WDID number and highlight all the information that has been changed. The appropriate official must sign the form, certifying the changes.

## II. AGENCY INFORMATION

A. Enter the name of the agency applying for coverage.
B. Enter the first and last name of the person familiar with the permit and responsible for permit compliance.
C. Enter the Title of the person listed in "B".
D. Enter the agency's mailing address.
E. Enter if necessary the 2nd address line.
F. Enter the agency's mailing address city.
G. Enter the agency's mailing address zip code.
H. Enter the county in which the agency is located. If the agency is located in more than one county, list all applicable counties. Attach additional sheets if necessary.
I. Enter the phone number where the contact person can be reached.
J. Enter the FAX number where the contact person can be reached.
K. Enter the email address where the contact person can be reached.
L. Check the box that corresponds to the agency owner.

## III. Permit Area

General name of the permit area, such as the Sacramento Metropolitan Area

## IV. Boundaries of Coverage

Describe the boundaries of the area to be permitted and include a site map. For a city, this would be the established city boundaries. For a county, unless the entire county is designated, the permitted area should be inclusive of the area of concern and rely on simplified boundaries for each general direction, such as rivers, major roads or highways, or an adjoining city's boundary. For non-traditional Small MS4s, in general, the property line shall serve as the permit boundary.

## V. Billing Information

A. Enter the name of the agency applying for coverage.
B. Enter the first and last name of the person familiar with the permit and responsible for permit compliance.
C. Enter the Title of the person listed in "B".
D. Enter the agency's mailing address.
E. Enter if necessary the 2nd address line.
F. Enter the agency's mailing address city.

G. Enter the agency's mailing address zip code.
H. Enter the county in which the agency is located.
I. Enter the phone number where the contact person can be reached.
J. Enter the FAX number where the contact person can be reached.
K. Enter the email address where the contact person can be reached.
L. Enter the average daily-user population of the applicant's permitted area. This is not the combined permit area of co-permittees. Submit the amount indicated by the current fee schedule (California Code of Regulations, Title 23, Division 3, Chapter 9, Article 1.) with the NOI package to the Regional Board. The fee schedule may be found at www.swrcb.ca.gov/stormwtr/municipal.html. School districts are exempt from MS4 permit fees.

## VI. Permit Type

Check the box that corresponds to the permitting option you wish to apply for:

Check box 1 if applying for individual general permit coverage.

Check box 2 if applying for a permit with one or more co-permittees. If you are applying to be a co-permittee, an appropriate official representing each agency who will participate in the area-wide permit must sign on the lines provided certifying the agency will be a co-permittee with the other agencies listed to implement a storm water program in the combined designated areas of each of the agency's jurisdiction. The agency to act as the Lead Agency (the entity responsible for being the main contact with the RWQCB for permit administration) shall start the list. If more than four agencies will act as co-permittees, continue the list on a separate page. The NOI must have original signatures.

Check box 3 if designating a Separate Implementing Entity and enter agency information.

A. Enter the name of the agency applying for coverage.
B. Enter the first and last name of the person familiar with the permit and responsible for permit compliance.
C. Enter the title of person in "B".
D. Enter the agency's mailing address phone number where the contact person can be reached.
E. Enter if necessary the 2nd address line.
F. Enter the agency's mailing address city.
G. Enter the agency's mailing address zip code.
H. Enter the county in which the agency is located. If the agency is located in more than one county, list all applicable counties. Attach additional sheets if necessary.
I. Enter the phone number where the contact person can be reached.
J. Enter the FAX number where the contact person can be reached.
K. Enter the email address where the contact person can be reached.
L. Check the box that corresponds to the agency owner.
M. List all of the Minimum Control Measure(s) that will be implemented by the SIE.
N. Certification by an appropriate SIE official that the SIE agrees to include the agency in implementing the SWMP. For a municipality, State, Federal, or other public agency the appropriate official would be a principal executive officer, ranking elected official or duly authorized representative. The principal executive officer of

a Federal agency includes the chief executive officer of the agency or the senior executive officer having responsibility for the overall operations of a principal geographic unit of the agency (e.g., Regional Administrator of USEPA).

For multiple agencies implementing different Minimum Control Measures please use a separate form for each Minimum Control Measures. A photocopy of the 2nd page of the NOI is adequate, but must have original signatures.

## VII. STORM WATER MANAGEMENT PROGRAM

The SWMP must be submitted with the NOI. Check the box if the SWMP is completed and attached to the NOI. If a SIE is implementing all of the Minimum Control Measures it is not necessary to submit a SWMP.

## VIII. CERTIFICATION

A. Print the name of the appropriate official. For a municipality, State, Federal, or other public agency this would be a principal executive officer, ranking elected official, or duly authorized representative. The principal executive officer of a Federal agency includes the chief executive officer of the agency or the senior executive officer having responsibility for the overall operations of a principal geographic unit of the agency (e.g., Regional Administrator of USEPA).
B. Enter the professional title of the person signing the NOI.
C. The person whose name is printed in box IV.A must sign the NOI.
D. Provide the date on which the Information Sheet was signed.

State Water Resources Control Board
NOTICE OF INTENT
TO COMPLY WITH THE TERMS OF THE GENERAL PERMIT FOR
STORM WATER DISCHARGES FROM
SMALL MUNICIPAL SEPARATE STORM SEWER SYSTEMS
(WATER QUALITY ORDER NO. 2003 – 0005 - DWQ)

## I. NOI Status

| |
|---|
| Mark Only One Item 1. [ ]New Permittee 2. [ ]Change of Information WDID #:_____ |

## II. Agency Information

| | | | |
|---|---|---|---|
| A. Agency | | | |
| B. Contact Person | | C. Title | |
| D. Mailing Address | | E. Address (Line 2) | |
| F. City | State **CA** | G. Zip | H. County |
| I. Phone | J. FAX | K. Email Address | |
| L. Operator Type (check one)<br>1. [ ] City 2. [ ] County 3. [ ] State 4. [ ] Federal 5. [ ] Special District 6. [ ] Government Combination | | | |

## III. Permit Area

_____

## IV. Boundaries of Coverage (include a site map with the submittal)

_____

_____

_____

_____

## V. Billing Information

| | | | |
|---|---|---|---|
| A. Agency | | | |
| B. Contact Person | | C. Title | |
| D. Mailing Address | | E. Address (Line 2) | |
| F. City | State **CA** | G. Zip | H. County |
| I. Phone | J. FAX | K. Email Address | |

Fees are based on the daily population served by the Small MS4. To determine your fee, consult the current fee schedule (California Code of Regulations, Title 23, Division 3, Chapter 9 Article 1), which can be viewed at www.swrcb.ca.gov/stormwtr/municipal.html.

L. Population_____

Fee _____

Check(s) should be made payable to the SWRCB and submitted to the appropriate RWQCB.

SWRCB Tax ID is: 68-0281986

## VI. Discharger Information (check applicable box(es) and complete corresponding information)

1. [ ] Applying for Individual General Permit Coverage

2. [ ] Applying for a permit with one or more co-permittees

| The undersigned agree to work as co-permittees in implementing a complete small MS4 storm water program. The program must comply with the requirements found in Title 40 of the Code of Federal Regulations, parts 122.32. Attach additional sheets if necessary. Each co-permittee must complete an NOI. | |
|---|---|
| Lead Agency | Signature |
| Agency | Signature |
| Agency | Signature |
| Agency | Signature |

3. [ ] Separate Implementing Entity (SIE)

| A. Agency | | | |
|---|---|---|---|
| B. Contact Person | C. Title | | |
| D. Mailing Address | E. Address (Line 2) | | |
| F. City | State **CA** | G. Zip | H. County |
| I. Phone | J. FAX | K. Email Address | |

H. Operator Type (check one)

1. [ ] City 2. [ ] County 3. [ ] State 4. [ ] Federal 5. [ ] Special District 6. [ ] Government Combination

Minimum Control Measures being implemented by the SIE (check all that apply)

[ ] Public Education [ ] Public Involvement [ ] Illicit Discharge/Elimination
[ ] Construction [ ] Post Construction [ ] Good Housekeeping

"I agree to coordinate with the agency identified in Section III of this form and comply with its qualifying storm water program. I certify under penalty of law that this document and all attachments were prepared under my direction and supervision in accordance with a system designed to assure 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 persons directly responsible for gathering the information, to the best of my knowledge and belief, the information submitted is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment. Additionally, I certify that the provisions of the permit, including the development and implementation of a Storm Water Management Program, will be complied with."

_____ _____

N. Signature of Official Date

## VII. Storm Water Management Plan (check box)

[ ] As per section A.2. of this General Permit, the SWMP is attached.

## VIII. Certification

"I certify under penalty of law that this document and all attachments were prepared under my direction and supervision in accordance with a system designed to assure 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 persons directly responsible for gathering the information, to the best of my knowledge and belief, the information submitted is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment. Additionally, I certify that the provisions of the permit, including the development and implementation of a Storm Water Management Program, will be complied with."

A. Printed Name:_____

B. Title:_____

C. Signature:_____ D. Date: _____

# STATE WATER RESOURCES CONTROL BOARD

**Division of Water Quality**
**Attention: Storm Water Section**
**P.O. Box 1977**
**Sacramento, CA 95812-1977**
**(916) 341-5539 FAX: (916) 341-5543**
**Web Page: http://www.swrcb.ca.gov/stormwtr/index.html**
**Email: stormwater@dwq.swrcb.ca.gov**

## CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARDS

NORTH COAST REGION (1)
5550 Skylane Blvd., Ste. A
Santa Rosa, CA 95403
(707) 576-2220 FAX: (707) 523-0135
Web Page: http://www.swrcb.ca.gov/rwqcb1

SAN FRANCISCO BAY REGION (2)
1515 Clay Street, Ste. 1400
Oakland, CA 94612
(510) 622-2300 FAX: (510) 622-2460
Web Page: http://www.swrcb.ca.gov/rwqcb2

CENTRAL COAST REGION (3)
895 Aerovista Place, Suite 101
San Luis Obispo, CA 93401
(805) 549-3147 FAX: (805) 543-0397
Web Page: http://www.swrcb.ca.gov/rwqcb3

LOS ANGELES REGION (4)
320 W. 4th Street, Ste. 200
Los Angeles, CA 90013
(213) 576-6600 FAX: (213) 576-6640
Web Page: http://www.swrcb.ca.gov/rwqcb4

CENTRAL VALLEY REGION (5S)
3443 Routier Road, Ste. A
Sacramento, CA 95827-3098
(916) 255-3000 FAX: (916) 255-3015
Web Page: http:// www.swrcb.ca.gov/rwqcb5

FRESNO BRANCH OFFICE (5F)
1685 "E" Street
Fresno, CA 93706-2020
(559) 445-5116 FAX: (559) 445-5910
Web Page: http:// www.swrcb.ca.gov/rwqcb5

REDDING BRANCH OFFICE (5R)
415 Knollcrest Drive, Ste. 100
Redding, CA 96002
(530) 224-4845 FAX: (530) 224-4857
Web Page: http:// www.swrcb.ca.gov/rwqcb5

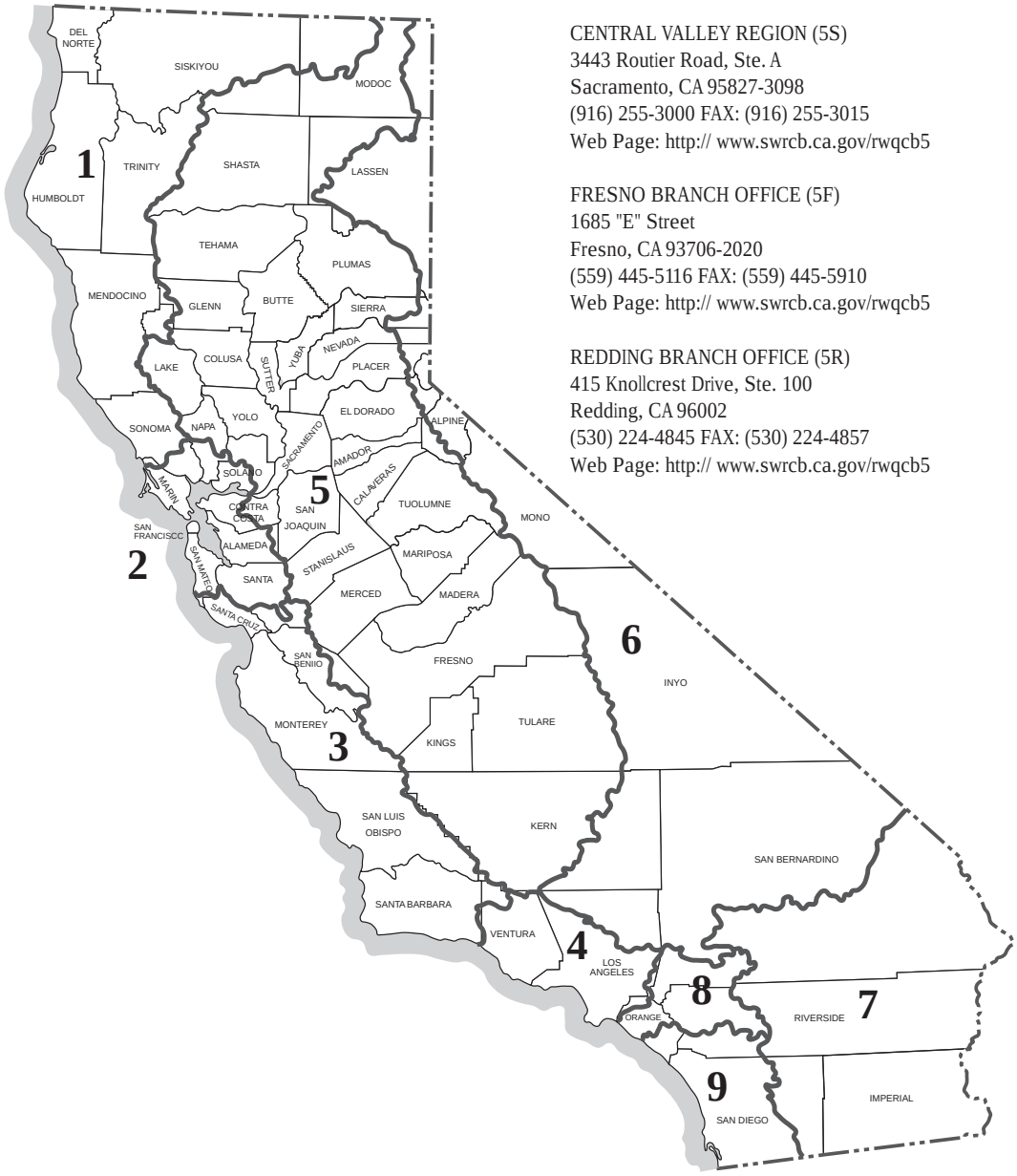
LAHONTAN REGION (6 SLT)
2501 Lake Tahoe Blvd.
South Lake Tahoe, CA 96150
(530) 542-5400 FAX: (530) 544-2271
Web Page: http:// www.swrcb.ca.gov/rwqcb6

VICTORVILLE BRANCH OFFICE (6V)
15428 Civic Drive, Ste. 100
Victorville, CA 92392-2383
(760) 241-6583 FAX: (760) 241-7308
Web Page: http:// www.swrcb.ca.gov/rwqcb6

COLORADO RIVER BASIN REGION (7)
73-720 Fred Waring Dr., Ste. 100
Palm Desert, CA 92260
(760) 346-7491 FAX: (760) 341-6820
Web Page: http:// www.swrcb.ca.gov/rwqcb7

SANTA ANA REGION (8)
California Tower
3737 Main Street, Ste. 500
Riverside, CA 92501-3339
(909) 782-4130 FAX: (909) 781-6288
Web Page: http://www.swrcb.ca.gov/rwqcb8

SAN DIEGO REGION (9)
9174 Sky Park Court, Suite 100
San Diego, CA 92123
(858) 467-2952 FAX: (858) 571-6972
Web Page: http://www.swrcb.ca.gov/rwqcb9




STATE OF CALIFORNIA
Gray Davis, Governor

CALIFORNIA ENVIRONMENTAL PROTECTION AGENCY
Winston H. Hickox, Secretary

STATE WATER RESOURCES CONTROL BOARD
Arthur Baggett Jr., Chair

**Attachment 9**
**To WQO 2003-0005-DWQ**

## Definition of Terms

1. **100,000 Square Foot Commercial Development** - 100,000 Square Foot Commercial Development means any commercial development that creates at least 100,000 square feet of impermeable area, including parking areas.

2. **Automotive Repair Shop** - Automotive Repair Shop means a facility that is categorized in any one of the following Standard Industrial Classification (SIC) codes: 5013, 5014, 5541, 7532-7534, or 7536-7539.

3. **Authorized Non-Storm Water Discharges** – Authorized non-storm water discharges are certain categories of discharges that are not composed entirely of storm water but are not found to pose a threat to water quality. They include: water line flushing; landscape irrigation; diverted stream flows; rising ground waters; uncontaminated ground water infiltration (as defined at 40 CFR §35.2005(20)) to separate storm sewers; uncontaminated pumped ground water; discharges from potable water sources; foundation drains; air conditioning condensate; irrigation water; springs; water from crawl space pumps; footing drains; lawn watering; individual residential car washing; flows from riparian habitats and wetlands; dechlorinated swimming pool discharges; and discharges or flows from emergency fire fighting activities. If any of the above authorized non-storm water discharges (except flows from fire fighting activities) are found to cause or contribute to an exceedance of water quality standards or cause or threaten to cause a condition of nuisance or pollution, the category of discharge must be prohibited.

4. **Best Management Practices (BMPs)** – Best management practices means schedules of activities, prohibitions of practices, maintenance procedures, and other management practices to prevent or reduce the pollution of 'waters of the United States." BMPs also include treatment requirements, operating procedures, and practices to control plant site runoff, spillage or leaks, sludge or waste disposal, or drainage from raw material storage. (40 CFR §122.2)

5. **Commercial Development** - Commercial Development means any development on private land that is not heavy industrial or residential. The category includes, but is not limited to: hospitals, laboratories and other medical facilities, educational institutions, recreational facilities, plant nurseries, multi-apartment buildings, car wash facilities, mini-malls and other business complexes, shopping malls, hotels, office buildings, public warehouses and other light industrial complexes.

6. **Directly Connected Impervious Area (DCIA)** - DCIA is the acronym for directly connected impervious areas and means the area covered by a building, impermeable pavement, and/ or other impervious surfaces, which drains directly into the storm drain without first flowing across permeable land area (e.g. lawns).

7. **Discretionary Project** - Discretionary Project means a project which requires the exercise of judgement or deliberation when the public agency or public body decides to approve or disapprove a particular activity, as distinguished from situations where the public agency or body merely has to determine whether there has been conformity with applicable statutes, ordinances, or regulations.

8. **Greater than (>) 9 unit home subdivision** - Greater than 9 unit home subdivision means any subdivision being developed for 10 or more single-family or multi-family dwelling units.

9. **Hillside** - Hillside means property located in an area with known erosive soil conditions, where the development contemplates grading on any natural slope that is twenty-five percent or greater.

10. **Infiltration** - Infiltration means the downward entry of water into the surface of the soil.

11. **Measurable Goal** – Measurable goals are definable tasks or accomplishments that are associated with implementing best management practices.

12. **Minimum Control Measure** – A minimum control measure is a storm water program area that must be addressed (best management practices implemented to accomplish the program goal) by all regulated Small MS4s. The following six minimum control measures are required to be addressed by the regulated Small MS4s: Public Education and Outreach on storm Water Impacts, Public Involvement/Participation, Illicit Discharge Detection and Elimination, construction Site Storm Water Runoff Control, Post-Construction Storm Water Management in New Development and Redevelopment, and Pollution Prevention/Good Housekeeping for Municipal Operations.

13. **New Development** - New Development means land disturbing activities; structural development, including construction or installation of a building or structure, creation of impervious surfaces; and land subdivision.

14. **Offsite Facility** - An offsite facility is a geographically non-adjacent or discontinuous site that serves, or is secondary to, the primary facility and has the same owner as the primary facility. Storm water discharges from an offsite facility must be permitted if it meets the definition of a regulated Small MS4 itself. The offsite facility may satisfy this permitting requirement if the SWMP of the primary facility addresses the offsite facility, such that the permitted area of the primary facility includes the offsite area.

15. **Outfall** – A point source at the point where a municipal separate storm sewer discharges to waters of the United States and does not include open conveyances connecting two municipal separate storm sewers, or pipes, tunnels or other conveyances which connect segments of the same stream or other waters of the United States and are used to convey waters of the United States. (40 CFR §122.26(b)(9))

16. **Parking Lot** - Parking Lot means land area or facility for the temporary parking or storage of motor vehicles used personally, for business or for commerce with a lot size of 5,000 square feet or more, or with 25 or more parking spaces.

17. **Point Source** – Any discernible, confined, and discrete conveyance, including but not limited to, any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, container, rolling stock, concentrated animal feeding operation, landfill leachate collection system, vessel or other floating craft from which pollutants are or may be discharged. This term does not include return flows from irrigated agriculture or agricultural storm water runoff. (40 CFR §122.2)

18. **Regulated Small MS4** – A regulated Small MS4 is a Small MS4 that is required to be permitted for discharging storm water through its MS4 to waters of the U.S. and is designated either automatically by the U.S. EPA because it is located within an urbanized area, or designated by the SWRCB or RWQCB in accordance with the designation criteria listed at Finding 11 of the General Permit.

19. **Redevelopment** - Redevelopment means, on an already developed site, the creation or addition of at least 5,000 square feet of impervious area. Redevelopment includes, but is not limited to: the expansion of a building footprint or addition of a structure; structural development including an increase in gross floor area and/ or exterior construction or remodeling; and land disturbing activities related with structural or impervious surfaces. Where redevelopment results in an increase of less than fifty percent of the impervious surfaces of a previously existing development, and the existing development was not subject to these Design Standards, the Design Standards apply only to the addition, and not to the entire development.

20. **Restaurant** - Restaurant means a stand-alone facility that sells prepared foods and drinks for consumption, including stationary lunch counters and refreshment stands selling prepared foods and drinks for immediate consumption. (SIC code 5812).

21. **Retail Gasoline Outlet** - Retail Gasoline Outlet means any facility engaged in selling gasoline and lubricating oils.

22. **Small Municipal Separate Storm Sewer System (Small MS4)** – A conveyance or system of conveyances (including roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, man-made channels, or storm drains) that are:
    (i) Owned or operated by the United States, a State, city, town, boroughs, county, parish, district, association, or other public body (created by or pursuant to State law) having jurisdiction over disposal of sewage, industrial wastes, storm water, or other wastes, including special districts under State law such as a sewer district, flood control district or drainage district, or similar entity, or an Indian tribe or an authorized Indian tribal organization, or designated and approved management agency under section 208 of the CWA that discharges to waters of the United States.
    (ii) Not defined as "large" or "medium" municipal separate storm sewer systems
    (iii) This term includes systems similar to separate storm sewer systems in municipalities, such as systems at military bases, large hospital or prison complexes, and highways and other thoroughfares. The term does not include separate storm sewers in very discrete areas, such as individual buildings. (40 CFR §122.26(b)(16))

23. **Separate Implementing Entity (SIE)** – A Separate Implementing Entity is an entity, such as a municipality, agency, or special district, other than the entity in question, that implements parts or all of a storm water program for a Permittee. The SIE may also be permitted under 40 CFR Part 122. Arrangements of one entity implementing a program for another entity is subject to approval by the Regional Water Quality Control Board Executive Officer.

24. **Source Control BMP** - Source Control BMP means any schedules of activities, prohibitions of practices, maintenance procedures, managerial practices or operational practices that aim to prevent storm water pollution by reducing the potential for contamination at the source of pollution.

25. **Storm Event** - Storm Event means a rainfall event that produces more than 0.1 inch of precipitation and that, which is separated from the previous storm event by at least 72 hours of dry weather.

26. **Structural BMP** - Structural BMP means any structural facility designed and constructed to mitigate the adverse impacts of storm water and urban runoff pollution (e.g. canopy, structural enclosure). The category may include both Treatment Control BMPs and Source Control BMPs.

27. **Treatment** - Treatment means the application of engineered systems that use physical, chemical, or biological processes to remove pollutants. Such processes include, but are not limited to, filtration, gravity settling, media adsorption, biodegradation, biological uptake, chemical oxidation and UV radiation.

28. **Treatment Control BMP** - Treatment Control BMP means any engineered system designed to remove pollutants by simple gravity settling of particulate pollutants, filtration, biological uptake, media adsorption or any other physical, biological, or chemical process.

# APPENDIX C

## Example Chemical Inventory System (CIS) List of Chemicals for Outdoor Storage Areas

**Location/Organization Result**

| | |
|---|---|
| Site: | SNL/CA |
| Bin (Wildcard): | DOCK |
| Purchase Date and Older | 11/9/2007 |
| Report Type: | Individual Containers |
| Group By: | Location |
| Physical States: | Solid Liquid Gas Aerosol |

| Barcode | Location | Org. | Quantity | QUnit | Report Quantity | RUnit | Purchase Date | Name |
|---|---|---|---|---|---|---|---|---|
| LV00116737 | CA/906/101/DOCK | 8367 | 8 | CUFT | 8 | CUFT | 4/10/2002 | ACETYLENE (1%)/ARGON (BAL) |
| LV00118442 | CA/906/101/DOCK | 8367 | 280 | CUFT | 280 | CUFT | 4/20/2005 | ARGON, COMPRESSED |
| LV00173558 | CA/906/101/DOCK | 8367 | 280 | CUFT | 280 | CUFT | 6/14/2006 | ARGON, COMPRESSED |
| LV00117757 | CA/906/101/DOCK | 8367 | 280 | CUFT | 280 | CUFT | 3/31/2004 | ARGON, COMPRESSED |
| LV00170347 | CA/906/101/DOCK | 8367 | 280 | CUFT | 280 | CUFT | 1/29/2007 | ARGON, COMPRESSED |
| LV00170348 | CA/906/101/DOCK | 8367 | 280 | CUFT | 280 | CUFT | 1/29/2007 | ARGON, COMPRESSED |
| LV00118707 | CA/906/101/DOCK | 8367 | 9.8 | CUFT | 9.8 | CUFT | 1/4/2006 | CARBON MONOXIDE (10%)/CARBON DIO (10%)/METHANE (10%)/ETHANE (10%)/ET (10%)/ACETYLENE (10%)/PROPANE (10%) (10%)/N-BUTANE (10%)/HYDROGEN (BAL |
| LV00116417 | CA/906/101/DOCK | 8367 | 422 | CUFT | 422 | CUFT | 8/15/2001 | ETHANE |
| LV00117467 | CA/906/101/DOCK | 8367 | 368 | CUFT | 368 | CUFT | 9/15/2003 | ETHYLENE |
| LV00118769 | CA/906/101/DOCK | 8367 | 61 | CUFT | 61 | CUFT | 2/13/2006 | ETHYLENE (5%)/PROPYLENE (5%)/PROPA (5%)/HYDROGEN (10%)/CARBON DIOXID MONOXIDE (10%)/METHANE (10%)/ETHA (BAL) |

| Barcode | Location | Org. | Quantity | QUnit | Report Quantity | RUnit | Purchase Date | Name |
|---|---|---|---|---|---|---|---|---|
| LV00117157 | CA/906/101/DOCK | 8367 | 244 | CUFT | 244 | CUFT | 3/10/2003 | HELIUM |
| LV00118297 | CA/906/101/DOCK | 8367 | 244 | CUFT | 244 | CUFT | 1/27/2005 | HELIUM |
| LV00117158 | CA/906/101/DOCK | 8367 | 244 | CUFT | 244 | CUFT | 3/10/2003 | HELIUM |
| LV00118780 | CA/906/101/DOCK | 8367 | 213 | CUFT | 213 | CUFT | 2/22/2006 | HYDROGEN |
| LV00170561 | CA/906/101/DOCK | 8367 | 213 | CUFT | 213 | CUFT | 6/1/2007 | HYDROGEN |
| LV00170560 | CA/906/101/DOCK | 8367 | 213 | CUFT | 213 | CUFT | 6/1/2007 | HYDROGEN |
| LV00118577 | CA/906/101/DOCK | 8367 | 210 | CUFT | 210 | CUFT | 8/5/2005 | METHANE (25%)/ARGON (BAL) |
| LV00055800 | CA/906/101/DOCK | 8367 | 70.6 | CUFT | 70.6 | CUFT | 1/15/1997 | NEON, ARGON, KRYPTON, XENON (1000 I (BAL) |
| LV00170627 | CA/906/101/DOCK | 8367 | 255 | CUFT | 255 | CUFT | 7/9/2007 | NITROGEN, COMPRESSED GAS |
| LV00170628 | CA/906/101/DOCK | 8367 | 255 | CUFT | 255 | CUFT | 7/9/2007 | NITROGEN, COMPRESSED GAS |
| LV00005616 | CA/906/101/DOCK | 8367 | 3.56 | CUFT | 3.56 | CUFT | 1/28/1993 | OXYGEN, COMPRESSED GAS |
| LV00118909 | CA/906/102/DOCK | 8350 | 9 | CUFT | 9 | CUFT | 5/16/2006 | AMMONIA, ANHYDROUS |
| LV00058475 | CA/906/102/DOCK | 8350 | 5 | CUFT | 5 | CUFT | 8/5/1994 | ARGON, COMPRESSED |
| LV00117225 | CA/906/102/DOCK | 8350 | 5.3 | CUFT | 5.3 | CUFT | 5/9/2003 | CHLORINE |
| LV00141728 | CA/906/102/DOCK | 8350 | 1 | CUFT | 1 | CUFT | 10/27/2003 | DEUTERIUM CHLORIDE |
| LV00163548 | CA/906/102/DOCK | 8350 | 500 | GR | 1.1023 | LBS | 10/23/2006 | ETHYL BROMIDE |
| LV00118514 | CA/906/102/DOCK | 8350 | 244 | CUFT | 244 | CUFT | 6/27/2005 | HELIUM |
| LV00170712 | CA/906/102/DOCK | 8350 | 244 | CUFT | 244 | CUFT | 8/23/2007 | HELIUM |

| Barcode | Location | Org. | Quantity | QUnit | Report Quantity | RUnit | Purchase Date | Name |
|---|---|---|---|---|---|---|---|---|
| LV00116871 | CA/906/102/DOCK | 8350 | 0.03 | CUFT | 0.03 | CUFT | 9/13/2002 | HYDRIODIC ACID |
| LV00118262 | CA/906/102/DOCK | 8350 | 213 | CUFT | 213 | CUFT | 12/29/2004 | HYDROGEN |
| LV00118687 | CA/906/102/DOCK | 8350 | 213 | CUFT | 213 | CUFT | 11/28/2005 | HYDROGEN |
| LV00170132 | CA/906/102/DOCK | 8350 | 213 | CUFT | 213 | CUFT | 10/4/2006 | HYDROGEN |
| LV00116187 | CA/906/102/DOCK | 8350 | 211 | CUFT | 211 | CUFT | 3/30/2001 | HYDROGEN (55%)/ARGON (BAL) |
| LV00116752 | CA/906/102/DOCK | 8350 | 0.5 | LBS | 0.5 | LBS | 4/16/2002 | HYDROGEN CHLORIDE, ANHYDROUS |
| LV00058477 | CA/906/102/DOCK | 8350 | 5 | CUFT | 5 | CUFT | 8/5/1994 | KRYPTON |
| LV00116751 | CA/906/102/DOCK | 8350 | 3.5 | CUFT | 3.5 | CUFT | 4/12/2002 | KRYPTON |
| LV00117135 | CA/906/102/DOCK | 8350 | 3.5 | CUFT | 3.5 | CUFT | 2/26/2003 | KRYPTON |
| LV00117715 | CA/906/102/DOCK | 8350 | 7 | CUFT | 7 | CUFT | 2/20/2004 | KRYPTON |
| LV00057409 | CA/906/102/DOCK | 8350 | 50 | L | 1.765735 | CUFT | 6/21/2005 | KRYPTON |
| LV00057786 | CA/906/102/DOCK | 8350 | 40 | CUFT | 40 | CUFT | 7/26/2000 | METHANE |
| LV00158475 | CA/906/102/DOCK | 8350 | 5 | GAL | 5 | GAL | 11/21/2005 | METHANOL REAGENT ACS |
| LV00158476 | CA/906/102/DOCK | 8350 | 5 | GAL | 5 | GAL | 11/21/2005 | METHANOL REAGENT ACS |
| LV00166382 | CA/906/102/DOCK | 8350 | 18 | L | 4.7550978 | GAL | 5/16/2007 | METHYL ALCOHOL |
| LV00117347 | CA/906/102/DOCK | 8350 | 176 | CUFT | 176 | CUFT | 7/7/2003 | NEON |
| LV00117714 | CA/906/102/DOCK | 8350 | 176 | CUFT | 176 | CUFT | 2/20/2004 | NEON |
| LV00118903 | CA/906/102/DOCK | 8350 | 0.18 | CUFT | 0.18 | CUFT | 5/11/2006 | NEON |
| LV00118902 | CA/906/102/DOCK | 8350 | 0.18 | CUFT | 0.18 | CUFT | 5/11/2006 | NEON |
| LV00117179 | CA/906/102/DOCK | 8350 | 1.2 | CUFT | 1.2 | CUFT | 4/1/2003 | NITRIC OXIDE |

| Barcode | Location | Org. | Quantity | QUnit | Report Quantity | RUnit | Purchase Date | Name |
|---|---|---|---|---|---|---|---|---|
| LV00117272 | CA/906/102/DOCK | 8350 | 1.2 | CUFT | 1.2 | CUFT | 6/4/2003 | NITRIC OXIDE |
| LV00117126 | CA/906/102/DOCK | 8350 | 17 | CUFT | 17 | CUFT | 2/21/2003 | NITRIC OXIDE (5%)/ARGON (BAL) |
| LV00170785 | CA/906/102/DOCK | 8350 | 2.3 | CUFT | 2.3 | CUFT | 10/3/2007 | NITRIC OXIDE (5%)/ARGON (BAL) |
| LV00170786 | CA/906/102/DOCK | 8350 | 2.3 | CUFT | 2.3 | CUFT | 10/3/2007 | NITRIC OXIDE (5%)/ARGON (BAL) |
| LV00118897 | CA/906/102/DOCK | 8350 | 31 | CUFT | 31 | CUFT | 5/11/2006 | NITRIC OXIDE (5%)/ARGON (BAL) |
| LV00055173 | CA/906/102/DOCK | 8350 | 256 | CUFT | 256 | CUFT | 3/6/1996 | NITROGEN, COMPRESSED GAS |
| LV00118869 | CA/906/102/DOCK | 8350 | 230 | CUFT | 230 | CUFT | 4/13/2006 | NITROGEN, COMPRESSED GAS |
| LV00052717 | CA/906/102/DOCK | 8350 | 250 | CUFT | 250 | CUFT | 5/4/1993 | NITROGEN, COMPRESSED GAS |
| LV00056104 | CA/906/102/DOCK | 8350 | 32 | CUFT | 32 | CUFT | 7/17/1997 | OXYGEN (10%)/ARGON (BAL) |
| LV00158045 | CA/906/102/DOCK | 8350 | 2 | LBS | 2 | LBS | 10/26/2005 | SAES GETTERS |
| LV00117389 | CA/906/102/DOCK | 8350 | 0.88 | CUFT | 0.88 | CUFT | 7/25/2003 | TRIDEUTERATED AMMONIA |
| LV00048097 | CA/906/102/DOCK | 8350 | 4 | CUFT | 4 | CUFT | 4/10/1995 | XENON |
| LV00057819 | CA/906/102/DOCK | 8350 | 3.53 | CUFT | 3.53 | CUFT | 8/28/2000 | XENON |
| LV00170815 | CA/906/103/DOCK | 8350 | 280 | CUFT | 280 | CUFT | 10/19/2007 | ARGON, COMPRESSED |
| LV00170816 | CA/906/103/DOCK | 8350 | 280 | CUFT | 280 | CUFT | 10/19/2007 | ARGON, COMPRESSED |
| LV00170817 | CA/906/103/DOCK | 8350 | 244 | CUFT | 244 | CUFT | 10/19/2007 | HELIUM |
| LV00165702 | CA/906/104/DOCK | 8362 | 4 | L | 1.0566884 | GAL | 3/29/2007 | 2,2,4-TRIMETHYLPENTANE |
| LV00110994 | CA/906/104/DOCK | 8362 | 1 | L | 0.2641721 | GAL | 3/15/2000 | ACETONE |
| LV00129737 | CA/906/104/DOCK | 8362 | 1 | GAL | 1 | GAL | 7/9/2004 | ACETONE |
| LV00170394 | CA/906/104/DOCK | 8362 | 75 | CUFT | 75 | CUFT | 3/7/2007 | CARBON MONOXIDE (0-6.5%) IN NITROG |

| Barcode | Location | Org. | Quantity | QUnit | Report Quantity | RUnit | Purchase Date | Name |
|---|---|---|---|---|---|---|---|---|
| LV00114105 | CA/906/104/DOCK | 8362 | 2 | L | 0.5283442 | GAL | 10/5/2001 | CYCLOHEXANE |
| LV00114104 | CA/906/104/DOCK | 8362 | 2 | L | 0.5283442 | GAL | 10/5/2001 | CYCLOHEXANE |
| LV00114157 | CA/906/104/DOCK | 8362 | 2 | L | 0.5283442 | GAL | 10/15/2001 | CYCLOPENTANE |
| LV00095948 | CA/906/104/DOCK | 8362 | 1 | L | 0.2641721 | GAL | 7/7/1998 | DIETHYL KETONE |
| LV00170011 | CA/906/104/DOCK | 8362 | 336 | CUFT | 336 | CUFT | 7/10/2006 | DIMETHYL ETHER |
| LV00170597 | CA/906/104/DOCK | 8362 | 35 | CUFT | 35 | CUFT | 6/22/2007 | FLUORINE (0.15%)/HELIUM (2.27%)/KRYP (3.03%)/NEON (BAL) |
| LV00170789 | CA/906/104/DOCK | 8362 | 35 | CUFT | 35 | CUFT | 10/5/2007 | FLUORINE (0.15%)/HELIUM (2.27%)/KRYP (3.03%)/NEON (BAL) |
| LV00170450 | CA/906/104/DOCK | 8362 | 30 | CUFT | 30 | CUFT | 3/30/2007 | HYDROGEN |
| LV00170233 | CA/906/104/DOCK | 8362 | 31 | CUFT | 31 | CUFT | 11/20/2006 | HYDROGEN (40%)/HELIUM (BAL) |
| LV00170234 | CA/906/104/DOCK | 8362 | 31 | CUFT | 31 | CUFT | 11/20/2006 | HYDROGEN (40%)/HELIUM (BAL) |
| LV00109578 | CA/906/104/DOCK | 8362 | 1 | L | 0.2641721 | GAL | 5/23/2001 | METHANOL REAGENT ACS |
| LV00109577 | CA/906/104/DOCK | 8362 | 1 | L | 0.2641721 | GAL | 5/23/2001 | METHANOL REAGENT ACS |
| LV00109576 | CA/906/104/DOCK | 8362 | 1 | L | 0.2641721 | GAL | 5/23/2001 | METHANOL REAGENT ACS |
| LV00110827 | CA/906/104/DOCK | 8362 | 4 | L | 1.0566884 | GAL | 12/13/1999 | N-BUTYL ALCOHOL |
| LV00117689 | CA/906/104/DOCK | 8362 | 28 | CUFT | 28 | CUFT | 2/4/2004 | NITRIC OXIDE (80 PPM)/NITROGEN (BAL) |
| LV00170416 | CA/906/104/DOCK | 8362 | 75 | CUFT | 75 | CUFT | 3/16/2007 | NITRIC OXIDE (80 PPM)/NITROGEN (BAL) |
| LV00170415 | CA/906/104/DOCK | 8362 | 75 | CUFT | 75 | CUFT | 3/16/2007 | NITRIC OXIDE (80 PPM)/NITROGEN (BAL) |
| LV00170711 | CA/906/104/DOCK | 8362 | 230 | CUFT | 230 | CUFT | 8/23/2007 | NITROGEN, COMPRESSED GAS |
| LV00170756 | CA/906/104/DOCK | 8362 | 485 | CUFT | 485 | CUFT | 9/14/2007 | NITROGEN, COMPRESSED GAS |
| LV00170757 | CA/906/104/DOCK | 8362 | 230 | CUFT | 230 | CUFT | 9/14/2007 | NITROGEN, COMPRESSED GAS |
| LV00127498 | CA/906/104/DOCK | 8362 | 428 | ML | 0.1130776 | GAL | 6/27/2002 | PRESTONE SUPER ANTI-RUST |
| LV00122566 | CA/906/104/DOCK | 8362 | 14.5 | FLOZ | 0.11328125 | GAL | 6/26/2000 | PRESTONE SUPER ANTI-RUST |
| LV00122567 | CA/906/104/DOCK | 8362 | 14.5 | FLOZ | 0.11328125 | GAL | 6/26/2000 | PRESTONE SUPER ANTI-RUST |

| Barcode | Location | Org. | Quantity | QUnit | Report Quantity | RUnit | Purchase Date | Name |
|---|---|---|---|---|---|---|---|---|
| LV00057233 | CA/906/104/DOCK | 8362 | 802 | CUFT | 802 | CUFT | 7/14/1999 | PROPANE |
| LV00170283 | CA/906/104/DOCK | 8362 | 35 | CUFT | 35 | CUFT | 12/15/2006 | PROPANE (990 PPM)/NITROGEN (BAL) |
| LV00170284 | CA/906/104/DOCK | 8362 | 35 | CUFT | 35 | CUFT | 12/15/2006 | PROPANE (990 PPM)/NITROGEN (BAL) |
| LV00080747 | CA/906/104/DOCK | 8362 | 5 | GAL | 5 | GAL | 10/1/1997 | RED LINE #2514 LOW FLUORESCENT OIL |
| LV00087027 | CA/906/104/DOCK | 8362 | 5 | GAL | 5 | GAL | 11/13/1996 | TERESSTIC 100 |
| LV00110856 | CA/906/104/DOCK | 8362 | 1 | L | 0.2641721 | GAL | 6/15/2005 | TERT-BUTYL ALCOHOL |
| LV00153606 | CA/906/104/DOCK | 8362 | 2 | L | 0.5283442 | GAL | 1/25/2005 | TOLUENE |
| LV00110991 | CA/906/105/DOCK | 8362 | 1 | L | 0.2641721 | GAL | 3/15/2000 | ACETONE |
| LV00110995 | CA/906/105/DOCK | 8362 | 1 | L | 0.2641721 | GAL | 3/15/2000 | ACETONE |
| LV00125863 | CA/906/105/DOCK | 8362 | 3 | FLOZ | 0.0234375 | GAL | 7/9/2001 | ADHESIVE, RUBBER BASE |
| LV00122544 | CA/906/105/DOCK | 8362 | 1 | GAL | 1 | GAL | 6/27/2000 | CITGARD 500 MOTOR OIL SAE 15W-40 |
| LV00122546 | CA/906/105/DOCK | 8362 | 1 | GAL | 1 | GAL | 6/27/2000 | CITGARD 500 MOTOR OIL SAE 15W-40 |
| LV00151074 | CA/906/105/DOCK | 8362 | 198 | GR | 0.4365108 | LBS | 7/9/2003 | FCP - 12 |
| LV00101860 | CA/906/105/DOCK | 8362 | 1 | GAL | 1 | GAL | 6/15/2005 | HYDRAULIC 32AW |
| LV00125961 | CA/906/105/DOCK | 8362 | 3 | FLOZ | 0.0234375 | GAL | 7/11/2001 | IMPRUV(TM) GENERAL PURPOSE ADHES |
| LV00067224 | CA/906/105/DOCK | 8362 | 500 | ML | 0.1321 | GAL | 4/6/1994 | METHYL ALCOHOL |
| LV00152751 | CA/906/105/DOCK | 8362 | 1 | QT | 0.25 | GAL | 6/21/2004 | MINERAL SPIRITS |
| LV00151020 | CA/906/105/DOCK | 8362 | 1 | QT | 0.25 | GAL | 7/8/2003 | MOBIL SHC 634 |
| LV00151021 | CA/906/105/DOCK | 8362 | 1 | QT | 0.25 | GAL | 7/8/2003 | MOBIL SHC 634 |
| LV00122568 | CA/906/105/DOCK | 8362 | 14.5 | FLOZ | 0.11328125 | GAL | 6/26/2000 | PRESTONE SUPER ANTI-RUST |
| LV00122570 | CA/906/105/DOCK | 8362 | 14.5 | FLOZ | 0.11328125 | GAL | 6/26/2000 | PRESTONE SUPER ANTI-RUST |
| LV00103929 | CA/906/105/DOCK | 8362 | 5 | GAL | 5 | GAL | 9/27/1999 | RED LINE #2514 LOW FLUORESCENT OIL |
| LV00103928 | CA/906/105/DOCK | 8362 | 5 | GAL | 5 | GAL | 9/27/1999 | RED LINE #2514 LOW FLUORESCENT OIL |
| LV00150210 | CA/906/105/DOCK | 8362 | 340 | GR | 0.749564 | LBS | 6/21/2005 | RUST-OLEUM PROFESSIONAL COATINGS |
| LV00129254 | CA/906/105/DOCK | 8362 | 10 | OZ | 0.625 | LBS | 7/7/2003 | SILIKROIL |
| LV00135716 | CA/906/105/DOCK | 8362 | 5 | GAL | 5 | GAL | 12/13/2002 | ULTRA LOW SULFUR DIESEL FUEL |
| LV00058909 | CA/906/105/DOCK | 8362 | 9 | FLOZ | 0.0703125 | GAL | 3/19/1997 | WD-40 AEROSOL |
| LV00134650 | CA/906/105/DOCK | 8362 | 16 | OZ | 1 | LBS | 10/11/2002 | WD-40 AEROSOL |
| LV00134651 | CA/906/105/DOCK | 8362 | 16 | OZ | 1 | LBS | 10/11/2002 | WD-40 AEROSOL |
| LV00134653 | CA/906/105/DOCK | 8362 | 16 | OZ | 1 | LBS | 10/11/2002 | WD-40 AEROSOL |
| LV00134643 | CA/906/105/DOCK | 8362 | 16 | OZ | 1 | LBS | 10/11/2002 | WD-40 AEROSOL |
| LV00134649 | CA/906/105/DOCK | 8362 | 16 | OZ | 1 | LBS | 10/11/2002 | WD-40 AEROSOL |
| LV00122103 | CA/906/105/DOCK | 8362 | 11 | OZ | 0.6875 | LBS | 6/13/2000 | WRINKLE FINISH SPRAY ALL COLORS |

| Barcode | Location | Org. | Quantity | QUnit | Report Quantity | RUnit | Purchase Date | Name |
|---|---|---|---|---|---|---|---|---|
| LV00122101 | CA/906/105/DOCK | 8362 | 11 | OZ | 0.6875 | LBS | 6/13/2000 | WRINKLE FINISH SPRAY ALL COLORS |
| LV00118889 | CA/906/106/DOCK | 8362 | 106 | CUFT | 106 | CUFT | 5/4/2006 | ACETONE (1000 PPM)/HYDROGEN (BAL) |
| LV00119000 | CA/906/106/DOCK | 8362 | 106 | CUFT | 106 | CUFT | 6/21/2006 | ACETONE (2500 PPM)/HELIUM (BAL) |
| LV00170001 | CA/906/106/DOCK | 8362 | 51 | CUFT | 51 | CUFT | 6/21/2006 | ACETONE (2500 PPM)/HELIUM (BAL) |
| LV00170002 | CA/906/106/DOCK | 8362 | 51 | CUFT | 51 | CUFT | 6/21/2006 | ACETONE (2500 PPM)/HELIUM (BAL) |
| LV00170000 | CA/906/106/DOCK | 8362 | 106 | CUFT | 106 | CUFT | 6/21/2006 | ACETONE (2500 PPM)/HELIUM (BAL) |
| LV00170154 | CA/906/106/DOCK | 8362 | 113 | CUFT | 113 | CUFT | 10/18/2006 | ACETONE (2500 PPM)/HYDROGEN (BAL) |
| LV00170155 | CA/906/106/DOCK | 8362 | 113 | CUFT | 113 | CUFT | 10/18/2006 | ACETONE (2500 PPM)/HYDROGEN (BAL) |
| LV00170156 | CA/906/106/DOCK | 8362 | 56 | CUFT | 56 | CUFT | 10/18/2006 | ACETONE (5000 PPM)/HYDROGEN (BAL) |
| LV00170157 | CA/906/106/DOCK | 8362 | 56 | CUFT | 56 | CUFT | 10/18/2006 | ACETONE (5000 PPM)/HYDROGEN (BAL) |
| LV00117066 | CA/906/106/DOCK | 8362 | 33 | CUFT | 33 | CUFT | 1/13/2003 | CARBON DIOXIDE-AIR USP MIXTURE (C( |
| LV00118145 | CA/906/106/DOCK | 8362 | 331 | CUFT | 331 | CUFT | 10/20/2004 | HELIUM |
| LV00116442 | CA/906/106/DOCK | 8362 | 30 | CUFT | 30 | CUFT | 9/12/2001 | HYDROGEN |
| LV00118545 | CA/906/106/DOCK | 8362 | 258 | CUFT | 258 | CUFT | 7/13/2005 | HYDROGEN |
| LV00118571 | CA/906/106/DOCK | 8362 | 322 | CUFT | 322 | CUFT | 8/5/2005 | HYDROGEN |
| LV00118573 | CA/906/106/DOCK | 8362 | 322 | CUFT | 322 | CUFT | 8/5/2005 | HYDROGEN |
| LV00118572 | CA/906/106/DOCK | 8362 | 322 | CUFT | 322 | CUFT | 8/5/2005 | HYDROGEN |
| LV00117000 | CA/906/106/DOCK | 8362 | 212 | CUFT | 212 | CUFT | 10/23/2002 | HYDROGEN |

| Barcode | Location | Org. | Quantity | QUnit | Report Quantity | RUnit | Purchase Date | Name |
|---|---|---|---|---|---|---|---|---|
| LV00118547 | CA/906/106/DOCK | 8362 | 255 | CUFT | 255 | CUFT | 7/13/2005 | NITROGEN, COMPRESSED GAS |
| LV00118548 | CA/906/106/DOCK | 8362 | 255 | CUFT | 255 | CUFT | 7/13/2005 | NITROGEN, COMPRESSED GAS |
| LV00137716 | CA/906/107/DOCK | 8362 | 4 | L | 1.0566884 | GAL | 3/31/2003 | 2,2,4-TRIMETHYLPENTANE |
| LV00155881 | CA/906/107/DOCK | 8362 | 4 | L | 1.0566884 | GAL | 6/14/2005 | 2,2,4-TRIMETHYLPENTANE |
| LV00160444 | CA/906/107/DOCK | 8362 | 4 | L | 1.0566884 | GAL | 4/18/2006 | 2,2,4-TRIMETHYLPENTANE |
| LV00128973 | CA/906/107/DOCK | 8362 | 1 | GAL | 1 | GAL | 6/3/2003 | ACETONE |
| LV00156839 | CA/906/107/DOCK | 8362 | 500 | ML | 0.1321 | GAL | 8/10/2005 | ACETONE |
| LV00170333 | CA/906/107/DOCK | 8362 | 225 | CUFT | 225 | CUFT | 1/17/2007 | AIR |
| LV00170458 | CA/906/107/DOCK | 8362 | 225 | CUFT | 225 | CUFT | 4/4/2007 | AIR |
| LV00127520 | CA/906/107/DOCK | 8362 | 340 | GR | 0.749564 | LBS | 6/27/2002 | BLACK HAMMER FINISH SPRAY |
| LV00170083 | CA/906/107/DOCK | 8362 | 28 | CUFT | 28 | CUFT | 8/25/2006 | CARBON DIOXIDE (0-10%)/NITROGEN (B/ |
| LV00118862 | CA/906/107/DOCK | 8362 | 35 | CUFT | 35 | CUFT | 4/6/2006 | CARBON DIOXIDE (0-23%) IN NITROGEN |
| LV00118864 | CA/906/107/DOCK | 8362 | 35 | CUFT | 35 | CUFT | 4/6/2006 | CARBON DIOXIDE (0-23%) IN NITROGEN |
| LV00118863 | CA/906/107/DOCK | 8362 | 35 | CUFT | 35 | CUFT | 4/6/2006 | CARBON DIOXIDE (0-23%) IN NITROGEN |
| LV00048566 | CA/906/107/DOCK | 8362 | 77 | CUFT | 77 | CUFT | 5/3/1995 | CARBON DIOXIDE, GAS |
| LV00170456 | CA/906/107/DOCK | 8362 | 525 | CUFT | 525 | CUFT | 4/4/2007 | CARBON DIOXIDE, GAS |
| LV00170457 | CA/906/107/DOCK | 8362 | 225 | CUFT | 225 | CUFT | 4/4/2007 | CARBON DIOXIDE, GAS |
| LV00174802 | CA/906/107/DOCK | 8362 | 1 | GAL | 1 | GAL | 6/5/2007 | CHEVRON DELO 400 |
| LV00174808 | CA/906/107/DOCK | 8362 | 1 | GAL | 1 | GAL | 6/5/2007 | CHEVRON DELO 400 |
| LV00174807 | CA/906/107/DOCK | 8362 | 1 | GAL | 1 | GAL | 6/5/2007 | CHEVRON DELO 400 |
| LV00174806 | CA/906/107/DOCK | 8362 | 1 | GAL | 1 | GAL | 6/5/2007 | CHEVRON DELO 400 |
| LV00174805 | CA/906/107/DOCK | 8362 | 1 | GAL | 1 | GAL | 6/5/2007 | CHEVRON DELO 400 |
| LV00174803 | CA/906/107/DOCK | 8362 | 1 | GAL | 1 | GAL | 6/5/2007 | CHEVRON DELO 400 |
| LV00174804 | CA/906/107/DOCK | 8362 | 1 | GAL | 1 | GAL | 6/5/2007 | CHEVRON DELO 400 |

| Barcode | Location | Org. | Quantity | QUnit | Report Quantity | RUnit | Purchase Date | Name |
|---|---|---|---|---|---|---|---|---|
| LV00104973 | CA/906/107/DOCK | 8362 | 547 | ML | 0.1445174 | GAL | 6/22/2000 | DE-SOLV-IT(R) INDUSTRIAL FORMULA C |
| LV00161359 | CA/906/107/DOCK | 8362 | 1 | L | 0.2641721 | GAL | 6/8/2006 | DIETHYL KETONE |
| LV00162434 | CA/906/107/DOCK | 8362 | 340 | GR | 0.749564 | LBS | 8/14/2006 | ENGINE ENAMEL |
| LV00162435 | CA/906/107/DOCK | 8362 | 340 | GR | 0.749564 | LBS | 8/14/2006 | ENGINE ENAMEL |
| LV00097816 | CA/906/107/DOCK | 8362 | 0.5 | GAL | 0.5 | GAL | 9/23/1998 | GASOLINE, AUTOMOTIVE, UNLEADED |
| LV00118182 | CA/906/107/DOCK | 8362 | 244 | CUFT | 244 | CUFT | 11/5/2004 | HELIUM |
| LV00118388 | CA/906/107/DOCK | 8362 | 244 | CUFT | 244 | CUFT | 3/7/2005 | HELIUM |
| LV00116443 | CA/906/107/DOCK | 8362 | 31 | CUFT | 31 | CUFT | 9/14/2001 | HELIUM |
| LV00134658 | CA/906/107/DOCK | 8362 | 4 | L | 1.0566884 | GAL | 10/14/2002 | HEPTANE |
| LV00162093 | CA/906/107/DOCK | 8362 | 340 | GR | 0.749564 | LBS | 8/1/2006 | HI-HEAT PAINT - ALL COLORS |
| LV00162094 | CA/906/107/DOCK | 8362 | 1 | QT | 0.25 | GAL | 8/1/2006 | HTC BLACK 1000VS-00 |
| LV00118546 | CA/906/107/DOCK | 8362 | 258 | CUFT | 258 | CUFT | 7/13/2005 | HYDROGEN |
| LV00117663 | CA/906/107/DOCK | 8362 | 211 | CUFT | 211 | CUFT | 1/23/2004 | HYDROGEN (40%)/HELIUM (BAL) |
| LV00170314 | CA/906/107/DOCK | 8362 | 200 | CUFT | 200 | CUFT | 1/5/2007 | HYDROGEN (40%)/HELIUM (BAL) |
| LV00173447 | CA/906/107/DOCK | 8362 | 1 | L | 0.2641721 | GAL | 6/12/2006 | METHYL ALCOHOL |
| LV00122163 | CA/906/107/DOCK | 8362 | 1 | GAL | 1 | GAL | 6/14/2000 | MOBIL DELVAC 1300 SUPER 10W-30 |
| LV00170289 | CA/906/107/DOCK | 8362 | 485 | CUFT | 485 | CUFT | 12/18/2006 | NITROGEN, COMPRESSED GAS |
| LV00170699 | CA/906/107/DOCK | 8362 | 485 | CUFT | 485 | CUFT | 8/17/2007 | NITROGEN, COMPRESSED GAS |
| LV00170700 | CA/906/107/DOCK | 8362 | 485 | CUFT | 485 | CUFT | 8/17/2007 | NITROGEN, COMPRESSED GAS |
| LV00101957 | CA/906/107/DOCK | 8362 | 0.95 | L | 0.250963495 | GAL | 6/22/1999 | PENNZOIL MOTOR OIL SAE 30 |
| LV00041228 | CA/906/107/DOCK | 8362 | 236.6 | ML | 0.06250972 | GAL | 7/18/1996 | SLIC-TITE PASTE WITH TEFLON |
| LV00101583 | CA/906/107/DOCK | 8362 | 15 | OZ | 0.9375 | LBS | 2/9/2000 | TOP ENGINE CLEANER |
| LV00051934 | CA/906/107/DOCK | 8362 | 15 | OZ | 0.9375 | LBS | 6/5/2007 | TOP ENGINE CLEANER |
| LV00105078 | CA/906/107/DOCK | 8362 | 1 | GAL | 1 | GAL | 6/29/2000 | UA68SP (SYNTHETIC OILS) |
| LV00105051 | CA/906/107/DOCK | 8362 | 1 | GAL | 1 | GAL | 6/29/2000 | UA68SP (SYNTHETIC OILS) |
| LV00105081 | CA/906/107/DOCK | 8362 | 1 | GAL | 1 | GAL | 6/29/2000 | UA68SP (SYNTHETIC OILS) |

| Barcode | Location | Org. | Quantity | QUnit | Report Quantity | RUnit | Purchase Date | Name |
|---|---|---|---|---|---|---|---|---|
| LV00125924 | CA/906/107/DOCK | 8362 | 1 | LBS | 1 | LBS | 7/9/2001 | X-PANDO PIPE JOINT COMPOUND |
| LV00170080 | CA/906/109/DOCK | 8353 | 280 | CUFT | 280 | CUFT | 8/18/2006 | ARGON, COMPRESSED |
| LV00118337 | CA/906/109/DOCK | 8353 | 244 | CUFT | 244 | CUFT | 2/16/2005 | HELIUM |
| LV00067254 | CA/906/110/DOCK | 8368 | 2 | L | 0.5283442 | GAL | 4/6/1994 | 3116K HIGH SPEED TURBO OIL |
| LV00076486 | CA/906/110/DOCK | 8368 | 1 | L | 0.2641721 | GAL | 4/3/1997 | ACETONE |
| LV00070908 | CA/906/110/DOCK | 8368 | 1 | L | 0.2641721 | GAL | 1/25/1998 | ACETONE |
| LV00065273 | CA/906/110/DOCK | 8368 | 1 | L | 0.2641721 | GAL | 1/30/1996 | ACETONE |
| LV00122321 | CA/906/110/DOCK | 8368 | 250 | CUFT | 250 | CUFT | 6/19/2000 | AIR, COMPRESSED |
| LV00106457 | CA/906/110/DOCK | 8368 | 250 | CUFT | 250 | CUFT | 10/9/2000 | AIR, COMPRESSED |
| LV00065266 | CA/906/110/DOCK | 8368 | 500 | GR | 1.1023 | LBS | 1/30/1996 | AMMONIUM HYDROGEN FLUORIDE |
| LV00117746 | CA/906/110/DOCK | 8368 | 524 | CUFT | 524 | CUFT | 3/19/2004 | CARBON DIOXIDE, GAS |
| LV00057744 | CA/906/110/DOCK | 8368 | 0.1 | LBS | 0.1 | LBS | 6/23/2000 | CARBON MONOXIDE |
| LV00173492 | CA/906/110/DOCK | 8368 | 1 | GR | 0.0022046 | LBS | 6/13/2006 | DYNACAL PERMEATION DEVICE |
| LV00105326 | CA/906/110/DOCK | 8368 | 1 | GAL | 1 | GAL | 7/18/2000 | EPH |
| LV00115344 | CA/906/110/DOCK | 8368 | 1 | GAL | 1 | GAL | 1/2/2002 | EPH |
| LV00115345 | CA/906/110/DOCK | 8368 | 1 | GAL | 1 | GAL | 1/2/2002 | EPH |
| LV00106090 | CA/906/110/DOCK | 8368 | 4 | L | 1.0566884 | GAL | 9/13/2000 | ETHYL ALCOHOL |
| LV00069537 | CA/906/110/DOCK | 8368 | 3.78 | L | 0.998570538 | GAL | 6/29/1994 | ETHYLENE GLYCOL |
| LV00069535 | CA/906/110/DOCK | 8368 | 3.78 | L | 0.998570538 | GAL | 6/29/1994 | ETHYLENE GLYCOL |
| LV00076494 | CA/906/110/DOCK | 8368 | 2 | L | 0.5283442 | GAL | 4/3/1997 | ETHYLENE GLYCOL |
| LV00101263 | CA/906/110/DOCK | 8368 | 2 | L | 0.5283442 | GAL | 4/6/1999 | ETHYLENE GLYCOL |
| LV00008086 | CA/906/110/DOCK | 8368 | 1 | L | 0.2641721 | GAL | 9/14/1992 | ETHYLENE GLYCOL |
| LV00069536 | CA/906/110/DOCK | 8368 | 3.78 | L | 0.998570538 | GAL | 6/29/1994 | ETHYLENE GLYCOL |
| LV00101265 | CA/906/110/DOCK | 8368 | 2 | L | 0.5283442 | GAL | 4/6/1999 | ETHYLENE GLYCOL |
| LV00076496 | CA/906/110/DOCK | 8368 | 2 | L | 0.5283442 | GAL | 4/3/1997 | GLYCERIN |
| LV00003973 | CA/906/110/DOCK | 8368 | 4 | L | 1.0566884 | GAL | 1/4/1993 | GLYCERIN |
| LV00125927 | CA/906/110/DOCK | 8368 | 340 | GR | 0.749564 | LBS | 7/11/2001 | KWIK FOAM |
| LV00148157 | CA/906/110/DOCK | 8368 | 5 | GAL | 5 | GAL | 10/21/2004 | METHYL ALCOHOL |
| LV00154946 | CA/906/110/DOCK | 8368 | 4 | L | 1.0566884 | GAL | 4/12/2005 | METHYL ALCOHOL |
| LV00080907 | CA/906/110/DOCK | 8368 | 1 | L | 0.2641721 | GAL | 10/10/1997 | N-BUTYL ACETATE |

| Barcode | Location | Org. | Quantity | QUnit | Report Quantity | RUnit | Purchase Date | Name |
|---|---|---|---|---|---|---|---|---|
| LV00056945 | CA/906/110/DOCK | 8368 | 135 | CUFT | 135 | CUFT | 4/16/2002 | NITRIC OXIDE (1%)/NITROGEN (BAL) |
| LV00118858 | CA/906/110/DOCK | 8368 | 140 | CUFT | 140 | CUFT | 3/30/2006 | NITRIC OXIDE (25 PPM)/NITROGEN (BAL) |
| LV00170564 | CA/906/110/DOCK | 8368 | 141 | CUFT | 141 | CUFT | 6/5/2007 | NITRIC OXIDE (25 PPM)/NITROGEN (BAL) |
| LV00056133 | CA/906/110/DOCK | 8368 | 199 | CUFT | 199 | CUFT | 8/13/1997 | OXYGEN (20%)/HELIUM (BAL) |
| LV00117745 | CA/906/110/DOCK | 8368 | 248 | CUFT | 248 | CUFT | 3/19/2004 | OXYGEN, COMPRESSED GAS |
| LV00076868 | CA/906/110/DOCK | 8368 | 2 | L | 0.5283442 | GAL | 4/14/1997 | PROPYLENE CARBONATE |
| LV00076869 | CA/906/110/DOCK | 8368 | 2 | L | 0.5283442 | GAL | 4/14/1997 | PROPYLENE CARBONATE |
| LV00072040 | CA/906/110/DOCK | 8368 | 77 | CUFT | 77 | CUFT | 3/31/1998 | SULFUR DIOXIDE (0.003%-10%) IN NITRO |
| LV00057530 | CA/906/110/DOCK | 8368 | 2 | LBS | 2 | LBS | 2/9/2000 | SULFUR DIOXIDE, 10 PPM IN NITROGEN |
| LV00079740 | CA/906/110/DOCK | 8368 | 1 | GAL | 1 | GAL | 8/20/1997 | TKO-19 |
| LV00040640 | CA/906/110/DOCK | 8368 | 12 | FLOZ | 0.09375 | GAL | 7/22/1996 | ULTRAGEL II |
| LV00003978 | CA/906/110/DOCK | 8368 | 336 | GR | 0.7407456 | LBS | 1/4/1993 | WD-40 AEROSOL |
| LV00116944 | CA/906/112/DOCK | 8367 | 211 | CUFT | 211 | CUFT | 9/18/2002 | 15-35 MOLAR % CARBON DIOXIDE IN NIT |
| LV00117584 | CA/906/112/DOCK | 8367 | 211 | CUFT | 211 | CUFT | 11/26/2003 | 18-25% OXYGEN IN NITROGEN |
| LV00116426 | CA/906/112/DOCK | 8367 | 77 | CUFT | 77 | CUFT | 8/24/2001 | AMMONIA (900 PPM)/NITROGEN (BAL) |
| LV00118228 | CA/906/112/DOCK | 8367 | 210 | CUFT | 210 | CUFT | 12/6/2004 | CARBON DIOXIDE IN NITROGEN |
| LV00118823 | CA/906/112/DOCK | 8367 | 611 | CUFT | 611 | CUFT | 3/10/2006 | CARBON DIOXIDE, GAS |
| LV00055386 | CA/906/112/DOCK | 8367 | 175 | CUFT | 175 | CUFT | 6/6/1996 | CARBON MONOXIDE |
| LV00118305 | CA/906/112/DOCK | 8367 | 116 | CUFT | 116 | CUFT | 2/2/2005 | CARBON MONOXIDE (0-6.5%) IN NITROG |
| LV00116763 | CA/906/112/DOCK | 8367 | 169 | CUFT | 169 | CUFT | 4/19/2002 | CARBON MONOXIDE (35%)/NITROGEN (E |
| LV00105215 | CA/906/112/DOCK | 8367 | 29 | LBS | 29 | LBS | 7/12/2000 | COAL BITUMINOUS |

| Barcode | Location | Org. | Quantity | QUnit | Report Quantity | RUnit | Purchase Date | Name |
|---|---|---|---|---|---|---|---|---|
| LV00117770 | CA/906/112/DOCK | 8367 | 244 | CUFT | 244 | CUFT | 4/5/2004 | HELIUM |
| LV00170098 | CA/906/112/DOCK | 8367 | 244 | CUFT | 244 | CUFT | 9/1/2006 | HELIUM |
| LV00118810 | CA/906/112/DOCK | 8367 | 244 | CUFT | 244 | CUFT | 3/7/2006 | HELIUM |
| LV00170099 | CA/906/112/DOCK | 8367 | 244 | CUFT | 244 | CUFT | 9/1/2006 | HELIUM |
| LV00116852 | CA/906/112/DOCK | 8367 | 212 | CUFT | 212 | CUFT | 6/28/2002 | HYDROGEN |
| LV00057345 | CA/906/112/DOCK | 8367 | 212 | CUFT | 212 | CUFT | 6/16/2005 | HYDROGEN |
| LV00118350 | CA/906/112/DOCK | 8367 | 210 | CUFT | 210 | CUFT | 2/16/2005 | HYDROGEN BROMIDE (1%)/NITROGEN (I |
| LV00118351 | CA/906/112/DOCK | 8367 | 210 | CUFT | 210 | CUFT | 2/16/2005 | HYDROGEN BROMIDE (1%)/NITROGEN (I |
| LV00116927 | CA/906/112/DOCK | 8367 | 80 | CUFT | 80 | CUFT | 8/26/2002 | HYDROGEN IN NITROGEN MIXTURE 0.00 |
| LV00118332 | CA/906/112/DOCK | 8367 | 141 | CUFT | 141 | CUFT | 2/16/2005 | NITRIC OXIDE (1200 PPM)/NITROGEN (BA |
| LV00118333 | CA/906/112/DOCK | 8367 | 105 | CUFT | 105 | CUFT | 2/16/2005 | NITRIC OXIDE (5%)/NITROGEN (BAL) |
| LV00116238 | CA/906/112/DOCK | 8367 | 247 | CUFT | 247 | CUFT | 5/7/2001 | NITROGEN, COMPRESSED GAS |
| LV00117476 | CA/906/112/DOCK | 8367 | 139 | CUFT | 139 | CUFT | 9/19/2003 | SULFUR DIOXIDE (850 PPM)/NITROGEN ( |
| LV00117752 | CA/906/113/DOCK | 8368 | 244 | CUFT | 244 | CUFT | 3/24/2004 | HELIUM |
| LV00118944 | CA/906/113/DOCK | 8368 | 244 | CUFT | 244 | CUFT | 5/24/2006 | HELIUM |
| LV00118753 | CA/906/113/DOCK | 8368 | 230 | CUFT | 230 | CUFT | 1/30/2006 | NITROGEN, COMPRESSED GAS |
| LV00116941 | CA/906/113/DOCK | 8368 | 9.8 | CUFT | 9.8 | CUFT | 9/13/2002 | OXYGEN, COMPRESSED GAS |
| LV00118777 | CA/906/113/DOCK | 8368 | 70 | CUFT | 70 | CUFT | 2/22/2006 | OXYGEN, COMPRESSED GAS |

| Barcode | Location | Org. | Quantity | QUnit | Report Quantity | RUnit | Purchase Date | Name |
|---|---|---|---|---|---|---|---|---|
| LV00118778 | CA/906/113/DOCK | 8368 | 70 | CUFT | 70 | CUFT | 2/22/2006 | OXYGEN, COMPRESSED GAS |
| LV00118702 | CA/906/113/DOCK | 8368 | 28 | CUFT | 28 | CUFT | 12/21/2005 | OXYGEN, COMPRESSED GAS |
| LV00057904 | CA/906/113/DOCK | 8368 | 9 | CUFT | 9 | CUFT | 10/20/2000 | OXYGEN, COMPRESSED GAS |
| LV00152592 | CA/906/113/DOCK | 8368 | 5 | GAL | 5 | GAL | 8/18/2005 | TKO-19 |
| LV00170057 | CA/906/114/DOCK | 8368 | 280 | CUFT | 280 | CUFT | 8/9/2006 | ARGON, COMPRESSED |
| LV00118991 | CA/906/114/DOCK | 8368 | 210 | CUFT | 210 | CUFT | 6/15/2006 | HYDROGEN (1%)/ARGON (BAL) |
| LV00151088 | CA/906/114/DOCK | 8368 | 4 | L | 1.0566884 | GAL | 7/9/2003 | ISOPROPYL ALCOHOL |
| LV00118064 | CA/906/114/DOCK | 8368 | 299 | CUFT | 299 | CUFT | 9/15/2004 | NITROGEN, COMPRESSED GAS |
| LV00170488 | CA/906/115/DOCK | 8368 | 35 | CUFT | 35 | CUFT | 4/30/2007 | ARGON, COMPRESSED |
| LV00170735 | CA/906/115/DOCK | 8368 | 35 | CUFT | 35 | CUFT | 8/30/2007 | ARGON, COMPRESSED |
| LV00170734 | CA/906/115/DOCK | 8368 | 35 | CUFT | 35 | CUFT | 8/30/2007 | ARGON, COMPRESSED |
| LV00055561 | CA/906/115/DOCK | 8368 | 342 | CUFT | 342 | CUFT | 9/20/1996 | CARBON DIOXIDE, GAS |
| LV00122137 | CA/906/115/DOCK | 8368 | 1 | FLOZ | 0.0078125 | GAL | 6/14/2000 | FLUORINE EXPOSURE MEDICATION |
| LV00117130 | CA/906/115/DOCK | 8368 | 244 | CUFT | 244 | CUFT | 2/21/2003 | HELIUM |
| LV00120321 | CA/906/115/DOCK | 8368 | 450 | ML | 0.11889 | GAL | 1/4/2000 | HYDROGEN PEROXIDE, 30% |
| LV00118804 | CA/906/115/DOCK | 8368 | 230 | CUFT | 230 | CUFT | 3/7/2006 | NITROGEN, COMPRESSED GAS |
| LV00170733 | CA/906/115/DOCK | 8368 | 255 | CUFT | 255 | CUFT | 8/30/2007 | NITROGEN, COMPRESSED GAS |
| LV00170732 | CA/906/115/DOCK | 8368 | 255 | CUFT | 255 | CUFT | 8/30/2007 | NITROGEN, COMPRESSED GAS |
| LV00117320 | CA/906/115/DOCK | 8368 | 247 | CUFT | 247 | CUFT | 6/27/2003 | OXYGEN, COMPRESSED GAS |
| LV00127531 | CA/906/115/DOCK | 8368 | 1 | LBS | 1 | LBS | 6/28/2002 | SMOOTH ON PC-B |

| Barcode | Location | Org. | Quantity | QUnit | Report Quantity | RUnit | Purchase Date | Name |
|---|---|---|---|---|---|---|---|---|
| LV00010452 | CA/906/116/DOCK | 8353 | 500 | ML | 0.1321 | GAL | 12/26/1992 | 1,3,3,5-TETRAMETHYL-1,1,5,5-TETRAPHENYLTRISILOXANE |
| LV00076071 | CA/906/116/DOCK | 8353 | 4 | L | 1.0566884 | GAL | 3/20/1997 | ACETONE |
| LV00098031 | CA/906/116/DOCK | 8353 | 1 | L | 0.2641721 | GAL | 10/26/1998 | ACETONE |
| LV00010454 | CA/906/116/DOCK | 8353 | 1 | KG | 2.2 | LBS | 12/26/1992 | AFLUNOX 606 FOMBLIN Y06/6 KRYTOX 1 |
| LV00010455 | CA/906/116/DOCK | 8353 | 2 | KG | 4.4 | LBS | 12/26/1992 | AFLUNOX 606 FOMBLIN Y06/6 KRYTOX 1 |
| LV00010456 | CA/906/116/DOCK | 8353 | 2 | KG | 4.4 | LBS | 12/26/1992 | AFLUNOX 606 FOMBLIN Y06/6 KRYTOX 1 |
| LV00010440 | CA/906/116/DOCK | 8353 | 1 | PT | 0.125 | GAL | 12/26/1992 | AQUADAG |
| LV00010437 | CA/906/116/DOCK | 8353 | 235 | ML | 0.062087 | GAL | 12/26/1992 | AQUADAG |
| LV00010442 | CA/906/116/DOCK | 8353 | 1 | PT | 0.125 | GAL | 12/26/1992 | AQUADAG |
| LV00010441 | CA/906/116/DOCK | 8353 | 1 | PT | 0.125 | GAL | 12/26/1992 | AQUADAG |
| LV00010438 | CA/906/116/DOCK | 8353 | 235 | ML | 0.062087 | GAL | 12/26/1992 | AQUADAG |
| LV00010377 | CA/906/116/DOCK | 8353 | 235 | ML | 0.062087 | GAL | 12/26/1992 | AQUADAG |
| LV00010443 | CA/906/116/DOCK | 8353 | 1 | PT | 0.125 | GAL | 12/26/1992 | AQUADAG |
| LV00010378 | CA/906/116/DOCK | 8353 | 235 | ML | 0.062087 | GAL | 12/26/1992 | AQUADAG |
| LV00010444 | CA/906/116/DOCK | 8353 | 1 | PT | 0.125 | GAL | 12/26/1992 | AQUADAG |
| LV00102039 | CA/906/116/DOCK | 8353 | 1 | L | 0.2641721 | GAL | 6/16/2005 | BALZER-OIL L |
| LV00011381 | CA/906/116/DOCK | 8353 | 1 | QT | 0.25 | GAL | 4/5/1993 | BUSCH R-570 OIL |
| LV00010434 | CA/906/116/DOCK | 8353 | 1000 | ML | 0.2642 | GAL | 12/26/1992 | DDO-19 |
| LV00010433 | CA/906/116/DOCK | 8353 | 1000 | ML | 0.2642 | GAL | 12/26/1992 | DDO-19 |
| LV00071103 | CA/906/116/DOCK | 8353 | 1 | PT | 0.125 | GAL | 1/30/1998 | ETHYL ALCOHOL |
| LV00071092 | CA/906/116/DOCK | 8353 | 1 | PT | 0.125 | GAL | 1/30/1998 | ETHYL ALCOHOL |
| LV00071111 | CA/906/116/DOCK | 8353 | 1 | PT | 0.125 | GAL | 1/30/1998 | ETHYL ALCOHOL |
| LV00071095 | CA/906/116/DOCK | 8353 | 1 | PT | 0.125 | GAL | 1/30/1998 | ETHYL ALCOHOL |
| LV00071094 | CA/906/116/DOCK | 8353 | 1 | PT | 0.125 | GAL | 1/30/1998 | ETHYL ALCOHOL |
| LV00071108 | CA/906/116/DOCK | 8353 | 1 | PT | 0.125 | GAL | 1/30/1998 | ETHYL ALCOHOL |
| LV00071112 | CA/906/116/DOCK | 8353 | 1 | PT | 0.125 | GAL | 1/30/1998 | ETHYL ALCOHOL |
| LV00071099 | CA/906/116/DOCK | 8353 | 1 | PT | 0.125 | GAL | 1/30/1998 | ETHYL ALCOHOL |
| LV00071107 | CA/906/116/DOCK | 8353 | 1 | PT | 0.125 | GAL | 1/30/1998 | ETHYL ALCOHOL |
| LV00071091 | CA/906/116/DOCK | 8353 | 1 | PT | 0.125 | GAL | 1/30/1998 | ETHYL ALCOHOL |
| LV00071093 | CA/906/116/DOCK | 8353 | 1 | PT | 0.125 | GAL | 1/30/1998 | ETHYL ALCOHOL |
| LV00071110 | CA/906/116/DOCK | 8353 | 1 | PT | 0.125 | GAL | 1/30/1998 | ETHYL ALCOHOL |
| | | | | | | | | |
| LV00170257 | CA/906/116/DOCK | 8353 | 381 | CUFT | 381 | CUFT | 12/6/2006 | ETHYLENE |
| LV00098045 | CA/906/116/DOCK | 8353 | 4 | L | 1.0566884 | GAL | 10/26/1998 | METHYL ALCOHOL |
| LV00139156 | CA/906/116/DOCK | 8353 | 2 | L | 0.5283442 | GAL | 6/3/2003 | METHYL ALCOHOL |

| Barcode | Location | Org. | Quantity | QUnit | Report Quantity | RUnit | Purchase Date | Name |
|---|---|---|---|---|---|---|---|---|
| LV00097934 | CA/906/116/DOCK | 8353 | 2 | L | 0.5283442 | GAL | 10/6/1998 | METHYL ALCOHOL |
| LV00069460 | CA/906/116/DOCK | 8353 | 2 | L | 0.5283442 | GAL | 6/23/1994 | METHYL ALCOHOL |
| LV00084773 | CA/906/116/DOCK | 8353 | 2 | L | 0.5283442 | GAL | 8/1/1996 | METHYL ALCOHOL |
| LV00105306 | CA/906/116/DOCK | 8353 | 18 | L | 4.7550978 | GAL | 7/17/2000 | METHYL ALCOHOL |
| LV00083313 | CA/906/116/DOCK | 8353 | 2 | L | 0.5283442 | GAL | 5/29/1996 | METHYL ALCOHOL |
| | | | | | | | | |
| LV00057369 | CA/906/116/DOCK | 8353 | 1686 | CUFT | 1686 | CUFT | 6/22/2000 | OXYGEN, COMPRESSED GAS |
| LV00041013 | CA/906/116/DOCK | 8353 | 16 | OZ | 1 | LBS | 7/10/1996 | PCB ETCHANT SOLUTION |
| LV00010453 | CA/906/116/DOCK | 8353 | 500 | ML | 0.1321 | GAL | 12/26/1992 | PENTAPHENYLTRIMETHYLTRISILOXAN |
| LV00122507 | CA/906/116/DOCK | 8353 | 1 | QT | 0.25 | GAL | 6/22/2000 | SYNTHETIC HYDROCARBONS |
| LV00049083 | CA/906/116/DOCK | 8353 | 1 | QT | 0.25 | GAL | 8/18/1993 | TKO-19 |
| LV00150077 | CA/906/116/DOCK | 8353 | 1 | QT | 0.25 | GAL | 6/16/2005 | TKO-19 |
| LV00049079 | CA/906/116/DOCK | 8353 | 1 | QT | 0.25 | GAL | 8/18/1993 | TKO-19 |
| LV00049080 | CA/906/116/DOCK | 8353 | 1 | QT | 0.25 | GAL | 8/18/1993 | TKO-19 |
| LV00049085 | CA/906/116/DOCK | 8353 | 1 | QT | 0.25 | GAL | 8/18/1993 | TKO-19 |
| LV00047289 | CA/906/116/DOCK | 8353 | 100 | ML | 0.02642 | GAL | 3/17/1995 | TRI-N-BUTYL PHOSPHATE |
| LV00050660 | CA/906/116/DOCK | 8353 | 16 | OZ | 1 | LBS | 8/6/1998 | VACSEAL HIGH VACUUM LEAK SEALAN |
| LV00127500 | CA/906/116/DOCK | 8353 | 1 | QT | 0.25 | GAL | 6/27/2002 | VACUUM PUMP FLUID |
| LV00011378 | CA/906/116/DOCK | 8353 | 1 | QT | 0.25 | GAL | 4/5/1993 | VACUUM PUMP OIL |
| LV00107162 | CA/906/118/DOCK | 8353 | 1 | L | 0.2641721 | GAL | 11/30/2000 | ACETONE |
| LV00107161 | CA/906/118/DOCK | 8353 | 1 | L | 0.2641721 | GAL | 11/30/2000 | ACETONE |
| LV00157620 | CA/906/118/DOCK | 8353 | 1 | L | 0.2641721 | GAL | 9/26/2005 | ACETONE |
| LV00107157 | CA/906/118/DOCK | 8353 | 1 | L | 0.2641721 | GAL | 11/30/2000 | ACETONE |
| LV00103052 | CA/906/118/DOCK | 8353 | 283.5 | GR | 0.6250041 | LBS | 6/5/2007 | AERODAG G |
| LV00102032 | CA/906/118/DOCK | 8353 | 8 | FLOZ | 0.0625 | GAL | 6/17/1999 | BRASSO |
| LV00127386 | CA/906/118/DOCK | 8353 | 473 | ML | 0.1249666 | GAL | 6/24/2002 | CONCENTRATED VINEGAR, ALL VARIET |
| LV00102805 | CA/906/118/DOCK | 8353 | 1 | FLOZ | 0.0078125 | GAL | 8/3/1999 | COPPER U BRIGHTENER |
| LV00073192 | CA/906/118/DOCK | 8353 | 500 | GR | 1.1023 | LBS | 6/2/1998 | COPPER(II) PYROPHOSPHATE HYDRATE |
| LV00099189 | CA/906/118/DOCK | 8353 | 2 | OZ | 0.125 | LBS | 1/7/1999 | DALMAR NICKEL BRIGHTNER |
| LV00011905 | CA/906/118/DOCK | 8353 | 4.5 | KG | 9.9 | LBS | 1/12/1993 | DOW CORNING(R) HIGH VACUUM GREA |
| LV00099761 | CA/906/118/DOCK | 8353 | 1 | L | 0.2641721 | GAL | 2/28/1999 | EASYPLATE COPPER PLATING SOLUTIOI |
| LV00099760 | CA/906/118/DOCK | 8353 | 1 | L | 0.2641721 | GAL | 2/28/1999 | EASYPLATE COPPER PLATING SOLUTIOI |
| LV00102807 | CA/906/118/DOCK | 8353 | 1 | L | 0.2641721 | GAL | 6/21/2005 | EASYPLATE COPPER PLATING SOLUTIOI |
| LV00102806 | CA/906/118/DOCK | 8353 | 1 | L | 0.2641721 | GAL | 6/21/2005 | EASYPLATE COPPER PLATING SOLUTIOI |
| LV00101579 | CA/906/118/DOCK | 8353 | 1 | QT | 0.25 | GAL | 5/7/1999 | EASYPLATE COPPER PLATING SOLUTIOI |
| LV00101578 | CA/906/118/DOCK | 8353 | 1 | QT | 0.25 | GAL | 5/7/1999 | EASYPLATE COPPER PLATING SOLUTIOI |

| Barcode | Location | Org. | Quantity | QUnit | Report Quantity | RUnit | Purchase Date | Name |
|---|---|---|---|---|---|---|---|---|
| LV00099188 | CA/906/118/DOCK | 8353 | 1 | QT | 0.25 | GAL | 1/7/1999 | EASYPLATE NICKEL PLATING SOLUTION |
| LV00150193 | CA/906/118/DOCK | 8353 | 500 | ML | 0.1321 | GAL | 6/21/2005 | FOMBLIN Y 25 |
| LV00150194 | CA/906/118/DOCK | 8353 | 453.6 | GR | 1.00000656 | LBS | 6/22/2005 | GC FLUX REMOVER & CLEANER |
| LV00150195 | CA/906/118/DOCK | 8353 | 453.6 | GR | 1.00000656 | LBS | 6/22/2005 | GC FLUX REMOVER & CLEANER |
| LV00150201 | CA/906/118/DOCK | 8353 | 453.6 | GR | 1.00000656 | LBS | 6/22/2005 | GC FLUX REMOVER & CLEANER |
| LV00150196 | CA/906/118/DOCK | 8353 | 453.6 | GR | 1.00000656 | LBS | 6/22/2005 | GC FLUX REMOVER & CLEANER |
| LV00150198 | CA/906/118/DOCK | 8353 | 453.6 | GR | 1.00000656 | LBS | 6/22/2005 | GC FLUX REMOVER & CLEANER |
| LV00150197 | CA/906/118/DOCK | 8353 | 453.6 | GR | 1.00000656 | LBS | 6/22/2005 | GC FLUX REMOVER & CLEANER |
| LV00004202 | CA/906/118/DOCK | 8353 | 4 | L | 1.0566884 | GAL | 4/13/1994 | GLYCERIN |
| LV00004201 | CA/906/118/DOCK | 8353 | 4 | L | 1.0566884 | GAL | 4/13/1994 | GLYCERIN |
| LV00129292 | CA/906/118/DOCK | 8353 | 473 | ML | 0.1249666 | GAL | 7/8/2003 | HYDROGEN PEROXIDE, 3% |
| LV00129291 | CA/906/118/DOCK | 8353 | 473 | ML | 0.1249666 | GAL | 7/8/2003 | HYDROGEN PEROXIDE, 3% |
| LV00069565 | CA/906/118/DOCK | 8353 | 3.79 | L | 1.001212259 | GAL | 6/30/1994 | ISOPROPYL ALCOHOL |
| LV00139837 | CA/906/118/DOCK | 8353 | 2 | L | 0.5283442 | GAL | 7/18/2003 | METHYL ALCOHOL |
| LV00139834 | CA/906/118/DOCK | 8353 | 2 | L | 0.5283442 | GAL | 7/18/2003 | METHYL ALCOHOL |
| LV00082858 | CA/906/118/DOCK | 8353 | 2 | L | 0.5283442 | GAL | 5/1/1996 | METHYL ALCOHOL |
| LV00065425 | CA/906/118/DOCK | 8353 | 2 | L | 0.5283442 | GAL | 2/9/1996 | METHYL ALCOHOL |
| LV00139836 | CA/906/118/DOCK | 8353 | 2 | L | 0.5283442 | GAL | 7/18/2003 | METHYL ALCOHOL |
| LV00016504 | CA/906/118/DOCK | 8353 | 1 | QT | 0.25 | GAL | 3/16/1993 | MICRO(R) CONCENTRATED CLEANING S |
| LV00058215 | CA/906/118/DOCK | 8353 | 4 | LBS | 4 | LBS | 7/26/1994 | MOLECULAR SIEVE |
| LV00058216 | CA/906/118/DOCK | 8353 | 4 | LBS | 4 | LBS | 7/26/1994 | MOLECULAR SIEVE |
| LV00004199 | CA/906/118/DOCK | 8353 | 16 | OZ | 1 | LBS | 4/13/1994 | MS-192 FREON(R) TMC SOLVENT |
| LV00098929 | CA/906/118/DOCK | 8353 | 500 | GR | 1.1023 | LBS | 12/14/1998 | NICKEL SULFATE, HEXAHYDRATE |
| LV00098928 | CA/906/118/DOCK | 8353 | 500 | GR | 1.1023 | LBS | 12/14/1998 | NICKELOUS CHLORIDE HEXAHYDRATE |
| LV00016381 | CA/906/118/DOCK | 8353 | 8 | OZ | 0.5 | LBS | 3/9/1993 | OMIT PLUS |
| LV00122502 | CA/906/118/DOCK | 8353 | 16 | FLOZ | 0.125 | GAL | 6/26/2000 | PCB ETCHANT SOLUTION |
| LV00073191 | CA/906/118/DOCK | 8353 | 2.5 | KG | 5.5 | LBS | 6/2/1998 | POTASSIUM PYROPHOSPHATE, ANHYDR |
| LV00129293 | CA/906/118/DOCK | 8353 | 1 | QT | 0.25 | GAL | 7/8/2003 | STRIPPER |
| LV00098896 | CA/906/118/DOCK | 8353 | 1 | GAL | 1 | GAL | 12/14/1998 | SUPER-BRITE ACID COPPER |
| LV00016370 | CA/906/118/DOCK | 8353 | 15 | OZ | 0.9375 | LBS | 3/9/1993 | SWISH |
| LV00058211 | CA/906/118/DOCK | 8353 | 1 | GAL | 1 | GAL | 7/26/1994 | TKO-W/7 |
| LV00058212 | CA/906/118/DOCK | 8353 | 1 | GAL | 1 | GAL | 7/26/1994 | TKO-W/7 |
| LV00004311 | CA/906/118/DOCK | 8353 | 500 | ML | 0.1321 | GAL | 1/14/1993 | TOLUENE |
| | | | | | | | | |
| LV00138949 | CA/906/118/DOCK | 8353 | 1 | CUFT | 1 | CUFT | 5/28/2003 | TRIFLUOROMETHYL IODIDE |

| Barcode | Location | Org. | Quantity | QUnit | Report Quantity | RUnit | Purchase Date | Name |
|---|---|---|---|---|---|---|---|---|
| LV00134743 | CA/906/118/DOCK | 8353 | 1 | CUFT | 1 | CUFT | 10/21/2002 | TRIFLUOROMETHYL IODIDE |
| LV00134744 | CA/906/118/DOCK | 8353 | 1 | CUFT | 1 | CUFT | 10/21/2002 | TRIFLUOROMETHYL IODIDE |
| LV00135315 | CA/906/118/DOCK | 8353 | 100 | GR | 0.22046 | LBS | 11/22/2002 | TRIFLUOROMETHYL IODIDE |
| LV00132012 | CA/906/118/DOCK | 8353 | 1 | CUFT | 1 | CUFT | 4/22/2002 | TRIFLUOROMETHYL IODIDE |
| LV00135665 | CA/906/118/DOCK | 8353 | 1 | CUFT | 1 | CUFT | 12/12/2002 | TRIFLUOROMETHYL IODIDE |
| LV00138695 | CA/906/118/DOCK | 8353 | 1 | CUFT | 1 | CUFT | 5/14/2003 | TRIFLUOROMETHYL IODIDE |
| LV00098897 | CA/906/118/DOCK | 8353 | 1 | QT | 0.25 | GAL | 12/14/1998 | UBAC EP MAINTENANCE |
| LV00170637 | CA/906/128/DOCK | 8367 | 225 | CUFT | 225 | CUFT | 7/13/2007 | AIR, COMPRESSED |
| LV00170703 | CA/906/128/DOCK | 8367 | 225 | CUFT | 225 | CUFT | 8/20/2007 | AIR, COMPRESSED |
| LV00170702 | CA/906/128/DOCK | 8367 | 225 | CUFT | 225 | CUFT | 8/20/2007 | AIR, COMPRESSED |
| LV00170638 | CA/906/128/DOCK | 8367 | 225 | CUFT | 225 | CUFT | 7/13/2007 | AIR, COMPRESSED |
| LV00057606 | CA/906/128/DOCK | 8367 | 280 | CUFT | 280 | CUFT | 3/24/2000 | ARGON, COMPRESSED |
| LV00118470 | CA/906/128/DOCK | 8367 | 381 | CUFT | 381 | CUFT | 5/4/2005 | ETHYLENE |
| LV00118609 | CA/906/128/DOCK | 8367 | 381 | CUFT | 381 | CUFT | 8/24/2005 | ETHYLENE |
| LV00118433 | CA/906/128/DOCK | 8367 | 1464 | CUFT | 1464 | CUFT | 4/15/2005 | HELIUM |
| LV00057248 | CA/906/128/DOCK | 8367 | 250 | CUFT | 250 | CUFT | 9/10/1999 | METHANE |
| LV00116850 | CA/906/128/DOCK | 8367 | 254 | CUFT | 254 | CUFT | 6/12/2002 | NITROGEN, COMPRESSED GAS |
| LV00118419 | CA/906/128/DOCK | 8367 | 247 | CUFT | 247 | CUFT | 3/28/2005 | NITROGEN, COMPRESSED GAS |
| LV00026548 | CA/906/128/DOCK | 8367 | 80 | CUFT | 80 | CUFT | 2/14/1994 | OXYGEN, COMPRESSED GAS |

| Barcode | Location | Org. | Quantity | QUnit | Report Quantity | RUnit | Purchase Date | Name |
|---|---|---|---|---|---|---|---|---|
| LV00116899 | CA/906/129/DOCK | 8367 | 280 | CUFT | 280 | CUFT | 8/5/2002 | ARGON, COMPRESSED |
| LV00116932 | CA/906/129/DOCK | 8367 | 1680 | CUFT | 1680 | CUFT | 9/4/2002 | ARGON, COMPRESSED |
| LV00116418 | CA/906/129/DOCK | 8367 | 422 | CUFT | 422 | CUFT | 8/15/2001 | ETHANE |
| LV00118251 | CA/906/129/DOCK | 8367 | 173 | CUFT | 173 | CUFT | 12/15/2004 | ETHANE (3.7%)/BUTANE (0.75%)/HYDRO( (7%)/METHANE (BAL) |
| LV00055626 | CA/906/129/DOCK | 8367 | 144 | CUFT | 144 | CUFT | 10/7/1996 | ETHANETHIOL (100 PPM)/HYDROGEN (B/ |
| LV00116955 | CA/906/129/DOCK | 8367 | 30 | CUFT | 30 | CUFT | 9/23/2002 | ETHYLENE (1%)/HELIUM (BAL) |
| LV00117155 | CA/906/129/DOCK | 8367 | 244 | CUFT | 244 | CUFT | 3/10/2003 | HELIUM |
| LV00116186 | CA/906/129/DOCK | 8367 | 211 | CUFT | 211 | CUFT | 3/30/2001 | HYDROGEN (55%)/ARGON (BAL) |
| LV00116956 | CA/906/129/DOCK | 8367 | 30 | CUFT | 30 | CUFT | 9/23/2002 | HYDROGEN CHLORIDE (1%)/HELIUM (BA |
| LV00116928 | CA/906/129/DOCK | 8367 | 80 | CUFT | 80 | CUFT | 8/26/2002 | HYDROGEN IN NITROGEN MIXTURE 0.00 |
| LV00117315 | CA/906/129/DOCK | 8367 | 248 | CUFT | 248 | CUFT | 6/27/2003 | OXYGEN, COMPRESSED GAS |
| LV00118645 | CA/906/129/DOCK | 8367 | 244 | CUFT | 244 | CUFT | 10/12/2005 | OXYGEN, COMPRESSED GAS |
| LV00057753 | CA/906/130/DOCK | 8367 | 31 | CUFT | 31 | CUFT | 6/30/2000 | HELIUM |
| LV00057752 | CA/906/130/DOCK | 8367 | 31 | CUFT | 31 | CUFT | 6/30/2000 | HELIUM |
| LV00116155 | CA/906/132/DOCK | 8367 | 280 | CUFT | 280 | CUFT | 3/9/2001 | ARGON, COMPRESSED |
| LV00118564 | CA/906/132/DOCK | 8367 | 244 | CUFT | 244 | CUFT | 8/1/2005 | HELIUM |
| LV00116378 | CA/906/132/DOCK | 8367 | 213 | CUFT | 213 | CUFT | 7/27/2001 | HYDROGEN |
| LV00117924 | CA/906/132/DOCK | 8367 | 173 | CUFT | 173 | CUFT | 6/30/2004 | HYDROGEN (10%)/CARBON MONOXIDE ( (BAL) |

| Barcode | Location | Org. | Quantity | QUnit | Report Quantity | RUnit | Purchase Date | Name |
|---|---|---|---|---|---|---|---|---|
| LV00116295 | CA/906/132/DOCK | 8367 | 247 | CUFT | 247 | CUFT | 6/12/2001 | METHANE |
| LV00118418 | CA/906/132/DOCK | 8367 | 247 | CUFT | 247 | CUFT | 3/28/2005 | NITROGEN, COMPRESSED GAS |
| LV00118227 | CA/906/132/DOCK | 8367 | 255 | CUFT | 255 | CUFT | 12/6/2004 | NITROGEN, COMPRESSED GAS |
| LV00057307 | CA/906/140/DOCK | 8367 | 330 | CUFT | 330 | CUFT | 6/16/2005 | ACETYLENE |
| LV00117571 | CA/906/140/DOCK | 8367 | 280 | CUFT | 280 | CUFT | 11/17/2003 | AIR, COMPRESSED |
| LV00057647 | CA/906/140/DOCK | 8367 | 95 | CUFT | 95 | CUFT | 4/24/2000 | AMMONIA, ANHYDROUS |
| LV00116489 | CA/906/140/DOCK | 8367 | 80 | CUFT | 80 | CUFT | 10/10/2001 | CARBON DIOXIDE (0-23%) IN NITROGEN |
| LV00116387 | CA/906/140/DOCK | 8367 | 200 | CUFT | 200 | CUFT | 7/26/2001 | CARBON DIOXIDE (1%)/NITROGEN (BAL) |
| LV00116410 | CA/906/140/DOCK | 8367 | 105 | CUFT | 105 | CUFT | 8/10/2001 | CARBON MONOXIDE (900 PPM)/NITROGE |
| LV00118253 | CA/906/140/DOCK | 8367 | 102 | CUFT | 102 | CUFT | 12/15/2004 | NITRIC OXIDE (5%)/NITROGEN (BAL) |
| LV00118292 | CA/906/141/DOCK | 8353 | 225 | CUFT | 225 | CUFT | 1/24/2005 | AIR, COMPRESSED |
| LV00170097 | CA/906/141/DOCK | 8353 | 381 | CUFT | 381 | CUFT | 9/1/2006 | ETHYLENE |
| LV00170494 | CA/906/141/DOCK | 8353 | 1530 | CUFT | 1530 | CUFT | 5/2/2007 | NITROGEN, COMPRESSED GAS |
| LV00117495 | CA/906/141/DOCK | 8353 | 248 | CUFT | 248 | CUFT | 10/1/2003 | OXYGEN, COMPRESSED GAS |
| LV00116052 | CA/906/141/DOCK | 8353 | 297 | CUFT | 297 | CUFT | 1/29/2001 | PROPANE |
| LV00170010 | CA/906/141/DOCK | 8353 | 301 | CUFT | 301 | CUFT | 7/10/2006 | PROPYLENE |
| LV00116759 | CA/906/143/DOCK | 8353 | 330 | CUFT | 330 | CUFT | 4/16/2002 | ACETYLENE |
| LV00118783 | CA/906/143/DOCK | 8353 | 225 | CUFT | 225 | CUFT | 2/24/2006 | AIR |

| Barcode | Location | Org. | Quantity | QUnit | Report Quantity | RUnit | Purchase Date | Name |
|---|---|---|---|---|---|---|---|---|
| LV00173527 | CA/906/143/DOCK | 8353 | 227 | GR | 0.5004442 | LBS | 6/14/2006 | ALLENE |
| LV00117008 | CA/906/143/DOCK | 8353 | 12 | CUFT | 12 | CUFT | 10/20/2002 | ARGON, COMPRESSED |
| LV00170117 | CA/906/143/DOCK | 8353 | 1680 | CUFT | 1680 | CUFT | 9/20/2006 | ARGON, COMPRESSED |
| LV00170116 | CA/906/143/DOCK | 8353 | 1680 | CUFT | 1680 | CUFT | 9/20/2006 | ARGON, COMPRESSED |
| LV00173532 | CA/906/143/DOCK | 8353 | 0.44 | LBS | 0.44 | LBS | 6/14/2006 | BUTADIENE, INHIBITED |
| LV00170763 | CA/906/143/DOCK | 8353 | 0.44 | LBS | 0.44 | LBS | 9/21/2007 | BUTADIENE, INHIBITED |
| LV00170823 | CA/906/143/DOCK | 8353 | 48 | CUFT | 48 | CUFT | 10/24/2007 | BUTADIENE, INHIBITED |
| LV00116086 | CA/906/143/DOCK | 8353 | 525 | CUFT | 525 | CUFT | 2/13/2001 | CARBON DIOXIDE, GAS |
| LV00170755 | CA/906/143/DOCK | 8353 | 336 | CUFT | 336 | CUFT | 9/14/2007 | DIMETHYL ETHER |
| LV00039240 | CA/906/143/DOCK | 8353 | 4 | L | 1.0566884 | GAL | 1/11/1993 | DIMETHYL SULFOXIDE |
| LV00170452 | CA/906/143/DOCK | 8353 | 400 | CUFT | 400 | CUFT | 4/2/2007 | ETHANE |
| LV00118394 | CA/906/143/DOCK | 8353 | 381 | CUFT | 381 | CUFT | 3/9/2005 | ETHYLENE |
| LV00057081 | CA/906/143/DOCK | 8353 | 70.6 | CUFT | 70.6 | CUFT | 6/16/1999 | FLUORINE (0.17%)/ARGON (4%)/NEON (B/ |
| LV00118875 | CA/906/143/DOCK | 8353 | 244 | CUFT | 244 | CUFT | 4/20/2006 | HELIUM |
| LV00170100 | CA/906/143/DOCK | 8353 | 244 | CUFT | 244 | CUFT | 9/1/2006 | HELIUM |
| LV00116971 | CA/906/143/DOCK | 8353 | 212 | CUFT | 212 | CUFT | 10/4/2002 | HYDROGEN |
| LV00170677 | CA/906/143/DOCK | 8353 | 213 | CUFT | 213 | CUFT | 8/7/2007 | HYDROGEN |
| LV00170678 | CA/906/143/DOCK | 8353 | 213 | CUFT | 213 | CUFT | 8/7/2007 | HYDROGEN |
| LV00141807 | CA/906/143/DOCK | 8353 | 2 | L | 0.5283442 | GAL | 11/3/2003 | ISOPROPYL ALCOHOL |
| LV00141808 | CA/906/143/DOCK | 8353 | 2 | L | 0.5283442 | GAL | 11/3/2003 | ISOPROPYL ALCOHOL |
| LV00046002 | CA/906/143/DOCK | 8353 | 14 | CUFT | 14 | CUFT | 1/18/1995 | KRYPTON |

| Barcode | Location | Org. | Quantity | QUnit | Report Quantity | RUnit | Purchase Date | Name |
|---|---|---|---|---|---|---|---|---|
| LV00170626 | CA/906/143/DOCK | 8353 | 286 | CUFT | 286 | CUFT | 7/9/2007 | METHANE |
| LV00170679 | CA/906/143/DOCK | 8353 | 286 | CUFT | 286 | CUFT | 8/7/2007 | METHANE |
| LV00148578 | CA/906/143/DOCK | 8353 | 2 | L | 0.5283442 | GAL | 11/23/2004 | METHYL ALCOHOL |
| LV00148584 | CA/906/143/DOCK | 8353 | 2 | L | 0.5283442 | GAL | 11/23/2004 | METHYL ALCOHOL |
| LV00117517 | CA/906/143/DOCK | 8353 | 105 | CUFT | 105 | CUFT | 10/10/2003 | NITRIC OXIDE (5%)/ARGON (BAL) |
| LV00170625 | CA/906/143/DOCK | 8353 | 244 | CUFT | 244 | CUFT | 7/9/2007 | OXYGEN, COMPRESSED GAS |
| LV00170618 | CA/906/143/DOCK | 8353 | 244 | CUFT | 244 | CUFT | 7/3/2007 | OXYGEN, COMPRESSED GAS |
| LV00055606 | CA/906/143/DOCK | 8353 | 211 | CUFT | 211 | CUFT | 9/20/1996 | PROPANE |
| LV00118622 | CA/906/143/DOCK | 8353 | 0.5 | LBS | 0.5 | LBS | 9/9/2005 | PROPYNE |
| LV00173531 | CA/906/143/DOCK | 8353 | 1 | GAL | 1 | GAL | 6/14/2006 | VACUUM PUMP FLUID |
| LV00055673 | CA/906/143/DOCK | 8353 | 3.53 | CUFT | 3.53 | CUFT | 11/15/1996 | XENON |
| LV00057033 | CA/906/143/DOCK | 8353 | 3.53 | CUFT | 3.53 | CUFT | 6/11/1999 | XENON |
| LV00121063 | CA/906/144/DOCK | 8353 | 1 | L | 0.2641721 | GAL | 2/9/2000 | ACETONE |
| LV00121064 | CA/906/144/DOCK | 8353 | 1 | L | 0.2641721 | GAL | 2/9/2000 | ACETONE |
| LV00121065 | CA/906/144/DOCK | 8353 | 1 | L | 0.2641721 | GAL | 2/9/2000 | ACETONE |
| LV00097923 | CA/906/144/DOCK | 8353 | 1 | L | 0.2641721 | GAL | 10/6/1998 | ACETONE |
| LV00120058 | CA/906/144/DOCK | 8353 | 2 | L | 0.5283442 | GAL | 12/17/1999 | ACETONE |
| LV00121067 | CA/906/144/DOCK | 8353 | 1 | L | 0.2641721 | GAL | 2/9/2000 | ACETONE |
| LV00097920 | CA/906/144/DOCK | 8353 | 1 | L | 0.2641721 | GAL | 10/6/1998 | ACETONE |
| LV00118338 | CA/906/144/DOCK | 8353 | 280 | CUFT | 280 | CUFT | 2/16/2005 | ARGON, COMPRESSED |
| LV00170790 | CA/906/144/DOCK | 8353 | 280 | CUFT | 280 | CUFT | 10/5/2007 | ARGON, COMPRESSED |
| LV00170615 | CA/906/144/DOCK | 8353 | 280 | CUFT | 280 | CUFT | 7/3/2007 | ARGON, COMPRESSED |
| LV00116529 | CA/906/144/DOCK | 8353 | 525 | CUFT | 525 | CUFT | 11/9/2001 | CARBON DIOXIDE, GAS |

| Barcode | Location | Org. | Quantity | QUnit | Report Quantity | RUnit | Purchase Date | Name |
|---|---|---|---|---|---|---|---|---|
| LV00118144 | CA/906/144/DOCK | 8353 | 180 | CUFT | 180 | CUFT | 10/20/2004 | CARBON DIOXIDE, GAS |
| LV00170762 | CA/906/144/DOCK | 8353 | 525 | CUFT | 525 | CUFT | 9/19/2007 | CARBON DIOXIDE, GAS |
| LV00151913 | CA/906/144/DOCK | 8353 | 117 | CUFT | 117 | CUFT | 4/16/2002 | CARBON MONOXIDE |
| LV00139293 | CA/906/144/DOCK | 8353 | 2 | L | 0.5283442 | GAL | 6/11/2003 | DENATURATED ETHANOL |
| LV00139393 | CA/906/144/DOCK | 8353 | 2 | L | 0.5283442 | GAL | 6/17/2003 | DENATURATED ETHANOL |
| LV00139296 | CA/906/144/DOCK | 8353 | 2 | L | 0.5283442 | GAL | 6/11/2003 | DENATURATED ETHANOL |
| LV00156484 | CA/906/144/DOCK | 8353 | 2 | L | 0.5283442 | GAL | 7/19/2005 | DIMETHYL SULFOXIDE |
| LV00098073 | CA/906/144/DOCK | 8353 | 1 | L | 0.2641721 | GAL | 10/26/1998 | ETHYL ALCOHOL |
| LV00108588 | CA/906/144/DOCK | 8353 | 2 | L | 0.5283442 | GAL | 3/19/2001 | ETHYL ALCOHOL |
| LV00108583 | CA/906/144/DOCK | 8353 | 2 | L | 0.5283442 | GAL | 3/19/2001 | ETHYL ALCOHOL |
| LV00116079 | CA/906/144/DOCK | 8353 | 411 | CUFT | 411 | CUFT | 1/31/2000 | ETHYLENE |
| LV00170142 | CA/906/144/DOCK | 8353 | 12.3 | CUFT | 12.3 | CUFT | 10/11/2006 | ETHYLENE (5%)/METHANE (5%)/ARGON |
| LV00101266 | CA/906/144/DOCK | 8353 | 2 | L | 0.5283442 | GAL | 4/6/1999 | ETHYLENE GLYCOL |
| LV00154609 | CA/906/144/DOCK | 8353 | 1 | L | 0.2641721 | GAL | 3/21/2005 | ETHYLENE GLYCOL |
| LV00118481 | CA/906/144/DOCK | 8353 | 1464 | CUFT | 1464 | CUFT | 5/25/2005 | HELIUM |
| LV00118509 | CA/906/144/DOCK | 8353 | 1464 | CUFT | 1464 | CUFT | 6/24/2005 | HELIUM |
| LV00170461 | CA/906/144/DOCK | 8353 | 1146 | CUFT | 1146 | CUFT | 4/11/2007 | HYDROGEN |
| LV00170807 | CA/906/144/DOCK | 8353 | 213 | CUFT | 213 | CUFT | 10/17/2007 | HYDROGEN |
| LV00153577 | CA/906/144/DOCK | 8353 | 5 | L | 1.3208605 | GAL | 1/24/2005 | HYDROGEN PEROXIDE, 30% |
| LV00118154 | CA/906/144/DOCK | 8353 | 286 | CUFT | 286 | CUFT | 10/22/2004 | METHANE |
| LV00118404 | CA/906/144/DOCK | 8353 | 286 | CUFT | 286 | CUFT | 3/23/2005 | METHANE |
| LV00170616 | CA/906/144/DOCK | 8353 | 286 | CUFT | 286 | CUFT | 7/3/2007 | METHANE |
| LV00161224 | CA/906/144/DOCK | 8353 | 4 | L | 1.0566884 | GAL | 5/31/2006 | METHANOL |
| LV00161225 | CA/906/144/DOCK | 8353 | 4 | L | 1.0566884 | GAL | 5/31/2006 | METHANOL |

| Barcode | Location | Org. | Quantity | QUnit | Report Quantity | RUnit | Purchase Date | Name |
|---|---|---|---|---|---|---|---|---|
| LV00161221 | CA/906/144/DOCK | 8353 | 4 | L | 1.0566884 | GAL | 5/31/2006 | METHANOL |
| LV00158610 | CA/906/144/DOCK | 8353 | 4 | L | 1.0566884 | GAL | 12/2/2005 | METHANOL REAGENT ACS |
| LV00055897 | CA/906/144/DOCK | 8353 | 7 | LBS | 7 | LBS | 3/26/1997 | METHYL ACETYLENE-PROPADIENE MIX |
| LV00120317 | CA/906/144/DOCK | 8353 | 25 | ML | 0.006605 | GAL | 12/20/1999 | METHYL ALCOHOL |
| LV00167484 | CA/906/144/DOCK | 8353 | 4 | L | 1.0566884 | GAL | 8/20/2007 | METHYL ALCOHOL |
| LV00164174 | CA/906/144/DOCK | 8353 | 4 | L | 1.0566884 | GAL | 12/13/2006 | METHYL ALCOHOL |
| LV00164171 | CA/906/144/DOCK | 8353 | 4 | L | 1.0566884 | GAL | 12/13/2006 | METHYL ALCOHOL |
| LV00164168 | CA/906/144/DOCK | 8353 | 4 | L | 1.0566884 | GAL | 12/13/2006 | METHYL ALCOHOL |
| LV00164169 | CA/906/144/DOCK | 8353 | 4 | L | 1.0566884 | GAL | 12/13/2006 | METHYL ALCOHOL |
| LV00148158 | CA/906/144/DOCK | 8353 | 5 | GAL | 5 | GAL | 10/21/2004 | METHYL ALCOHOL |
| LV00164170 | CA/906/144/DOCK | 8353 | 4 | L | 1.0566884 | GAL | 12/13/2006 | METHYL ALCOHOL |
| LV00116361 | CA/906/144/DOCK | 8353 | 0.53 | CUFT | 0.53 | CUFT | 7/13/2001 | NITRIC OXIDE |
| LV00150261 | CA/906/144/DOCK | 8353 | 20 | CUFT | 20 | CUFT | 6/23/2005 | NITRIC OXIDE |
| LV00170110 | CA/906/144/DOCK | 8353 | 141 | CUFT | 141 | CUFT | 9/15/2006 | NITRIC OXIDE (0.01%)/NITROGEN (BAL) |
| LV00170827 | CA/906/144/DOCK | 8353 | 141 | CUFT | 141 | CUFT | 10/30/2007 | NITRIC OXIDE (100 PPM)/NITROGEN (BAI |
| LV00118082 | CA/906/144/DOCK | 8353 | 105 | CUFT | 105 | CUFT | 9/17/2004 | NITRIC OXIDE (5%)/ARGON (BAL) |
| LV00118321 | CA/906/144/DOCK | 8353 | 255 | CUFT | 255 | CUFT | 2/11/2005 | NITROGEN, COMPRESSED GAS |
| LV00118379 | CA/906/144/DOCK | 8353 | 255 | CUFT | 255 | CUFT | 3/3/2005 | NITROGEN, COMPRESSED GAS |
| LV00117480 | CA/906/144/DOCK | 8353 | 247 | CUFT | 247 | CUFT | 9/26/2003 | OXYGEN, COMPRESSED GAS |
| LV00170824 | CA/906/144/DOCK | 8353 | 1464 | CUFT | 1464 | CUFT | 10/24/2007 | OXYGEN, COMPRESSED GAS |
| LV00118149 | CA/906/144/DOCK | 8353 | 244 | CUFT | 244 | CUFT | 10/20/2004 | OXYGEN, COMPRESSED GAS |
| LV00173426 | CA/906/144/DOCK | 8353 | 5 | GAL | 5 | GAL | 6/12/2006 | PERMAVIS 8 |
| LV00010488 | CA/906/144/DOCK | 8353 | 3 | GR | 0.0066138 | LBS | 5/28/1993 | SULFORHODAMINE |
| LV00173428 | CA/906/144/DOCK | 8353 | 5 | GAL | 5 | GAL | 6/12/2006 | TKO-FF |
| LV00173427 | CA/906/144/DOCK | 8353 | 5 | GAL | 5 | GAL | 6/12/2006 | TKO-FF |
| LV00108619 | CA/906/144/DOCK | 8353 | 2 | L | 0.5283442 | GAL | 3/20/2001 | TRICHLOROETHYLENE |

| Barcode | Location | Org. | Quantity | QUnit | Report Quantity | RUnit | Purchase Date | Name |
|---|---|---|---|---|---|---|---|---|
| LV00151040 | CA/906/144/DOCK | 8353 | 1 | GAL | 1 | GAL | 7/9/2003 | VACUUM PUMP FLUID |
| LV00011412 | CA/906/144/DOCK | 8353 | 3.52 | CUFT | 3.52 | CUFT | 4/7/1993 | XENON |
| LV00154952 | CA/906/148/DOCK | 8351 | 1 | L | 0.2641721 | GAL | 4/12/2005 | ACETONE |
| LV00154954 | CA/906/148/DOCK | 8351 | 1 | L | 0.2641721 | GAL | 4/12/2005 | ACETONE |
| LV00154950 | CA/906/148/DOCK | 8351 | 1 | L | 0.2641721 | GAL | 4/12/2005 | ACETONE |
| LV00154955 | CA/906/148/DOCK | 8351 | 1 | L | 0.2641721 | GAL | 4/12/2005 | ACETONE |
| LV00101180 | CA/906/148/DOCK | 8351 | 1 | L | 0.2641721 | GAL | 4/1/1999 | ACETONE |
| LV00101177 | CA/906/148/DOCK | 8351 | 1 | L | 0.2641721 | GAL | 4/1/1999 | ACETONE |
| LV00154953 | CA/906/148/DOCK | 8351 | 1 | L | 0.2641721 | GAL | 4/12/2005 | ACETONE |
| LV00117917 | CA/906/148/DOCK | 8351 | 330 | CUFT | 330 | CUFT | 6/28/2004 | ACETYLENE |
| LV00117915 | CA/906/148/DOCK | 8351 | 40 | CUFT | 40 | CUFT | 6/25/2004 | ACETYLENE |
| LV00117922 | CA/906/148/DOCK | 8351 | 225 | CUFT | 225 | CUFT | 6/30/2004 | AIR, COMPRESSED |
| LV00056827 | CA/906/148/DOCK | 8351 | 233 | CUFT | 233 | CUFT | 2/23/1998 | AIR, COMPRESSED |
| LV00122532 | CA/906/148/DOCK | 8351 | 2.5 | OZ | 0.15625 | LBS | 6/22/2000 | ALKANES, C3-4 |
| LV00122531 | CA/906/148/DOCK | 8351 | 1.05 | OZ | 0.065625 | LBS | 6/22/2000 | ALKANES, C3-4 |
| LV00117932 | CA/906/148/DOCK | 8351 | 1680 | CUFT | 1680 | CUFT | 6/30/2004 | ARGON, COMPRESSED |
| LV00118511 | CA/906/148/DOCK | 8351 | 1680 | CUFT | 1680 | CUFT | 6/24/2005 | ARGON, COMPRESSED |
| LV00118701 | CA/906/148/DOCK | 8351 | 13.8 | CUFT | 13.8 | CUFT | 12/19/2005 | BUTADIENE, INHIBITED |
| LV00117782 | CA/906/148/DOCK | 8351 | 524 | CUFT | 524 | CUFT | 4/7/2004 | CARBON DIOXIDE, GAS |
| LV00117906 | CA/906/148/DOCK | 8351 | 141 | CUFT | 141 | CUFT | 6/18/2004 | CARBON MONOXIDE (1%)/NITROGEN (BA |
| LV00118526 | CA/906/148/DOCK | 8351 | 116 | CUFT | 116 | CUFT | 7/1/2005 | CARBON MONOXIDE (1%)/NITROGEN (BA |
| LV00096573 | CA/906/148/DOCK | 8351 | 1 | GAL | 1 | GAL | 10/12/1998 | DIFFOIL-20 |
| LV00055823 | CA/906/148/DOCK | 8351 | 0.07 | CUFT | 0.07 | CUFT | 2/18/1997 | DIMETHYL ETHER |

| Barcode | Location | Org. | Quantity | QUnit | Report Quantity | RUnit | Purchase Date | Name |
|---|---|---|---|---|---|---|---|---|
| LV00118852 | CA/906/148/DOCK | 8351 | 381 | CUFT | 381 | CUFT | 3/30/2006 | ETHYLENE |
| LV00173424 | CA/906/148/DOCK | 8351 | 340 | GR | 0.749564 | LBS | 6/12/2006 | FLAT BLACK 7776 |
| LV00173425 | CA/906/148/DOCK | 8351 | 340 | GR | 0.749564 | LBS | 6/12/2006 | FLAT BLACK 7776 |
| LV00174634 | CA/906/148/DOCK | 8351 | 71 | CUFT | 71 | CUFT | 10/18/2007 | FLUORINE (0.17%)/ARGON (5.33%)/HELIU (BAL) |
| LV00057839 | CA/906/148/DOCK | 8351 | 244 | CUFT | 244 | CUFT | 9/6/2000 | HELIUM |
| LV00118510 | CA/906/148/DOCK | 8351 | 1464 | CUFT | 1464 | CUFT | 6/24/2005 | HELIUM |
| LV00055011 | CA/906/148/DOCK | 8351 | 330 | CUFT | 330 | CUFT | 11/16/1995 | HELIUM |
| LV00057840 | CA/906/148/DOCK | 8351 | 244 | CUFT | 244 | CUFT | 9/6/2000 | HELIUM |
| LV00170542 | CA/906/148/DOCK | 8351 | 1146 | CUFT | 1146 | CUFT | 5/18/2007 | HYDROGEN |
| LV00170531 | CA/906/148/DOCK | 8351 | 213 | CUFT | 213 | CUFT | 5/14/2007 | HYDROGEN |
| LV00055500 | CA/906/148/DOCK | 8351 | 7.06 | CUFT | 7.06 | CUFT | 7/25/1996 | HYDROGEN (1%)/NEON (BAL) |
| LV00122533 | CA/906/148/DOCK | 8351 | 5.13 | OZ | 0.320625 | LBS | 6/22/2000 | MASTER APPLIANCE ULTRATANE BUTA |
| LV00170550 | CA/906/148/DOCK | 8351 | 1716 | CUFT | 1716 | CUFT | 5/24/2007 | METHANE |
| LV00170724 | CA/906/148/DOCK | 8351 | 1716 | CUFT | 1716 | CUFT | 8/27/2007 | METHANE |
| LV00161229 | CA/906/148/DOCK | 8351 | 1 | L | 0.2641721 | GAL | 5/31/2006 | METHANOL |
| LV00161231 | CA/906/148/DOCK | 8351 | 1 | L | 0.2641721 | GAL | 5/31/2006 | METHANOL |
| LV00161233 | CA/906/148/DOCK | 8351 | 1 | L | 0.2641721 | GAL | 5/31/2006 | METHANOL |
| LV00161232 | CA/906/148/DOCK | 8351 | 1 | L | 0.2641721 | GAL | 5/31/2006 | METHANOL |
| LV00146383 | CA/906/148/DOCK | 8351 | 2.5 | L | 0.66043025 | GAL | 7/14/2004 | METHANOL ABSOLUTE |
| LV00146388 | CA/906/148/DOCK | 8351 | 2.5 | L | 0.66043025 | GAL | 7/14/2004 | METHANOL ABSOLUTE |
| LV00146384 | CA/906/148/DOCK | 8351 | 2.5 | L | 0.66043025 | GAL | 7/14/2004 | METHANOL ABSOLUTE |
| LV00148174 | CA/906/148/DOCK | 8351 | 5 | GAL | 5 | GAL | 10/26/2004 | METHYL ALCOHOL |
| LV00164175 | CA/906/148/DOCK | 8351 | 4 | L | 1.0566884 | GAL | 12/13/2006 | METHYL ALCOHOL |
| LV00164177 | CA/906/148/DOCK | 8351 | 4 | L | 1.0566884 | GAL | 12/13/2006 | METHYL ALCOHOL |
| LV00164178 | CA/906/148/DOCK | 8351 | 4 | L | 1.0566884 | GAL | 12/13/2006 | METHYL ALCOHOL |

| Barcode | Location | Org. | Quantity | QUnit | Report Quantity | RUnit | Purchase Date | Name |
|---|---|---|---|---|---|---|---|---|
| LV00164176 | CA/906/148/DOCK | 8351 | 4 | L | 1.0566884 | GAL | 12/13/2006 | METHYL ALCOHOL |
| LV00164165 | CA/906/148/DOCK | 8351 | 4 | L | 1.0566884 | GAL | 12/13/2006 | METHYL ALCOHOL |
| LV00164163 | CA/906/148/DOCK | 8351 | 4 | L | 1.0566884 | GAL | 12/13/2006 | METHYL ALCOHOL |
| LV00164164 | CA/906/148/DOCK | 8351 | 4 | L | 1.0566884 | GAL | 12/13/2006 | METHYL ALCOHOL |
| LV00055035 | CA/906/148/DOCK | 8351 | 75 | CUFT | 75 | CUFT | 12/13/1995 | NEON |
| LV00056151 | CA/906/148/DOCK | 8351 | 263 | CUFT | 263 | CUFT | 8/24/1997 | NEON |
| LV00170270 | CA/906/148/DOCK | 8351 | 141 | CUFT | 141 | CUFT | 12/8/2006 | NITRIC OXIDE (1000 PPM)/NITROGEN (BA |
| LV00057982 | CA/906/148/DOCK | 8351 | 140 | CUFT | 140 | CUFT | 12/8/2000 | NITRIC OXIDE (200 PPM)/NITROGEN (BAI |
| LV00170740 | CA/906/148/DOCK | 8351 | 143 | CUFT | 143 | CUFT | 9/4/2007 | NITRIC OXIDE (200 PPM)/NITROGEN (BAI |
| LV00170312 | CA/906/148/DOCK | 8351 | 141 | CUFT | 141 | CUFT | 1/12/2007 | NITRIC OXIDE (200 PPM)/NITROGEN (BAI |
| LV00170739 | CA/906/148/DOCK | 8351 | 143 | CUFT | 143 | CUFT | 9/4/2007 | NITRIC OXIDE (200 PPM)/NITROGEN (BAI |
| LV00170741 | CA/906/148/DOCK | 8351 | 143 | CUFT | 143 | CUFT | 9/4/2007 | NITRIC OXIDE (200 PPM)/NITROGEN (BAI |
| LV00170742 | CA/906/148/DOCK | 8351 | 143 | CUFT | 143 | CUFT | 9/4/2007 | NITRIC OXIDE (200 PPM)/NITROGEN (BAI |
| LV00056958 | CA/906/148/DOCK | 8351 | 230 | CUFT | 230 | CUFT | 3/31/1999 | NITROGEN, COMPRESSED GAS |
| LV00057691 | CA/906/148/DOCK | 8351 | 248.9 | CUFT | 248.9 | CUFT | 5/11/2000 | OXYGEN, COMPRESSED GAS |
| LV00117792 | CA/906/148/DOCK | 8351 | 1500 | CUFT | 1500 | CUFT | 4/13/2004 | OXYGEN, COMPRESSED GAS |
| LV00057692 | CA/906/148/DOCK | 8351 | 248.9 | CUFT | 248.9 | CUFT | 5/11/2000 | OXYGEN, COMPRESSED GAS |
| LV00170681 | CA/906/148/DOCK | 8351 | 1716 | CUFT | 1716 | CUFT | 8/6/2007 | OXYGEN, COMPRESSED GAS |
| LV00150145 | CA/906/148/DOCK | 8351 | 1 | GAL | 1 | GAL | 6/20/2005 | PERMAVIS 8 |
| LV00150146 | CA/906/148/DOCK | 8351 | 1 | GAL | 1 | GAL | 6/20/2005 | PERMAVIS 8 |
| LV00173422 | CA/906/148/DOCK | 8351 | 284 | GR | 0.6261064 | LBS | 6/12/2006 | PROFESSIONAL GRAY PRIMER 7582 |
| LV00173423 | CA/906/148/DOCK | 8351 | 284 | GR | 0.6261064 | LBS | 6/12/2006 | PROFESSIONAL GRAY PRIMER 7582 |

| Barcode | Location | Org. | Quantity | QUnit | Report Quantity | RUnit | Purchase Date | Name |
|---|---|---|---|---|---|---|---|---|
| LV00118853 | CA/906/148/DOCK | 8351 | 860 | CUFT | 860 | CUFT | 3/30/2006 | PROPANE |
| LV00140258 | CA/906/148/DOCK | 8351 | 2 | L | 0.5283442 | GAL | 8/13/2003 | PROPYLENE CARBONATE |
| LV00140259 | CA/906/148/DOCK | 8351 | 2 | L | 0.5283442 | GAL | 8/13/2003 | PROPYLENE CARBONATE |
| LV00140261 | CA/906/148/DOCK | 8351 | 2 | L | 0.5283442 | GAL | 8/13/2003 | PROPYLENE CARBONATE |
| LV00102227 | CA/906/148/DOCK | 8351 | 16 | FLOZ | 0.125 | GAL | 6/30/1999 | RAPID TAP |
| LV00150147 | CA/906/148/DOCK | 8351 | 1 | GAL | 1 | GAL | 6/20/2005 | TKO-FF |
| LV00010491 | CA/906/149/DOCK | 8353 | 500 | MG | 0.0011023 | LBS | 5/28/1993 | 4-(DICYANOMETHYLENE)-2-METHYL-6-(DIMETHYLAMINOSTYRYL)-4H-PYRAN |
| LV00010492 | CA/906/149/DOCK | 8353 | 500 | MG | 0.0011023 | LBS | 5/28/1993 | 4-(DICYANOMETHYLENE)-2-METHYL-6-(DIMETHYLAMINOSTYRYL)-4H-PYRAN |
| LV00170336 | CA/906/149/DOCK | 8353 | 53 | CUFT | 53 | CUFT | 1/17/2007 | 5% FLUORINE BAL HELIUM |
| LV00126083 | CA/906/149/DOCK | 8353 | 5 | GR | 0.011023 | LBS | 7/16/2001 | ACETIC ANHYDRIDE |
| LV00077280 | CA/906/149/DOCK | 8353 | 5 | GR | 0.011023 | LBS | 4/23/1997 | ACETIC ANHYDRIDE |
| LV00079654 | CA/906/149/DOCK | 8353 | 5 | GR | 0.011023 | LBS | 8/20/1997 | ACETIC ANHYDRIDE-D6 |
| LV00079655 | CA/906/149/DOCK | 8353 | 5 | GR | 0.011023 | LBS | 8/20/1997 | ACETIC ANHYDRIDE-D6 |
| LV00079199 | CA/906/149/DOCK | 8353 | 5 | GR | 0.011023 | LBS | 7/30/1997 | ACETIC ANHYDRIDE-D6 |
| LV00079657 | CA/906/149/DOCK | 8353 | 5 | GR | 0.011023 | LBS | 8/20/1997 | ACETIC ANHYDRIDE-D6 |
| LV00079656 | CA/906/149/DOCK | 8353 | 5 | GR | 0.011023 | LBS | 8/20/1997 | ACETIC ANHYDRIDE-D6 |
| LV00079659 | CA/906/149/DOCK | 8353 | 5 | GR | 0.011023 | LBS | 8/20/1997 | ACETIC ANHYDRIDE-D6 |
| LV00079658 | CA/906/149/DOCK | 8353 | 5 | GR | 0.011023 | LBS | 8/20/1997 | ACETIC ANHYDRIDE-D6 |
| LV00079653 | CA/906/149/DOCK | 8353 | 5 | GR | 0.011023 | LBS | 8/20/1997 | ACETIC ANHYDRIDE-D6 |
| LV00079201 | CA/906/149/DOCK | 8353 | 5 | GR | 0.011023 | LBS | 7/30/1997 | ACETIC ANHYDRIDE-D6 |
| LV00042774 | CA/906/149/DOCK | 8353 | 50 | ML | 0.01321 | GAL | 3/7/1997 | ACETONE-D6 |
| LV00042775 | CA/906/149/DOCK | 8353 | 50 | ML | 0.01321 | GAL | 3/7/1997 | ACETONE-D6 |
| LV00109105 | CA/906/149/DOCK | 8353 | 100 | ML | 0.02642 | GAL | 4/24/2001 | ACETONITRILE |
| LV00109103 | CA/906/149/DOCK | 8353 | 100 | ML | 0.02642 | GAL | 4/24/2001 | ACETONITRILE |
| LV00057213 | CA/906/149/DOCK | 8353 | 250 | CUFT | 250 | CUFT | 9/1/1999 | ACETYLENE |
| LV00116741 | CA/906/149/DOCK | 8353 | 331 | CUFT | 331 | CUFT | 4/5/2002 | ARGON, COMPRESSED |
| LV00116740 | CA/906/149/DOCK | 8353 | 331 | CUFT | 331 | CUFT | 4/5/2002 | ARGON, COMPRESSED |
| LV00116550 | CA/906/149/DOCK | 8353 | 280 | CUFT | 280 | CUFT | 11/30/2001 | ARGON, COMPRESSED |

| Barcode | Location | Org. | Quantity | QUnit | Report Quantity | RUnit | Purchase Date | Name |
|---|---|---|---|---|---|---|---|---|
| LV00116009 | CA/906/149/DOCK | 8353 | 331 | CUFT | 331 | CUFT | 1/8/2001 | ARGON, COMPRESSED |
| LV00098315 | CA/906/149/DOCK | 8353 | 1 | L | 0.2641721 | GAL | 11/3/1998 | BENZENE |
| LV00057847 | CA/906/149/DOCK | 8353 | 0.42 | CUFT | 0.42 | CUFT | 9/20/2000 | CARBON DIOXIDE, GAS |
| LV00117108 | CA/906/149/DOCK | 8353 | 175 | CUFT | 175 | CUFT | 2/5/2003 | CARBON MONOXIDE |
| LV00057237 | CA/906/149/DOCK | 8353 | 66 | CUFT | 66 | CUFT | 8/30/1999 | CARBON MONOXIDE |
| LV00117204 | CA/906/149/DOCK | 8353 | 175 | CUFT | 175 | CUFT | 4/16/2003 | CARBON MONOXIDE |
| LV00117962 | CA/906/149/DOCK | 8353 | 0.5 | LBS | 0.5 | LBS | 7/21/2004 | CESIUM SULFATE |
| LV00056867 | CA/906/149/DOCK | 8353 | 0.5 | LBS | 0.5 | LBS | 2/23/1998 | CHLOROTRIFLUOROMETHANE |
| LV00011189 | CA/906/149/DOCK | 8353 | 5 | GR | 0.011023 | LBS | 6/16/1993 | COUMARIN 1 |
| LV00021004 | CA/906/149/DOCK | 8353 | 5 | GR | 0.011023 | LBS | 3/23/1993 | COUMARIN 1 |
| LV00086746 | CA/906/149/DOCK | 8353 | 2 | GR | 0.0044092 | LBS | 5/5/1997 | COUMARIN 120 |
| LV00011187 | CA/906/149/DOCK | 8353 | 2 | GR | 0.0044092 | LBS | 6/16/1993 | COUMARIN 120 |
| LV00038693 | CA/906/149/DOCK | 8353 | 1 | GAL | 1 | GAL | 6/20/2005 | CYCLOHEXANE |
| LV00042138 | CA/906/149/DOCK | 8353 | 2.2 | CUFT | 2.2 | CUFT | 2/6/1997 | DICHLORODIFLUOROMETHANE |
| LV00109081 | CA/906/149/DOCK | 8353 | 1 | L | 0.2641721 | GAL | 4/19/2001 | EDWARDS ULTRAGRADE 15, 19 AND 20 M PUMP OILS |
| LV00001383 | CA/906/149/DOCK | 8353 | 1 | PT | 0.125 | GAL | 8/28/1992 | ETHYL ALCOHOL |
| LV00057470 | CA/906/149/DOCK | 8353 | 381 | CUFT | 381 | CUFT | 6/24/2005 | ETHYLENE |
| LV00073193 | CA/906/149/DOCK | 8353 | 3 | GR | 0.0066138 | LBS | 6/4/1998 | EXALITE 428 |
| LV00174632 | CA/906/149/DOCK | 8353 | 71 | CUFT | 71 | CUFT | 2/15/2007 | FLUORINE (0.12%)/HELIUM (3.3%)/KRYPT |
| LV00118647 | CA/906/149/DOCK | 8353 | 5 | LBS | 5 | LBS | 10/14/2005 | FLUORINE (0.17%)/ARGON (6%)/HELIUM |
| LV00118646 | CA/906/149/DOCK | 8353 | 5 | LBS | 5 | LBS | 10/14/2005 | FLUORINE (0.17%)/ARGON (6%)/HELIUM |
| LV00042140 | CA/906/149/DOCK | 8353 | 1.9 | CUFT | 14.21298705 | GAL | 2/6/1997 | FLUOROTRICHLOROMETHANE |
| LV00116883 | CA/906/149/DOCK | 8353 | 244 | CUFT | 244 | CUFT | 7/19/2002 | HELIUM |

| Barcode | Location | Org. | Quantity | QUnit | Report Quantity | RUnit | Purchase Date | Name |
|---|---|---|---|---|---|---|---|---|
| LV00170264 | CA/906/149/DOCK | 8353 | 244 | CUFT | 244 | CUFT | 12/6/2006 | HELIUM |
| LV00170771 | CA/906/149/DOCK | 8353 | 244 | CUFT | 244 | CUFT | 9/24/2007 | HELIUM |
| LV00170770 | CA/906/149/DOCK | 8353 | 244 | CUFT | 244 | CUFT | 9/24/2007 | HELIUM |
| LV00170265 | CA/906/149/DOCK | 8353 | 244 | CUFT | 244 | CUFT | 12/6/2006 | HELIUM |
| LV00170263 | CA/906/149/DOCK | 8353 | 244 | CUFT | 244 | CUFT | 12/6/2006 | HELIUM |
| LV00118618 | CA/906/149/DOCK | 8353 | 244 | CUFT | 244 | CUFT | 9/7/2005 | HELIUM |
| LV00170069 | CA/906/149/DOCK | 8353 | 244 | CUFT | 244 | CUFT | 8/15/2006 | HELIUM |
| LV00170068 | CA/906/149/DOCK | 8353 | 244 | CUFT | 244 | CUFT | 8/15/2006 | HELIUM |
| LV00118631 | CA/906/149/DOCK | 8353 | 213 | CUFT | 213 | CUFT | 9/19/2005 | HYDROGEN |
| LV00170814 | CA/906/149/DOCK | 8353 | 3.5 | CUFT | 3.5 | CUFT | 10/19/2007 | HYDROGEN |
| LV00170402 | CA/906/149/DOCK | 8353 | 70 | CUFT | 70 | CUFT | 3/9/2007 | HYDROGEN CHLORIDE (0.14%)/HYDROG (0.03%)/HELIUM (2.59%)/XENON (2.07%)/N |
| LV00107167 | CA/906/149/DOCK | 8353 | 176.5 | CUFT | 176.5 | CUFT | 12/4/2000 | KRYPTON |
| LV00012432 | CA/906/149/DOCK | 8353 | 2 | CUFT | 2 | CUFT | 10/21/1992 | METHANE |
| LV00042771 | CA/906/149/DOCK | 8353 | 2 | L | 0.5283442 | GAL | 3/7/1997 | N-HEXANE |
| LV00170358 | CA/906/149/DOCK | 8353 | 177 | CUFT | 177 | CUFT | 2/2/2007 | NEON |
| LV00170780 | CA/906/149/DOCK | 8353 | 176 | CUFT | 176 | CUFT | 9/28/2007 | NEON |
| LV00117551 | CA/906/149/DOCK | 8353 | 45 | CUFT | 45 | CUFT | 10/31/2003 | NITRIC OXIDE |
| LV00116008 | CA/906/149/DOCK | 8353 | 299 | CUFT | 299 | CUFT | 1/8/2001 | NITROGEN, COMPRESSED GAS |

| Barcode | Location | Org. | Quantity | QUnit | Report Quantity | RUnit | Purchase Date | Name |
|---|---|---|---|---|---|---|---|---|
| LV00118708 | CA/906/149/DOCK | 8353 | 300 | CUFT | 300 | CUFT | 1/4/2006 | NITROGEN, COMPRESSED GAS |
| LV00118456 | CA/906/149/DOCK | 8353 | 300 | CUFT | 300 | CUFT | 4/25/2005 | NITROGEN, COMPRESSED GAS |
| LV00170278 | CA/906/149/DOCK | 8353 | 11 | CUFT | 11 | CUFT | 12/13/2006 | NITROGEN, COMPRESSED GAS |
| LV00170280 | CA/906/149/DOCK | 8353 | 11 | CUFT | 11 | CUFT | 12/13/2006 | NITROGEN, COMPRESSED GAS |
| LV00170279 | CA/906/149/DOCK | 8353 | 11 | CUFT | 11 | CUFT | 12/13/2006 | NITROGEN, COMPRESSED GAS |
| LV00170277 | CA/906/149/DOCK | 8353 | 11 | CUFT | 11 | CUFT | 12/13/2006 | NITROGEN, COMPRESSED GAS |
| LV00089283 | CA/906/149/DOCK | 8353 | 177 | CUFT | 177 | CUFT | 6/12/1995 | NITROUS OXIDE |
| LV00116717 | CA/906/149/DOCK | 8353 | 52 | CUFT | 52 | CUFT | 3/27/2002 | NITROUS OXIDE |
| LV00057582 | CA/906/149/DOCK | 8353 | 248 | CUFT | 248 | CUFT | 6/28/2002 | OXYGEN, COMPRESSED GAS |
| LV00174633 | CA/906/149/DOCK | 8353 | 244 | CUFT | 244 | CUFT | 2/15/2007 | OXYGEN, COMPRESSED GAS |
| LV00127389 | CA/906/149/DOCK | 8353 | 1 | GAL | 1 | GAL | 6/24/2002 | PERMAVIS 8 |
| LV00057531 | CA/906/149/DOCK | 8353 | 175 | GR | 0.385805 | LBS | 2/11/2000 | PROPYLENE |
| LV00118632 | CA/906/149/DOCK | 8353 | 31 | CUFT | 31 | CUFT | 9/19/2005 | PROPYLENE (1%)/ETHYLENE (1%)/METH<br>BUTENE (1%)/KRYPTON (1%)/XENON (1% |
| LV00010514 | CA/906/149/DOCK | 8353 | 5 | GR | 0.011023 | LBS | 5/28/1993 | RHODAMINE 590 CHLORIDE |
| LV00010513 | CA/906/149/DOCK | 8353 | 5 | GR | 0.011023 | LBS | 5/28/1993 | RHODAMINE 590 CHLORIDE |
| LV00010479 | CA/906/149/DOCK | 8353 | 5 | GR | 0.011023 | LBS | 5/28/1993 | RHODAMINE 590 TETRAFLUOROBORATI |
| LV00174725 | CA/906/149/DOCK | 8353 | 35 | CUFT | 35 | CUFT | 5/30/2007 | SULFUR DIOXIDE (0.3%)/HELIUM (BAL) |
| LV00046005 | CA/906/149/DOCK | 8353 | 33 | CUFT | 33 | CUFT | 1/18/1995 | SULFUR HEXAFLUORIDE |
| LV00167778 | CA/906/149/DOCK | 8353 | 5 | GAL | 5 | GAL | 9/7/2007 | SYLTHERM XLT HEAT TRANSFER FLUID |
| LV00086218 | CA/906/149/DOCK | 8353 | 88.7 | ML | 0.02343454 | GAL | 10/1/1996 | THREE-IN-ONE MULTI-PURPOSE OIL |
| LV00079408 | CA/906/149/DOCK | 8353 | 1 | GAL | 1 | GAL | 7/22/1997 | TKO-77 |
| LV00151046 | CA/906/149/DOCK | 8353 | 5 | GAL | 5 | GAL | 7/9/2003 | TKO-FF |
| LV00151044 | CA/906/149/DOCK | 8353 | 1 | GAL | 1 | GAL | 7/9/2003 | VACUUM PUMP FLUID |

| Barcode | Location | Org. | Quantity | QUnit | Report Quantity | RUnit | Purchase Date | Name |
|---|---|---|---|---|---|---|---|---|
| LV00151039 | CA/906/149/DOCK | 8353 | 1 | GAL | 1 | GAL | 7/9/2003 | VACUUM PUMP FLUID |
| LV00151042 | CA/906/149/DOCK | 8353 | 1 | GAL | 1 | GAL | 7/9/2003 | VACUUM PUMP FLUID |
| LV00108873 | CA/906/149/DOCK | 8353 | 900 | GR | 1.98414 | LBS | 4/3/2001 | VINYL BROMIDE |
| LV00083360 | CA/906/149/DOCK | 8353 | 2 | CUFT | 2 | CUFT | 5/29/1996 | VINYL METHYL ETHER |
| LV00107002 | CA/906/149/DOCK | 8353 | 5 | GR | 0.011023 | LBS | 11/10/2000 | VINYLIDENE FLUORIDE |
| LV00140361 | CA/906/150/DOCK | 8368 | 4 | L | 1.0566884 | GAL | 8/18/2003 | ACETONE |
| LV00146741 | CA/906/150/DOCK | 8368 | 4 | L | 1.0566884 | GAL | 8/10/2004 | ACETONITRILE |
| LV00057412 | CA/906/150/DOCK | 8368 | 251 | CUFT | 251 | CUFT | 12/3/1999 | AIR, COMPRESSED |
| LV00057408 | CA/906/150/DOCK | 8368 | 88 | CUFT | 88 | CUFT | 12/3/1999 | ARGON, COMPRESSED |
| LV00117852 | CA/906/150/DOCK | 8368 | 173 | CUFT | 173 | CUFT | 5/17/2004 | CARBON DIOXIDE (30%)/NITROGEN (30% |
| LV00057623 | CA/906/150/DOCK | 8368 | 175 | CUFT | 175 | CUFT | 5/2/2000 | CARBON DIOXIDE/NITROGEN/HELIUM M |
| LV00170212 | CA/906/150/DOCK | 8368 | 35 | CUFT | 35 | CUFT | 11/8/2006 | CHLORINE (20 PPM)/NITROGEN (BAL) |
| | | | | | | | | EDWARDS ULTRAGRADE 15, 19 AND 20 M |
| LV00121548 | CA/906/150/DOCK | 8368 | 1 | L | 0.2641721 | GAL | 3/1/2000 | PUMP OILS |
| LV00135850 | CA/906/150/DOCK | 8368 | 500 | ML | 0.1321 | GAL | 1/10/2003 | FORMIC ACID |
| LV00170054 | CA/906/150/DOCK | 8368 | 244 | CUFT | 244 | CUFT | 8/4/2006 | HELIUM |
| LV00170594 | CA/906/150/DOCK | 8368 | 244 | CUFT | 244 | CUFT | 6/22/2007 | HELIUM |
| LV00170476 | CA/906/150/DOCK | 8368 | 10 | CUFT | 10 | CUFT | 4/20/2007 | HELIUM |
| LV00140253 | CA/906/150/DOCK | 8368 | 4 | L | 1.0566884 | GAL | 8/13/2003 | ISOPROPYL ALCOHOL, 10% IN WATER |
| LV00140251 | CA/906/150/DOCK | 8368 | 4 | L | 1.0566884 | GAL | 8/13/2003 | ISOPROPYL ALCOHOL, 10% IN WATER |
| LV00140252 | CA/906/150/DOCK | 8368 | 4 | L | 1.0566884 | GAL | 8/13/2003 | ISOPROPYL ALCOHOL, 10% IN WATER |
| LV00011619 | CA/906/150/DOCK | 8368 | 5 | L | 1.3208605 | GAL | 3/23/1999 | P3 OIL |
| LV00103889 | CA/906/153/DOCK | 8353 | 0.5 | L | 0.01765735 | CUFT | 10/10/1999 | 1,1,1,2,2-D5 PROPANE |
| LV00103888 | CA/906/153/DOCK | 8353 | 0.5 | L | 0.01765735 | CUFT | 10/10/1999 | 1,1,1,3,3,3-D6-PROPANE |

| Barcode | Location | Org. | Quantity | QUnit | Report Quantity | RUnit | Purchase Date | Name |
|---|---|---|---|---|---|---|---|---|
| LV00103887 | CA/906/153/DOCK | 8353 | 0.5 | L | 0.01765735 | CUFT | 10/10/1999 | 1,1,1-D3 PROPANE |
| LV00103890 | CA/906/153/DOCK | 8353 | 0.25 | L | 0.008828675 | CUFT | 10/10/1999 | 1,1,2,2-D4 CYCLOPROPANE |
| LV00038687 | CA/906/153/DOCK | 8353 | 10.7 | GR | 0.02358922 | LBS | 6/1/1993 | 1,1,2,3,4,4-HEXAFLUORO-1,3-BUTADIENE |
| LV00120808 | CA/906/153/DOCK | 8353 | 5 | GR | 0.011023 | LBS | 2/4/2000 | 1,3,5,7-CYCLOOCTATETRAENE |
| LV00103885 | CA/906/153/DOCK | 8353 | 0.5 | L | 0.01765735 | CUFT | 10/10/1999 | 2,2-D2 PROPANE |
| LV00103886 | CA/906/153/DOCK | 8353 | 0.5 | L | 0.01765735 | CUFT | 10/10/1999 | 2,2-D2 PROPANE |
| LV00117306 | CA/906/153/DOCK | 8353 | 1.9 | CUFT | 1.9 | CUFT | 6/23/2003 | 3,3,3-TRIFLUORO-1-PROPENE |
| LV00117114 | CA/906/153/DOCK | 8353 | 53 | CUFT | 53 | CUFT | 2/7/2003 | 5% FLUORINE BAL HELIUM |
| LV00117095 | CA/906/153/DOCK | 8353 | 10 | CUFT | 10 | CUFT | 1/22/2003 | 5% FLUORINE BAL HELIUM |
| LV00055734 | CA/906/153/DOCK | 8353 | 32 | CUFT | 32 | CUFT | 12/10/1996 | ACETALDEHYDE (100 PPM)/HELIUM (BAL |
| LV00117205 | CA/906/153/DOCK | 8353 | 3 | CUFT | 3 | CUFT | 4/18/2003 | AMMONIA, ANHYDROUS |
| LV00118455 | CA/906/153/DOCK | 8353 | 12 | CUFT | 12 | CUFT | 4/22/2005 | ARGON, COMPRESSED |
| LV00116551 | CA/906/153/DOCK | 8353 | 280 | CUFT | 280 | CUFT | 11/30/2001 | ARGON, COMPRESSED |
| LV00118185 | CA/906/153/DOCK | 8353 | 331 | CUFT | 331 | CUFT | 11/12/2004 | ARGON, COMPRESSED |
| LV00132467 | CA/906/153/DOCK | 8353 | 369 | GR | 0.8134974 | LBS | 5/31/2002 | BUG BUSTERS ROACH POWDER |
| LV00118512 | CA/906/153/DOCK | 8353 | 2.12 | CUFT | 2.12 | CUFT | 6/24/2005 | CARBON DIOXIDE, GAS |
| LV00118953 | CA/906/153/DOCK | 8353 | 524 | CUFT | 524 | CUFT | 6/6/2006 | CARBON DIOXIDE, GAS |
| LV00121507 | CA/906/153/DOCK | 8353 | 0.04 | CUFT | 0.04 | CUFT | 2/25/2000 | CARBON MONOXIDE C13 O18 |
| LV00099803 | CA/906/153/DOCK | 8353 | 959.5 | GR | 2.1153137 | LBS | 2/28/1999 | CARBON MONOXIDE-13C 18O |
| LV00118959 | CA/906/153/DOCK | 8353 | 140 | CUFT | 140 | CUFT | 6/8/2006 | CHLORINE (1%)/HELIUM (BAL) |

| Barcode | Location | Org. | Quantity | QUnit | Report Quantity | RUnit | Purchase Date | Name |
|---|---|---|---|---|---|---|---|---|
| LV00116310 | CA/906/153/DOCK | 8353 | 0.6 | CUFT | 0.6 | CUFT | 6/11/2001 | CHLORODIFLUOROMETHANE |
| LV00056868 | CA/906/153/DOCK | 8353 | 2 | CUFT | 2 | CUFT | 2/8/1999 | CHLORODIFLUOROMETHANE |
| LV00005947 | CA/906/153/DOCK | 8353 | 80 | ML | 0.021136 | GAL | 5/26/1993 | CHLOROFORM |
| LV00127563 | CA/906/153/DOCK | 8353 | 3 | LBS | 3 | LBS | 6/28/2002 | CHLOROTRIFLUOROMETHANE |
| LV00042139 | CA/906/153/DOCK | 8353 | 2.6 | CUFT | 2.6 | CUFT | 2/6/1997 | CHLOROTRIFLUOROMETHANE |
| LV00127761 | CA/906/153/DOCK | 8353 | 1 | GR | 0.0022046 | LBS | 7/12/2002 | CIS-1,2-DICHLOROETHYLENE |
| LV00162424 | CA/906/153/DOCK | 8353 | 100 | ML | 0.02642 | GAL | 8/14/2006 | CYCLOHEXANE |
| LV00165109 | CA/906/153/DOCK | 8353 | 100 | ML | 0.02642 | GAL | 2/21/2007 | CYCLOHEXANE |
| LV00010696 | CA/906/153/DOCK | 8353 | 1 | GR | 0.0022046 | LBS | 5/24/1993 | CYCLOHEXANE-D12 |
| LV00010692 | CA/906/153/DOCK | 8353 | 100 | GR | 0.22046 | LBS | 5/24/1993 | CYCLOHEXANE-D12 |
| LV00131590 | CA/906/153/DOCK | 8353 | 1 | CUFT | 1 | CUFT | 3/21/2002 | CYCLOPROPANE |
| LV00131589 | CA/906/153/DOCK | 8353 | 1 | CUFT | 1 | CUFT | 3/21/2002 | CYCLOPROPANE |
| LV00133015 | CA/906/153/DOCK | 8353 | 25 | GR | 0.055115 | LBS | 7/5/2002 | CYCLOPROPANE |
| LV00133016 | CA/906/153/DOCK | 8353 | 25 | GR | 0.055115 | LBS | 7/5/2002 | CYCLOPROPANE |
| LV00072984 | CA/906/153/DOCK | 8353 | 0.35 | CUFT | 0.35 | CUFT | 5/26/1998 | DEUTERIUM HYDRIDE |
| LV00002836 | CA/906/153/DOCK | 8353 | 10.54 | LBS | 10.54 | LBS | 8/7/1995 | DICHLORODIFLUOROMETHANE |
| LV00105964 | CA/906/153/DOCK | 8353 | 1 | GAL | 1 | GAL | 8/30/2000 | EPH |
| LV00113307 | CA/906/153/DOCK | 8353 | 4 | L | 1.0566884 | GAL | 8/2/2001 | ESTANE |
| LV00057259 | CA/906/153/DOCK | 8353 | 413 | CUFT | 413 | CUFT | 9/30/1999 | ETHANE |
| LV00056952 | CA/906/153/DOCK | 8353 | 280 | GR | 0.617288 | LBS | 3/31/1999 | ETHANE |
| LV00117106 | CA/906/153/DOCK | 8353 | 4 | CUFT | 4 | CUFT | 1/30/2003 | ETHANE |
| LV00132221 | CA/906/153/DOCK | 8353 | 0.14 | CUFT | 0.14 | CUFT | 5/9/2002 | ETHANE-D6 |
| LV00165149 | CA/906/153/DOCK | 8353 | 1 | L | 0.2641721 | GAL | 2/22/2007 | ETHYL ALCOHOL |
| LV00143547 | CA/906/153/DOCK | 8353 | 100 | ML | 0.02642 | GAL | 2/23/2004 | ETHYL IODIDE |
| LV00010690 | CA/906/153/DOCK | 8353 | 1 | GR | 0.0022046 | LBS | 5/24/1993 | ETHYL-2,2,2-D3 ALCOHOL |
| LV00117090 | CA/906/153/DOCK | 8353 | 411 | CUFT | 411 | CUFT | 1/17/2003 | ETHYLENE |

| Barcode | Location | Org. | Quantity | QUnit | Report Quantity | RUnit | Purchase Date | Name |
|---|---|---|---|---|---|---|---|---|
| LV00079648 | CA/906/153/DOCK | 8353 | 4 | L | 1.0566884 | GAL | 8/11/1997 | ETHYLENE GLYCOL |
| LV00131083 | CA/906/153/DOCK | 8353 | 4 | L | 1.0566884 | GAL | 2/22/2002 | ETHYLENE GLYCOL |
| LV00131085 | CA/906/153/DOCK | 8353 | 4 | L | 1.0566884 | GAL | 2/22/2002 | ETHYLENE GLYCOL |
| LV00118921 | CA/906/153/DOCK | 8353 | 35 | CUFT | 35 | CUFT | 5/16/2006 | EXCIMER LASER MIXTURE (HCL IN HE) |
| LV00116582 | CA/906/153/DOCK | 8353 | 1 | CUFT | 7.4805195 | GAL | 1/2/2002 | FLUOROTRICHLOROMETHANE |
| LV00117772 | CA/906/153/DOCK | 8353 | 244 | CUFT | 244 | CUFT | 4/5/2004 | HELIUM |
| LV00116483 | CA/906/153/DOCK | 8353 | 244 | CUFT | 244 | CUFT | 10/5/2001 | HELIUM |
| LV00170227 | CA/906/153/DOCK | 8353 | 244 | CUFT | 244 | CUFT | 11/17/2006 | HELIUM |
| LV00170701 | CA/906/153/DOCK | 8353 | 244 | CUFT | 244 | CUFT | 8/20/2007 | HELIUM |
| LV00170292 | CA/906/153/DOCK | 8353 | 244 | CUFT | 244 | CUFT | 12/18/2006 | HELIUM |
| LV00117769 | CA/906/153/DOCK | 8353 | 244 | CUFT | 244 | CUFT | 4/5/2004 | HELIUM |
| LV00116607 | CA/906/153/DOCK | 8353 | 0.03 | CUFT | 0.03 | CUFT | 1/9/2002 | HYDRIODIC ACID |
| LV00038688 | CA/906/153/DOCK | 8353 | 3.53 | CUFT | 3.53 | CUFT | 6/2/1993 | HYDROGEN |
| LV00057780 | CA/906/153/DOCK | 8353 | 2 | CUFT | 2 | CUFT | 7/21/2000 | ISOBUTANE |
| LV00077481 | CA/906/153/DOCK | 8353 | 10 | GR | 0.022046 | LBS | 5/8/1997 | ISOPROPYL BROMIDE |
| LV00116207 | CA/906/153/DOCK | 8353 | 176 | CUFT | 176 | CUFT | 4/20/2001 | KRYPTON |
| LV00116208 | CA/906/153/DOCK | 8353 | 176 | CUFT | 176 | CUFT | 4/20/2001 | KRYPTON |
| LV00020260 | CA/906/153/DOCK | 8353 | 3.53 | CUFT | 3.53 | CUFT | 2/25/1993 | METHANE |
| LV00057346 | CA/906/153/DOCK | 8353 | 15 | CUFT | 15 | CUFT | 6/24/2005 | METHANE |
| LV00137987 | CA/906/153/DOCK | 8353 | 60 | CUFT | 60 | CUFT | 4/9/2003 | METHYL ACETYLENE |
| LV00135991 | CA/906/153/DOCK | 8353 | 4 | L | 1.0566884 | GAL | 1/16/2003 | METHYL ALCOHOL |

| Barcode | Location | Org. | Quantity | QUnit | Report Quantity | RUnit | Purchase Date | Name |
|---|---|---|---|---|---|---|---|---|
| LV00139422 | CA/906/153/DOCK | 8353 | 100 | GR | 0.22046 | LBS | 6/23/2003 | METHYL ALCOHOL-D |
| LV00165148 | CA/906/153/DOCK | 8353 | 250 | GR | 0.55115 | LBS | 2/22/2007 | METHYL BUTYRATE |
| LV00165150 | CA/906/153/DOCK | 8353 | 100 | GR | 0.22046 | LBS | 2/22/2007 | METHYL HEPTANOATE |
| LV00165151 | CA/906/153/DOCK | 8353 | 100 | GR | 0.22046 | LBS | 2/22/2007 | METHYL HEPTANOATE |
| LV00165153 | CA/906/153/DOCK | 8353 | 25 | GR | 0.055115 | LBS | 2/22/2007 | METHYL VALERATE |
| LV00165154 | CA/906/153/DOCK | 8353 | 25 | GR | 0.055115 | LBS | 2/22/2007 | METHYL VALERATE |
| LV00006633 | CA/906/153/DOCK | 8353 | 1 | GR | 0.0022046 | LBS | 7/2/1992 | METHYL-13C IODIDE |
| LV00010689 | CA/906/153/DOCK | 8353 | 1 | GR | 0.0022046 | LBS | 5/24/1993 | METHYL-2-PROPANOL-D10, 99 ATOM % I |
| LV00139109 | CA/906/153/DOCK | 8353 | 10 | ML | 0.002642 | GAL | 6/2/2003 | METHYL-D3 ALCOHOL-D |
| LV00139106 | CA/906/153/DOCK | 8353 | 10 | ML | 0.002642 | GAL | 6/2/2003 | METHYL-D3 ALCOHOL-D |
| LV00139115 | CA/906/153/DOCK | 8353 | 10 | ML | 0.002642 | GAL | 6/2/2003 | METHYL-D3 ALCOHOL-D |
| LV00139111 | CA/906/153/DOCK | 8353 | 10 | ML | 0.002642 | GAL | 6/2/2003 | METHYL-D3 ALCOHOL-D |
| LV00010698 | CA/906/153/DOCK | 8353 | 1 | GR | 0.0022046 | LBS | 5/24/1993 | METHYL-D3 ALCOHOL-D |
| LV00139112 | CA/906/153/DOCK | 8353 | 10 | ML | 0.002642 | GAL | 6/2/2003 | METHYL-D3 ALCOHOL-D |
| LV00165152 | CA/906/153/DOCK | 8353 | 1 | L | 0.2641721 | GAL | 2/22/2007 | METHYLCYCLOHEXANE |
| LV00010687 | CA/906/153/DOCK | 8353 | 5 | GR | 0.011023 | LBS | 5/24/1993 | N-BUTAN(OL-D) |
| LV00089232 | CA/906/153/DOCK | 8353 | 4 | CUFT | 4 | CUFT | 6/12/1995 | N-BUTANE |
| LV00165110 | CA/906/153/DOCK | 8353 | 100 | ML | 0.02642 | GAL | 2/21/2007 | N-BUTYL ALCOHOL |
| LV00117218 | CA/906/153/DOCK | 8353 | 176 | CUFT | 176 | CUFT | 5/5/2003 | NEON |
| LV00118888 | CA/906/153/DOCK | 8353 | 177 | CUFT | 177 | CUFT | 5/2/2006 | NEON |
| LV00057783 | CA/906/153/DOCK | 8353 | 0.38 | LBS | 0.38 | LBS | 7/26/2000 | NEOPENTANE |
| LV00117434 | CA/906/153/DOCK | 8353 | 1.2 | CUFT | 1.2 | CUFT | 8/20/2003 | NITRIC OXIDE |
| LV00117139 | CA/906/153/DOCK | 8353 | 254 | CUFT | 254 | CUFT | 3/3/2003 | NITROGEN, COMPRESSED GAS |
| LV00057400 | CA/906/153/DOCK | 8353 | 210 | CUFT | 210 | CUFT | 6/24/2005 | OXYGEN, 10% TO 25% IN HELIUM |
| LV00117466 | CA/906/153/DOCK | 8353 | 248 | CUFT | 248 | CUFT | 9/12/2003 | OXYGEN, COMPRESSED GAS |
| LV00118608 | CA/906/153/DOCK | 8353 | 244 | CUFT | 244 | CUFT | 8/22/2005 | OXYGEN, COMPRESSED GAS |
| LV00118561 | CA/906/153/DOCK | 8353 | 244 | CUFT | 244 | CUFT | 7/25/2005 | OXYGEN, COMPRESSED GAS |

| Barcode | Location | Org. | Quantity | QUnit | Report Quantity | RUnit | Purchase Date | Name |
|---|---|---|---|---|---|---|---|---|
| LV00113670 | CA/906/153/DOCK | 8353 | 5 | GR | 0.011023 | LBS | 8/27/2001 | PARAFORMALDEHYDE-D2 |
| LV00089081 | CA/906/153/DOCK | 8353 | 2 | CUFT | 2 | CUFT | 7/3/1995 | PROPANE |
| LV00161670 | CA/906/153/DOCK | 8353 | 1 | L | 0.0353147 | CUFT | 6/29/2006 | PROPANE |
| LV00116342 | CA/906/153/DOCK | 8353 | 70 | CUFT | 70 | CUFT | 4/16/2002 | PROPANE |
| LV00127509 | CA/906/153/DOCK | 8353 | 1 | L | 0.2641721 | GAL | 6/27/2002 | PROPENE-D6 |
| LV00117228 | CA/906/153/DOCK | 8353 | 3.8 | CUFT | 3.8 | CUFT | 5/20/2003 | PROPYLENE |
| LV00138761 | CA/906/153/DOCK | 8353 | 4 | L | 1.0566884 | GAL | 5/21/2003 | PROPYLENE CARBONATE |
| LV00070019 | CA/906/153/DOCK | 8353 | 3 | KG | 6.6 | LBS | 12/1/1997 | PROPYLENE CARBONATE |
| LV00046004 | CA/906/153/DOCK | 8353 | 33 | CUFT | 33 | CUFT | 1/18/1995 | SULFUR HEXAFLUORIDE (0.99%)/NITROC |
| LV00046006 | CA/906/153/DOCK | 8353 | 33 | CUFT | 33 | CUFT | 1/18/1995 | SULFUR HEXAFLUORIDE (10.5%)/NITROC |
| LV00010688 | CA/906/153/DOCK | 8353 | 5 | GR | 0.011023 | LBS | 5/24/1993 | TERT-BUTYL ALCOHOL |
| LV00122400 | CA/906/153/DOCK | 8353 | 1 | GAL | 1 | GAL | 6/20/2000 | TKO-77 |
| LV00127562 | CA/906/153/DOCK | 8353 | 1 | L | 0.2641721 | GAL | 6/28/2002 | TOLUENE |
| LV00010694 | CA/906/153/DOCK | 8353 | 1 | GR | 0.0022046 | LBS | 5/24/1993 | WATER-18O |
| LV00010695 | CA/906/153/DOCK | 8353 | 1 | GR | 0.0022046 | LBS | 5/24/1993 | WATER-18O |
| LV00010693 | CA/906/153/DOCK | 8353 | 1 | GR | 0.0022046 | LBS | 5/24/1993 | WATER-18O |
| LV00118268 | CA/906/153/DOCK | 8353 | 2000 | L | 70.6294 | CUFT | 1/5/2005 | XENON (0.001%)/OXYGEN (0.0015%)/FLUC (0.17%)/HELIUM (1%)/ARGON (6%)/NEON |
| LV00118400 | CA/906/153/DOCK | 8353 | 2000 | L | 70.6294 | CUFT | 3/11/2005 | XENON (0.001%)/OXYGEN (0.0015%)/FLUC (0.17%)/HELIUM (1%)/ARGON (6%)/NEON |
| LV00164418 | CA/906/155/DOCK | 8324 | 4 | L | 1.0566884 | GAL | 1/18/2007 | ACETONE |
| LV00170192 | CA/906/155/DOCK | 8324 | 3.85 | CUFT | 3.85 | CUFT | 11/3/2006 | ARGON (0.1%)/BENZENE (0.1%)/HALOCAI (0.1%)/ISOPROPANOL (0.1%)/STYRENE (0. (BAL) |
| LV00165996 | CA/906/155/DOCK | 8324 | 4 | L | 1.0566884 | GAL | 4/19/2007 | DICHLOROMETHANE |
| LV00120282 | CA/906/155/DOCK | 8324 | 15 | OZ | 0.9375 | LBS | 8/2/2001 | ELIMINATOR HORNET AND WASP SPRAY |
| LV00164026 | CA/906/155/DOCK | 8324 | 4 | L | 1.0566884 | GAL | 12/1/2006 | ETHYL ACETATE |
| LV00170484 | CA/906/155/DOCK | 8324 | 31 | CUFT | 31 | CUFT | 4/27/2007 | HELIUM |

| Barcode | Location | Org. | Quantity | QUnit | Report Quantity | RUnit | Purchase Date | Name |
|---|---|---|---|---|---|---|---|---|
| LV00170826 | CA/906/155/DOCK | 8324 | 244 | CUFT | 244 | CUFT | 10/26/2007 | HELIUM |
| LV00170529 | CA/906/155/DOCK | 8324 | 244 | CUFT | 244 | CUFT | 5/11/2007 | HELIUM |
| LV00116182 | CA/906/155/DOCK | 8324 | 9.8 | CUFT | 9.8 | CUFT | 3/26/2001 | HYDROGEN |
| LV00116431 | CA/906/155/DOCK | 8324 | 212 | CUFT | 212 | CUFT | 8/29/2001 | HYDROGEN |
| LV00118013 | CA/906/155/DOCK | 8324 | 212 | CUFT | 212 | CUFT | 8/13/2004 | HYDROGEN |
| LV00164239 | CA/906/155/DOCK | 8324 | 4 | L | 1.0566884 | GAL | 12/20/2006 | METHYL ALCOHOL |
| LV00170271 | CA/906/155/DOCK | 8324 | 28 | CUFT | 28 | CUFT | 12/8/2006 | N-BUTYL MERCAPTAN (10 PPM)/S-BUTYL (10 PPM)/T-BUTYL MERCAPTAN (10 PPM) MERCAPTAN (10 PPM)/CARBON DISULFI PPM)/NITROGEN (BAL) |
| LV00164025 | CA/906/155/DOCK | 8324 | 4 | L | 1.0566884 | GAL | 12/1/2006 | N-HEXANE |
| LV00170383 | CA/906/155/DOCK | 8324 | 230 | CUFT | 230 | CUFT | 2/26/2007 | NITROGEN, COMPRESSED GAS |
| LV00170384 | CA/906/155/DOCK | 8324 | 230 | CUFT | 230 | CUFT | 2/26/2007 | NITROGEN, COMPRESSED GAS |
| LV00164432 | CA/906/155/DOCK | 8324 | 4 | L | 1.0566884 | GAL | 1/19/2007 | REAGENT ALCOHOL |
| LV00165995 | CA/906/155/DOCK | 8324 | 1 | KG | 2.2 | LBS | 4/18/2007 | SILICA GEL |
| LV00120267 | CA/906/155/DOCK | 8324 | 8 | FLOZ | 0.0625 | GAL | 4/17/2000 | SNOOP |
| LV00122284 | CA/906/161/DOCK | 8351 | 467 | GR | 1.0295482 | LBS | 6/20/2000 | 3M(TM) SUPER 77(TM) SPRAY ADHESIVE |
| LV00098028 | CA/906/161/DOCK | 8351 | 1 | L | 0.2641721 | GAL | 10/26/1998 | ACETONE |
| LV00118323 | CA/906/161/DOCK | 8351 | 330 | CUFT | 330 | CUFT | 2/14/2005 | ACETYLENE |
| LV00060775 | CA/906/161/DOCK | 8351 | 225 | CUFT | 225 | CUFT | 10/28/1994 | ACETYLENE |
| LV00056828 | CA/906/161/DOCK | 8351 | 233 | CUFT | 233 | CUFT | 2/23/1998 | AIR, COMPRESSED |
| LV00127505 | CA/906/161/DOCK | 8351 | 340 | GR | 0.749564 | LBS | 6/27/2002 | APPLIANCE EPOXY SPRAY ENAMEL |
| LV00057864 | CA/906/161/DOCK | 8351 | 1680 | CUFT | 1680 | CUFT | 10/2/2000 | ARGON, COMPRESSED |
| LV00057372 | CA/906/161/DOCK | 8351 | 1680 | CUFT | 1680 | CUFT | 6/4/2007 | ARGON, COMPRESSED |

| Barcode | Location | Org. | Quantity | QUnit | Report Quantity | RUnit | Purchase Date | Name |
|---|---|---|---|---|---|---|---|---|
| LV00173573 | CA/906/161/DOCK | 8351 | 913 | ML | 0.2412146 | GAL | 6/15/2006 | BRU-TONE ACRYLIC SATIN ENAMEL-WH |
| LV00057967 | CA/906/161/DOCK | 8351 | 524 | CUFT | 524 | CUFT | 12/11/2000 | CARBON DIOXIDE, GAS |
| LV00170744 | CA/906/161/DOCK | 8351 | 3145 | CUFT | 3145 | CUFT | 9/4/2007 | CARBON DIOXIDE, GAS |
| LV00170743 | CA/906/161/DOCK | 8351 | 3415 | CUFT | 3415 | CUFT | 9/4/2007 | CARBON DIOXIDE, GAS |
| LV00055693 | CA/906/161/DOCK | 8351 | 438 | CUFT | 438 | CUFT | 11/15/1996 | CARBON DIOXIDE, GAS |
| LV00116572 | CA/906/161/DOCK | 8351 | 2.1 | CUFT | 2.1 | CUFT | 1/2/2002 | CARBON DIOXIDE, GAS |
| LV00118883 | CA/906/161/DOCK | 8351 | 175 | CUFT | 175 | CUFT | 4/25/2006 | CARBON MONOXIDE |
| LV00118878 | CA/906/161/DOCK | 8351 | 175 | CUFT | 175 | CUFT | 4/25/2006 | CARBON MONOXIDE |
| LV00118879 | CA/906/161/DOCK | 8351 | 175 | CUFT | 175 | CUFT | 4/25/2006 | CARBON MONOXIDE |
| LV00118881 | CA/906/161/DOCK | 8351 | 175 | CUFT | 175 | CUFT | 4/25/2006 | CARBON MONOXIDE |
| LV00170440 | CA/906/161/DOCK | 8351 | 117 | CUFT | 117 | CUFT | 3/28/2007 | CARBON MONOXIDE |
| LV00170573 | CA/906/161/DOCK | 8351 | 117 | CUFT | 117 | CUFT | 6/14/2007 | CARBON MONOXIDE |
| LV00170706 | CA/906/161/DOCK | 8351 | 117 | CUFT | 117 | CUFT | 8/22/2007 | CARBON MONOXIDE |
| LV00170705 | CA/906/161/DOCK | 8351 | 117 | CUFT | 117 | CUFT | 8/22/2007 | CARBON MONOXIDE |
| LV00170727 | CA/906/161/DOCK | 8351 | 117 | CUFT | 117 | CUFT | 8/28/2007 | CARBON MONOXIDE |
| LV00170512 | CA/906/161/DOCK | 8351 | 117 | CUFT | 117 | CUFT | 5/4/2007 | CARBON MONOXIDE |
| LV00170578 | CA/906/161/DOCK | 8351 | 117 | CUFT | 117 | CUFT | 6/14/2007 | CARBON MONOXIDE |
| LV00170577 | CA/906/161/DOCK | 8351 | 117 | CUFT | 117 | CUFT | 6/14/2007 | CARBON MONOXIDE |

| Barcode | Location | Org. | Quantity | QUnit | Report Quantity | RUnit | Purchase Date | Name |
|---|---|---|---|---|---|---|---|---|
| LV00170576 | CA/906/161/DOCK | 8351 | 117 | CUFT | 117 | CUFT | 6/14/2007 | CARBON MONOXIDE |
| LV00170575 | CA/906/161/DOCK | 8351 | 117 | CUFT | 117 | CUFT | 6/14/2007 | CARBON MONOXIDE |
| LV00170574 | CA/906/161/DOCK | 8351 | 117 | CUFT | 117 | CUFT | 6/14/2007 | CARBON MONOXIDE |
| LV00170709 | CA/906/161/DOCK | 8351 | 117 | CUFT | 117 | CUFT | 8/22/2007 | CARBON MONOXIDE |
| LV00170708 | CA/906/161/DOCK | 8351 | 117 | CUFT | 117 | CUFT | 8/22/2007 | CARBON MONOXIDE |
| LV00170707 | CA/906/161/DOCK | 8351 | 117 | CUFT | 117 | CUFT | 8/22/2007 | CARBON MONOXIDE |
| LV00170442 | CA/906/161/DOCK | 8351 | 117 | CUFT | 117 | CUFT | 3/28/2007 | CARBON MONOXIDE |
| LV00170439 | CA/906/161/DOCK | 8351 | 117 | CUFT | 117 | CUFT | 3/28/2007 | CARBON MONOXIDE |
| LV00118880 | CA/906/161/DOCK | 8351 | 175 | CUFT | 175 | CUFT | 4/25/2006 | CARBON MONOXIDE |
| LV00047706 | CA/906/161/DOCK | 8351 | 250 | CUFT | 250 | CUFT | 3/23/1995 | CARBON MONOXIDE (1%)/HELIUM (BAL) |
| LV00055264 | CA/906/161/DOCK | 8351 | 250 | CUFT | 250 | CUFT | 4/18/1996 | CARBON MONOXIDE (1%)/NITROGEN (B/ |
| LV00057876 | CA/906/161/DOCK | 8351 | 11 | LBS | 11 | LBS | 10/16/2000 | CARBON MONOXIDE (1%)/NITROGEN (B/ |
| LV00057671 | CA/906/161/DOCK | 8351 | 60 | LBS | 60 | LBS | 4/28/2000 | CARBON MONOXIDE (10%)/NITROGEN (E |
| LV00127037 | CA/906/161/DOCK | 8351 | 290 | GR | 0.639334 | LBS | 5/22/2002 | CATALOG 6065 SPRAY-MOUNT(TM) ART |
| LV00118682 | CA/906/161/DOCK | 8351 | 400 | CUFT | 400 | CUFT | 11/18/2005 | ETHANE |
| LV00118683 | CA/906/161/DOCK | 8351 | 400 | CUFT | 400 | CUFT | 11/18/2005 | ETHANE |
| LV00170253 | CA/906/161/DOCK | 8351 | 381 | CUFT | 381 | CUFT | 12/6/2006 | ETHYLENE |
| LV00170254 | CA/906/161/DOCK | 8351 | 381 | CUFT | 381 | CUFT | 12/6/2006 | ETHYLENE |
| LV00170256 | CA/906/161/DOCK | 8351 | 381 | CUFT | 381 | CUFT | 12/6/2006 | ETHYLENE |

| Barcode | Location | Org. | Quantity | QUnit | Report Quantity | RUnit | Purchase Date | Name |
|---|---|---|---|---|---|---|---|---|
| LV00170259 | CA/906/161/DOCK | 8351 | 381 | CUFT | 381 | CUFT | 12/6/2006 | ETHYLENE |
| LV00170260 | CA/906/161/DOCK | 8351 | 381 | CUFT | 381 | CUFT | 12/6/2006 | ETHYLENE |
| LV00170258 | CA/906/161/DOCK | 8351 | 381 | CUFT | 381 | CUFT | 12/6/2006 | ETHYLENE |
| LV00170255 | CA/906/161/DOCK | 8351 | 381 | CUFT | 381 | CUFT | 12/6/2006 | ETHYLENE |
| LV00154610 | CA/906/161/DOCK | 8351 | 1 | L | 0.2641721 | GAL | 3/21/2005 | ETHYLENE GLYCOL |
| LV00154614 | CA/906/161/DOCK | 8351 | 1 | L | 0.2641721 | GAL | 3/21/2005 | ETHYLENE GLYCOL |
| LV00154613 | CA/906/161/DOCK | 8351 | 1 | L | 0.2641721 | GAL | 3/21/2005 | ETHYLENE GLYCOL |
| LV00122246 | CA/906/161/DOCK | 8351 | 355 | GR | 0.782633 | LBS | 6/20/2000 | GLOSS WHITE QUICK DRY SPRAY ENAM |
| LV00102038 | CA/906/161/DOCK | 8351 | 355 | GR | 0.782633 | LBS | 6/4/2007 | GLOSS WHITE QUICK DRY SPRAY ENAM |
| LV00117916 | CA/906/161/DOCK | 8351 | 244 | CUFT | 244 | CUFT | 6/28/2004 | HELIUM |
| LV00118368 | CA/906/161/DOCK | 8351 | 244 | CUFT | 244 | CUFT | 2/28/2005 | HELIUM |
| LV00170340 | CA/906/161/DOCK | 8351 | 244 | CUFT | 244 | CUFT | 1/22/2007 | HELIUM |
| LV00170605 | CA/906/161/DOCK | 8351 | 1146 | CUFT | 1146 | CUFT | 6/29/2007 | HELIUM |
| LV00170341 | CA/906/161/DOCK | 8351 | 244 | CUFT | 244 | CUFT | 1/22/2007 | HELIUM |
| LV00170339 | CA/906/161/DOCK | 8351 | 244 | CUFT | 244 | CUFT | 1/22/2007 | HELIUM |
| LV00151120 | CA/906/161/DOCK | 8351 | 340 | GR | 0.749564 | LBS | 7/10/2003 | HIGH HEAT SPRAY PAINT A114 |
| LV00151122 | CA/906/161/DOCK | 8351 | 340 | GR | 0.749564 | LBS | 7/10/2003 | HIGH HEAT SPRAY PAINT A114 |
| LV00170200 | CA/906/161/DOCK | 8351 | 1146 | CUFT | 1146 | CUFT | 11/3/2006 | HYDROGEN |
| LV00170462 | CA/906/161/DOCK | 8351 | 1146 | CUFT | 1146 | CUFT | 4/11/2007 | HYDROGEN |
| LV00170453 | CA/906/161/DOCK | 8351 | 1146 | CUFT | 1146 | CUFT | 4/4/2007 | HYDROGEN |
| LV00170210 | CA/906/161/DOCK | 8351 | 1146 | CUFT | 1146 | CUFT | 11/8/2006 | HYDROGEN |
| LV00152908 | CA/906/161/DOCK | 8351 | 946 | ML | 0.2499332 | GAL | 6/24/2004 | HYDROGEN PEROXIDE, 3% |

| Barcode | Location | Org. | Quantity | QUnit | Report Quantity | RUnit | Purchase Date | Name |
|---|---|---|---|---|---|---|---|---|
| LV00152907 | CA/906/161/DOCK | 8351 | 946 | ML | 0.2499332 | GAL | 6/24/2004 | HYDROGEN PEROXIDE, 3% |
| LV00128992 | CA/906/161/DOCK | 8351 | 1 | GAL | 1 | GAL | 6/24/2003 | KEROSENE |
| LV00127504 | CA/906/161/DOCK | 8351 | 340 | GR | 0.749564 | LBS | 6/27/2002 | KRYLON(R) INTERIOR/EXTERIOR PAINT, |
| LV00116622 | CA/906/161/DOCK | 8351 | 1761 | CUFT | 1761 | CUFT | 1/16/2002 | METHANE |
| LV00170373 | CA/906/161/DOCK | 8351 | 1716 | CUFT | 1716 | CUFT | 2/15/2007 | METHANE |
| LV00170281 | CA/906/161/DOCK | 8351 | 1716 | CUFT | 1716 | CUFT | 12/15/2006 | METHANE |
| LV00170374 | CA/906/161/DOCK | 8351 | 1716 | CUFT | 1716 | CUFT | 2/15/2007 | METHANE |
| LV00164036 | CA/906/161/DOCK | 8351 | 4 | L | 1.0566884 | GAL | 12/1/2006 | METHANOL REAGENT ACS |
| LV00164038 | CA/906/161/DOCK | 8351 | 4 | L | 1.0566884 | GAL | 12/1/2006 | METHANOL REAGENT ACS |
| LV00057886 | CA/906/161/DOCK | 8351 | 89 | CUFT | 89 | CUFT | 10/9/2000 | NITRIC OXIDE (200 PPM)/NITROGEN (BAI |
| LV00056356 | CA/906/161/DOCK | 8351 | 256 | CUFT | 256 | CUFT | 2/3/1998 | NITROGEN, COMPRESSED GAS |
| LV00118616 | CA/906/161/DOCK | 8351 | 32 | CUFT | 32 | CUFT | 9/2/2005 | NITROGEN, COMPRESSED GAS |
| LV00118383 | CA/906/161/DOCK | 8351 | 247 | CUFT | 247 | CUFT | 3/7/2005 | OXYGEN, COMPRESSED GAS |
| LV00170715 | CA/906/161/DOCK | 8351 | 1464 | CUFT | 1464 | CUFT | 8/24/2007 | OXYGEN, COMPRESSED GAS |
| LV00170455 | CA/906/161/DOCK | 8351 | 1464 | CUFT | 1464 | CUFT | 4/4/2007 | OXYGEN, COMPRESSED GAS |
| LV00011509 | CA/906/161/DOCK | 8351 | 14 | OZ | 0.875 | LBS | 12/18/1992 | PENETRATING OIL AEROSOL |
| LV00144373 | CA/906/161/DOCK | 8351 | 1.02 | LBS | 1.02 | LBS | 4/16/2004 | PROPANE |
| LV00005546 | CA/906/161/DOCK | 8351 | 14.1 | CUFT | 14.1 | CUFT | 1/11/1993 | PROPANE |
| LV00126073 | CA/906/161/DOCK | 8351 | 473 | ML | 0.1249666 | GAL | 7/12/2001 | VINEGAR |
| LV00121853 | CA/906/165/DOCK | 8362 | 500 | ML | 0.1321 | GAL | 3/27/2000 | 1,1,3,3-TETRAETHOXYPROPANE |
| LV00121855 | CA/906/165/DOCK | 8362 | 500 | ML | 0.1321 | GAL | 3/27/2000 | 1,1,3,3-TETRAETHOXYPROPANE |
| LV00109983 | CA/906/165/DOCK | 8362 | 2.9 | KG | 6.38 | LBS | 7/9/2001 | 2,2,4,4,6,8,8-HEPTAMETHYLNONANE |
| LV00053185 | CA/906/165/DOCK | 8362 | 1 | GAL | 1 | GAL | 5/25/1993 | 2,2,4,4,6,8,8-HEPTAMETHYLNONANE |
| LV00020137 | CA/906/165/DOCK | 8362 | 100 | GR | 0.22046 | LBS | 2/23/1993 | 2,2,4,4,6,8,8-HEPTAMETHYLNONANE |
| LV00160849 | CA/906/165/DOCK | 8362 | 1 | L | 0.2641721 | GAL | 5/11/2006 | 2,2,4-TRIMETHYLPENTANE |

| Barcode | Location | Org. | Quantity | QUnit | Report Quantity | RUnit | Purchase Date | Name |
|---|---|---|---|---|---|---|---|---|
| LV00160852 | CA/906/165/DOCK | 8362 | 1 | L | 0.2641721 | GAL | 5/11/2006 | 2,2,4-TRIMETHYLPENTANE |
| LV00166305 | CA/906/165/DOCK | 8362 | 4 | L | 1.0566884 | GAL | 5/9/2007 | 2,2,4-TRIMETHYLPENTANE |
| LV00166306 | CA/906/165/DOCK | 8362 | 4 | L | 1.0566884 | GAL | 5/9/2007 | 2,2,4-TRIMETHYLPENTANE |
| LV00011658 | CA/906/165/DOCK | 8362 | 500 | ML | 0.1321 | GAL | 12/16/1992 | 2-PROPANOL |
| | | | | | | | | 5920 COPPER HIGH PERFORMANCE RTV |
| LV00138487 | CA/906/165/DOCK | 8362 | 85 | GR | 0.187391 | LBS | 5/7/2003 | GASKET MAKER |
| LV00051917 | CA/906/165/DOCK | 8362 | 500 | ML | 0.1321 | GAL | 6/16/2005 | ACETONE |
| LV00051914 | CA/906/165/DOCK | 8362 | 500 | ML | 0.1321 | GAL | 6/16/2005 | ACETONE |
| LV00152873 | CA/906/165/DOCK | 8362 | 1 | GAL | 1 | GAL | 6/24/2004 | ACRYLIC LACQUER THINNER |
| LV00101964 | CA/906/165/DOCK | 8362 | 1 | LBS | 1 | LBS | 6/4/2007 | AEROSHELL(R) GREASE 7 |
| LV00170188 | CA/906/165/DOCK | 8362 | 225 | CUFT | 225 | CUFT | 11/3/2006 | AIR |
| LV00129220 | CA/906/165/DOCK | 8362 | 444 | ML | 0.1173048 | GAL | 7/7/2003 | AIR TOOL OIL |
| LV00117485 | CA/906/165/DOCK | 8362 | 280 | CUFT | 280 | CUFT | 9/26/2003 | AIR, COMPRESSED |
| LV00118315 | CA/906/165/DOCK | 8362 | 225 | CUFT | 225 | CUFT | 2/7/2005 | AIR, COMPRESSED |
| LV00117265 | CA/906/165/DOCK | 8362 | 30 | CUFT | 30 | CUFT | 5/30/2003 | AIR, COMPRESSED |
| LV00118314 | CA/906/165/DOCK | 8362 | 225 | CUFT | 225 | CUFT | 2/7/2005 | AIR, COMPRESSED |
| LV00094266 | CA/906/165/DOCK | 8362 | 1 | QT | 0.25 | GAL | 12/16/1994 | AMTEX-CCR |
| LV00058465 | CA/906/165/DOCK | 8362 | 16 | OZ | 1 | LBS | 8/1/1994 | ANTI-SEIZE |
| LV00122562 | CA/906/165/DOCK | 8362 | 1 | GAL | 1 | GAL | 6/22/2000 | CHEVRON DELO 400 |
| LV00122561 | CA/906/165/DOCK | 8362 | 1 | GAL | 1 | GAL | 6/22/2000 | CHEVRON DELO 400 |
| LV00174761 | CA/906/165/DOCK | 8362 | 1 | GAL | 1 | GAL | 6/4/2007 | CHEVRON DELO 400 |
| LV00174762 | CA/906/165/DOCK | 8362 | 1 | GAL | 1 | GAL | 6/4/2007 | CHEVRON DELO 400 |
| LV00174760 | CA/906/165/DOCK | 8362 | 1 | GAL | 1 | GAL | 6/4/2007 | CHEVRON DELO 400 |
| LV00174759 | CA/906/165/DOCK | 8362 | 1 | GAL | 1 | GAL | 6/4/2007 | CHEVRON DELO 400 |
| LV00174763 | CA/906/165/DOCK | 8362 | 1 | GAL | 1 | GAL | 6/4/2007 | CHEVRON DELO 400 |
| LV00174764 | CA/906/165/DOCK | 8362 | 1 | GAL | 1 | GAL | 6/4/2007 | CHEVRON DELO 400 |
| LV00173452 | CA/906/165/DOCK | 8362 | 1 | GAL | 1 | GAL | 6/12/2006 | CITGO A/W-D HYDRAULIC OIL 46 |
| LV00082646 | CA/906/165/DOCK | 8362 | 4 | OZ | 0.25 | LBS | 7/2/1996 | CLOVER SILICON CARBIDE GREASE MIX |
| LV00082644 | CA/906/165/DOCK | 8362 | 4 | OZ | 0.25 | LBS | 7/2/1996 | CLOVER SILICON CARBIDE GREASE MIX |
| LV00082651 | CA/906/165/DOCK | 8362 | 4 | OZ | 0.25 | LBS | 7/2/1996 | CLOVER SILICON CARBIDE GREASE MIX |
| LV00082648 | CA/906/165/DOCK | 8362 | 4 | OZ | 0.25 | LBS | 7/2/1996 | CLOVER SILICON CARBIDE GREASE MIX |

| Barcode | Location | Org. | Quantity | QUnit | Report Quantity | RUnit | Purchase Date | Name |
|---|---|---|---|---|---|---|---|---|
| LV00082652 | CA/906/165/DOCK | 8362 | 4 | OZ | 0.25 | LBS | 7/2/1996 | CLOVER SILICON CARBIDE GREASE MIX |
| LV00082653 | CA/906/165/DOCK | 8362 | 4 | OZ | 0.25 | LBS | 7/2/1996 | CLOVER SILICON CARBIDE GREASE MIX |
| LV00082643 | CA/906/165/DOCK | 8362 | 4 | OZ | 0.25 | LBS | 7/2/1996 | CLOVER SILICON CARBIDE GREASE MIX |
| LV00082650 | CA/906/165/DOCK | 8362 | 4 | OZ | 0.25 | LBS | 7/2/1996 | CLOVER SILICON CARBIDE GREASE MIX |
| LV00082654 | CA/906/165/DOCK | 8362 | 4 | OZ | 0.25 | LBS | 7/2/1996 | CLOVER SILICON CARBIDE GREASE MIX |
| LV00082645 | CA/906/165/DOCK | 8362 | 4 | OZ | 0.25 | LBS | 7/2/1996 | CLOVER SILICON CARBIDE GREASE MIX |
| LV00082649 | CA/906/165/DOCK | 8362 | 4 | OZ | 0.25 | LBS | 7/2/1996 | CLOVER SILICON CARBIDE GREASE MIX |
| LV00082647 | CA/906/165/DOCK | 8362 | 4 | OZ | 0.25 | LBS | 7/2/1996 | CLOVER SILICON CARBIDE GREASE MIX |
| LV00003716 | CA/906/165/DOCK | 8362 | 4 | OZ | 0.25 | LBS | 1/13/1993 | COPPER COAT GASKET COMPOUND |
| LV00122479 | CA/906/165/DOCK | 8362 | 2.8 | FLOZ | 0.021875 | GAL | 6/26/2000 | DAP AQUARIUM SILICONE SEALANT CL |
| LV00122450 | CA/906/165/DOCK | 8362 | 1 | QT | 0.25 | GAL | 6/21/2000 | DENATURED ALCOHOL |
| LV00144704 | CA/906/165/DOCK | 8362 | 5 | GAL | 5 | GAL | 5/5/2004 | DIESEL 2007 CERTIFICATION FUEL |
| LV00144705 | CA/906/165/DOCK | 8362 | 5 | GAL | 5 | GAL | 5/5/2004 | DIESEL 2007 CERTIFICATION FUEL |
| LV00087034 | CA/906/165/DOCK | 8362 | 2.5 | GAL | 2.5 | GAL | 11/13/1996 | DIESEL FUEL NO. 2 |
| LV00087033 | CA/906/165/DOCK | 8362 | 2.5 | GAL | 2.5 | GAL | 11/13/1996 | DIESEL FUEL NO. 2 |
| LV00126007 | CA/906/165/DOCK | 8362 | 90 | ML | 0.023778 | GAL | 7/11/2001 | DOW CORNING 3145 RTV MIL-A-46146 AI SEALANT - GRAY |
| LV00152881 | CA/906/165/DOCK | 8362 | 150 | GR | 0.33069 | LBS | 6/24/2004 | DOW CORNING(R) 4 ELECTRICAL INSUL/ COMPOUND |
| LV00102247 | CA/906/165/DOCK | 8362 | 90 | ML | 0.023778 | GAL | 6/18/1999 | DOW CORNING(R) 736 HEAT RESISTANT/ |
| LV00091465 | CA/906/165/DOCK | 8362 | 150 | GR | 0.33069 | LBS | 9/7/1995 | DOW CORNING(R) HIGH VACUUM GREA |
| LV00040757 | CA/906/165/DOCK | 8362 | 150 | GR | 0.33069 | LBS | 6/16/2005 | DOW CORNING(R) HIGH VACUUM GREA |
| LV00040904 | CA/906/165/DOCK | 8362 | 85 | GR | 0.187391 | LBS | 7/2/1996 | FORM-A-GASKET(R) #1 SEALANT |
| LV00174767 | CA/906/165/DOCK | 8362 | 50 | ML | 0.01321 | GAL | 6/4/2007 | GASKET ELIMINATOR 518 SEALANT |
| LV00122471 | CA/906/165/DOCK | 8362 | 1 | OZ | 0.0625 | LBS | 6/26/2000 | HEAVY DUTY ANTISEIZE (C-102) |
| LV00114273 | CA/906/165/DOCK | 8362 | 2 | L | 0.5283442 | GAL | 10/18/2001 | HEPTANE |
| LV00166369 | CA/906/165/DOCK | 8362 | 4 | L | 1.0566884 | GAL | 5/15/2007 | HEPTANE |
| LV00166371 | CA/906/165/DOCK | 8362 | 4 | L | 1.0566884 | GAL | 5/15/2007 | HEPTANE |
| LV00166372 | CA/906/165/DOCK | 8362 | 4 | L | 1.0566884 | GAL | 5/15/2007 | HEPTANE |
| LV00166370 | CA/906/165/DOCK | 8362 | 4 | L | 1.0566884 | GAL | 5/15/2007 | HEPTANE |
| LV00165399 | CA/906/165/DOCK | 8362 | 4 | L | 1.0566884 | GAL | 3/8/2007 | HEPTANE |
| LV00153767 | CA/906/165/DOCK | 8362 | 4 | L | 1.0566884 | GAL | 2/7/2005 | HEPTANE |
| LV00158960 | CA/906/165/DOCK | 8362 | 4 | L | 1.0566884 | GAL | 1/6/2006 | HEPTANE |
| LV00165397 | CA/906/165/DOCK | 8362 | 4 | L | 1.0566884 | GAL | 3/8/2007 | HEPTANE |
| LV00114275 | CA/906/165/DOCK | 8362 | 2 | L | 0.5283442 | GAL | 10/18/2001 | HEPTANE |
| LV00109982 | CA/906/165/DOCK | 8362 | 2.9 | KG | 6.38 | LBS | 7/9/2001 | HEXADECANE |

| Barcode | Location | Org. | Quantity | QUnit | Report Quantity | RUnit | Purchase Date | Name |
|---|---|---|---|---|---|---|---|---|
| LV00067000 | CA/906/165/DOCK | 8362 | 1 | QT | 0.25 | GAL | 5/9/1996 | HIGHLY REFINED MINERAL OILS |
| LV00119432 | CA/906/165/DOCK | 8362 | 236 | ML | 0.0623512 | GAL | 10/11/1999 | LIBERTY POLISH |
| LV00119441 | CA/906/165/DOCK | 8362 | 236 | ML | 0.0623512 | GAL | 10/11/1999 | LIBERTY POLISH |
| LV00119439 | CA/906/165/DOCK | 8362 | 236 | ML | 0.0623512 | GAL | 10/11/1999 | LIBERTY POLISH |
| LV00119425 | CA/906/165/DOCK | 8362 | 236 | ML | 0.0623512 | GAL | 10/11/1999 | LIBERTY POLISH |
| LV00119440 | CA/906/165/DOCK | 8362 | 236 | ML | 0.0623512 | GAL | 10/11/1999 | LIBERTY POLISH |
| LV00119446 | CA/906/165/DOCK | 8362 | 236 | ML | 0.0623512 | GAL | 10/11/1999 | LIBERTY POLISH |
| LV00119435 | CA/906/165/DOCK | 8362 | 236 | ML | 0.0623512 | GAL | 10/11/1999 | LIBERTY POLISH |
| | | | | | | | | LOCTITE 587 BLUE HIGH PERFORMANCE |
| LV00174768 | CA/906/165/DOCK | 8362 | 85 | GR | 0.187391 | LBS | 6/4/2007 | GASKET MAKER |
| LV00174765 | CA/906/165/DOCK | 8362 | 128 | GR | 0.2821888 | LBS | 6/4/2007 | LOCTITE LOCQUIC PRIMER N 7649 |
| LV00100912 | CA/906/165/DOCK | 8362 | 5 | GAL | 5 | GAL | 4/13/2000 | LOW SULFUR DIESEL 2 |
| LV00122477 | CA/906/165/DOCK | 8362 | 10 | GR | 0.022046 | LBS | 6/21/2000 | METAL POLISH |
| LV00126024 | CA/906/165/DOCK | 8362 | 50 | GR | 0.11023 | LBS | 7/11/2001 | METAL POLISH |
| LV00122478 | CA/906/165/DOCK | 8362 | 50 | GR | 0.11023 | LBS | 6/21/2000 | METAL POLISH |
| LV00057272 | CA/906/165/DOCK | 8362 | 715 | CUFT | 715 | CUFT | 10/27/1999 | METHANE |
| LV00057005 | CA/906/165/DOCK | 8362 | 250 | CUFT | 250 | CUFT | 4/21/1999 | METHANE |
| LV00067210 | CA/906/165/DOCK | 8362 | 500 | ML | 0.1321 | GAL | 4/6/1994 | METHYL ALCOHOL |
| LV00003634 | CA/906/165/DOCK | 8362 | 2.5 | L | 0.66043025 | GAL | 7/16/1993 | MOBIL DELVAC 1230 |
| LV00131194 | CA/906/165/DOCK | 8362 | 145 | GR | 0.319667 | LBS | 3/4/2002 | N-BUTANE |
| LV00131195 | CA/906/165/DOCK | 8362 | 145 | GR | 0.319667 | LBS | 3/4/2002 | N-BUTANE |
| LV00131196 | CA/906/165/DOCK | 8362 | 145 | GR | 0.319667 | LBS | 3/4/2002 | N-BUTANE |
| LV00047832 | CA/906/165/DOCK | 8362 | 454 | GR | 1.0008884 | LBS | 3/31/1995 | NEVER-SEEZ PURE NICKEL SPECIAL |
| LV00122584 | CA/906/165/DOCK | 8362 | 4 | FLOZ | 0.03125 | GAL | 6/26/2000 | NEW RAPID TAP |
| LV00150070 | CA/906/165/DOCK | 8362 | 200 | CUFT | 200 | CUFT | 6/16/2005 | NITRIC OXIDE (300 PPM)/NITROGEN (BAI |
| LV00057820 | CA/906/165/DOCK | 8362 | 247 | CUFT | 247 | CUFT | 8/31/2000 | NITROGEN, COMPRESSED GAS |
| LV00057821 | CA/906/165/DOCK | 8362 | 247 | CUFT | 247 | CUFT | 8/31/2000 | NITROGEN, COMPRESSED GAS |
| LV00127466 | CA/906/165/DOCK | 8362 | 15 | OZ | 0.9375 | LBS | 6/25/2002 | ORTHO HORNET & WASP KILLER |
| LV00057267 | CA/906/165/DOCK | 8362 | 251 | CUFT | 251 | CUFT | 9/29/1999 | OXYGEN, COMPRESSED GAS |
| LV00122447 | CA/906/165/DOCK | 8362 | 16 | FLOZ | 0.125 | GAL | 6/21/2000 | PREMIUM PAINT & EPOXY REMOVER |

| Barcode | Location | Org. | Quantity | QUnit | Report Quantity | RUnit | Purchase Date | Name |
|---|---|---|---|---|---|---|---|---|
| LV00129227 | CA/906/165/DOCK | 8362 | 1 | GAL | 1 | GAL | 7/7/2003 | PRESTONE ANTIFREEZE/COOLANT |
| LV00129223 | CA/906/165/DOCK | 8362 | 1 | L | 0.2641721 | GAL | 7/7/2003 | PRESTONE SUPER RADIATOR CLEANER |
| LV00174770 | CA/906/165/DOCK | 8362 | 3 | GR | 0.0066138 | LBS | 6/4/2007 | PRISM(R) 454 SURF-INSENSIT GEL INST A |
| LV00057271 | CA/906/165/DOCK | 8362 | 1033 | CUFT | 1033 | CUFT | 10/27/1999 | PROPANE |
| LV00174766 | CA/906/165/DOCK | 8362 | 50 | ML | 0.01321 | GAL | 6/4/2007 | PST 565 PIPE SEALANT |
| LV00129234 | CA/906/165/DOCK | 8362 | 50 | ML | 0.01321 | GAL | 7/7/2003 | PST(R) HIGH TEMPERATURE ANTI-GALL SEALANT |
| LV00174769 | CA/906/165/DOCK | 8362 | 6 | ML | 0.0015852 | GAL | 6/4/2007 | QUICK METAL(R) PRESS FIT REPAIR |
| LV00060563 | CA/906/165/DOCK | 8362 | 16 | FLOZ | 0.125 | GAL | 10/12/1994 | REGAL OIL R&O 32, 00700 |
| LV00101784 | CA/906/165/DOCK | 8362 | 10 | OZ | 0.625 | LBS | 6/10/1999 | SHEILA SHINE LIQUID |
| LV00122472 | CA/906/165/DOCK | 8362 | 1 | FLOZ | 0.0078125 | GAL | 6/26/2000 | SILVER GOOP |
| LV00122463 | CA/906/165/DOCK | 8362 | 50 | GR | 0.11023 | LBS | 6/21/2000 | SIMICHROME POLISH |
| LV00126006 | CA/906/165/DOCK | 8362 | 50 | GR | 0.11023 | LBS | 7/11/2001 | SIMICHROME POLISH |
| LV00040915 | CA/906/165/DOCK | 8362 | 1.75 | OZ | 0.109375 | LBS | 7/2/1996 | STEVEN ADHESIVES |
| LV00129233 | CA/906/165/DOCK | 8362 | 8.45 | FLOZ | 0.066015625 | GAL | 7/7/2003 | SWAK |
| LV00032727 | CA/906/165/DOCK | 8362 | 1 | OZ | 0.0625 | LBS | 12/2/1993 | SWAK |
| LV00040914 | CA/906/165/DOCK | 8362 | 50 | CC | 0.0132 | GAL | 7/2/1996 | SWAK |
| LV00102029 | CA/906/165/DOCK | 8362 | 118 | ML | 0.0311756 | GAL | 9/3/1999 | TAPFREE |
| LV00017101 | CA/906/165/DOCK | 8362 | 4 | FLOZ | 0.03125 | GAL | 3/31/1993 | THREE-IN-ONE MULTI-PURPOSE OIL |
| LV00126092 | CA/906/165/DOCK | 8362 | 1 | GAL | 1 | GAL | 7/13/2001 | TKO-19 |
| LV00166325 | CA/906/165/DOCK | 8362 | 1 | L | 0.2641721 | GAL | 5/10/2007 | TOLUENE |
| LV00105075 | CA/906/165/DOCK | 8362 | 1 | GAL | 1 | GAL | 6/29/2000 | UA68SP (SYNTHETIC OILS) |
| LV00105046 | CA/906/165/DOCK | 8362 | 1 | GAL | 1 | GAL | 6/29/2000 | UA68SP (SYNTHETIC OILS) |
| LV00105074 | CA/906/165/DOCK | 8362 | 1 | GAL | 1 | GAL | 6/29/2000 | UA68SP (SYNTHETIC OILS) |
| LV00126011 | CA/906/165/DOCK | 8362 | 311 | GR | 0.6856306 | LBS | 7/11/2001 | WD-40 AEROSOL |
| LV00122464 | CA/906/165/DOCK | 8362 | 11 | OZ | 0.6875 | LBS | 6/21/2000 | WRINKLE FINISH SPRAY ALL COLORS |
| LV00085437 | CA/906/166/DOCK | 8362 | 4 | KG | 8.8 | LBS | 9/3/1996 | 1-METHYLNAPHTHALENE |
| LV00079111 | CA/906/166/DOCK | 8362 | 1 | L | 0.2641721 | GAL | 7/15/1997 | ACETONE |
| LV00078607 | CA/906/166/DOCK | 8362 | 1 | L | 0.2641721 | GAL | 6/30/1997 | ACETONE |
| LV00078606 | CA/906/166/DOCK | 8362 | 1 | L | 0.2641721 | GAL | 6/30/1997 | ACETONE |
| LV00051953 | CA/906/166/DOCK | 8362 | 500 | ML | 0.1321 | GAL | 6/15/2005 | ACETONE |
| LV00051954 | CA/906/166/DOCK | 8362 | 500 | ML | 0.1321 | GAL | 6/15/2005 | ACETONE |
| LV00078602 | CA/906/166/DOCK | 8362 | 1 | L | 0.2641721 | GAL | 6/30/1997 | ACETONE |
| LV00078608 | CA/906/166/DOCK | 8362 | 1 | L | 0.2641721 | GAL | 6/30/1997 | ACETONE |
| LV00078599 | CA/906/166/DOCK | 8362 | 1 | L | 0.2641721 | GAL | 6/30/1997 | ACETONE |

| Barcode | Location | Org. | Quantity | QUnit | Report Quantity | RUnit | Purchase Date | Name |
|---|---|---|---|---|---|---|---|---|
| LV00116887 | CA/906/166/DOCK | 8362 | 330 | CUFT | 330 | CUFT | 7/26/2002 | ACETYLENE |
| LV00118937 | CA/906/166/DOCK | 8362 | 330 | CUFT | 330 | CUFT | 5/24/2006 | ACETYLENE |
| LV00116760 | CA/906/166/DOCK | 8362 | 330 | CUFT | 330 | CUFT | 4/16/2002 | ACETYLENE |
| LV00116282 | CA/906/166/DOCK | 8362 | 330 | CUFT | 330 | CUFT | 6/1/2001 | ACETYLENE |
| LV00116731 | CA/906/166/DOCK | 8362 | 225 | CUFT | 225 | CUFT | 3/29/2002 | AIR, COMPRESSED |
| LV00003272 | CA/906/166/DOCK | 8362 | 12.5 | OZ | 0.78125 | LBS | 6/28/1999 | BLACK PRIMER (HOT ROD), 69977 |
| LV00118550 | CA/906/166/DOCK | 8362 | 524 | CUFT | 524 | CUFT | 7/13/2005 | CARBON DIOXIDE, GAS |
| LV00160906 | CA/906/166/DOCK | 8362 | 1 | GAL | 1 | GAL | 5/15/2006 | CITGO JET TURBINE FUEL, ALL GRADES |
| LV00089089 | CA/906/166/DOCK | 8362 | 1 | PT | 0.125 | GAL | 6/15/1995 | CUTTING FLUID |
| LV00165395 | CA/906/166/DOCK | 8362 | 1 | GAL | 1 | GAL | 3/8/2007 | ETHYL ALCOHOL |
| LV00096854 | CA/906/166/DOCK | 8362 | 355 | GR | 0.782633 | LBS | 11/11/1998 | FLUORESCENT GLO PAINT |
| LV00096858 | CA/906/166/DOCK | 8362 | 946 | ML | 0.2499332 | GAL | 11/19/1998 | FORMULA 409 ALL PURPOSE CLEANER |
| LV00163540 | CA/906/166/DOCK | 8362 | 4 | L | 1.0566884 | GAL | 10/23/2006 | GASOLINE, AUTOMOTIVE, UNLEADED |
| LV00157197 | CA/906/166/DOCK | 8362 | 1 | L | 0.2641721 | GAL | 8/23/2005 | HEPTANE |
| LV00161628 | CA/906/166/DOCK | 8362 | 4 | L | 1.0566884 | GAL | 6/26/2006 | HEPTANE |
| LV00161630 | CA/906/166/DOCK | 8362 | 4 | L | 1.0566884 | GAL | 6/26/2006 | HEPTANE |
| LV00161629 | CA/906/166/DOCK | 8362 | 4 | L | 1.0566884 | GAL | 6/26/2006 | HEPTANE |
| LV00157198 | CA/906/166/DOCK | 8362 | 1 | L | 0.2641721 | GAL | 8/23/2005 | HEPTANE |
| LV00157199 | CA/906/166/DOCK | 8362 | 1 | L | 0.2641721 | GAL | 8/23/2005 | HEPTANE |
| LV00057693 | CA/906/166/DOCK | 8362 | 212.9 | CUFT | 212.9 | CUFT | 5/12/2000 | HYDROGEN |
| LV00057694 | CA/906/166/DOCK | 8362 | 212.9 | CUFT | 212.9 | CUFT | 5/12/2000 | HYDROGEN |
| LV00079514 | CA/906/166/DOCK | 8362 | 1 | GAL | 1 | GAL | 8/8/1997 | HYDROTREATED LIGHT DISTILLATE |
| LV00089101 | CA/906/166/DOCK | 8362 | 1 | PT | 0.125 | GAL | 6/15/1995 | ISOPROPYL ALCOHOL |
| LV00157119 | CA/906/166/DOCK | 8362 | 1 | GAL | 1 | GAL | 8/18/2005 | JP-8 |
| LV00166529 | CA/906/166/DOCK | 8362 | 1 | GAL | 1 | GAL | 5/31/2007 | JP-8 |
| LV00161006 | CA/906/166/DOCK | 8362 | 1 | GAL | 1 | GAL | 5/18/2006 | JP-900 JET FUEL |
| LV00055860 | CA/906/166/DOCK | 8362 | 230 | CUFT | 230 | CUFT | 2/27/1997 | METHANE (3000 PPM)/NITROGEN (BAL) |

| Barcode | Location | Org. | Quantity | QUnit | Report Quantity | RUnit | Purchase Date | Name |
|---|---|---|---|---|---|---|---|---|
| LV00067223 | CA/906/166/DOCK | 8362 | 500 | ML | 0.1321 | GAL | 4/6/1994 | METHYL ALCOHOL |
| LV00083697 | CA/906/166/DOCK | 8362 | 500 | ML | 0.1321 | GAL | 6/6/1996 | METHYL ALCOHOL |
| LV00083683 | CA/906/166/DOCK | 8362 | 500 | ML | 0.1321 | GAL | 6/6/1996 | METHYL ALCOHOL |
| LV00067226 | CA/906/166/DOCK | 8362 | 500 | ML | 0.1321 | GAL | 4/6/1994 | METHYL ALCOHOL |
| LV00083678 | CA/906/166/DOCK | 8362 | 500 | ML | 0.1321 | GAL | 6/6/1996 | METHYL ALCOHOL |
| LV00122564 | CA/906/166/DOCK | 8362 | 1 | GAL | 1 | GAL | 6/26/2000 | MOBIL HYDRAULIC OIL AW 46 |
| LV00118543 | CA/906/166/DOCK | 8362 | 230 | CUFT | 230 | CUFT | 7/13/2005 | NITROGEN, COMPRESSED GAS |
| LV00170521 | CA/906/166/DOCK | 8362 | 1530 | CUFT | 1530 | CUFT | 5/9/2007 | NITROGEN, COMPRESSED GAS |
| LV00170562 | CA/906/166/DOCK | 8362 | 1530 | CUFT | 1530 | CUFT | 6/4/2007 | NITROGEN, COMPRESSED GAS |
| LV00170553 | CA/906/166/DOCK | 8362 | 1530 | CUFT | 1530 | CUFT | 5/30/2007 | NITROGEN, COMPRESSED GAS |
| LV00118307 | CA/906/166/DOCK | 8362 | 210 | CUFT | 210 | CUFT | 2/2/2005 | OXYGEN (40%)/NITROGEN (BAL) |
| LV00118938 | CA/906/166/DOCK | 8362 | 210 | CUFT | 210 | CUFT | 5/24/2006 | OXYGEN (40%)/NITROGEN (BAL) |
| LV00118941 | CA/906/166/DOCK | 8362 | 210 | CUFT | 210 | CUFT | 5/24/2006 | OXYGEN (40%)/NITROGEN (BAL) |
| LV00118939 | CA/906/166/DOCK | 8362 | 210 | CUFT | 210 | CUFT | 5/24/2006 | OXYGEN (40%)/NITROGEN (BAL) |
| LV00157501 | CA/906/166/DOCK | 8362 | 1 | GAL | 1 | GAL | 9/12/2005 | PYROMARK PAINT SERIES 2500 |
| LV00060564 | CA/906/166/DOCK | 8362 | 16 | FLOZ | 0.125 | GAL | 10/12/1994 | REGAL OIL R&O 32, 00700 |
| LV00060569 | CA/906/166/DOCK | 8362 | 16 | FLOZ | 0.125 | GAL | 10/12/1994 | REGAL OIL R&O 32, 00700 |
| LV00160905 | CA/906/166/DOCK | 8362 | 1 | GAL | 1 | GAL | 5/15/2006 | S-8 SYNTHETIC JET FUEL |
| LV00096856 | CA/906/166/DOCK | 8362 | 355 | GR | 0.782633 | LBS | 11/18/1998 | SEMI-FLAT BLACK 00978 |
| LV00096859 | CA/906/166/DOCK | 8362 | 710 | ML | 0.187582 | GAL | 11/19/1998 | SUPERCLEAN |
| LV00122563 | CA/906/166/DOCK | 8362 | 1 | QT | 0.25 | GAL | 6/22/2000 | TSP NO-RINSE SUBSTITUTE |
| LV00114493 | CA/906/168/DOCK | 8362 | 800 | GR | 1.76368 | LBS | 10/24/2001 | 2,2,4,4,6,8,8-HEPTAMETHYLNONANE |
| LV00114492 | CA/906/168/DOCK | 8362 | 800 | GR | 1.76368 | LBS | 10/24/2001 | 2,2,4,4,6,8,8-HEPTAMETHYLNONANE |
| LV00114495 | CA/906/168/DOCK | 8362 | 800 | GR | 1.76368 | LBS | 10/24/2001 | 2,2,4,4,6,8,8-HEPTAMETHYLNONANE |
| LV00114491 | CA/906/168/DOCK | 8362 | 800 | GR | 1.76368 | LBS | 10/24/2001 | 2,2,4,4,6,8,8-HEPTAMETHYLNONANE |
| LV00161887 | CA/906/168/DOCK | 8362 | 2.5 | L | 0.66043025 | GAL | 7/19/2006 | ACETONE |
| LV00161888 | CA/906/168/DOCK | 8362 | 2.5 | L | 0.66043025 | GAL | 7/19/2006 | ACETONE |

| Barcode | Location | Org. | Quantity | QUnit | Report Quantity | RUnit | Purchase Date | Name |
|---|---|---|---|---|---|---|---|---|
| LV00118242 | CA/906/168/DOCK | 8362 | 225 | CUFT | 225 | CUFT | 12/20/2004 | AIR, COMPRESSED |
| LV00170540 | CA/906/168/DOCK | 8362 | 225 | CUFT | 225 | CUFT | 5/17/2007 | AIR, COMPRESSED |
| LV00170541 | CA/906/168/DOCK | 8362 | 225 | CUFT | 225 | CUFT | 5/17/2007 | AIR, COMPRESSED |
| LV00118233 | CA/906/168/DOCK | 8362 | 23 | CUFT | 23 | CUFT | 12/9/2004 | CARBON DIOXIDE IN NITROGEN |
| LV00118831 | CA/906/168/DOCK | 8362 | 254 | CUFT | 254 | CUFT | 3/10/2006 | CARBON DIOXIDE, GAS |
| LV00170634 | CA/906/168/DOCK | 8362 | 525 | CUFT | 525 | CUFT | 7/10/2007 | CARBON DIOXIDE, GAS |
| LV00170614 | CA/906/168/DOCK | 8362 | 525 | CUFT | 525 | CUFT | 7/3/2007 | CARBON DIOXIDE, GAS |
| LV00170632 | CA/906/168/DOCK | 8362 | 525 | CUFT | 525 | CUFT | 7/10/2007 | CARBON DIOXIDE, GAS |
| LV00170633 | CA/906/168/DOCK | 8362 | 525 | CUFT | 525 | CUFT | 7/10/2007 | CARBON DIOXIDE, GAS |
| LV00071290 | CA/906/168/DOCK | 8362 | 1 | GAL | 1 | GAL | 2/23/1998 | ETHYL ALCOHOL |
| LV00079098 | CA/906/168/DOCK | 8362 | 1 | L | 0.2641721 | GAL | 7/15/1997 | ETHYL ALCOHOL |
| LV00079097 | CA/906/168/DOCK | 8362 | 1 | L | 0.2641721 | GAL | 7/15/1997 | ETHYL ALCOHOL |
| LV00071292 | CA/906/168/DOCK | 8362 | 1 | GAL | 1 | GAL | 2/23/1998 | ETHYL ALCOHOL |
| LV00079100 | CA/906/168/DOCK | 8362 | 1 | L | 0.2641721 | GAL | 7/15/1997 | ETHYL ALCOHOL |
| LV00071291 | CA/906/168/DOCK | 8362 | 1 | GAL | 1 | GAL | 2/23/1998 | ETHYL ALCOHOL |
| LV00071288 | CA/906/168/DOCK | 8362 | 1 | GAL | 1 | GAL | 2/23/1998 | ETHYL ALCOHOL |
| LV00071287 | CA/906/168/DOCK | 8362 | 1 | GAL | 1 | GAL | 2/23/1998 | ETHYL ALCOHOL |
| LV00071289 | CA/906/168/DOCK | 8362 | 1 | GAL | 1 | GAL | 2/23/1998 | ETHYL ALCOHOL |
| LV00079099 | CA/906/168/DOCK | 8362 | 1 | L | 0.2641721 | GAL | 7/15/1997 | ETHYL ALCOHOL |
| LV00158022 | CA/906/168/DOCK | 8362 | 4 | L | 1.0566884 | GAL | 10/24/2005 | HEPTANE |
| LV00161937 | CA/906/168/DOCK | 8362 | 4 | L | 1.0566884 | GAL | 7/24/2006 | HEPTANE |
| LV00158024 | CA/906/168/DOCK | 8362 | 4 | L | 1.0566884 | GAL | 10/24/2005 | HEPTANE |
| LV00161938 | CA/906/168/DOCK | 8362 | 4 | L | 1.0566884 | GAL | 7/24/2006 | HEPTANE |
| LV00161940 | CA/906/168/DOCK | 8362 | 4 | L | 1.0566884 | GAL | 7/24/2006 | HEPTANE |
| LV00114456 | CA/906/168/DOCK | 8362 | 2 | L | 0.5283442 | GAL | 10/22/2001 | HEXADECANE |
| LV00144822 | CA/906/168/DOCK | 8362 | 2 | L | 0.5283442 | GAL | 5/10/2004 | HEXADECANE |
| LV00144823 | CA/906/168/DOCK | 8362 | 2 | L | 0.5283442 | GAL | 5/10/2004 | HEXADECANE |

| Barcode | Location | Org. | Quantity | QUnit | Report Quantity | RUnit | Purchase Date | Name |
|---|---|---|---|---|---|---|---|---|
| LV00170129 | CA/906/168/DOCK | 8362 | 31 | CUFT | 31 | CUFT | 9/25/2006 | HYDROGEN (40%)/HELIUM (BAL) |
| LV00170631 | CA/906/168/DOCK | 8362 | 31 | CUFT | 31 | CUFT | 7/10/2007 | HYDROGEN (40%)/HELIUM (BAL) |
| LV00170630 | CA/906/168/DOCK | 8362 | 31 | CUFT | 31 | CUFT | 7/10/2007 | HYDROGEN (40%)/HELIUM (BAL) |
| LV00106994 | CA/906/168/DOCK | 8362 | 1 | L | 0.2641721 | GAL | 11/10/2000 | ISOPROPYL ALCOHOL |
| LV00110659 | CA/906/168/DOCK | 8362 | 1 | L | 0.2641721 | GAL | 7/29/1999 | METHYL ALCOHOL |
| LV00111623 | CA/906/168/DOCK | 8362 | 1 | L | 0.2641721 | GAL | 6/15/2001 | METHYL ALCOHOL |
| LV00111628 | CA/906/168/DOCK | 8362 | 1 | L | 0.2641721 | GAL | 6/15/2001 | METHYL ALCOHOL |
| LV00111625 | CA/906/168/DOCK | 8362 | 1 | L | 0.2641721 | GAL | 6/15/2001 | METHYL ALCOHOL |
| LV00170118 | CA/906/168/DOCK | 8362 | 32 | CUFT | 32 | CUFT | 9/20/2006 | NITROGEN, COMPRESSED GAS |
| LV00170818 | CA/906/168/DOCK | 8362 | 1530 | CUFT | 1530 | CUFT | 10/22/2007 | NITROGEN, COMPRESSED GAS |
| LV00170833 | CA/906/168/DOCK | 8362 | 1530 | CUFT | 1530 | CUFT | 11/5/2007 | NITROGEN, COMPRESSED GAS |
| LV00151004 | CA/906/168/DOCK | 8362 | 1 | L | 0.2641721 | GAL | 7/8/2003 | PRESTONE SUPER RADIATOR CLEANER |
| LV00151003 | CA/906/168/DOCK | 8362 | 1 | L | 0.2641721 | GAL | 7/8/2003 | PRESTONE SUPER RADIATOR CLEANER |
| LV00117863 | CA/906/168/DOCK | 8362 | 104.3 | CUFT | 104.3 | CUFT | 5/20/2004 | PROPANE |
| LV00116942 | CA/906/168/DOCK | 8362 | 0.45 | CUFT | 0.45 | CUFT | 9/13/2002 | PROPANE |
| LV00105966 | CA/906/168/DOCK | 8362 | 5 | GAL | 5 | GAL | 8/31/2000 | RED LINE LOW FLUORESCENT OIL #2514 |
| LV00105965 | CA/906/168/DOCK | 8362 | 5 | GAL | 5 | GAL | 8/31/2000 | RED LINE LOW FLUORESCENT OIL #2514 |
| LV00105068 | CA/906/168/DOCK | 8362 | 1 | GAL | 1 | GAL | 6/29/2000 | UA68SP (SYNTHETIC OILS) |
| LV00105045 | CA/906/168/DOCK | 8362 | 1 | GAL | 1 | GAL | 6/29/2000 | UA68SP (SYNTHETIC OILS) |
| LV00105066 | CA/906/168/DOCK | 8362 | 1 | GAL | 1 | GAL | 6/29/2000 | UA68SP (SYNTHETIC OILS) |
| LV00105067 | CA/906/168/DOCK | 8362 | 1 | GAL | 1 | GAL | 6/29/2000 | UA68SP (SYNTHETIC OILS) |
| LV00105070 | CA/906/168/DOCK | 8362 | 1 | GAL | 1 | GAL | 6/29/2000 | UA68SP (SYNTHETIC OILS) |
| LV00105047 | CA/906/168/DOCK | 8362 | 1 | GAL | 1 | GAL | 6/29/2000 | UA68SP (SYNTHETIC OILS) |
| LV00107213 | CA/906/169/DOCK | 8362 | 500 | ML | 0.1321 | GAL | 12/11/2000 | 1,1,3,3-TETRAETHOXYPROPANE |
| LV00107212 | CA/906/169/DOCK | 8362 | 500 | ML | 0.1321 | GAL | 12/11/2000 | 1,1,3,3-TETRAETHOXYPROPANE |
| LV00107220 | CA/906/169/DOCK | 8362 | 500 | ML | 0.1321 | GAL | 12/11/2000 | 1,1,3,3-TETRAETHOXYPROPANE |
| LV00107215 | CA/906/169/DOCK | 8362 | 500 | ML | 0.1321 | GAL | 12/11/2000 | 1,1,3,3-TETRAETHOXYPROPANE |
| LV00106959 | CA/906/169/DOCK | 8362 | 500 | ML | 0.1321 | GAL | 11/9/2000 | 1,1,3,3-TETRAETHOXYPROPANE |

| Barcode | Location | Org. | Quantity | QUnit | Report Quantity | RUnit | Purchase Date | Name |
|---|---|---|---|---|---|---|---|---|
| LV00106965 | CA/906/169/DOCK | 8362 | 500 | ML | 0.1321 | GAL | 11/9/2000 | 1,1,3,3-TETRAETHOXYPROPANE |
| LV00107217 | CA/906/169/DOCK | 8362 | 500 | ML | 0.1321 | GAL | 12/11/2000 | 1,1,3,3-TETRAETHOXYPROPANE |
| LV00107214 | CA/906/169/DOCK | 8362 | 500 | ML | 0.1321 | GAL | 12/11/2000 | 1,1,3,3-TETRAETHOXYPROPANE |
| LV00108913 | CA/906/169/DOCK | 8362 | 5 | GAL | 5 | GAL | 4/5/2001 | 2,2,4,4,6,8,8-HEPTAMETHYLNONANE |
| LV00107369 | CA/906/169/DOCK | 8362 | 800 | GR | 1.76368 | LBS | 1/3/2001 | 2,2,4,4,6,8,8-HEPTAMETHYLNONANE |
| LV00127410 | CA/906/169/DOCK | 8362 | 1 | GAL | 1 | GAL | 6/25/2002 | 2,2,4,4,6,8,8-HEPTAMETHYLNONANE |
| LV00107368 | CA/906/169/DOCK | 8362 | 800 | GR | 1.76368 | LBS | 1/3/2001 | 2,2,4,4,6,8,8-HEPTAMETHYLNONANE |
| LV00107366 | CA/906/169/DOCK | 8362 | 800 | GR | 1.76368 | LBS | 1/3/2001 | 2,2,4,4,6,8,8-HEPTAMETHYLNONANE |
| LV00106955 | CA/906/169/DOCK | 8362 | 1 | L | 0.2641721 | GAL | 11/9/2000 | ACETONE |
| LV00106956 | CA/906/169/DOCK | 8362 | 1 | L | 0.2641721 | GAL | 11/9/2000 | ACETONE |
| LV00051948 | CA/906/169/DOCK | 8362 | 500 | ML | 0.1321 | GAL | 6/15/2005 | ACETONE |
| LV00106954 | CA/906/169/DOCK | 8362 | 1 | L | 0.2641721 | GAL | 11/9/2000 | ACETONE |
| LV00118313 | CA/906/169/DOCK | 8362 | 225 | CUFT | 225 | CUFT | 2/7/2005 | AIR, COMPRESSED |
| LV00170385 | CA/906/169/DOCK | 8362 | 28 | CUFT | 28 | CUFT | 2/28/2007 | CARBON DIOXIDE IN NITROGEN |
| LV00170831 | CA/906/169/DOCK | 8362 | 525 | CUFT | 525 | CUFT | 11/2/2007 | CARBON DIOXIDE, GAS |
| LV00118882 | CA/906/169/DOCK | 8362 | 175 | CUFT | 175 | CUFT | 4/25/2006 | CARBON MONOXIDE |
| LV00170795 | CA/906/169/DOCK | 8362 | 175 | CUFT | 175 | CUFT | 10/12/2007 | CARBON MONOXIDE |
| LV00118122 | CA/906/169/DOCK | 8362 | 23 | CUFT | 23 | CUFT | 10/4/2004 | CARBON MONOXIDE (0-6.5%) IN NITROG |
| LV00147723 | CA/906/169/DOCK | 8362 | 35 | LBS | 35 | LBS | 9/30/2004 | DIESEL 2007 CERTIFICATION FUEL |
| LV00163019 | CA/906/169/DOCK | 8362 | 1 | GAL | 1 | GAL | 9/18/2006 | DIESEL FUEL NO. 2 |
| LV00163023 | CA/906/169/DOCK | 8362 | 1 | GAL | 1 | GAL | 9/18/2006 | DIESEL FUEL NO. 2 |
| LV00163022 | CA/906/169/DOCK | 8362 | 1 | GAL | 1 | GAL | 9/18/2006 | DIESEL FUEL NO. 2 |
| LV00163020 | CA/906/169/DOCK | 8362 | 1 | GAL | 1 | GAL | 9/18/2006 | DIESEL FUEL NO. 2 |
| LV00163021 | CA/906/169/DOCK | 8362 | 1 | GAL | 1 | GAL | 9/18/2006 | DIESEL FUEL NO. 2 |
| LV00102338 | CA/906/169/DOCK | 8362 | 1 | GAL | 1 | GAL | 9/28/2000 | ETHANOL SOLUTION 3 |
| LV00106971 | CA/906/169/DOCK | 8362 | 1 | L | 0.2641721 | GAL | 11/9/2000 | HEPTANE |
| LV00106967 | CA/906/169/DOCK | 8362 | 1 | L | 0.2641721 | GAL | 11/9/2000 | HEPTANE |
| LV00106945 | CA/906/169/DOCK | 8362 | 500 | ML | 0.1321 | GAL | 11/9/2000 | HEXADECANE |
| LV00106951 | CA/906/169/DOCK | 8362 | 500 | ML | 0.1321 | GAL | 11/9/2000 | HEXADECANE |
| LV00106947 | CA/906/169/DOCK | 8362 | 500 | ML | 0.1321 | GAL | 11/9/2000 | HEXADECANE |

| Barcode | Location | Org. | Quantity | QUnit | Report Quantity | RUnit | Purchase Date | Name |
|---|---|---|---|---|---|---|---|---|
| LV00106949 | CA/906/169/DOCK | 8362 | 500 | ML | 0.1321 | GAL | 11/9/2000 | HEXADECANE |
| LV00106948 | CA/906/169/DOCK | 8362 | 500 | ML | 0.1321 | GAL | 11/9/2000 | HEXADECANE |
| LV00106952 | CA/906/169/DOCK | 8362 | 500 | ML | 0.1321 | GAL | 11/9/2000 | HEXADECANE |
| LV00106950 | CA/906/169/DOCK | 8362 | 500 | ML | 0.1321 | GAL | 11/9/2000 | HEXADECANE |
| LV00106946 | CA/906/169/DOCK | 8362 | 500 | ML | 0.1321 | GAL | 11/9/2000 | HEXADECANE |
| LV00118642 | CA/906/169/DOCK | 8362 | 213 | CUFT | 213 | CUFT | 10/12/2005 | HYDROGEN |
| LV00100913 | CA/906/169/DOCK | 8362 | 35 | LBS | 35 | LBS | 4/13/2000 | LOW SULFUR DIESEL 2 |
| LV00100915 | CA/906/169/DOCK | 8362 | 35 | LBS | 35 | LBS | 4/13/2000 | LOW SULFUR DIESEL 2 |
| LV00170017 | CA/906/169/DOCK | 8362 | 286 | CUFT | 286 | CUFT | 7/6/2006 | METHANE |
| LV00051940 | CA/906/169/DOCK | 8362 | 500 | ML | 0.1321 | GAL | 6/15/2005 | METHYL ALCOHOL |
| LV00051941 | CA/906/169/DOCK | 8362 | 500 | ML | 0.1321 | GAL | 6/15/2005 | METHYL ALCOHOL |
| LV00051936 | CA/906/169/DOCK | 8362 | 500 | ML | 0.1321 | GAL | 6/15/2005 | METHYL ALCOHOL |
| LV00051931 | CA/906/169/DOCK | 8362 | 500 | ML | 0.1321 | GAL | 6/15/2005 | METHYL ALCOHOL |
| LV00051938 | CA/906/169/DOCK | 8362 | 500 | ML | 0.1321 | GAL | 6/15/2005 | METHYL ALCOHOL |
| LV00102901 | CA/906/169/DOCK | 8362 | 1 | QT | 0.25 | GAL | 6/15/2005 | METHYL ETHYL KETONE |
| LV00170137 | CA/906/169/DOCK | 8362 | 28 | CUFT | 28 | CUFT | 10/6/2006 | NITRIC OXIDE (300 PPM)/NITROGEN (BAI |
| LV00170272 | CA/906/169/DOCK | 8362 | 28 | CUFT | 28 | CUFT | 12/8/2006 | NITRIC OXIDE (300 PPM)/NITROGEN (BAI |
| LV00118542 | CA/906/169/DOCK | 8362 | 230 | CUFT | 230 | CUFT | 7/13/2005 | NITROGEN, COMPRESSED GAS |
| LV00170694 | CA/906/169/DOCK | 8362 | 1530 | CUFT | 1530 | CUFT | 8/14/2007 | NITROGEN, COMPRESSED GAS |
| LV00170829 | CA/906/169/DOCK | 8362 | 1530 | CUFT | 1530 | CUFT | 10/30/2007 | NITROGEN, COMPRESSED GAS |
| LV00170696 | CA/906/169/DOCK | 8362 | 1530 | CUFT | 1530 | CUFT | 8/14/2007 | NITROGEN, COMPRESSED GAS |
| LV00170830 | CA/906/169/DOCK | 8362 | 1530 | CUFT | 1530 | CUFT | 10/30/2007 | NITROGEN, COMPRESSED GAS |
| LV00170828 | CA/906/169/DOCK | 8362 | 1530 | CUFT | 1530 | CUFT | 10/30/2007 | NITROGEN, COMPRESSED GAS |
| LV00057534 | CA/906/169/DOCK | 8362 | 1.03 | CUFT | 1.03 | CUFT | 2/14/2000 | PROPANE |

| Barcode | Location | Org. | Quantity | QUnit | Report Quantity | RUnit | Purchase Date | Name |
|---|---|---|---|---|---|---|---|---|
| LV00170513 | CA/906/169/DOCK | 8362 | 301 | CUFT | 301 | CUFT | 5/4/2007 | PROPANE |
| LV00170230 | CA/906/169/DOCK | 8362 | 35 | CUFT | 35 | CUFT | 11/20/2006 | PROPANE IN AIR |
| LV00133080 | CA/906/169/DOCK | 8362 | 5 | GAL | 5 | GAL | 7/11/2002 | RED LINE LOW FLUORESCENT OIL #2514 |
| LV00173589 | CA/906/169/DOCK | 8362 | 1 | LBS | 1 | LBS | 6/15/2006 | RTV60 |
| LV00080407 | CA/906/169/DOCK | 8362 | 1 | GAL | 1 | GAL | 9/17/1997 | SYNETHIC OIL |
| LV00119122 | CA/906/169/DOCK | 8362 | 311 | GR | 0.6856306 | LBS | 6/15/2005 | WD-40 AEROSOL |

Number of containers: 1237

# APPENDIX D

Example Environmental Protection Emergency Response Record
(Spill Response Record)

COPY

**Sandia National Laboratories/California**
**Environmental Protection Emergency Response Record**

**A. CALL INFORMATION**(to be completed by Secretary/Hotline)

| | | | |
|---|---|---|---|
| 1. NAME | Steve Ragon | 2. CALL DATE:(mm/dd/yy) | 2/6/97 |
| 3. CALLER LOCATION | 968 | 4. CALL TIME: 10:35 | : (am) pm |
| 5. PHONE NUMBER | 8294 | 6. RECEIVED BY | C. Law |
| 7. Brief Description: (What spilled, where and how much?) | Oil spill, 8th and 4th street , 1 liter | | |

PERSON(S) CONTACTED (Call in this order. Put check next to person(s) contacted)

| IC & SO | CALLOUT LIST | OFFICE PHONE | MOBILE PAGER |
|---|---|---|---|
| | SARAH O'CONNOR | 3738 | P# 03458 |
| | PAT O'BRION | 1023 | P# 1-800-604-6217 |
| IC | LAURIE FARREN | 2573 | P#04155/CP# 914-2239 |
| | DOUG VAN LARE | 3528 | P#408-581-4753 |
| SO | JIM MILLICK | 3156 | P# 510-440-5049 |
| | DEE DEE DICKER | 1553 | P# 510-734-7515/CP# 599-0754 |

8. TIME CONTACTED: 10:35 : (am) pm
9. PERSONS RESPONDING (must have 2 people for all responses) L. Farren; J. Millick

**B. (MOST HAZARDOUS MATERIAL INVOLVED** (to be completed by responder)

| | | | |
|---|---|---|---|
| 10. NAME: | Oil | | |
| 11. HAZARDOUS PROPERTIES : | California Toxic | | |
| 12. QUANTITY : 1 liter | | 13. CONTAINER TYPE: | None |

**C. OTHER INFORMATION**

| | | |
|---|---|---|
| 14. | TIME OF SPILL | 10:30 |
| 15 | DETAILED LOCATION | At the intersection of 8th and A street by Maintenance |
| 16 | WITNESS | Steve Ragon |
| 17 | PERSONNEL INJURED | None |
| 18 | PROPERTY DAMAGES | None |
| 19 | WEATHER CONDITIONS: | Cool, Cloudy |

**D. CONTACTS TO BE MADE (Send copy to all contacts)**

20. (Check all applicable boxes)
- [ ] E. P. DEPT. MANAGER
- [ ] DEPT. MANGER FOR AREA
- [ ] FIRE PROTECTION (over 1 G. flammable, 5 G. Combustible)
- [ ] 911
- [ ] OTHER

Record Number _____

# Record of Call (Clerical)

Came in on 4-3724 or 911 or Safety or Other

Date: 2-6-97 Time 10:25 a.m./p.m.

Caller's Name: Steve Bagon

Phone: 4-8294 Org.: 8513

Location of Incident: Bldg. 968 Room _____ Area outside an oil spill in Road

Call Taken By: Carina Laws

Odors/Natural Gas _____ (If it is a natural gas odor call 911 Immediately)

Bldg. _____ Room _____

**Call or Leave Audix Message for Asst. Bldg. Coordinator**

CAUTION: **If there is a burning odor or natural gas odor INSIDE a building - EVACUATE - if the odor is OUTSIDE - stay in the building**

Identify that the call is from the Hotline, leave time of incident, type of odor if known, location, whether the bldg is being evacuated and what function is responding from ES&H

Asst. Bldg. Coordinator _____ Time: _____

ES&H Personnel Call Referred to: Laurie Farren Time Notified 10:37 Org. 8421

ES&H Personnel Call Referred to: _____ Time Notified _____ Org. _____

Other Personnel Call Referred to: _____ Time Notified _____ Org. _____

Notify Center (s) 8500

**Referred to:**
- ☐ Emergency Line 911
- ☑ ES&H Hotline
- ☐ OM Rep
- ☐ Safety

**Site**
- ☐ Power Outages
- ☐ Electrical
- ☐ Explosives
- ☐ Suspect/Counterfeit Parts
- ☐ Trip/Slip Hazards
- ☐ Radioactive Concerns
- ☐ Ergonomics
- ☐ CRF
- ☐ General Safety Issues
- ☐ Odors
- ☐ Property Damage
- ☐ Pressure
- ☐ MSDS
- ☐ Maintenance Concerns
- ☐ Basic Info. Question

**Outside Agencies**
- ☐ LLNL Fire Dept
- ☐ LLNL Ambulance
- ☐ Hazmat Team

**Traffic Issues**
- ☑ Traffic Safety
- ☐ Cars/Trucks/Buses
- ☐ Bicycles
- ☐ Carts
- ☐ Forklifts/Tractors
- ☐ Citations
- ☐ Violations

**Alarms**
- ☐ Fire
- ☐ Security
- ☐ Hazard/Danger
- ☐ Equipment

**Injury/Illness**
- ☐ Injury
- ☐ Illness
- ☐ Contractor

**Shipping/Receiving**
- ☐ Labels/Markings
- ☐ Shipping Papers
- ☐ Explosives
- ☐ Classified Concerns

**Construction**
- ☐ Safety Issues

**Fire Protection**
- ☐ Fire/Smoke
- ☐ Flooding/Leaks
- ☐ Evacuations
- ☐ Egress/Blockages
- ☐ System Failures

**Security**
- ☐ Thefts
- ☐ Illegal Substances
- ☐ Security Concerns

**Environmental**
- ☐ Spills/Leaks
- ☐ Haz. Disposal Concerns
- ☐ Secondary Containment
- ☐ ROV's
- ☐ LECS
- ☐ Sewer Outfall

NOTES: Steve called to report an oil spill outside of 968 between 8th and A street.

# APPENDIX E

Best Management Practices (BMPs) Information

# APPENDIX E-1

Brochures:
Only Rain in the Storm Drain,
construction activities,
material handling,
vehicle and equipment maintenance and
site and building maintenance

### *What can you do to keep pollutants out of storm drains and the Arroyo?*

Attend the site-wide training program on storm water pollution prevention! This program is being implemented at Sandia/California by the Environmental Operations Department. It includes presentations at department meetings and visits to outdoor activity areas, where rainwater that runs off the site could be contaminated. Through this training, you will learn the best management practices to prevent pollutants from contacting rainwater and being washed or dumped into the storm drains and the Arroyo Seco.

If you would like to know more about best management practices for your activities, call Environmental Operations on ext. 4–3803.

***Remember, "Only rain in the storm drain."***




**Environmental Operations Department**

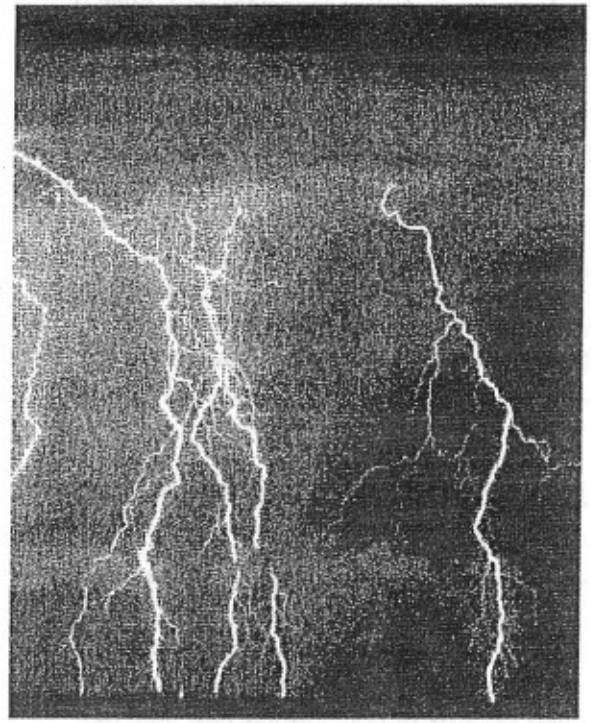
**Stormwater Management Program**

**Janet Harris, ext. 4–3803**


Sandia National Laboratories


Printed 9/94


# *Only Rain in the Storm Drain*



## *Have you ever wondered where the drain by the sidewalk leads? Or what happens to the dirt, oil, grease, and litter on streets and sidewalks after rainwater washes them away?*

Gutters, ditches, channels, and most outdoor drains at Sandia/California are part of the site's storm drain system. The storm drain system was built to collect and transport rainwater off the site to prevent flooding in paved areas. Anything that flows or is dumped into the storm drain system goes untreated to the Arroyo Seco, which flows to Alameda Creek and eventually to San Francisco Bay. Even if the Arroyo is dry now, pollutants are transported during the rainy season.

A common misconception is that all drains go to a treatment plant. At Sandia/California, the storm drain system is separate from the sanitary sewer system. The sanitary sewers transport wastewater from restrooms, sinks, labs, other indoor operations, and the maintenance wash pad by Building 963, to the City of Livermore's treatment plant. The storm drain system goes directly to the Arroyo Seco.

## *How do pollutants get into storm drains?*

Most are washed off streets, parking lots, and other paved areas by rainwater. Other pollutants are deliberately or carelessly drained, spilled, or dumped onto streets, gutters, and inlets because of poor storage and material handling practices. A third way pollutants get into the storm drains is through accidental illicit connections. An illicit connection is piping that connects sanitary and process wastewater—which should go to the sanitary sewer system—to the storm drains. **Illicit connections are illegal.**

## *Examples of day-to-day activities that contaminate rain include:*

**Dumping wastes.** Disposing of garbage or liquid waste, such as oil, paint, or wash water, in a gutter or an inlet releases pollutants directly into the storm drains. Leaking dumpsters or garbage scattered on the ground around dumpsters can pollute rainwater, which then flows to the storm drains.

**Building or remodeling facilities.** When soil and vegetation are disturbed during construction, erosion greatly increases; sediment is a rainwater pollutant. During construction, proper material handling and waste disposal are especially important because much of the work is performed outdoors.



**Cleaning tools or equipment outdoors.** Cleaning or rinsing containers, tools, floor mats, or other items outdoors discharges pollutants (e.g., chemicals, detergents, oils) into the storm drains.

**Allowing drainage from indoor operations to flow outside.** Process or cleanup water flowing onto outdoor pavement transports contaminants to the storm drains.

**Maintaining vehicles outdoors.** Vehicle maintenance results in drips and spills of oil, coolant, and other fluids. These fluids remain on asphalt and concrete pavements until they are washed away in the next storm.

**Landscaping and grounds maintenance.** Overuse or indiscriminate use of fertilizers and pesticides results in contaminated runoff from landscaped areas into storm drains.

## *What are the consequences of these activities?*

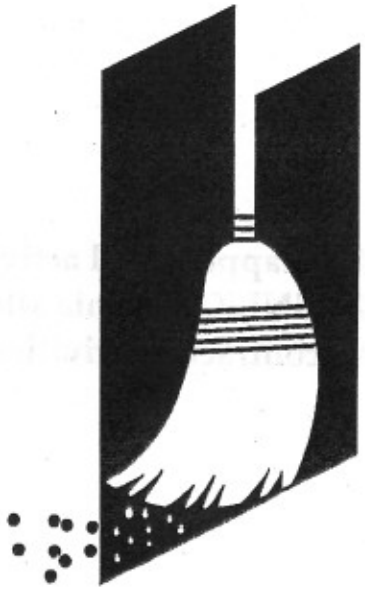
Clean rainwater can quickly be transformed into an oily, cloudy mixture. Litter is left behind by receding waters after a storm. Water supply sources become contaminated. Recreational activities such as fishing, swimming, and boating are lost.

Contaminated rainwater is a major cause of water pollution in local creeks and in the San Francisco Bay. This pollution can harm humans, as well as fish, birds, and other wildlife.



### Waste H ..ng

- Prevent rain from entering waste containers. Make sure outdoor waste containers have a lid or are covered (roof or tarp). Keep lids on all dumpsters closed.
- Sweep up and remove litter in waste disposal areas regularly.
- Contact the Waste Management Program, ext. 4–2145, for more information about disposing of hazardous wastes.




**Environmental Operations Department**

**Storm Water Management Program**

**Janet Harris, ext. 4–3803**



Sandia National Laboratories

Printed 2/95


## Best Management Practices for

# Material Handling and Storage



This brochure describes best management practices (BMPs) for material handling. BMP brochures are also available for construction activities, vehicle and equipment maintenance, and building and site maintenance. If you are involved in any of these activities and would like a copy of the BMP brochure, please contact the Storm Water Management Program on ext. 4–3803.

Sandia/California is required by both state permit and city ordinance to minimize the site's impact on rainwater quality. Because rainwater is not treated, contaminants it picks up as it leaves the site flow to the Arroyo Seco, then to Alameda Creek, and eventually to the San Francisco Bay. To prevent Sandia/California from contributing to this pollution, all Sandia/California employees and contractors are required to use BMPs in their activities so that only uncontaminated water enters the storm drains. The objectives of the following BMPs are to:

- keep pollutants from coming into contact with rain and being transported as runoff to storm water inlets and the Arroyo Seco, and
- keep pollutants from being dumped, poured, or spilled into storm water inlets or the Arroyo.

Pollution prevention needs to be considered when planning and conducting all activities on site.

### *Material Handling/Transfer*

*The following BMPs apply to all materials that could be exposed to rain or that could discharge to the storm drain system.*

- Park trucks and other delivery vehicles so that materials that leak or spill during transfer can be contained.
- Implement a spill plan for material transfer areas (e.g., Building 928) to prevent the discharge of material in case of a spill.[1]
- All spills will be cleaned up immediately. Call the ES&H Hotline (ext. 4–3724) for spill cleanup assistance.



[1]Contact the Storm Water Management Program on ext. 4–3803 if you need help preparing a spill plan.

### *Container Storage*[2]

- Clearly label all storage containers.
- Maintain storage containers in good condition. Inspect all storage containers regularly for leaks.
- Keep liquid material in secondary containment and in a designated area on a paved or other impervious surface.

### *Open Storage*

- Store stockpiled materials under a roof or covered with a tarp to prevent contact with rain.
- Sweep open storage areas regularly.

**These BMPs apply to all activities on the SNL/California site, including contractor activities.**

[2]The owner of the stored material is responsible for implementing these BMPs.




Environmental Operations Department

Storm Water Management Program

Janet Harris, ext. 4–3803



Sandia National Laboratories

Printed 2/95


*Best Management Practices for*

# *Vehicle and Equipment Maintenance*



This brochure describes best management practices (BMPs) for vehicle and equipment maintenance. BMP brochures are also available for construction activities, material handling, and building and site maintenance. If you are involved in any of these activities and would like a copy of the BMP brochure, please contact the Storm Water Management Program on ext. 4–3803.

Sandia/Califo...a is required by both state permit and city ordinance to minimize the site's impact on rainwater quality. Because rainwater is not treated, contaminants it picks up as it leaves the site flow to the Arroyo Seco, then to Alameda Creek, and eventually to the San Francisco Bay. To prevent Sandia/California from contributing to this pollution, all Sandia/California employees and contractors are required to use BMPs in their activities so that only uncontaminated water enters the storm drains. The objectives of the following BMPs are to:

- keep pollutants from coming into contact with rain and being transported as runoff to storm water inlets and the Arroyo Seco, and
- keep pollutants from being dumped, poured, or spilled into storm water inlets or the Arroyo.

Pollution prevention needs to be considered when planning and conducting all activities on site.

**These BMPs apply to all activities on the SNL/California site, including contractor activities.**

### *Maintenance and Re...*

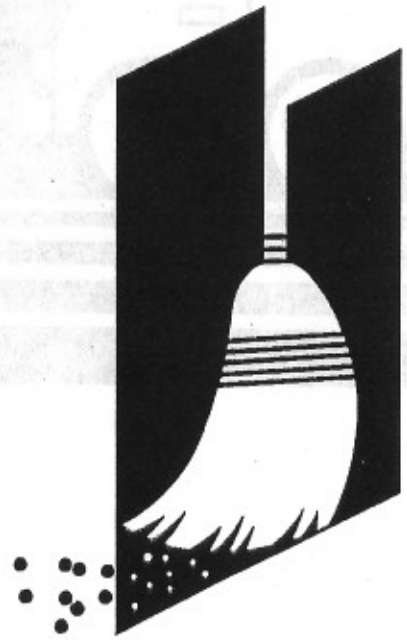
- Regularly inspect vehicles, carts, and equipment used on site for leaks. Place drip pans under leaks until the leaks can be fixed.
- Keep maintenance areas clean. Do not allow excess buildup of oil and grease. Remove any excess buildup of oil and grease on impervious surfaces using dry cleanup methods (e.g., absorbent materials).
- Sweep maintenance areas regularly.
- All spills will be cleaned up immediately. Call the ES&H Hotline (ext. 4–3724) for spill cleanup assistance.
- Dispose of oil filters as hazardous waste.
- Use tarps on the ground to collect fallen debris or splatters.

### *Storage*

- Keep vehicle, cart, and equipment storage areas clean; do not allow excess buildup of oil and grease.
- Sweep vehicle, cart, and equipment storage areas regularly.
- If practical, store equipment under cover.

### *Washing/Cleaning*

- Conduct all on-site vehicle, cart, and heavy equipment washing/cleaning on the wash pad by Building 963.[1]



[1]Contact the Storm Water Management Program on ext. 4–3803 before washing a large amount of heavy equipment.




**Environmental Operations Department**

**Storm Water Management Program**

**Janet Harris, ext. 4–3803**


Sandia National Laboratories


Printed 2/95


*Best Management Practices for*

# *Site and Building Maintenance*



This brochure describes best management practices (BMPs) for site and building maintenance. BMP brochures are also available for construction activities, material handling, and vehicle and equipment maintenance. If you are involved in any of these activities and would like a copy of the BMP brochure, please contact the Storm Water Management Program on ext. 4–3803.

Sandia/Calif..ia is required by both state permit and city ordinance to minimize the site's impact on rainwater quality. Because rainwater is not treated, contaminants it picks up as it leaves the site flow to the Arroyo Seco, then to Alameda Creek, and eventually to the San Francisco Bay. To prevent Sandia/California from contributing to this pollution, all Sandia/California employees and contractors are required to use BMPs in their activities so that only uncontaminated water enters the storm drains. The objectives of the following BMPs are to:

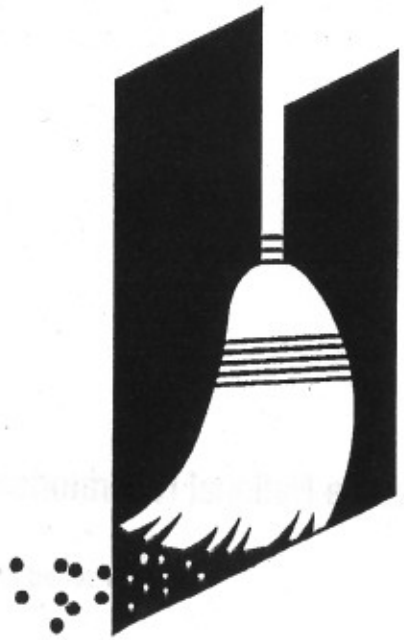
- keep pollutants from coming into contact with rain and being transported as runoff to storm water inlets and the Arroyo Seco, and
- keep pollutants from being dumped, poured, or spilled into storm water inlets or the Arroyo.

Pollution prevention needs to be considered when planning and conducting all activities on site.

**These BMPs apply to all activities on the SNL/California site, including contractor activities.**

### *Site Maintenance*

- Minimize the amount of fertilizer and pesticides used, whenever possible.
- Sweep paved areas regularly, including parking lots.
- Pick up litter and other wastes from outside areas, especially around storm drain grates, regularly.
- Clean storm drain inlets annually. Minimize the amount of pollutants discharged to the storm drains or the Arroyo during cleaning.
- Properly dispose of wash water, swept debris, and sediment—do not dispose of them in the storm drains or the Arroyo.



### *Building Maintenance*

- Use tarps on the ground to collect fallen debris or splatters.
- If you are stripping or cleaning building exteriors with high-pressure water, prevent wash water from entering the storm drain system. For example, block nearby storm drains or inlets with sandbags. If possible, divert the water to pervious areas to allow it to evaporate. Contact the Storm Water Management Program on ext. 4–3803 before discharging any water to the sanitary sewer system.

  If you must discharge wash water to the sanitary sewer system, minimize impact to the sanitary sewers by:
  —allowing as much water to evaporate as possible,
  —allowing particles to settle, and
  —filtering the water before discharging it.
- Do not clean brushes or rinse paint containers in a street, gutter, storm drain, or the Arroyo.

# APPENDIX E-2

BMP Presentation Outline

**BMP Training**
**Facilities and Engineering**

I. OVERVIEW

**Here to talk to you about rain and how we can keep the rain that leaves the site, clean.**

**Before we get too embroiled in the specifics, I want to go over briefly why we are doing this, the reasoning.**

**As most of you know, there are two ways water leaves the site ...**

A. two drainage systems

1. storm does not get treated

- **conveys rain off the site (control flooding)**
- **system includes (inlets, catch basins, channels, etc.)**
- **in Livermore, rain leaves the site, goes through the city, to Alameda Creek and to the Bay**
- **NO TREATMENT**
- **only rain is allowed in the storm drains**

2. sanitary gets treated

- **conveys everything else other than rain**
- **system includes indoor drains, sinks, bathrooms, etc.**
- **leaves site, through the city, to the treatment plant and to the Bay**

**Illicit connections are illegal.**

**So how we conduct our business can affect the quality of our water.**
- **what gets left on the ground that gets washed away by rain**
- **when we wash tools or equipment by a drain w/o checking to make sure it goes to the sanitary**

B. **The purpose of this training is to go over the ways that we can minimize the pollutants that can get washed away with rainwater**

C. **reasons** for doing this

1. **obvious, we care about the water we live and play around**

2. Federal, state, city agencies are requiring us to do so

   a. **believe it or not, we are under permit to make sure the rain that leaves the site is clean**

   b. **luckily, we have some measure of flexibility since the regulators know there is no one way to keep rain clean**

D. **approach**

1. **not to re-invent anything, want to take credit for things we do already that also helps clean the rain runoff** so a lot of what we're going to say, you do already because it makes sense

2. **start with the practices we do already and modify or change the things that are left over**

3. **we have to realize that some things/practices are going to have to be modified or changed**

II. BMPs

**What we've done is to put together the activities for preventing SW pollution on site into brochures. These practices are called BMPs.**

A. **BMPs are just a fancy name for describing what we do to keep the rain clean.**

1. **categorized** the BMPs into activities:
   a. construction
   b. vehicle and equipment maintenance
   c. material handling and storage
   d. site and building maintenance

2. **This talk is tailored to your specific activities. You should be aware of the others should your job duties change.**

B. objectives of the BMPs - **All the BMPs are driven by two principles**

1. **keep pollutants from coming into contact with rain and being transported as runoff to storm water inlets and the Arroyo**
2. **keep pollutants from being dumped, poured, or spilled into storm water inlets or the Arroyo**

C (go over the specific BMPs)

**CONSTRUCTION**
General Practices
Material Storage and Handling
Material Disposal
Paving and other Concrete/Asphalt Operations
Trenching, Excavation, and other Earthwork

**VEHICLE AND EQUIPMENT MAINTENANCE**
Maintenance and Repair
Storage
Washing/Cleaning

**MATERIAL HANDLING AND STORAGE**
Material Handling/Transfer
Container Storage
Open Storage
Waste Handling

**SITE AND BUILDING MAINTENANCE**
Site Maintenance
Building Maintenance

III. Closing - Who to call if you have more questions

# APPENDIX E-3

BMP Contract Language

Construction contracts. See what you think and give me a call.
Craig x3589

SECTION 01560

TEMPORARY CONTROLS

PART 1 GENERAL

1.01 CONSTRUCTION CLEANING

A. The Contractor shall keep all debris clear from work areas, passageways, stairs, and in and around buildings or other structures by continuous policing of all work areas.

B. Comply with regulatory requirements and anti-pollution ordinances during conduct of cleaning and disposal operations.

C. Provide on-site containers for the collection of waste materials, debris, and rubbish.

D. Remove waste materials, debris, and rubbish from the site periodically, and dispose of at legal disposal areas away from the site.

E. The SDR may, at any time during construction, request a general clean-up of site as part of work under this section.

F. Cleaning for specific products or work is specified in the appropriate individual specification sections.

1.02 DUST CONTROL

A. Cooperate with Sandia if dust becomes objectionable. Provide periodic dust control in the form of site watering or whatever other means are necessary to control the problem.

1.03 NOISE CONTROL

A. Cooperate with Sandia if an ongoing construction activity becomes objectionable by its longevity, or by overlapping into an activity started later by Sandia. It is understood and agreed that both parties shall cooperate so that neither will be unduly inconvenienced by this requirement.

B. Comply with requirements specified in the various sections.

1.04 POLLUTION CONTROL

A. Burning of refuse, debris, or other materials will not be permitted on the site.

B. Comply with regulatory requirements and anti-pollution ordinances during the duration of construction and disposal operations.

1.05 STORM WATER POLLUTION PREVENTION

A. Nonhazardous material waste management

1. Material, delivery, storage, and waste collection areas shall be located near the construction site but away from catch basins, gutters, drainage courses, and creeks.

2. Granular material shall be stored at least ten (10) feet from catch basins and curb returns, and shall not be allowed to enter the storm drains or creeks. During wet weather the SDR may require that all granular material be covered and surrounded with sand bags.

3. At the end of each working day or as directed by the SDR, the Contractor shall clean and sweep the roadways and on-site paved areas of all materials attributed to or involved with the work. Water shall not be used to flush down streets in lieu of street sweeping.

B. Spill prevention and control

1. Keep a stockpile of spill cleanup materials, such as rags or absorbents, readily accessible on-site.

2. Immediately contain and prevent leaks and spills from entering the storm drains, and properly clean-up and dispose of the waste and clean-up materials. In addition, if the waste is hazardous, the SDR shall be notified immediately.

C. Activity specific requirements

1. All water from dewatering operations shall be routed through a control measure, such as a sediment trap, sediment basin, or Baker tank to remove settleable solids prior to discharge to the storm drain system.

2. During saw cutting, all catch basins shall be covered or barricaded using control measures, such as filter fabric, straw bales, sand bags, or fine gravel dams to keep slurry out of the storm drain system. If slurry accidentally enters a catch basin, it shall be removed immediately.

3. Concrete trucks and equipment shall not be washed out into gutters, storm drains, or creeks. Washout shall occur off-site or on-site in an area where the water will flow onto dirt or into a temporary pit in a dirt area.

1.06 SURFACE WATER CONTROL

A. Do not permit surface or subsurface water to accumulate in or about the premises and vicinity thereof. Should such conditions be encountered or develop, control the water, and suitably dispose of it by means of temporary pumps, piping, drainage lines, troughs, ditches, dams, and other methods, as approved.

B. Maintain the existing building in a weathertight condition throughout construction. Repair damage caused by construction operations. Take precautions necessary to protect the building and occupants during the construction period.

PART 2 PRODUCTS - Not Used

PART 3 EXECUTION - Not Used

END OF SECTION

# APPENDIX F

Illicit Connections

Table [redacted]. Activities Conducted to Identify Baseline Information on Non-Storm Water Discharges

| Bldg. No. | Plan Review Notes | Description of Field Investigation Conducted | Potential Connections | Possible Remedial Actions Being Investigated |
|---|---|---|---|---|
| 904 | Plans do not show sanitary sewer lines in vicinity. | Inspected building exterior for drains. Inspected catch basins for flow. | None identified. | |
| 905 | Rain water leaders (RWL) leave the building from the north and south. Need to determine where these pass through the building. | Checked service area for floor drains. Checked catch basins (CBs) north and south of building for flow. | None identified. | |
| 906 | RWLs are indicated, but need to field-check if these are inside or outside the building. | Checked for drains extending from the building. Conducted a visual inspection of building exterior to determine locations of RWLs and any potential cross-connections. Ran water to drain in outside covered area. Checked CBs on west and east sides of building for flow. Inspected mezzanine area. | Floor drains in mezzanine mechanical area seem to be connected to rain water leaders. Potential flows include blow-off from heating hot water and chilled water systems. | Set new overflow point and drain to sanitary sewer.<br><br>Confirm drainage, by dye testing if necessary. Redirect blow-off blows to sanitary sewer. Consider sealing drains throughout mezzanine. |
| 907 | Plans show a plugged storm line west of building. Check to insure that this line is indeed plugged. Plans show no sanitary sewer lines. Plans show 4 rain-water leaders (RWLs). | Checked if any floor drains or sinks were connected to RWLs. Inspected catch basins for flow. Checked routing for cooling tower drain. | Splash from cooling tower drips to catch basin. Overflow of shallow tower catchment would drain to catch basin. | Set new overflow point and drain to sanitary sewer. |
| 910 | Plan shows a RWL from the northern portion of the roof. | Checked for drains extending from building. Noted drainage from subsurface equipment areas is pumped to sanitary sewer. Inspected | Floor drains in penthouse mechanical area may drain to rain water leaders.<br><br>Two PVC lines extend from | Confirm drainage by dye testing. Redirect blow-off flows to sanitary sewer. Consider sealing drains throughout penthouse. |

| Bldg. No. | Plan Review Notes | Description of Field Investigation Conducted | Potential Connections | Possible Remedial Actions Being Investigated |
|---|---|---|---|---|
| | | penthouse mechanical area. | inside the solvent recovery facility penthouse down to the rooftop. | Check with line organization regarding nature of these flows. Consider collecting discharge in a container and removing periodically or, if volumes are large, provide a sanitary connection. |
| 911 | Area drains are located south of building. | Confirmed no flows are entering area drains from outside equipment. Checked CBs SE and SW of the building and in "B" Street. | None identified. | |
| 912 | Plans show no RWLs. Storm drain inlet drains are located in center patio. Storm drains in "B" Street are poorly documented. | Checked for flow at outfall to the East Avenue ditch and in "B" Street. | None identified. | |
| 913 | Building has no RWLs. | Checked direction of drains extending from building. Checked CB at southwest corner of building. | At the SW corner of building, a 3/4" pipe penetrates the building wall and extends to the ground.<br><br>On south side of building, near the eyewash station, 2 pipes emerge from the building wall. | Check with line organization. Cap or remove pipe.<br><br>Check with line organization. Cap or remove pipe. |
| 914 | No storm drain lines are adjacent to this building. | Checked for exterior drains extending from building. | None identified. | |
| 915 | Plans show two removed sanitary lines. No other sanitary or storm drain | Checked containment of cooling tower at former building site. | None identified. | |

| Bldg. No. | Plan Review Notes | Description of Field Investigation Conducted | Potential Connections | Possible Remedial Actions Being Investigated |
|---|---|---|---|---|
| | connections are shown. | | | |
| 916 | No RWLs or adjacent storm drains. | Checked for exterior drains extending from building. | 4" drains exit on north and south sides of building. These may be RWLs. | Arrange with line organization to check interior of building. |
| 918 | No RWLs or adjacent storm drains. | Checked for exterior drains extending from building. | None identified. | |
| 920 | No connections to storm drains shown. | Checked for equipment drains extending from the building. | None identified. | |
| 921 | No connections to storm drains shown. | Checked for equipment drains extending from the building. | None identified. | |
| 922 | No connections to storm drains shown. | Checked for equipment drains extending from building. | None identified. | |
| 927 | No connections to storm drains shown. | Checked CBs NE and south of building. Checked for equipment drains extending from building. | None identified. | |
| 928 | No sanitary or storm lines in the vicinity. | Checked for exterior drain lines. | A 2" drain exits building onto loading dock. Adjacent wall is stained.<br><br>In catch basins on east and west sides of building, a 1"-2" hole enters catch basin from building side. No evidence of dry-weather flow. | Plug this drain. Determine source of drain.<br><br>Note these locations for future monitoring and follow-up. |
| 961 | No sanitary or storm lines in the vicinity. | Checked for exterior drain lines. | None identified. | |
| 963 | No sanitary or storm lines in the vicinity. | Checked for exterior drain lines. | None identified. | |
| 965 | No sanitary or storm lines in the vicinity. | Checked for exterior drain lines. | None identified. | |

| Bldg. No. | Plan Review Notes | Description of Field Investigation Conducted | Potential Connections | Possible Remedial Actions Being Investigated |
|---|---|---|---|---|
| 966 | No sanitary or storm lines in the vicinity. | Checked for exterior drain lines. | None identified. | |
| 967 | No sanitary or storm lines in the vicinity. | Checked for exterior drain lines. | None identified. | |
| 968 | No sanitary or storm lines in the vicinity. | Checked for exterior drain lines. | None identified. | |
| 969 | No sanitary or storm lines in the vicinity. | Checked for exterior drain lines. | None identified. | |
| 977 | (None) | Checked for exterior drains lines. | Basin at SW corner had ponded water. (Upstream basis was dry.) | Confirm source of ponded water is groundwater. |

*EOA, INC.* *MEMORANDUM*

TO: Janet Harris, Sandia, California (8644)

FROM: Kristin Kerr and Lily Sanchez

DATE: May 8, 1995

SUBJECT: Proposed Plan for Eliminating Illicit Connections to the Storm Drain

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Sandia/CA is required under the California General Industrial Activities Storm Water NPDES permit to certify no illicit connections exist on-site. Non-storm water could potentially reach the storm drain system through physical connections between the storm drain and sanitary sewer systems called illicit connections. To be able to fulfill this requirement, Sandia/CA has, and will continue to conduct annual site inspections to identify potential connections. Based on past inspections summarized in the Annual Report for Storm Water Discharges Associated with Industrial Activities (1993-1994), there are presently eight areas with potential for illicit connections and are the focus of this memo. This memo proposes a strategy for verifying if any illicit connections at the eight target areas exist. The following describes the investigations EOA staff recently conducted with assistance from Sandia personnel on the target areas. This memo also describes alternatives for verifying potential connections where recent investigations were inconclusive. As illicit connections are identified, if any, EOA will assist Sandia with developing appropriate methods to effectively eliminate any non-storm water from discharging into the storm drain system.

It is important to note that Sandia/CA continues to conduct searches for any potential connections that may have been missed in past inspections and is presently setting up a system to verify and document that new drains are properly connected. Activities concluded under other Sandia/CA programs provide the opportunity to continue searching for illicit connections. For example, Sandia/CA is conducting a site wide wastewater survey. This survey collects information on the number and locations of drains, and where they discharge. In conjunction with the wastewater surveys a drain registration program is being developed. This program will track any changes in drain locations or use and any new drains installed. This will ensure any changes or new drains do not become illicit connections. Sandia/CA also conducts annual site inspections. Potential illicit connections evident from the exterior of the buildings will be located during the annual site inspections. Though the focus of this memo is the eight target areas identified during past investigations, it is only one part of Sandia/CA's overall plan to ensure the elimination and prevention of illicit connections.

## BACKGROUND

The potential for illicit connections on the SNL, CA site was initially investigated in September 1993. The findings were reported in the January 1994 Storm Water Pollution Prevention Plan (SWPPP) and in the Annual Report for Storm Water Discharges Associated with Industrial Activities 1993-1994 to the Regional Water Quality Control Board. This preliminary investigation consisted of a piping schematic review, interviews with Facilities Planning Department personnel, site inspections, and dry weather testing (which consisted of running water to building drains during dry weather to inspect for flow in storm drains). The preliminary investigation identified eight areas with potential for illicit connections. The eight areas are located in buildings 906, 907, 910, 913, 916 and 928.

## ELIMINATING ILLICIT CONNECTIONS

Proposed methods for verifying potential illicit connections to the sanitary sewer system in the eight areas were first presented in the SWPPP (January 1994) and Annual Report (1994). The eight areas were targeted because preliminary investigations could not ascertain that there are no illicit connections in these areas. Two traditional methods for identifying cross connections between the storm drain and sanitary sewers are dye testing and smoke testing. The following sections describe the activities conducted to obtain further information on the target areas, and then describe what additional information smoke or dye testing can provide.

### Recent Field Investigations

Field investigations were conducted to collect additional information on the drains in the eight target areas. Whenever possible, these investigations were performed concurrently with lab surveys conducted for the wastewater waste minimization program. Coordinating with the wastewater surveys allowed facilities personnel most familiar with the target area to offer their knowledge and assistance during the investigation.

Field investigations included visually following outdoor pipes and drains located in the target areas to their sources inside the building. These drains were initially identified during the preliminary investigations conducted in September 1993. During recent investigations conducted between November 1994 through May 1995, water was also run into possible source drains when the weather was dry. Observing water flowing at the outdoor storm drain would verify the indoor drain as a source drain. The results of these additional investigations eliminated several suspected illicit connections and decreased the cost for further testing.

Table 1 summarizes the results of the field investigations we recently conducted. Key points include:

- Three of the target areas were eliminated from further testing because the methods described above resulted in reasonable confidence that these areas did nt have illicit connections.

- A remedial action plan has been developed for a verified illicit connection which was identified at building 907. A new overflow point will be set at the cooling tower. A work order has been submitted to Facilities to complete the remedial action.

- No sources of potential flows to the two PVC lines leading from the rooftop lab on Building 910 could be identified. The purpose of the PVC lines are unknown.

- Five potential illicit connections in Buildings 906, two in 910, 916 and 928 will require additional testing before a determination can be made.

- The source of the drain at Building 928 could not be identified by examining plumbing and sewer plans, and testing irrigation drainage with water during a dry period. The possibility of an industrial wastewater connection to the pipe is unlikely since Building 928 consists entirely of offices and a large receiving area for most of the site. The area of the building closest to the suspect drain is a large warehouse area that has no drains indoors. EOA staff will attempt to determine if the suspect drain is connected to RWLs, connected to the fire sprinkler system, or plugged, before conducting any of the additional testing described below.

**Additional Testing Methods**

Cost estimates included below are preliminary and are intended only to assist Sandia/CA decide on an appropriate test method. EOA can assist Sandia/CA refine cost estimates as part of drafting a work plan for the testing.

*Smoke Testing*

Smoke testing involves filling a portion of the storm drain system with smoke during dry weather and tracing the path of the smoke by observing where the smoke discharges. A smoke bomb is released in the storm drain system. An industrial fan is then used to blow the smoke in the direction desired. The appearance of smoke in vent pipes or escaping from sanitary fixtures would indicate a connection between the sanitary sewer and storm drain systems. Both the inside and outside of the building would need to be inspected for the appearance of smoke.

Smoke testing is generally done on a building by building basis. Though smoke testing can sometimes give faster results than dye testing, results may not always be definitive. For example, a sag in a pipe filled with standing water could prevent smoke from passing.

Facilities surrounding the portion of the storm drain system being tested would be notified prior to testing to help identify the appearance of smoke in the facilities, and so as not to cause any alarm. This will also help ensure that facility operations are not disrupted. Since personnel on site could mistake the smoke as the sign of a fire, notification of testing to all on-site personnel (including security and the fire response team) is important.

Because of the amount of coordination and specialized equipment needed for smoke testing, cost estimates assumed that an experienced contractor would perform the actual

smoke testing so that Environmental Operations Department (EOD) staff could focus on coordinating with site personnel. To test the areas described in Table 1, smoke bombs would be placed in storm drains outside the buildings or in the outlet drains of the building identified as a potential illicit connection. Based on telephone conversations with contractors experienced in smoke testing 3,000 feet of storm drains can be tested in one day under optimum conditions, at a rate of approximately $1,500 per day. Estimates described in Table 2 do not use the optimum conditions but allow for the complexity of the Sandia site. In Table 2 the number of days needed to smoke test a building is estimated from the number of feet of storm drains located outside the building, the location of the storm drains (separate drains located around the building versus one length of drain), and the size and number of buildings in the surrounding area that would need to be inspected for smoke.

*Dye Testing*

Dye testing can be used to establish positively if certain facilities or fixtures are connected to the storm water collection system. A dye is introduced into the suspected source drain, or fixture. The storm water and sanitary sewer collection system are then examined for the dye. The dye used would be one approved by the Livermore Water Reclamation Plant (LWRP). A copy of the work plan, should dye testing be conducted, would be sent to the LWRP for notification and approval. Dye testing will also require extensive coordination with the owners of the potential source drains, to ensure that our presence in their area or the introduction of dye does not interfere with their activities.

Dye testing is generally done on a drain by drain basis. Dye testing will tell us where a specific drain discharges but will not identify other source drains. For example, a dye introduced into drain A discharges into drain B if the dye is observed at drain B. However, dye testing will not tell us what other drains discharge into drain B.

Dye testing of the 14 drains identified in two of the target areas can be performed in-house by Sandia/CA Environmental Operations and Facilities personnel. The cost estimates described in Table 3 includes the cost of the dye and two Facilities/Maintenance personnel needed in addition to Environmental Operations staff. Facilities/Maintenance is needed to provide access to the sanitary and storm drain systems and assist in visually locating the dye. Based on telephone conversations with contractors experienced in dye testing, about 18 drains can be tested in one day. Cost estimates are calculated at $75 per hour for each Facilities/Maintenance personnel.

Cost estimates for a contractor to conduct the dye testing is also described in Table 3. Note that one Facilities/Maintenance personnel will still be necessary to provide access to the sanitary and storm drain systems and Environmental Operations staff will still be necessary to coordinate the dye testing activity. The number of days needed to test the building assumes the entire building will be tested (except for offices) and that there are five drains per room, unless drain number information is available from the wastewater survey. Contractor costs are estimated at approximately $135 per hour.

The cost of the additional testing methods prohibits Sandia/CA from performing a site wide test for improper connections to the storm drain. We understand that Sandia intends to test the target areas as funding becomes available. Table 2 and 3 reflect Sandia's priority for testing as indicated to us, with the highest priority listed first. Also note that, for each target area, the drains can be further prioritized based on the age of the facility and the reliability of available plumbing plans.

Tables 2 and 3 list the cost estimates for the two testing methods and include an approximation of the time it will take to conduct the testing. Though the type of testing selected will depend largely on time schedule and budget, it is important to note the advantages and disadvantages of each testing method. The following summarizes key points that should be kept in mind as Sandia makes a decision.

- Smoke testing will allow one to find most, if not all, of the source drains provided that there are no obstructions (such as standing water) in the path of the smoke to prevent it from passing.

- Dye testing will confirm where a particular drain discharges but does not indicate what other drains may also discharge into the system.

- Smoke testing will take less money for Environmental Operations to implement in staff and contractor time.

- Dye testing is less intrusive of daily activity on site and visually less disagreeable to casual observers than smoke testing. As indicated previously, all on site personnel must be made aware of the testing so as not to cause undue alarm.

- Dye testing would also help identify which drains are connected to the Liquid Effluent Control Systems (LECS).

- There is also the option of using a combination of dye and smoke testing depending on the information being sought in the target area. Given the conditions described in Table 1 for the areas that require additional testing, the following may be appropriate.

    - Conduct dye testing for the 14 drains identified in Buildings 906/910. The additional information obtained from the wastewater survey has sufficiently narrowed the scope of the dye testing to a manageable level of effort.
    - Conduct dye testing on the floor drains in the mezzanine mechanical area of Building 906. The objective is to confirm that the floor drains discharge to the sanitary sewers. If dye is observed in the storm drains, only then would smoke testing be necessary to identify other drains discharge into the line. No further action would be needed if connection to the sanitary sewer is confirmed.

- Conduct dye testing on the floor drains in the penthouse mechanical area of Building 910. Again, the objective is to confirm that the floor drains discharge to the sanitary sewers. If dye is observed in the storm drains, only then would smoke testing be necessary to identify if other drains discharge into the line. No further action would be needed if connection to the sanitary sewer is confirmed.
- If the purpose of the two PVC lines that extend onto the rooftop of Building 910 cannot be identified, it may be necessary to smoke test the area to identify what other lines discharge into the PVC lines. Because the drains discharge to the roof, any flow would eventually discharge to the storm drains through the rain water leaders. Any wastewater that flows through these PVC lines would need to be eliminated.
- Smoke test the two drains exiting 916 to identify all possible source drains in addition to the rainwater leaders identified in the field investigation.
- Smoke test the two inch drain exiting the north side of Building 928, as possible (the size of the drain may prevent inserting a smoke bomb into the pipe). If it is not possible to smoke test the drain, conduct dye testing on the entire building. As indicated in Table 3, there is an estimated 5 drains in the building and this could be tested by SNL/CA personnel.

Some engineering effort will be required for preparing a more detailed work plan to conduct the testing and for eliminating illicit connections identified by the testing, if any. Alternatives for eliminating illicit connections if any are identified include sealing drains, redirecting flows to the sanitary sewer, capping or removing discharge pipe, and collecting discharge in a container and removing periodically (if discharge is small). Table 1 also includes possible remedial actions if potential discharges are confirmed. EOA can help develop cost estimates for eliminating illicit connections which are identified, depending on the type and amount of the discharge. Any resulting connections to the sanitary sewer system should be submitted to the LWRP for notification, review, and approval.

**TABLE 1. Results from Recent Field Investigations and Proposed Actions**

| Building | Potential Connection | Recent Field Investigation Activities | Conclusions from Recent Field Investigation | Proposed Remedial Actions |
|---|---|---|---|---|
| 906 | Floor drains in the mezzanine mechanical area seem to be connected to RWLs. Potential flows include blow-off from hot water and chilled water systems. | Plans were not available to show expected connection to the sanitary sewer. No visible inspection was possible. | None | Perform additional testing on six drains in mezzanine area.<br><br>If drains are not connected to the sanitary sewer, redirect blow-off flows to sanitary and seal drains throughout the mezzanine. (1) |
| 907 | Splash from the cooling tower drips to the catch basin. Overflow of the shallow tower catchment would also drain to the catch basin. | Visual inspection confirmed previous investigation. | Potential non-storm water discharge is verified. | Set new overflow point and drain to sanitary. |
| 910 | Floor drains in the penthouse mechanical area may drain to RWLs. | Plans obtained from Facilities did not clearly show expected connection to the sanitary sewer. | None | Perform additional testing on eight drains in mezzanine area.<br><br>If drains are not connected to the sanitary sewer, redirect flows to sanitary and seal drains throughout the penthouse. (1) |

| Building | Potential Connection | Recent Field Investigation Activities | Conclusions from Recent Field Investigation | Proposed Remedial Actions |
|---|---|---|---|---|
| 910 | Two PVC lines extend from inside the solvent recovery facility in the penthouse down to the rooftop. | Visual inspection did not reveal purpose of PVC lines or any sources of discharge. | None | Identify purpose of PVC lines by interviewing owner of facilities. Conduct additional testing if interviews are inconclusive.<br><br>Eliminate or redirect any potential flow, as appropriate. (1) |
| 913 | At the southwest corner of the building, a 3/4 inch pipe penetrates the building wall and extends to the ground. | The pipe was visually traced into Room 124C (now empty but formerly the Polymer Lab) where it is connected to the fire sprinkler system. | City ordinance allows fire fighting flows to the storm drain, if properly managed. | None |
| 913 | On the south side of the building, near the eyewash stations, two pipes emerge from the building wall. | Sandia/CA Fire Protection identified the pipes as part of the fire sprinkler system. EOA and EOD staff confirmed visually. | City ordinance allows fire fighting flows to the storm drain, if properly managed. | None (Fire Protection indicated they intend to label the pipes to prevent confusion in future.) |

| Building | Potential Connection | Recent Field Investigation Activities | Conclusions from Recent Field Investigation | Proposed Remedial Actions |
|---|---|---|---|---|
| 916 | Four inch drains exit on the north and south sides of the building. | The source drains were verified as RWLs by running water through the roof drain. | Source drain identified, insufficient information to conclude there are no potential illicit connections | Perform additional testing on building.<br><br>Eliminate or redirect any potential flow, as appropriate. (1) |
| 928 | A two inch drain exits the building onto the loading dock on the north side of the building. | Nearby irrigation drains were tested with running water as potential source drains. Testing was inconclusive. | None | Perform additional testing on building.<br><br>Eliminate or redirect any potential flow, as appropriate. (1) |

(1) Building and fire code requirements should be checked before sealing any drains.nal testing on building.

Eliminate or redirect any potential flow, as appropriate. (1)

(1) Building and fire code requirements should be checked before sealing any drains.

TABLE 2. Cost Estimates for Smoke Testing

| Building | Storm Drain Lines (feet) | Days of Testing (1) | Total Cost Estimate (2) |
|---|---|---|---|
| 906/910 (3) | 2,480 | 3 days | $6,500 |
| 906 (4) | 1,250 | 2 days | $4,500 |
| 910 (5) | 1,230 and 2 PVC pipe outlets | 2 days | $4,000 |
| 928 | 1 pipe outlet | < 1 day | $2,000 |
| 916 | 2 pipe outlets | 1 day | $2,500 |

(1) The number of days needed for smoke testing is estimated from the number of feet of storm drains located outside the building, the location of the storm drains (separate drains located outside the building versus one length of drain), and the size and number of buildings in the surrounding area that would need to be inspected.

(2) Contractor rate is calculated at $1,500 per day. Since access to underground portions of the storm drain system is likely, estimate also includes $600 per day for one Facilities personnel. Cost estimated rounded up to the nearest $500.

(3) Cost estimate includes only the penthouse mechanical area for Building 910.

(4) Smoke testing needed if dye testing shows discharge to the storm drain system.

(5) Cost estimate includes both target areas identified in Building 910 described in Table 1.

TABLE 3. **Cost Estimates for Dye Testing**

| Building | No. Potential Source Drains | Days of Testing | Sandia/CA Costs (1) | Contractor Cost (2) |
|---|---|---|---|---|
| 906/910 (3) | 14 (4) | 0.75 days | $500 | - |
| 906 | 246 | 14 days | - | $24,000 |
| 910 (5) | 250 | 14 days | - | $24,000 |
| 928 (6) | 5 | 0.3 days | $250 | - |
| 916 | 155 | 9 | | $15,500 |

(1) Sandia/CA Facilities rate is calculated at $75 per hour per person. It is assumed one Facilities person would be needed.

(2) Contractor rate is estimated at $135 per hour total. Since access to underground portions of the storm drain system is likely, estimate also includes $600 per day for one Facilities personnel.

(3) Cost estimate includes only the penthouse mechanical area for Building 910.

(4) Drains were identified during recent field investigations.

(5) Estimate assumes the entire building would be tested.

(6) The number of drains to be tested does not include roof drains which may be the source drains. The roof drains can be tested with running water.

**TO:** Trish Larson/Janet Harris

**FROM:** Kristin Kerr

**DATE:** September 11, 1995

**SUBJECT:** Results of Dye and Water Testing

In response to SNL/CA storm water permit requirement, EOA staff assisted Environmental Operations Department (EOD) staff perform testing on drains identified as possible illicit connections. These drains were identified during previous investigations described in the memo *Proposed Plan for Eliminating Illicit Connections to the Storm Drain* (EOA, May 8, 1995). Testing was also performed on other drains throughout the site, identified by EOD, to determine if the drains discharged to the LECS tanks or directly to the site's main sanitary sewer.

Table 1 summarizes the drains that were tested and the results of the testing. A general description of the procedures used follows. The City of Livermore Water Reclamation Plant (LWRP) was informed in advance when dye[1] was used for testing drains. A description of the test activities conducted for groups of drains is summarized in Table 2.

**Table 1. Testing Results**

| Building | Drains Tested | Results |
|---|---|---|
| 906 | 11 floor drains in the mezzanine mechanical area | drains discharge to storm drain system |
| 907 | 1 floor drain in mechanical room | drain discharges to 906 LECS |
| 910 | 8 floor drains in the penthouse mechanical area | drains discharge to storm drain system |
| 913 | 1 janitor sink near Rm 106, 1 janitor sink near Rm 151 | sink drains discharge directly to site's main sanitary sewer |
| 913 | Room 128D 1 hood drain | drain in hood discharges to 913 LECS |
| 913-7 | floor drain on east side of equipment shed | floor drain discharges directly to site's main sanitary sewer |

[1] The dye used for testing was blue and red Norlab dye. The dye was provided by the LWRP.

| Building | Drains Tested | Results |
|---|---|---|
| 916 | Room 106 janitor sink and janitor sink across from Room 162 | sink drains discharge directly to site's main sanitary sewer |
| 940 (IMTL) | janitor sink in north east entrance lobby | sink drain discharges directly to site's main sanitary sewer |
| 941 (IMTL) | janitor sink to the left of Rm 1169 | sink drain discharges directly to site's main sanitary sewer |
| 941 (IMTL) | Room 1150 janitor sink | sink drain discharges to IMTL LECS |
| 942 (IMTL) | Room 1307 janitor sink | sink drain discharges to IMTL LECS |

General Procedures for Testing

The EOA and EOD team tested drains in building 906 mezzanine mechanical area and building 910 penthouse mechanical area for illicit connections. Team members were placed at storm drain catch basins and at nearby sanitary sewer manholes chosen by examining site drawings, to watch for water and/or dye.

Because testing was conducted during dry weather, it was not always necessary to use dye during the testing. Where team members anticipated a drain discharges to the storm drains, only water was used since the appearance of any water in the presently dry storm drains was sufficient to verify the drainage path. Dye was used when team members anticipated discharge to the sanitary sewers or when no water was observed in the storm drains.

Whenever test water was observed in a catch basin, testing did not continue till after flow in the catch basin ceased. This allowed team members to distinguish flow from the different drains testing in the same building or area.

See Figure 1 and 2 for the location of the catch basins that receive flow from the floor drains in building 906 and 910 respectively. During testing, any equipment discharging to the drains was noted.

All other drains listed in Table 1 were tested to determine if the drains discharged to the LECS tanks or directly to the site's main sanitary sewer. Team members were placed at the corresponding LECS tank and nearby sanitary sewer manholes chosen by examining site drawings, to watch for dye. Dye and water were discharged to the drains. Once dye and water were discharged to a drain, testing did not continue to the next drain until the flow path of the first drain was confirmed. This allowed team members to distinguish the source of the dye from the different drains testing in the same building or area.

## Table 2. Testing Activities

| Drain Location | Testing Date | Testing Activities | Observations |
|---|---|---|---|
| 906 mezzanine mechanical area floor drains | June 22, 1995 | Both storm drains and sanitary sewers were monitored. Catch basins were initially dry. Water and dye were sent down two drains at separate times. Sandbags were placed in the East Avenue drainage ditch to prevent the dye and water from entering the Arroyo. | Water and dye were observed in the catch basin (see Figure 1 for which catch basins received flow from drains). All test water was effectively contained with the sandbags and evaporated. |
| | June 28, 1995 | No dye was used for testing. The catch basins were initially damp but it was possible to identify the test water. Water was discharged to a floor drain and the flow path was confirmed by flow observed in the catch basin. | Eight drains were confirmed to flow to the storm drain system (see Figure 1 for which catch basins received flow from drains). One drain was observed to be clogged when the test water began to pond over the drain; however, slight flow was observed in the catch basin and since all the other floor drains in the area drain to the storm drain system, the clogged floor drain can also be designated as discharging to the storm drain system with a reasonable degree of confidence. |
| 907 mechanical room floor drain | July 14, 1995 | Dye and water were discharged to one drain. | Dye was observed at the 906 LECS. Dye was not observed at the sanitary sewer manhole north of the CRF. |
| 910 penthouse mechanical area floor drains | June 22, 28 and 29, 1995 | Before testing, ponded (irrigation) water was observed in the catch basins being monitored. Eight drains were tested using only water. | It was possible to distinguish test flow in the catch basin (and it was possible to hear the water approaching through the pipe to the catch basin). All drains discharged to the catch basin (see Figure 2 for the catch basin that received flow from floor drains). |

| Drain Location | Testing Date | Testing Activities | Observations |
|---|---|---|---|
| 913 janitor sinks | June 15, 1995 | Dye and water were discharged to two janitor sinks. | Dye discharged to the janitor sink near room 151 was observed at the sanitary sewer manhole located at the northeast corner of building 913. Dye discharged to the janitor sink near room 106 was observed at the southwest corner of B Street and 2nd Street. Dye was not observed at the LECS tank. |
| 913 room 128D | June 15, 1995 | Dye and water were discharged to one (representative drain) of several drains in the hood. It was assumed that all the drains would have the same discharge path. | Dye was observed at the LECS more than 20 minutes after being discharged to the drain. Dye was not observed at the sanitary sewer manhole located near the southwest corner of the B Street and Second Street intersection. |
| 913-7 Equipment room | June 15, 1995 | Dye and water were discharged to a floor drain on the east side of the equipment shed. | Dye was observed in the sanitary sewer manhole located near the southwest corner of B Street and Second Street. Dye was not observed at the LECS. |
| 916 janitor sinks | June 15 and July 14, 1995 | Dye and water were discharged to the janitor sinks. | Dye discharged to the janitor sink near room 106 was observed in the sanitary sewer manhole located on the northwest corner of B Street ant Third Street. Dye discharged to the janitor sink across from room 162 was observed at the sanitary sewer manhole located on the northwest corner of A Street and Third Street. No dye was observed at the LECS. |

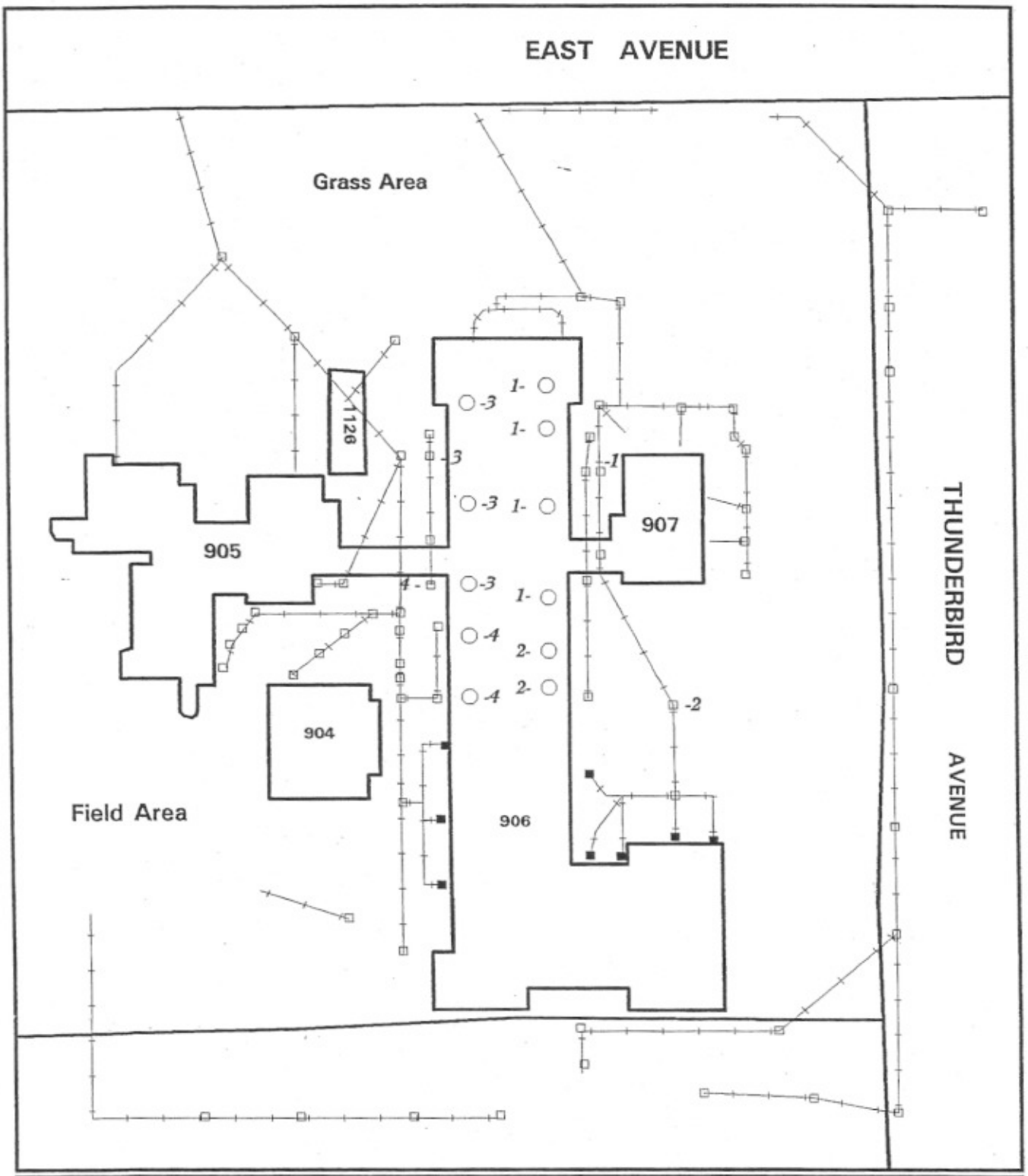
| Drain Location | Testing Date | Testing Activities | Observations |
|---|---|---|---|
| =IMTL janitor sinks | June 15, 1995 | Dye and water were discharged to the janitor sink drains in four locations at the IMTL. Team members were placed at the IMTL LECS and at a sanitary sewer manhole located in the grass courtyard south of building 942. | The dye took approximately 10 minutes to reach the sanitary sewer manhole of the LECS. Dye was observed at the sanitary sewer manhole for the janitor sink drains located in the janitor's closet in the lobby of building 940 and the janitor's closet to the left of room 1169 in building 941. Dye was detected at the IMTL LECS for the janitor sink drains located in room 1150 building 941 and room 1307 building 942. |

Additional Observations

The drain testing in building 906 mezzanine mechanical area and building 910 penthouse mechanical area confirmed the drains in these areas were connected to the storm drain. A decision must be made whether to redirect any flow to the sanitary sewer, replumb the drains to the sanitary sewer, seal the drains, or not make any modifications. This decision will be based on a review of the regulations and the characterization of the flow to the drains. A description of the equipment discharging to these drains observed during the testing follows.

In building 906 five drains had 1/4 inch copper piping from water condensate collection trays under air ducts discharging to the drains. Two drains had 1/4 inch copper piping directly from air handlers. A pipe from an automatic electric water heater discharged to one drain. Chilled water supply, heat recovery water supply and return pipes with valves are located near drains. The valves are in the closed position but can be opened to release water.

In building 910 every drain had copper piping discharging water condensate from air handlers. Larger pipes from humidifiers also lead to the drains. There are chilled water supply pipes with valves located over drains. The valves are in the closed position but can be opened to release water.




## LEGEND

- CATCH BASIN
- AREA DRAIN
- STORM DRAIN
- DITCH
- INTERNAL BUILDING DRAIN

N

APPROX. SCALE

0' 100'

Figure

1

July 1995

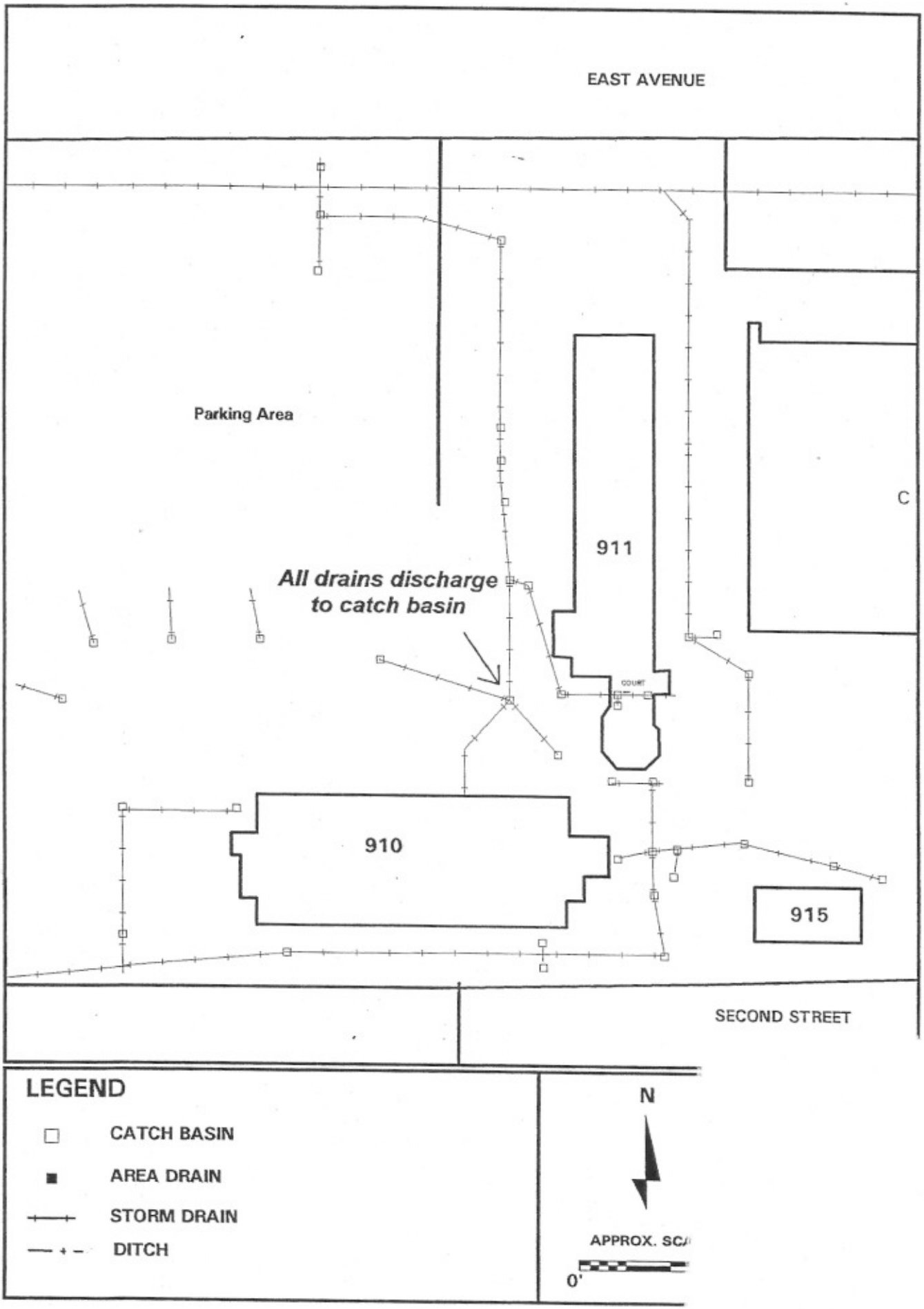

EAST AVENUE
Parking Area
911
All drains discharge
to catch basin
COURT
C
910
915
SECOND STREET
LEGEND
CATCH BASIN
AREA DRAIN
STORM DRAIN
DITCH
N
APPROX. SC
0'

**Table F-1 Follow-up Investigations to Identify Illicit Connections During 1994/1995**

| Building | Results from Investigations | Conclusions |
|---|---|---|
| 906 | 11 floor drains in the mezzanine mechanical area discharge to the storm drains. The only discharges are drips of condensate from air handlers. A small amount of chiller water could also be released from check valves onto the floor. | Discharge flows are very small and contain little or no pollutants. The mezzanine mechanical area has no material storage or handling. The only activity conducted in the area is maintenance on the building equipment. There are no activities that could result in a spill. There is no impact to the storm drain system. |
| 907 | Splash from the cooling tower drips to the catch basin. Overflow of the shallow tower catchment would also drain to the catch basin. | A splash guard was installed during facility upgrades and there is no significant discharge (only minimal drips) from the cooling tower to the storm drain. |
| 910 | 8 floor drains in the penthouse mechanical area discharge to the storm drains. The only discharges are drips of condensate from air handlers. A small amount of chiller water could also be released from check valves onto the floor. | Discharge flows are very small and contain little or no pollutants. The mezzanine mechanical area has no material storage or handling. The only activity conducted in the area is maintenance on the building equipment. There are no activities that could result in a spill. There is no impact to the storm drain system. |
| 910 | Two PVC lines extending from inside the solvent recovery facility discharge de-ionized water and municipal supply water during emergencies to release pressure. The water discharges to the roof and eventually the storm drains. | The de-ionized water and municipal supply water contain no pollutants. In addition, discharges would only occur during emergency situations. There is no impact to the storm drain system. |
| 913 | At the southwest corner of the building, a 3/4 inch pipe penetrates the building wall and extends to the ground. The pipe was visually traced into room 124C (now empty but formerly the Polymer Lab) where it is connected to the fire sprinkler system. | Fire fighting flows are authorized by the general permit. Building 913 was removed in September 2000. |
| 913 | On the south side of the building, near the eyewash stations, two pipes emerge from the building wall. Fire Protection identified the pipes as part of the fire sprinkler system. | Fire fighting flows are authorized by the general permit. Building 913 was removed in September 2000. |
| 916 | Four inch drains exiting the north and south sides of the building are rain water leaders (RWLs). | There is little potential for cross connections to the RWLs. The area surrounding the building is a high traffic area and non-stormwater discharges would be immediately identified. There is no impact to the storm drain system. |
| 928 | 1 two-inch drain exiting the building onto the loading dock is most likely a rain water leader. There are physically no drains in Building 928 except for the restrooms. | There is no potential for cross connection. The loading dock is a high traffic area and non-stormwater discharges would be immediately identified. There is no impact to the storm drain system. |

| Building | Results from Investigations | Conclusions |
|---|---|---|
| 968 | In late December 1995 drain testing was conducted in Building 968 to identify which drains discharged directly into the site's main sanitary sewer system or retained by Liquid Effluent Control System (LECS) tanks first. On December 13, 1995, Environmental Management and Facilities staff tested the cooling tower sump drain and identified that the drain discharged to the arroyo. | The cooling tower was replumbed to the sanitary sewer system. |

# APPENDIX G

## Monitoring Program Components

# APPENDIX G-1

## Operating Procedures for Stormwater Sampling

# OPERATING PROCEDURE (OP)

Sandia/CA
UNCLASSIFIED

**Title:** Operating Procedure for Stormwater Sampling and Analysis

Check One: (Type of OP)
___ Laboratory
Location: Bldg./Rm.

__X__ Activity
Description: Procedure to be followed to sample stormwater.

**Document Release or Change History:**

| Procedure # | Issue | Date | Review Period |
|---|---|---|---|
| OP471091 | A | 11/23/93 | 2 Years |
| OP471091 | B | 5/16/95 | 2 Years |
| OP471091 | C | 10/7/97 | 2 Years |
| OP471091 | D | 10/28/99 | 2 Years |
| OP471091 | E | 10/01 | 2 Years |
| OP471091 | F | 8/29/03 | 2 Years |
| OP471091 | G | 9/13/05 | 2 Years |
| OP471091 | H | 9/20/07 | 2 Years |

Author/Contact Person: Robert Holland

| | Org. | Phone | Date |
|---|---|---|---|
| _____ | 8516 | 4-3755 | |
| Signature | | | |

Reviewer: John Chavarria

| | Org. | Phone | Date |
|---|---|---|---|
| _____ | 8516 | 4-3473 | |
| Signature | | | |

Approved By Owner: Gary Shamber

| | Org. | Phone | Date |
|---|---|---|---|
| _____ | 8516 | 4-2237 | |
| Signature | | | |

Summary of Changes Since Last Issue

1. Changed Environmental Operations Department to Environmental Management Department.

2. Changed Environmental Operations Technician to Environmental Management Technologist.

3. Add a description of the pole and sample jar apparatus available to the sampling team for Location X.

4. Revised the following outfall location designations: removed discharge locations 4 and 5 and added sheet flow description, removed discharge location 8, added discharge location 10A, and added discharge location 15. Updated pictures, maps and forms as needed.

5. Added Field Blank location to Stormwater Sampling Event Form.

6. Deleted question #6 “If Non-Stormwater Discharge Observations, was Industrial Hygiene contacted to review previous quarter inspection records for wastewater issues?” from the Stormwater Tracking Form because IH has not prepared the identified reports for more than two years.

7. Changed automatic sampler to mechanical sampler.

8. Added procedure for Area Velocity Module.

## 1.0 GENERAL

### 1.1 Purpose

This procedure describes the methods for collecting stormwater samples. These activities are conducted in compliance with the California Industrial Activities Stormwater General Permit (Reference 6.1). This procedure also incorporates stormwater sampling at the Navy Landfill (NLF) area for the Environmental Restoration Program according to the Erosion Control Action Plan (Reference 6.2).

### 1.2 Scope

Stormwater sampling activities apply to the Environmental Management Department (EMD), Environmental Monitoring Program.

This procedure describes two methods for collecting samples site-wide. One method is to physically collect the sample (i.e. holding the bottle opening at the collection point so runoff flows into the bottle) while the second method involves using a mechanical sampler to pump runoff from a remote location to where a bottle can be filled. Additional information on SNL/CA's stormwater monitoring program is described in the Stormwater Pollution Prevention Plan (SWPPP; Reference 6.3).

### 1.3 Ownership

This procedure is maintained by the EMD Manager. Comments should be sent to the Environmental Monitoring Program Lead.

## 2.0 RESPONSIBILITIES

**2.1 Environmental Monitoring Program Lead** is responsible for initiating activities to identify the source of non-stormwater and other pollutant discharges. The Environmental Monitoring Program Lead assists the Environmental Management Technologist with the collection of stormwater samples. The Environmental Monitoring Program Lead works with site organizations to prevent pollutant discharge to storm drains.

The Environmental Monitoring Program Lead is responsible for erosion issues at the NLF and evaluation data received from the area velocity module.

**2.2 Environmental Management Technologist** is responsible for notifying the contract laboratory of the potentially large sample load, collecting the stormwater samples, completing the sampling documentation (i.e. stormwater sampling event form, sampling log book, and chain of custody form), and ensuring the documentation is maintained at the records control center and in the stormwater program files in Building 922, Room 105. The technologist is also responsible for informing the Environmental Monitoring Program Lead of 1) any evidence observed while conducting the sampling that may indicate a non-stormwater or other pollutant discharge and 2) any evidence of erosion at the (NLF) area.

## 3.0 DEFINITIONS

**3.1 Mechanical Sampler Stations** are stormwater sampling locations where there is an mechanical sampler. Mechanical sampler stations are Stations G, L, Y, and Z. Sampling locations are shown in Attachment 7.1, pictured in Attachment 7.2 and described in Attachment 7.4.

**3.2 Blank Field Sample** duplicates, as closely as possible, the sample matrix without possible pollutants. It is used to assess background levels of the pollutants and possible contamination of the samples in the field or in the laboratory. Blank samples for stormwater monitoring consists of deionized water. A blank sample is labeled sample location “R”.

**3.3 Drainage Area** is the portion of the site which drains to a storm drain discharge location.

**3.4 Duplicate Sample** is a second routine sample collected from the same sampling location. The duplicate sample is used to check the precision of the collection and analysis. A duplicate sample is labeled sample location "Q".

**3.5 Non-stormwater Discharge** is anything that flows into the storm drain other than rainwater.

**3.6 Physical Sampling Stations** are stormwater sampling locations where the sample must be collected manually (i.e. holding the bottle opening at the collection point so runoff flows into the bottle). Physical sampling stations are Stations A, C, F, K, and X. Sampling locations are shown in Attachment 7.1, pictured in Attachment 7.2 and described in Attachment 7.4.

**3.7 Sampling Event** is when samples are collected from at least one stormwater station during a storm event.

**3.8 Site Stormwater Outfall** is the location where stormwater runoff leaves the facility. The SNL/CA site stormwater outfall is at the northwest corner of the site along the Arroyo Seco, after the drainage ditch along East Avenue discharges into the Arroyo Seco, as it flows beneath East Avenue. The site outfall is illustrated in Attachment 7.3.

**3.9 Stormwater Conveyance System** drains, transports, and discharges stormwater runoff from the site into the Arroyo Seco or East Avenue channel. The stormwater conveyance system includes inlets, storm drain lines, dirt ditches, open concrete channels, outfalls, and Arroyo. All site discharge locations and descriptions of drainage areas and drainage area activities are listed in Attachment 7.4.

**3.10 Storm Drain Discharge Locations** are where an identifiable stream of stormwater runoff discharges into the Arroyo Seco or East Avenue channel through either a pipe or open channel. All storm drain discharge locations are illustrated in Attachment 7.3.

**3.11 Trained Personnel** are personnel who receive EMD training for stormwater sampling once per year before the first storm event.

**3.12 Wet Season** is from October 1 through May 31.

## 4.0 PROCEDURE

### 4.1 Pre-operation Conditions

4.1.1 Stormwater sampling is performed to comply with stormwater monitoring requirements in California's Industrial Activities Stormwater NPDES General Permit (General Permit, Reference 6.1). Sandia National Laboratories, California (SNL/CA) has filed a Notice of Intent (NOI) with the State Water Resources Control Board and must comply with the conditions of the General Permit.

Stormwater sampling at the NLF is performed to characterize potential erosion at the NLF area as required by the Erosion Control Action Plan developed during closure of the NLF site by the Regional Water Quality Control Board.

4.1.2 Stormwater samples are collected at least twice during a wet season: 1) the first storm event of the wet season, if possible and 2) at least one other storm event in the wet season. Each stormwater sampling event is preceded by at least three days of dry weather. Sampling is conducted during normal working hours (7:30 AM through 4:00 PM). Sampling should be initiated within the first hour stormwater is discharged, or as soon as practicable thereafter.

4.1.3 For each set of ten samples that are collected, the technologist randomly selects a sampling location to 1) collect duplicate samples and 2) prepare a field blank as per the Operating Procedure OP471131 Data Validation and Verification for Environmental Operations Department (Reference 6.4). Before commencing field activities, decide which station to collect the duplicate and prepare the field blank. Note on the Stormwater Sampling Event Form (Attachment 7.5) the location where the duplicate and blank are collected.

4.1.4 Before the first storm event, the technician prepares twelve sets of sample bottles (one set per each of the ten sample stations, one duplicate, and one field blank) as listed in Table 1. Each set of sample bottles are stored in coolers that are kept in the hallway cabnets in Building 973. There is one small cooler per sample station. (Note that one sampling station will have three sets of sample bottles).

4.1.5 Before the first storm event of the season, check that each of the mechanical samplers is maintained and prepared as described in Attachment 7.6. This includes the Area Velocity Module at locations Y and Z. Log inspections in the Stormwater Maintenance and Calibration binder.

4.1.6 Place deionized water in the ice chest with the extra set of bottles for a blank field sample.

4.1.7 There must be ***two*** persons per sampling team. Table 2 describes the order of tasks depending on whether there are one or two teams of *trained personnel* available during the storm event. Each team uses an ice chest for transporting bottles to and from sampling locations.

4.1.8 Each team describes their activities on a Stormwater Sampling Event Form (Attachment 7.5) for each stormwater sampling event. Each sampling team completes Box 1 of the form before collecting any samples. This includes the location where the duplicate and blank are collected. Box 2 is completed during the stormwater sampling.

4.1.9 One sample team will also conduct wet weather visual observations for the remaining discharge locations that are not also sampling stations (see OP471090 Operating Procedure for Stormwater Discharge Visual Observations, Reference 6.5).

4.1.10 Technologists performing this procedure shall comply with the requirements for the control of samples in reference OP471310 Administrative Procedure for Control of Samples (Reference 6.6).

4.1.11 As soon as possible, the technologist should contact both the contract laboratory to notify them that they will be receiving a large sample delivery, and the courier service for a later pick up time since sample preparation may cause delays.

4.1.12 Carry a charged battery as a back-up to mechanical samplers.

**4.2 Safety Considerations**

**CAUTION: STORM WEATHER CONDITIONS CAN MAKE ACCESS TO AND FROM SAMPLING POINTS ALONG THE ARROYO SECO VERY HAZARDOUS. UNDER NO CONDITION DO THE TRAINED PERSONNEL ATTEMPT TO COLLECT SAMPLES IF THE PERSONEL JUDGES THAT THE ACCESS ROUTE IS TOO DANGEROUS. TO FURTHER ENSURE THE SAFETY OF PERSONEL, A SAMPLING TEAM MUST ALWAYS CONSIST OF AT LEAST TWO PEOPLE.**

The safety of EMD personel collecting stormwater samples is of primary importance. **NO SAMPLING IS CONDUCTED AFTER DARK**. During the winter months, if a storm begins towards the end of the work day and sampling continues past 4:00 PM, sampling continues only as long as the technologist judges that there is sufficient day light to continue safely.

The sampling team shall **NOT** enter the magazine area to collect a sample at Location N if the lightening indicator is on.

**4.3. Sampling Locations**

The Stormwater Monitoring Program for SNL/CA includes ten sample locations where stormwater is collected at least twice for each wet season. Attachment 7.1 illustrates the sampling locations. Samples at each location are collected as described below.

4.3.1 Location A (physical sampling station): Collect the sample from the storm drain pipe, before it mixes with runoff along East Avenue.

4.3.2 Location C (physical sampling station): Collect the sample from the storm drain pipe, before it discharges into the Arroyo Seco.

4.3.3 Location F (physical sampling station): Collect the sample from the storm drain gutter on the north west corner of B Street and Third Street.

4.3.4 Location G (mechanical sampler station): Collect the sample from the storm drain grate on the north east corner at the credit union. A key is needed to open the mechanical sampler housing unit.

4.3.5 Location K (physical sampling station): Collect the sample from the storm drain channel before it discharges into the Arroyo Seco.

4.3.6 Location L (mechanical sampler station): Collect the sample from the Arroyo Seco west of C Street on the south side of the Arroyo. A key is needed to open the mechanical sampler housing unit.

4.3.7 Location N (physical sampling location): Collect the sample from the storm drain grating at the north end of the bunker area. There is access to the storm drain through a panel in the grate. A well key is needed to open the lock on the grate panel. The sample team will need to use the dedicated teflon dipper rod and beaker to collect the sample. The team must call security for gate access.

4.3.8 Location X (physical sampling station): Collect the sample from the storm drain pipe on the north east corner of the Building 968 area before it discharges into the Arroyo Seco. The sample team may choose to use the pole and sample jar apparatus to reach the discharge pipe.

4.3.9 Location Y (mechanical sampler station): Collect the sample from the Arroyo Seco on the east side of the Thunderbird Lane bridge. A key is needed to open the mechanical sampler housing unit. The team must call security for gate access.

4.3.10 Location Z (mechanical sampler station): Collect the sample from the Arroyo Seco just east of East Avenue. A key is needed to open the mechanical sampler housing unit.

**4.4 Collecting Grab Samples at Physical Sampling Stations**

4.4.1 Note the time of arrival at each sampling location on the Stormwater Sampling Event form.

4.4.2 For locations A, C, F, K, N and X fill the following containers with rainwater for each sample location:

a. 1: 1 liter, plastic bottle for total suspended solids, specific conductivity, pH, and nitrate-nitrite
b. 2: 1 liter, glass wide mouth bottles for oil and grease (total)
c. 1: 500 ml (or 250 ml), plastic bottle for metals: arsenic, cadmium, lead, mercury, silver, zinc, aluminum, iron, magnesium, and selenium
d. 1: 500 ml, plastic bottle for ammonia and chemical oxygen demand (COD)
e. 1: 250 ml, plastic bottle for cyanide
f. 1: 20 ml glass scintillation vial for tritium analysis (filter approximately 4 ml from the 500 ml plastic container)

Replace and tighten the lids on the sample bottles.

4.4.3 Label sample containers with the sample location identification letter, initials of sampler, date, time, sample analyses, and sample number. Sample numbers are designated as ST-MMDDYY where MM is the month, DD is the day, and YY is the final two digits of the year plus the location identification letter (i.e. ST-110107A is a sample collected on November 1, 2007 at station A).

4.4.4 Record all observations in Box 2 of the Stormwater Sampling Event form, which describes anything out of the ordinary and might indicate pollutant discharge with the stormwater. Any evidence of pollutants (such as floating and/or suspended materials, oil, grease, discolored stormwater, odor, etc.) in the stormwater discharge observed by the teams is noted in the "Observations" column of the Sampling Event Form. When describing observations for Location N, include any erosion in the NLF area. Indicate location of erosion on NLF area map. See OP471090 Operating Procedure for Stormwater Discharge Visual Observations (Reference 6.5) for more information on NLF observations and NLF area map.

4.4.5 If the duplicate sample is collected at a physical sampling location, fill a second set of containers at the randomly selected location. Replace and tighten the lids on the duplicate sample bottles. Label the duplicate samples with location "Q", date, technician's initials and sample number. Fill the third set of containers with deionized water for a field blank. Replace and tighten

the lids on the field blank. Label the containers with location "R", date, technician's initials and sample number.

4.4.6 Note on the Stormwater Sampling Event form the location where the field blank and duplicate samples were prepared.

### 4.5 Collecting Grab Samples at Mechanical Sampler Stations

Attachment 7.6 illustrates the parts of the mechanical sampler described in the following sections.

4.5.1 Before leaving the office, collect a key to open the mechanical sampler housing units.

4.5.2 Note the time of arrival at each sampling location on the Stormwater Sampling Event form.

4.5.3 Unlock the mechanical sampler housing unit.

4.5.4 Remove the mechanical sampler from the housing unit. Do not disturb the tubing and wiring that exits the housing unit through a hole in the side wall of the unit. There should be enough slack tubing and wire in the housing unit to remove the sampler without disturbing the tubing and wire running out of the side wall.

4.5.5 Remove the mechanical sampler lid.

4.5.6 Samples can be collected manually using the mechanical sampler's pump. If the sampler does not power on connect a new battery.

4.5.7 Disconnect the pump tube from the bulkhead fitting (see Attachment 7.6).

4.5.8 Place the end of the tube over a sample bottle.

4.5.9 Turn on the pump using instructions for Manual Pump Operation found in Attachment 7.5.

4.5.10 Fill the following containers with stormwater for each sample location:

a. 1: 1 liter, plastic bottle for total suspended solids, specific conductivity, pH, and nitrate-nitrite
b. 2: 1 liter, glass wide mouth bottles for oil and grease (total)
c. 1: 500 ml (or 250 ml), plastic bottle for metals: arsenic, cadmium, lead, mercury, silver, zinc, aluminum, iron, magnesium, and selenium
d. 1: 500 ml, plastic bottle for ammonia and chemical oxygen demand (COD)
e. 1: 250 ml, plastic bottle for cyanide
f. 1: 20 ml glass scintillation vial for tritium analysis (filter approximately 4 ml from the 500 ml plastic container)

Replace and tighten the lids on the sample bottles.

4.5.11 After the last sample bottle is filled, turn the pump off and clean the intake line by reversing the pump (see Attachment 7.6). Turn the sampler off by pressing the power button.

4.5.12 Reconnect the pump tube to the bulkhead fitting.

4.5.13 Replace the sampler lid and return the sampler to the housing unit.

4.5.14 Lock the housing unit.

4.5.15 Label sample containers with the sample location identification letter, initials of sampler, date, time, sample analyses, and sample number. Sample numbers are designated as ST-MMDDYY where MM is the month, DD is the date, and YY is the final two digits of the year plus the location identification letter (i.e. ST-110107A is a sample collected on November 1, 2007 at station A).

4.5.15 Record all observations in Box 2 of the Stormwater Sampling Event form which describe anything out of the ordinary and might indicate pollutant discharge with the stormwater. Any evidence of pollutants (such as floating and/or suspended materials, oil, grease, discolored stormwater, odor, etc.) in the stormwater discharge observed by the teams is noted in the "Observations" column of the Sampling Event Form.

4.5.16 If the duplicate sample is collected at an mechanical sampling location, fill a second set of containers at the randomly selected location. Replace and tighten the lids on the duplicate sample bottles. Label the duplicate samples with location "Q", date, technician's initials and sample number. Fill the third set of containers with deionized water for a field blank. Replace and tighten the lids on the field blank. Label the containers with location “R”, sample number, date and technician's initials.

4.5.17 Note on the Stormwater Event form the location where the field blank and duplicate samples were prepared.

### 4.6 Discontinuing a Sampling Event

Because of the number of sampling locations and the distance between them, there is the possibility that sampling is discontinued because of safety considerations (e.g. poor lighting, slippery footing, etc.) before samples are collected from all locations. There is also a possibility that a sample cannot be collected because there is not enough flow at that specific location. The following steps are taken for sampling events when subsets of the ten locations are sampled:

4.6.1 Note on the Stormwater Sampling Event form the unsafe conditions in the "Observations" column in Box 2 of the row for the appropriate sampling location, or note if there is not enough flow.

4.6.2 If day light conditions permit, continue collecting samples from the other locations.

4.6.3 If it is too dark to continue, state so on the form. Discontinue collecting samples and proceed with preparing the samples that were collected for analysis.

4.6.4 Remaining locations are sampled during another storm event of the same wet season, as possible.

### 4.7 Preparing Samples for Analysis

**WARNING: THE PRESERVATIVES USED IN THIS SECTION ARE STRONG ACIDS OR BASES.**

4.7.1 Wear protective glasses and gloves.

4.7.2 Prepare the Chain of Custody Record (Attachment 7.7) and the stormwater sampling containers according to OP471310, Administrative Procedure for Control of Samples (Reference 6.6).

4.7.3 Add the concentrated reagent grade preservatives to the appropriate bottles as described in Table 1.

4.7.4 Replace and tighten the lids of all sample bottles. Apply tamper resistant seals.

4.7.5 Verify that sample labels are complete, including the sample location identification letter, initials of sampler, date, time, sample analyses, and sample number. Sample numbers are designated as ST-MMDDYY where MM is the month, DD is the date, and YY is the final two digits of the year plus the location identification letter (i.e. ST-110107A is a sample collected on November 1, 2007 at station A).

4.7.6 Prepare the Chain of Custody form required by Health Physics (Attachment 7.8). Deliver the 20 ml scintillation cocktail vials to Health Physics Laboratory for tritium analysis.

4.7.7 Deliver the remaining stormwater samples, field blanks, and chain of custody form to the contract laboratory by the end of the next work day.

### 4.8 Between Sampling Events

4.8.1 Periodically check the batteries at locations Y and Z while there is flow in the Arroyo. The batteries must be charged for the Area Velocity Module to collect data. (Note, data will not be lost if the battery charge dies.)

4.8.2 Every two months download data from the Area Velocity Module and check desiccant cartridge for replacement as needed (see Attachment 7.6).

### 4.9 Data Management

4.9.1 Annual Stormwater Monitoring Report: Analytical results are summarized in the SNL/CA annual stormwater monitoring report to the Executive Officer of the San Francisco Regional Water Quality Control Board submitted by July 1 of each year.

4.9.2 Stormwater Inspection Report Tracking Form (Attachment 7.9): Tracking forms are attached to the Stormwater Sampling Event and Discharge Visual Observation Forms and given to the Environmental Monitoring Program Lead for review and any follow-up actions. Copies are kept in Room 105, Building 922 until the are transmitted to the Records Center.

4.9.3 Analytical data is electronically entered in the Environmental Monitoring Database.

## 5.0 RECORDS

5.1 **ES&H Records Center** (File Code# EM-217): Stormwater Sampling Event Forms, Chain of Custody Records, and analytical results are stored and maintained by the Records Manager.

## 6.0 REFERENCES

6.1 California Industrial Activities Stormwater NPDES General Permit, CAS000001, May 1, 1997
6.2 Erosion Control Action Plan for the Navy Land Fill (NLF) at SNL/CA approved by the RWQCB in a March 17, 1998 letter to DOE
6.3 Stormwater Pollution Prevention Plan for Sandia National Laboratories, California, 2005
6.4 OP471131 Data Validation and Verification for Environmental Operations Department
6.5 OP471090 Operating Procedure for Stormwater Discharge Visual Observations
6.6 OP471310 Administrative Procedure for the Control of Samples

## 7.0 ATTACHMENTS

7.1 Stormwater Sampling Stations (figure)
7.2 Stormwater Sampling Stations (photos)
7.3 Stormwater Discharge Locations
7.4 Site Discharge Location Descriptions
7.5 Stormwater Sampling Event Form
7.6 Procedures for Maintaining, Programming, and Preparing the Mechanical Stormwater Samplers
7.7 Standard Chain of Custody Record
7.8 Health Physics Chain of Custody Record (for tritium analysis)
7.9 Stormwater Inspection Report Tracking Form

**TABLE 1: Sampling Analysis**

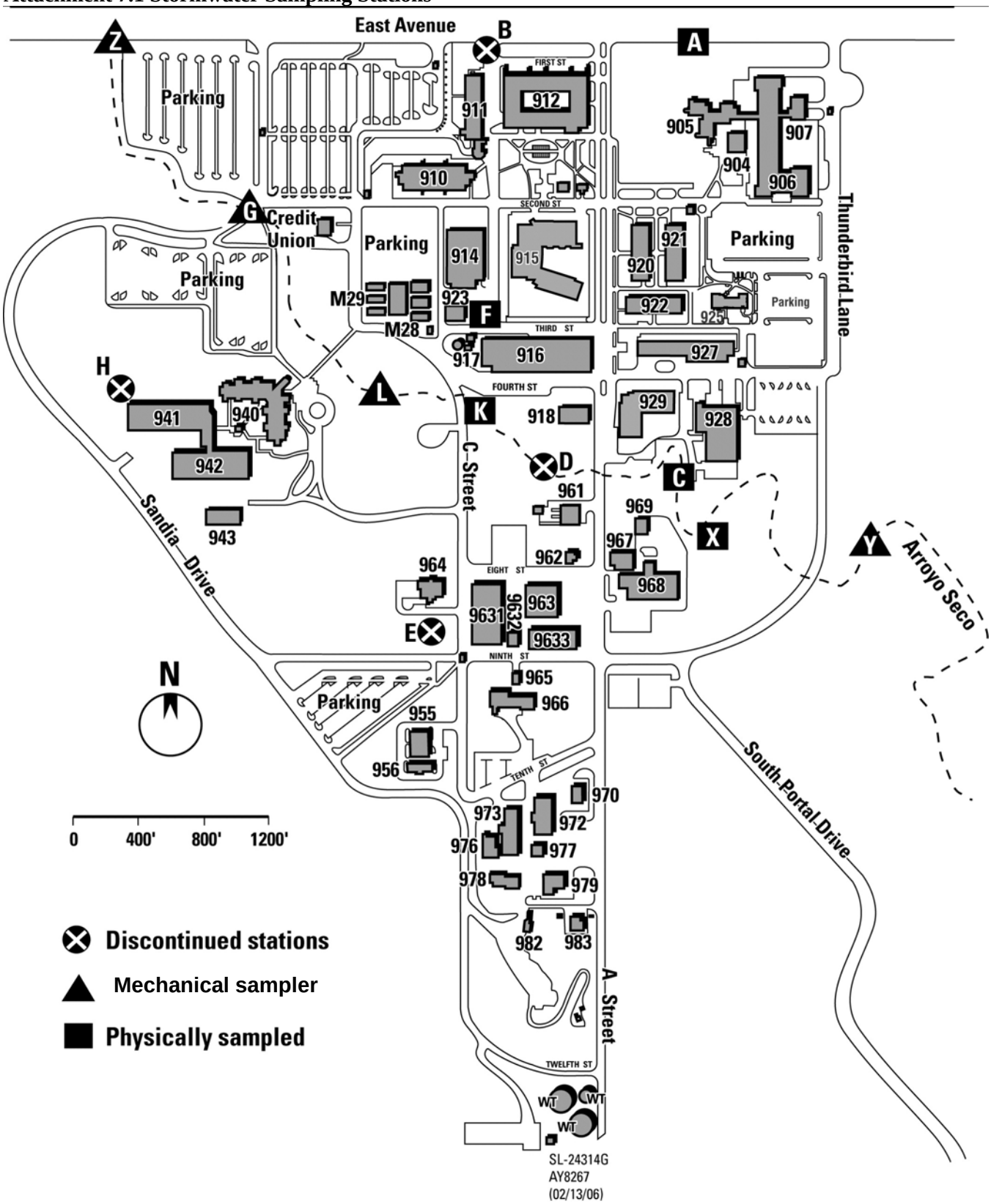
| PARAMETER | EPA METHOD | AMOUNT CONTAINER | PRESERVATION |
|---|---|---|---|
| specific conductance | 120.1 | 1 x 1 liter, plastic | none |
| total suspended solids | 160.2 | | |
| pH | 150.1 (48 hr hold time) | | |
| Nitrate-nitrite | 300 | | |
| oil and grease (total) | 1664 | 2 (or 1) x 1 liter, glass wide mouth | $H_2SO_4$ (96.6 %) 3.6 ml (for pH<2) |
| Metals: Arsenic, Cadmium, Lead, Mercury, Silver, Zinc Aluminum, Iron, Magnesium, Selenium, | 200.1, 200.2 | 1 x 500 ml (or 250 ml), plastic | $HNO_3$ |
| Ammonia | 350.3 | 1 x 500 ml plastic | $H_2SO_4$ |
| Chemical Oxygen Demand (COD) | 410.4 | | |
| Cyanide | 335.2 (4500E ASTM) | 1 x 250 ml plastic | NaOH |
| Tritium | not applicable | 1 x 20 ml, glass cocktail | none |

**TABLE 2: Order of Team Activities**

*Before commencing field activities, decide which station to collect the duplicate.*

| ONE TEAM | TWO TEAMS |
|---|---|
| 1. Collect samples from all the physical sampling stations (Stations A, C, F, K, N and X)<br><br>2. Conduct wet weather visual observations for the remaining discharge locations that are not also sampling stations (see OP471090 Conducting Wet Weather Observations, Reference 6.8)<br><br>3. Collect samples from all the mechanical sampling stations (Stations G, L, Y, and Z)<br><br>4. Begin preparing samples for transport | <u>Team A</u><br>1. Collect samples from physical sampling Station A<br><br>2. Collect samples from all the mechanical sampling stations (Stations L, G, Y, and Z)<br><br>3. Begin preparing samples from both teams for transport |
| | <u>Team B</u><br>1. Collect samples from physical sampling Stations C, F, K, N and X and drop them off in Room 105, Building 973 (be sure all the bottles have been properly labeled)<br><br>2. Conduct wet weather visual observations for the remaining discharge locations that are not also sampling stations (see OP471090 Conducting Wet Weather Observations, Reference 6.8) |

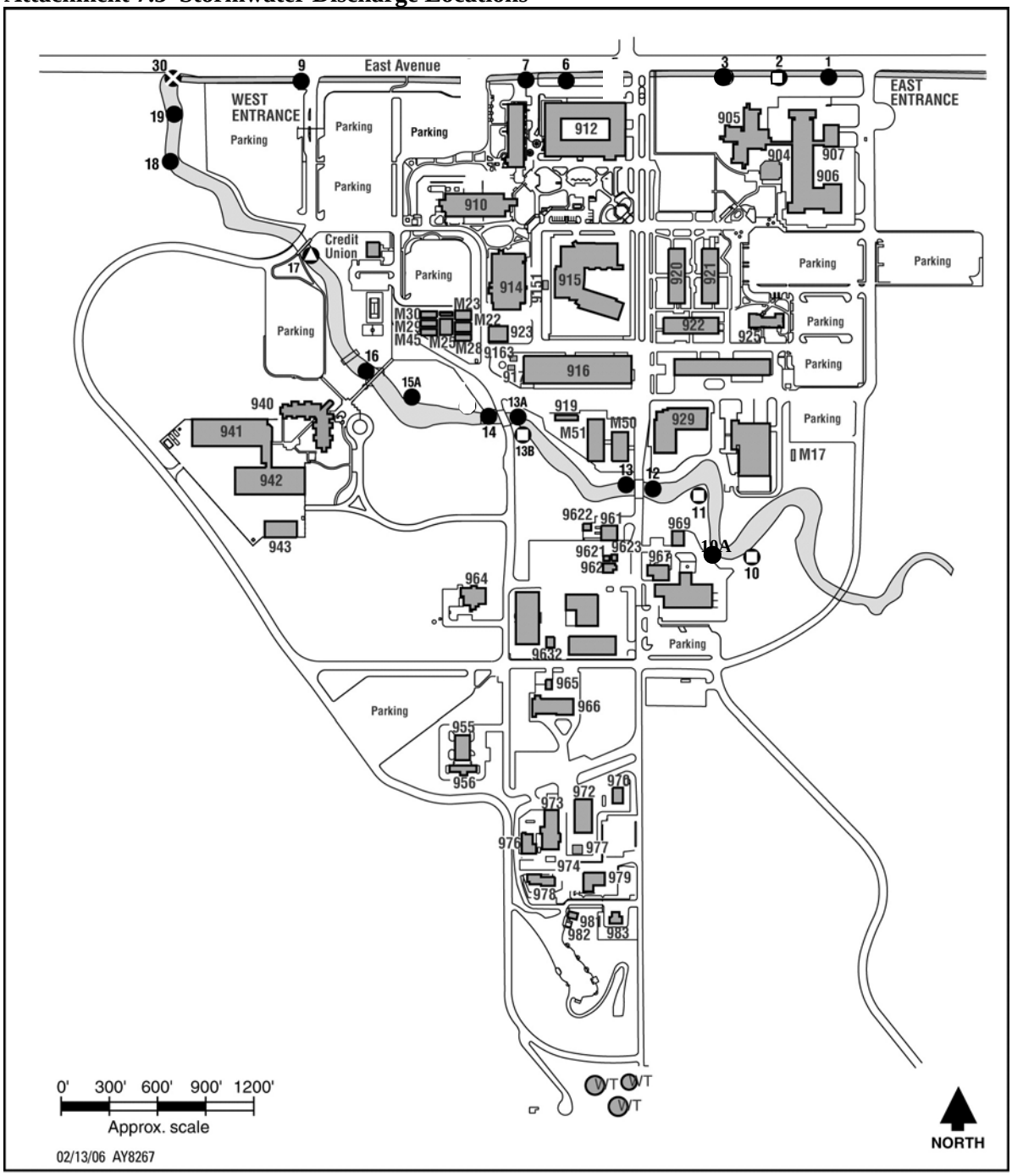
**Attachment 7.1 Stormwater Sampling Stations**



**Attachment 7.2 Stormwater Sampling Stations (pictures)**

**Attachment 7.2 Stormwater Sampling Stations (continued)**

**Attachment 7.3 Stormwater Discharge Locations**




**Legend**

- Site Outfall (Mechanical Samples)
- Observation Only Locations
- Observation and Mechanical Sample Locations
- Observation and Physical Sampling Locations
- Arroyo Seco
- Ditch along East Avenue

**SITE OUTFALL AND DRAINAGE POINTS**

| FIGURE: | DATE: |
|---|---|
| | |

**Attachment 7.4 Site Discharge Location Descriptions**

| Discharge Location | SW Sample Location | Drainage Area ID# | Description of Drainage Area | Description of Drainage Area Activities |
|---|---|---|---|---|
| 1 | no sample | 1 | West side of Thunderbird Lane; south side of B906 | road; drains parking and driveway areas; storage sheds; significantly identical to Area 3 |
| 2 | A | 2 | East side of Combustion Research Facility (CRF) area | Outdoor maintenance and material handling; oils and solvents storage; significantly identical to Area 3 |
| 3 | No sample | 3 | West side CRF area | Outdoor maintenance and material handling; oils and solvents storage; significantly identical to Area 2 |
| | sheet flow | 4 | East side, north end A Street (B920, 921, 922) | Administration buildings/office areas |
| | sheet flow | 5 | West side, north end A Street;<br>➢ East side B912<br>➢ East side park area above underground Computer Facility | office areas, outdoor activities include Cushman parking, park area |
| 6 | no sample | 6 | Building 912 courtyard | Drains park in office courtyard |
| 7 | B (6) | 7 | B Street:<br>➢ East side B911<br>➢ West side B912<br>➢ West side park area above underground Computer Facility | Office buildings; indoor equipment room; outdoor activities include Cushman parking, park area |
| | no sample; connects underground | 8 | Park area in front of Gate 1 (west side B911 and north side B910) | Drains parking and office areas |
| 9 | no sample | 9 | North west parking area | Drains parking area |
| 10 | X | 10 | East side B968 (CDRL); parking lot south of B968 | Outdoor material handling; covered storage next to building; parking lot |
| 10A | no sample | 10A | Driveway on east side of equipment room | unused driveway |
| 11 | C | 11 | East parking area and area west and south Gate 15:<br>➢ South end east parking area<br>➢ South east side B927<br>➢ North side B928<br>➢ West and east side B928 | Outdoor materials handling; materials receiving area for entire site; parking area |
| 12 | no sample | 12 | M24 and south west side of B927 | Office trailer; indoor office equipment warehouse |

| Discharge Location | SW Sample Location | Drainage Area ID# | Description of Drainage Area | Description of Drainage Area Activities |
|---|---|---|---|---|
| | no sample | 12A | West side B967 | Offices; catch basin in landscaping; location 10 captures possible runoff from CDRL facility |
| 13 | no sample | 13 | Water Tanks | Drains water supply tanks |
| 13A | no sample | 13A | Area south of B916; M51, M50, B919 | Indoor research laboratories; outdoor storage for B916; paved area surrounding electrical switching stations; office trailers |
| 13B | K | 13B | Maintenance yard and Hazardous Materials Building:<br>➢ 7th Street<br>➢ B961 (Hazardous Materials Facility)<br>➢ Maintenance Yard | ➢ Outdoor hazardous materials handling<br>➢ Outdoor materials storage and stockpiling<br>➢ Outdoor raw stock metals stock storage; process chemicals, gas bottles, and storage sheds<br>➢ Heavy equipment storage (on pervious surface-dirt)<br>➢ Sand/aggregate material storage<br>➢ Covered vehicle fueling area<br>➢ Site maintenance area |
| 14 | no sample | 14A | North end C Street:<br>➢ Area west of B9631<br>➢ South side B9633<br>➢ Former FOS site (closed)<br>➢ B964 | south west of maintenance area; raw stock metals storage, storage sheds; significantly identical to sample K and L |
| | E (1), N (5) | 14B | South end Sandia Drive/C Street:<br>➢ Areas north and west B965 and 966<br>➢ B970 through 983<br>➢ Storage bunkers<br>➢ Security firing range | ➢ Outdoor materials handling<br>➢ Outdoor storage sheds<br>➢ Outdoor firing shed<br>➢ Explosives storage<br>➢ Indoor research laboratories<br>➢ NFL site (closed) |
| 15 | no sample | 15 | Open asphalt area south of Redwood Park | office buildings |
| 15A | F | 15A | West end Third Street and north end Fifth Street:<br>➢ South west corner of B915 (DISL)<br>➢ Area east and south B923<br>➢ Areas west B916<br>South end D Street: | Indoor research laboratories |

| Discharge Location | SW Sample Location | Drainage Area ID# | Description of Drainage Area | Description of Drainage Area Activities |
|---|---|---|---|---|
| | | | East end Mobile 28&29 (Redwood Park) | |
| 16 | no sample | 16 | Area east of MANTL (B940) | Drains parking and office area |
| 17 | G (2) | 17 | Second Street west of A Street:<br>➢ North west corner of B915<br>➢ Area east and south B910<br>➢ Area west B10<br>➢ Area north and east of Credit Union<br>➢ Area north B914 | Outdoor material handling and storage sheds; parking, offices |
| 18 | H (3) | 18A | North end Sandia Drive:<br>➢ MANTL | Outdoor maintenance, material handling, storage sheds, vacuum, pumps |
| | no sample | 18B | Area surrounding B955 and 956 | Drains parking area; indoor environmental testing |
| 19 | no sample | 19 | Far northwest parking area | Drains parking area |
| | D (4,7) | | | |
| | L | | Sample location in Arroyo downstream of 14 and 15A sample locations | |
| | sheet flow | 22 | B919 south side | Sheet flow to Arroyo, no outdoor activities |
| | Y (4) | | Arroyo Seco as it enters the site | |
| 30 | Z (4) | | Arroyo Seco as it leaves the site | |

(1) Discontinued after baseline information determined no significant erosion from hill area.
(2) Mechanical sampler installed for the 1996/97 wet season.
(3) Discontinued after baseline information on new facility onsite identified significantly identical to Area 7.
(4) Mechanical sampler installed for the 1995/96 wet season.
(5) Sample location N is for monitoring the closure of the NLF site and is not part of the stormwater monitoring program for the General Permit.
(6) Discontinued after site construction changed site drainage patterns. This location only receives stormwater drainage from office areas.
(7) Discontinued after site construction changed site drainage patterns. This location formally received sheet flow from hazardous waste facility and maintenance area. These drainage areas are now sampled at location K, 13B.

**Attachment 7.5 Stormwater Sampling Event Form**

**BOX 1**

1. Date: _____
2. Technicians:
   (a) _____ (b) _____
3. Estimate start of storm event: (a) Date: _____ (b) Time: _____
4. Are observations being initiated within the first hour of the storm event? yes [ ] no [ ]
   If no, describe reason for delay. _____
5. Was storm event preceded by three days of dry weather? yes [ ] no [ ]
   If no, describe reason for initiating sampling even. _____
6. Indicate the sampling location duplicate samples (Q) are collected: _____ and field blanks (R): _____

**BOX 2**

| Sample ID | Time | Observations |
|---|---|---|
| A | | |
| C | | |
| F | | |
| G | | |
| K | | |
| L | | |
| N* | | |
| X | | |
| Y | | |
| Z | | |

* Attach map to illustrate any areas of erosion.

**Attachment 7.6 Procedures for Maintaining, Programming, and Preparing the Mechanical Stormwater Samplers**

For more information on the mechanical samplers see the 6700 Portable Samplers Instruction Manual (Isco) on the bookshelf in Building 922, Room 105.

**1.0 Maintenance**

**1.1** Conduct the following maintenance activities for each mechanical sampler station just before the start of the wet season (October 1st).

1.1.1. Check the batteries and recharge if necessary.

1.1.2. Inspect the gravel bed that holds the intake line strainer. Replace the intake line strainer and reposition in the gravel bed if necessary.

1.1.3. Inspect tubing for breaks, kinks or holes that would prevent proper sample collection. Replace the tubing if necessary.

1.1.4. Check for accumulation of sediment and debris in the intake line and clean or replace as necessary.

**1.2** During the month of June, remove the intake strainer and flow actuator from the arroyo and place on the concrete pad beside the housing unit. Pull as much of the intake and actuator line into the housing unit through the hole. Secure (lock) the housing unit for the dry season.

**1.3** Conduct the following maintenance activities for the Area Velocity Modules at the location Y and Z mechanical sampler stations just before the start of the wet season (October 1st). For more information see the 750 Area Velocity Module Installation and Operation Guide (Teledyne Isco) in Building 922 Room 106.

1.3.1 Check the sensor is secure in the mounting plate facing upstream. The mounting plate is screwed into the ground and should not move. The sensor snaps into the mounting plate.

1.3.2 Replace the desiccant as needed. The desiccant cartridge is mounted next to the control panel. The current desiccant is Drierite (kept in Building 973 lab) and will turn from blue to pink when it needs to be replaced. Empty the old desiccant into a ziploc bag and throw out in the trash. Pour the new desiccant into the plastic cartridge. Secure the plastic cartridge next to the control panel.

2.0 Download the data from the Area Velocity Module.

2.1 Turn the sampler on.

2.2 Plug in the Rapid Transfer Device (RTD, in Building 922 room 106) to the sampler outlet labeled with the Interrogator Icon (looks like an open laptop).

2.3 While the RTD is operating, the yellow light will blink. The green light will blink as the data reports are collected. The green light will remain constant when the transfer is completed.

2.4 Remove the RTD when the green light is constant and turn off the sampler power.

2.5 Use a transfer cable (in Building 922 room 106) to connect the RTD to a PC computer (John's computer in Bldg 922 room 105 has the correct FlowLink software to transfer data.)

2.6 Verify under the menu option Utilities=>Options the Comport is “3” and the baud rate is “9600”. Then click the RTD transfer symbol. Note the flow conversions have already been entered in Flowlink. These are:

| **Flow Conversions** | **Station Y** | **Station Z** |
|---|---|---|
| Max level (ft) | 4 | 3.5 |
| Channel type | Trapeziodal channel | Trapeziodal channel |
| Top width (ft) | 24 | 17 |
| Bottom width (ft) | 12 | 8 |
| Silt level (ft) | 0 | 0 |

**3.0 Manual Pump Operation**

**3.1** 6700 mechanical sampler (locations L, Y and Z) manual pump operation

3.1.1 Remove the lid from the mechanical sampler.

3.1.2 Disconnect the pump tube from the bulkhead fitting (figure with instructions is also in the housing unit).

3.1.3 Place the end of the tube over a collection container.

3.1.4 Press the Power button to turn on the sampler. The Power button is located on the keypad on the top of the sampler. The start up screen will appear:

6700 Sampler
Standard Programming
For help at any
screen press “?” key.

After a few minutes the first menu screen will appear.

3.1.5 Select Other Functions from the menu items listed:

Run
Program
View Report
Other Functions

A new menu screen will appear.

3.1.6 Select Manual Functions from the menu items listed:

Maintenance
Manual Functions
Module
Hardware

A new menu screen will appear.

3.1.7 Select Operate Pump from the menu items listed:

Manual Sample
Calibrate Volume
Operate Pump
Move Distributor

A new menu  screen will appear.

3.1.8  Select Forward Pump from the menu items listed:

Forward Pump
Reverse Pump

The pump will turn on.

3.1.9  When the sample bottle is filled press the Stop button.  The previous menu screen will appear.

3.1.10  If there is more than one sample bottle to fill select Forward Pump from the menu items listed.  Press the Stop button when the sample bottle is filled.  Continue filling sample bottles in this manner.

3.1.11  After the last sample bottle is filled, and the pump is turned off, select Reverse Pump from the menu items.  This will clear the sample line.  Press the Stop button when the line has been cleared.  The previous menu screen will appear.

3.1.12  Press the Power button to turn the sampler off.

3.1.13  Reconnect the pump tube to the bulkhead fitting.

**3.2** 3700 mechanical sampler (location G) manual pump operation

3.2.1  Repeat steps 2.1.1 through 2.1.3

3.2.2  Press the On/Off button to turn on the sampler.

3.2.3  Press the Pump Forward button to turn on the pump.

3.2.4  When the sample bottle is filled press the Stop button.

3.2.5  If there is more than one sample bottle to fill press the Pump Forward button.  Press the Stop button when the sample bottle is filled. Continue filling sample bottles in this manner.

3.2.6  After the last sample bottle is filled, and the pump is turned off, select Pump Reverse from the menu items.  This will clear trhe sample line. Press the Stop button when the line has been cleared.

3.2.7  Press the On/Off button to turn the sampler off.

3.2.8  Reconnect the pump tube to the bulkhead fitting.

**Figure 1. Mechanical Samplers**
(hard copy only available)

**Attachment 7.7 Standard Chain of Custody Record**
**CHAIN OF CUSTODY RECORD AND ANALYTIC INSTRUCTIONS**



| Sample ID | Location | S. Time | S. Date | Sample Mat'l | Analyze For | Method | # of Cont | Initials | Preservative |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |

BSK Analytical Laboratories WILL BE REQUIRED TO INFORM SANDIA IF IT APPEARS THAT THE ANALYTICAL DATA IS OF LIMITED USE DUE TO THEIR LABORATORY PROCEDURES AND HANDLING OR IF THE QA DATA DOES NOT MEET EPA STANDARDS.

Project Name or ID No: _____ Sample Released By:_____
Sampler(s) Signature: _____ Date/Time Sample Released: _____
Sandia Contact Name: John J. Chavarria Courier SampleReceived By: _____
Sandia Phone Number: (925) 294-3473/Fax (925) 294-3418 Date/Time Received:_____
Sample Released By: _____ Courier Sample Released By: _____
Date/Time Released: _____ Date/Time Sample Released: _____
Sample Received By: _____ Received by Lab Personnel: _____
Date/Time Received:_____ Date/Time Received:_____

Laboratory Name, Address, Phone:

McCampbell Analytical, Inc. Laboratory
1534 Willow Pass Road
Pittsburg, CA 94565-1701 PH (877)252-9262 Fax(925)252-9269

1. Specify analytical method used and detection limits
2. Specify date
3. Notify Sandia of anomalies or problems
4. Provide QA/QC data along with the results
5. Tamper resistant seals are in place (yes/no)

Please sign and return this form to: Sandia National Laboratories, Environmental Operations Department, MS 9221
P.O Box 969, Livermore, Ca. 94551-0969

**Attachment 7.8 Health Physics Chain of Custody Record**

**Sandia National Laboratories**
**Radiation Protection Sample Diagnostics**

**Sample Analysis Request Form**
**Page 1 of 1**

*To be completed by Customer* *Shaded areas are for HASD*

| | | | | | |
|---|---|---|---|---|---|
| Customer : | John Chavarria | Hazards/Special Instructions: | | Batch Log Number: | _____ |
| Organization: | 8418 | | | Logged By: | _____ |
| Project Location: | Sewer Outfall | | | Analysis Type: | Gamma Spec<br>H-3<br>Alpha/Beta<br>Alpha Spec<br>Total U<br>Other |
| Phone: | X3473 | | | | |
| Date Results Needed: | 2 week Turnaround | | | | |
| Suspect Isotopes: | Tritium | | | | |
| Other Information: | | | | | |

| Customer Sample ID | Sample Type | Date/Time Collected | Sample Quantity | Requested Analysis | RPSD Sample ID | Screen cpm | Sample Mass | Remarks / Aliquot Amount |
|---|---|---|---|---|---|---|---|---|
| SW-010204 | SW | 01/02/04 /1000 | 1 EA | Tritium | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |

Relinquished by _____ Date _____ Time _____ Received by _____ Date _____ Time _____
Relinquished by _____ Date _____ Time _____ Received by _____ Date _____ Time _____
Relinquished by _____ Date _____ Time _____ Received by _____ Date _____ Time _____

**Attachment 7.9 STORMWATER INSPECTION REPORT TRACKING FORM**

Report Identification:_____

_____

Requester:_____ Date:_____

To be completed by Environmental Monitoring Program Lead

Reviewer:_____

1) Is any action/follow-up needed for any issues identified in inspection?
- θ No (sign and date form)
- θ Yes (fill in #2)

2) Identify each issue* and follow-up/actions needed

| Description of issue and follow-up | compliance schedule ** (w/in 1 wk) |
|---|---|
| | |

3) Does SWPPP need to be changed/updated?
- θ No
- θ Yes: Date updated (within 12 weeks)_____
  - θ description of potential pollutant sources
  - θ identified pollution prevention measures and controls
  - θ other:_____

4) If Annual Site Compliance Inspection, were spill response forms reviewed? θ Yes θ No

5) If Non-Stormwater Discharge Observations, was maintenance contacted to verify SPCC fuel tank inspections are being conducted? θ Yes θ No

Signature:_____ Date:_____

*The Environmental Monitoring Program Lead identifies significant issues only, that require follow-up action. Some issues identified in the inspection reports may not be significant.

**Compliance schedule shall be completed within 1 week. Follow-up actions identified in the compliance schedule must be completed within 90 days or reported to the Regional Board.

## 8.0 AUTHORIZED USERS LIST

By my signature below, I affirm that I have read and understood this OP and all references called out in procedural steps, and I agree to operate within the stated constraints.

| Name | Signature | Org./Company | Date |
|---|---|---|---|
| Name | Signature | Org./Company | Date |
| Name | Signature | Org./Company | Date |
| Name | Signature | Org./Company | Date |
| Name | Signature | Org./Company | Date |
| Name | Signature | Org./Company | Date |
| Name | Signature | Org./Company | Date |
| Name | Signature | Org./Company | Date |
| Name | Signature | Org./Company | Date |

# APPENDIX G-2

Operating Procedures for Non-Stormwater Discharge Visual Observations

# OPERATING PROCEDURE (OP)

Sandia/CA
UNCLASSIFIED

**Title:** Operating Procedure for Non-stormwater Discharge Visual Observations

Check One: (Type of OP)
___ Laboratory
Location: Bldg./Rm.

__X__ Activity Description: Procedure to be followed to perform non-stormwater discharge visual observations.

**Document Release or Change History:**

| Procedure # | Issue | Date | Review Period |
|---|---|---|---|
| OP471089 | A | 1/23/93 | 2 Years |
| OP471089 | B | 3/30/95 | 2 Years |
| OP471089 | C | 12/8/97 | 2 Years |
| OP471089 | D | 10/28/99 | 2 Years |
| OP471089 | E | 10/01 | 2 Years |
| OP471089 | F | 9/11/03 | 2 Years |
| OP471089 | G | 9/13/05 | 2 Years |
| OP471089 | H | 9/21/07 | 2 Years |

Author/Contact Person: Robert Holland

| Org. | Phone | Date |
|---|---|---|
| 8516 | 4-3755 | |

_____
Signature

Reviewer: John Chavarria

| Org. | Phone | Date |
|---|---|---|
| 8516 | 4-3473 | |

_____
Signature

Approved By Owner: Gary Shamber

| Org. | Phone | Date |
|---|---|---|
| 8516 | 4-2237 | |

_____
Signature

Summary of Changes Since Last Issue

1. Changed Environmental Operations Department to Environmental Management Department.

2. Changed Environmental Operations Technician to Environmental Management Technologist.

3. Provided correct title for OP471347 in Section 5.1.

4. Revised the following outfall location designations: removed discharge locations 4 and 5 and added sheet flow description, removed discharge location 8, added discharge location 10A, and added discharge location 15. Updated pictures, maps and forms as needed.

5. Deleted DI water release in Discharge Area 17 from the authorized non-stormwater discharge table in Attachment 7.5.

6. Deleted question #6 “If Non-Stormwater Discharge Observations, was Industrial Hygiene contacted to review previous quarter inspection records for wastewater issues?” from the Stormwater Tracking Form because IH has not prepared the identified reports for more than two years.

## 1.0 GENERAL

### 1.1 Purpose

This procedure describes the method for conducting visual inspections of authorized non-stormwater discharges and investigations for unauthorized non-stormwater discharges. The intent of this procedure is to identify and effectively eliminate unauthorized non-stormwater discharge and visually observe that authorized non-stormwater discharges include no pollutants. Identifying pollutants that are not a result from the activities conducted onsite (e.g. fallen leaves) is not the aim of this procedure.

The procedure also includes contacting the Preventive Maintenance Team to ensure inspections of fuel and oil storage locations on site are being conducted and that any leaks have been repaired, as part of the site's Spill Prevention Control and Countermeasure (SPCC) Program.

### 1.2 Scope

Stormwater monitoring activities apply to the Environmental Management Department, Environmental Monitoring Program.

### 1.3 Ownership

This procedure is maintained by the Environmental Management Department Manager. Comments should be sent to the Environmental Monitoring Program Lead.

## 2.0 RESPONSIBILITIES

**2.1 Environmental Monitoring Program Lead** is responsible for initiating activities to identify the source of unauthorized non-stormwater discharges and ensuring responsible personnel receive training on BMPs to prevent future discharge. The Environmental Monitoring Program Lead is also responsible for initiating activities to eliminate pollutants discharged with authorized non-stormwater. The Environmental Monitoring Program Lead assists the Environmental Management Technologist conduct the inspections, as needed.

**2.2 Environmental ManagementTechnologist** is responsible for inspecting all drainage areas, completing the non-stormwater visual observation form, and ensuring the documentation is maintained at the records control center and in the Stormwater Program files in Building 922, Room 105. The technologist is also responsible for informing the Environmental Monitoring Program Lead of any observation that may indicate an unauthorized non-stormwater discharge or pollutants discharged with an authorized non-stormwater discharge.

## 3.0 DEFINITIONS

**3.1 Authorized Non-stormwater Discharge** is anything not composed entirely of rain but is allowed to discharge to the storm drains as described in the site's Storm Water Pollution Prevention Plan (SWPPP). The list of authorized non-stormwater discharges inspected by these visual observations is included in Box 5 of Attachment 7.3.

**3.2 Best Management Practices (BMPs)** are structural and non-structural practices to eliminate or prevent pollutant discharges to the storm drains.

**3.3 Drainage Area** is the portion of the site that discharges through a single storm water discharge location. Drainage areas are described in Attachment 7.2.

**3.4 Storm Drain Outfall** is the location where an identifiable stream of stormwater runoff discharges into the Arroyo Seco or ditch along East Avenue through either a pipe or open channel.

All storm drain outfalls are illustrated in Attachment 7.1. The ditch along East Avenue eventually discharges into the Arroyo Seco. All stormwater discharges off site at one location: the Arroyo Seco as it flows beneath East Avenue.

**3.5 Unauthorized Non-stormwater Discharge** is anything not composed entirely of rain and is not allowed to discharge to the storm drains because it may contain pollutants. Unauthorized discharges are anything not listed in Box 5 of Attachment 7.3.

## 4.0 PROCEDURE

### 4.1 Pre-operation Conditions

4.1.1 Visual inspections are performed to comply with stormwater monitoring requirements in California's Industrial Activities Storm Water NPDES General Permit (general permit; Reference 6.1). Sandia National Laboratories, California (SNL/CA) has filed a Notice of Intent (NOI) with the State Water Resources Control Board to comply with the permit. Note, discharges to either the Arroyo Seco or the drainage ditch along East Avenue from fire fighting activities are authorized by this general permit. These visual inspections have also been incorporated into the Storm Water Management Program for the Discharge of Storm Water from Small MS4 NPDES General Permit (general permit, Reference 6.2).

4.1.2 There are twenty-one storm drain outfalls onsite that discharge into either 1) the ditch that runs along East Avenue or 2) the Arroyo Seco. Discharge from the ditch along East Avenue discharges to the Arroyo Seco under the bridge beneath East Avenue. Therefore, the Arroyo Seco is the one site outfall.

4.1.3 Visual observations are conducted during normal daylight working hours (7:30 AM through 4:00 PM) on days with no stormwater discharges.

4.1.4 Visual observations are recorded on Quarterly Non-storm Water Discharge Visual Observation Forms (Attachment 7.3). The technologist performing the visual observations completes a form for each inspection event for each drainage area.

4.1.5 Visual observations are conducted once every quarter (January-March, April-June, July-September, October-December) within 6-18 weeks of each other.

4.1.6 Each authorized non-stormwater discharge must be inspected each quarter.

### 4.2 Conducting Visual Observations

4.2.1 Inspect each drainage area and associated outfall described in Attachment 7.2. Figures with the drainage areas defined are available in the SWPPP (Reference 6.3).

4.2.2 Complete a Quarterly Non-storm Water Visual Observation Form (Attachment 7.3) for each drainage area.

4.2.2.1 Complete Box 1 with the names of the inspectors, the date and time arrived at the drainage area.

4.2.2.2 Use Box 2 to update information on the activities conducted in the drainage area.

4.2.2.3 Answer the questions in Box 3 of the form. This describes the types of observations to look for: stains, sludge, visible flow, or standing water.

4.2.2.4 If the technologist observes pollutants or unauthorized non-storm water discharge, describe the conditions further in Box 4 of the form; descriptions should be aimed at identifying the source of the pollutant discharged.

4.2.2.5 Identify all authorized non-stormwater discharges in the drainage area in Box 5.

4.2.2.6 Complete Box 6 for each authorized discharge in the drainage area. Observe each authorized non-stormwater discharge and its sources to ensure that BMPs are being implemented and effective. Authorized non-stormwater discharges on site and the BMPs identified for each are summarized in Attachment 7.5. All authorized non-stormwater discharges and their sources must be inspected every quarter.

4.2.3 The technologist reports pollutant discharge observations to the Environmental Monitoring Program Lead so that steps to identify the source and effectively eliminate the discharge can be initiated. The technologist attaches a Stormwater Inspection Report Tracking Form (Attachment 7.4) to Quarterly Non-storm Water Visual Observation Forms and gives these to the Environmental Monitoring Program Lead. The Environmental Monitoring Program Lead ensures that corrective actions taken are appropriate. If the issues can not be resolved within several days the Environmental Monitoring Program Lead enters the issues into the ES&H Self Assessment Database.

### 4.3 Fuel and Oil Storage Inspections

4.3.1 The Environmental Technologist or Environmental Monitoring Program Lead contacts the Preventative Maintenance Team to verify inspections are being conducted and any leaks identified have been repaired. The underground diesel storage tanks are monitored daily and all other tanks are monitored weekly. Both the Preventive Maintenance Team and the Maintenance Engineering Department keep copies of inspection logs.

4.3.2 A copy of the correspondence (email or record of phone conversation), or actual inspection logs, are kept in Room 105, Building 922 until they are transmitted to records.

### 4.4 Data Management

4.4.1 Copies of the Quarterly Non-stormwater Discharge Visual Observation Forms are maintained by Environmental Management Department staff in stormwater program files in Room 105, Building 922 for one year. The forms are then maintained in the Record Center for five years.

4.4.2 Annual Stormwater Monitoring Report: Results from quarterly non-stormwater visual observations are summarized in the SNL/CA annual stormwater monitoring report to the Executive Officer of the San Francisco Regional Water Quality Control Board submitted by July 1 of each year.

## 5.0 Records

**5.1 Records Control Center** (RRS# EM-217.03): Quarterly Non-stormwater Discharge Visual Observation Forms are stored and maintained by the Records Manager according to OP471347, Administrative Procedure for Managing Sandia/CA ES&H Recorded Information (Reference 6.4).

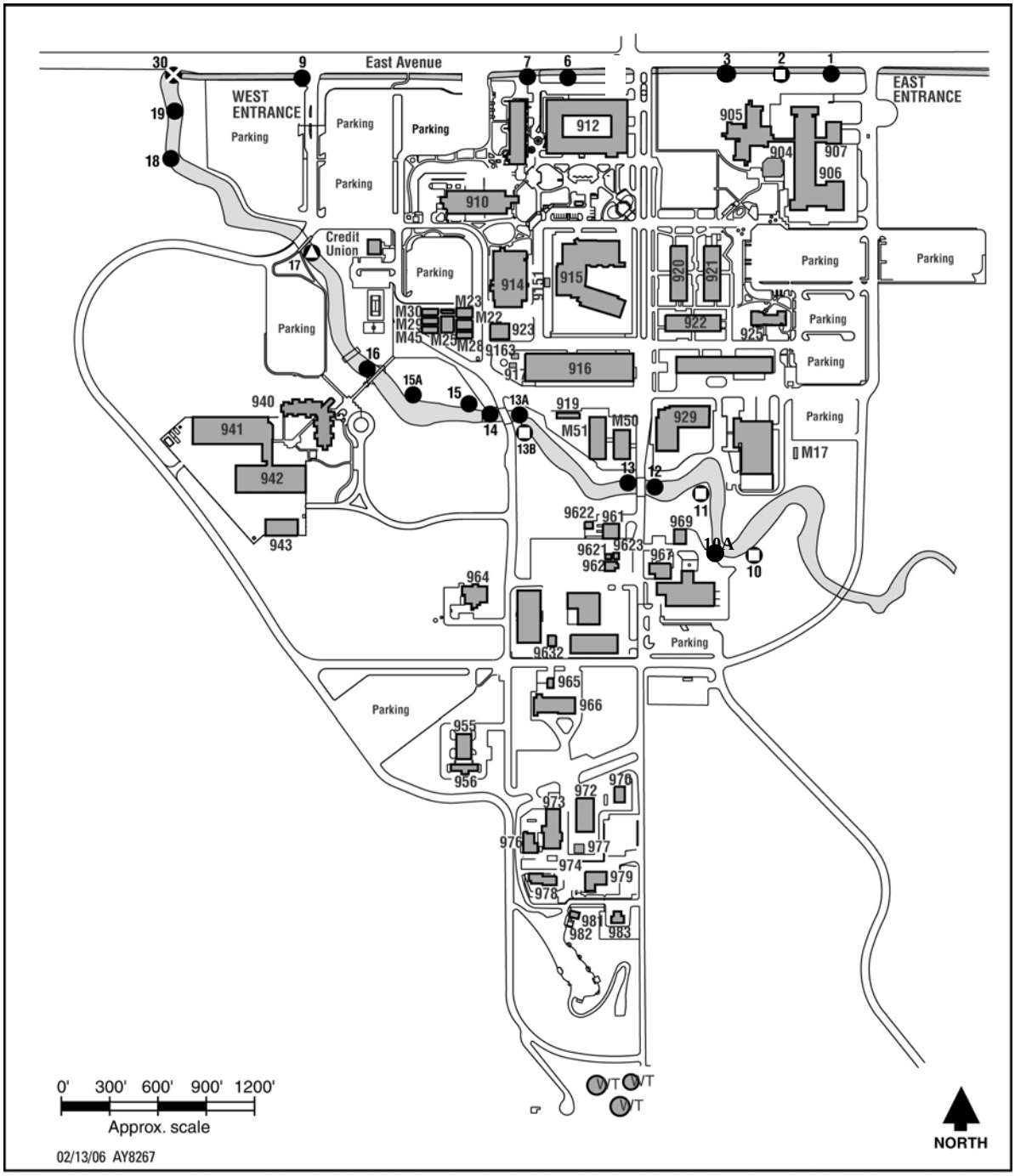
## 6.0 REFERENCES

6.1 California Reissued Industrial Activities Storm Water NPDES General Permit, CAS000001, Water Quality Order No. 97-03-DWQ, April 25, 1997.
6.2 Discharge of Storm water from Small MS4s NPDES General Permit, CAS000004, Water Quality Order No. 2003-0005-DWQ
6.3 Storm Water Pollution Prevention Plan for Sandia National Laboratories, California, August 2005
6.4 OP471347, Administrative Procedure for Managing Sandia/CA ES&H Recorded Information

## 7.0 ATTACHMENTS

7.1 Storm Drain Outfall Locations
7.2 Drainage Area Activities
7.3 Non-storm Water Discharge Visual Observation Form
7.4 Stormwater Inspection Report Tracking Form
7.5 Authorized Non-Stormwater Discharges

**Attachment 7.1 Storm Drain Outfall Locations**




**Legend**

- Site Outfall (Automatic Samples)
- Observation Only Locations
- Observation and Automatic Sample Locations
- Observation and Physical Sampling Locations
- Arroyo Seco
- Ditch along East Avenue

**SITE OUTFALL AND DRAINAGE POINTS**

| FIGURE: | DATE: |
|---|---|
| | |

## Attachment 7.2 Description of Drainage Area Activities

| Discharge Location | SW Sample Location | Drainage Area ID# | Description of Drainage Area | Description of Drainage Area Activities |
|---|---|---|---|---|
| 1 | no sample | 1 | West side of Thunderbird Lane; south side of B906 | road; drains parking and driveway areas; storage sheds; significantly identical to Area 3 |
| 2 | A | 2 | East side of Combustion Research Facility (CRF) area | Outdoor maintenance and material handling; oils and solvents storage; significantly identical to Area 3 |
| 3 | No sample | 3 | West side CRF area | Outdoor maintenance and material handling; oils and solvents storage; significantly identical to Area 2 |
| | sheet flow | 4 | East side, north end A Street (B920, 921, 922) | Administration buildings/office areas |
| | sheet flow | 5 | West side, north end A Street;<br>➢ East side B912<br>➢ East side park area above underground Computer Facility | office areas, outdoor activities include Cushman parking, park area |
| 6 | no sample | 6 | Building 912 courtyard | Drains park in office courtyard |
| 7 | B (6) | 7 | B Street:<br>➢ East side B911<br>➢ West side B912<br>➢ West side park area above underground Computer Facility | Office buildings; indoor equipment room; outdoor activities include Cushman parking, park area |
| | no sample; connects underground | 8 | Park area in front of Gate 1 (west side B911 and north side B910) | Drains parking and office areas |
| 9 | no sample | 9 | North west parking area | Drains parking area |
| 10 | X | 10 | East side B968 (CDRL); parking lot south of B968 | Outdoor material handling; covered storage next to building; parking lot |
| 10A | no sample | 10A | Driveway on east side of equipment room | unused driveway |
| 11 | C | 11 | East parking area and area west and south Gate 15:<br>➢ South end east parking area<br>➢ South east side B927<br>➢ North side B928<br>➢ West and east side B928 | Outdoor materials handling; materials receiving area for entire site; parking area |
| 12 | no sample | 12 | M24 and south west side of B927 | Office trailer; indoor office equipment warehouse |

| Discharge Location | SW Sample Location | Drainage Area ID# | Description of Drainage Area | Description of Drainage Area Activities |
|---|---|---|---|---|
| | no sample | 12A | West side B967 | Offices; catch basin in landscaping; location 10 captures possible runoff from CDRL facility |
| 13 | no sample | 13 | Water Tanks | Drains water supply tanks |
| 13A | no sample | 13A | Area south of B916; M51, M50, B919 | Indoor research laboratories; outdoor storage for B916; paved area surrounding electrical switching stations; office trailers |
| 13B | K | 13B | Maintenance yard and Hazardous Materials Building:<br>➢ 7th Street<br>➢ B961 (Hazardous Materials Facility)<br>➢ Maintenance Yard | ➢ Outdoor hazardous materials handling<br>➢ Outdoor materials storage and stockpiling<br>➢ Outdoor raw stock metals stock storage; process chemicals, gas bottles, and storage sheds<br>➢ Heavy equipment storage (on pervious surface-dirt)<br>➢ Sand/aggregate material storage<br>➢ Covered vehicle fueling area<br>➢ Site maintenance area |
| 14 | no sample | 14A | North end C Street:<br>➢ Area west of B9631<br>➢ South side B9633<br>➢ Former FOS site (closed)<br>➢ B964 | south west of maintenance area; raw stock metals storage, storage sheds; significantly identical to sample K and L |
| | E (1), N (5) | 14B | South end Sandia Drive/C Street:<br>➢ Areas north and west B965 and 966<br>➢ B970 through 983<br>➢ Storage bunkers<br>➢ Security firing range | ➢ Outdoor materials handling<br>➢ Outdoor storage sheds<br>➢ Outdoor firing shed<br>➢ Explosives storage<br>➢ Indoor research laboratories<br>➢ NFL site (closed) |
| 15 | no sample | 15 | Open asphalt area south of Redwood Park | office buildings |
| 15A | F | 15A | West end Third Street and north end Fifth Street:<br>➢ South west corner of B915 (DISL)<br>➢ Area east and south B923<br>➢ Areas west B916<br>South end D Street: | Indoor research laboratories |

| Discharge Location | SW Sample Location | Drainage Area ID# | Description of Drainage Area | Description of Drainage Area Activities |
|---|---|---|---|---|
| | | | East end Mobile 28&29 (Redwood Park) | |
| 16 | no sample | 16 | Area east of MANTL (B940) | Drains parking and office area |
| 17 | G (2) | 17 | Second Street west of A Street:<br>➢ North west corner of B915<br>➢ Area east and south B910<br>➢ Area west B10<br>➢ Area north and east of Credit Union<br>➢ Area north B914 | Outdoor material handling and storage sheds; parking, offices |
| 18 | H (3) | 18A | North end Sandia Drive:<br>➢ MANTL | Outdoor maintenance, material handling, storage sheds, vacuum, pumps |
| | no sample | 18B | Area surrounding B955 and 956 | Drains parking area; indoor environmental testing |
| 19 | no sample | 19 | Far northwest parking area | Drains parking area |
| | D (4,7) | | | |
| | L | | Sample location in Arroyo downstream of 14 and 15A sample locations | |
| | sheet flow | 22 | B919 south side | Sheet flow to Arroyo, no outdoor activities |
| | Y (4) | | Arroyo Seco as it enters the site | |
| 30 | Z (4) | | Arroyo Seco as it leaves the site | |

(1) Discontinued after baseline information determined no significant erosion from hill area.
(2) Automatic sampler installed for the 1996/97 wet season.
(3) Discontinued after baseline information on new facility onsite identified significantly identical to Area 7.
(4) Automatic sampler installed for the 1995/96 wet season.
(5) Sample location N is for monitoring the closure of the NLF site and is not part of the stormwater monitoring program for the General Permit.
(6) Discontinued after site construction changed site drainage patterns. This location only receives stormwater drainage from office areas.
(7) Discontinued after site construction changed site drainage patterns. This location formally received sheet flow from hazardous waste facility and maintenance area. These drainage areas are now sampled at location K, 13B.

**Attachment 7.3 Quarterly Non-storm Water Discharge Visual Observation Form**
**SNL/CA QUARTERLY NON-STORMWATER VISUAL OBSERVATIONS**
**Environmental Management Department**

Page _____ of _____

| **BOX 1** | |
|---|---|
| Inspectors: | |
| Date: | Time: |

| **BOX 2** |
|---|
| Drainage Area Number (as described in the SWPPP) and Description of Activities Conducted |

| **BOX 3** | | |
|---|---|---|
| *Check "YES" or "NO" for each of the following questions:* | YES | NO |
| Is there any evidence of non-stormwater discharge? (e.g., presence of any discoloration, stains, odors, floating materials, sludge, etc.) | | |
| Is there any standing water? | | |
| Is there any visible flow of an **unauthorized** non-stormwater discharge? | | |

| **BOX 4** |
|---|
| *If you answered "YES" to any of the questions in BOX 3, describe:*<br>*1) each of the observations (color, odor, floating objects, scum. sludge, suds, oil sheen, etc.);*<br>*2) source or potential source; and*<br>*3) any follow-up conducted during inspection to identify and eliminate the source.* |
| |
| |
| |
| |
| |

| **BOX 5** | | | |
|---|---|---|---|
| *Are there any **authorized** non-stormwater discharges in this area?* | Continuous | Intermittent | None |
| Air Conditioning Condensate | | | |
| Air Handler Condensate | | | |
| Fire Auxiliary - building sprinkler testing | | | |
| Fire Auxiliary - hydrant testing | | | |
| Safety Wash - eye wash and shower testing | | | |
| Landscape/Lawn Irrigation | | | |
| DI Water | | | |
| Supply Water Tank no more upgrades | | | |
| Other that Should be Added to List (describe): | | | |
| | | | |
| | | | |
| | | | |

*- For <u>each</u> continuous discharge and intermittent discharge occurring during the inspection, complete BOX 6.*
*- For <u>each</u> intermittent discharge that was not occurring during the inspection, schedule an inspection when the discharge can be observed. Complete BOX 6 during the follow-up inspection.*

**SNL/CA QUARTERLY NON-STORMWATER VISUAL OBSERVATIONS** (continued)

Drainage Area: _____ Page _____ of _____

| **BOX 6** | | |
|---|---|---|
| Describe authorized non-stormwater discharge: | | |
| *Check "YES" or "NO" for each of the following questions:* | YES | NO |
| Is BMP in place to reduce contact with pollutants? | | |
| Is BMP in place to minimize the flow or volume? | | |
| Are BMPs effective? | | |
| Describe any follow-up:<br>☐ None<br>☐ Implement BMP<br>☐ Modify or Improve Current BMP | | |

| **BOX 6** | | |
|---|---|---|
| Describe authorized non-stormwater discharge: | | |
| *Check "YES" or "NO" for each of the following questions:* | YES | NO |
| Is BMP in place to reduce contact with pollutants? | | |
| Is BMP in place to minimize the flow or volume? | | |
| Are BMPs effective? | | |
| Describe any follow-up:<br>☐ None<br>☐ Implement BMP<br>☐ Modify or Improve Current BMP | | |

| **BOX 6** | | |
|---|---|---|
| Describe authorized non-stormwater discharge: | | |
| *Check "YES" or "NO" for each of the following questions:* | YES | NO |
| Is BMP in place to reduce contact with pollutants? | | |
| Is BMP in place to minimize the flow or volume? | | |
| Are BMPs effective? | | |
| Describe any follow-up:<br>☐ None<br>☐ Implement BMP<br>☐ Modify or Improve Current BMP | | |

## Attachment 7.4. STORMWATER INSPECTION REPORT TRACKING FORM

Report Identification:_____

_____

Requester:_____ Date:_____

To be completed by Environmental Monitoring Program Lead

Reviewer:_____

1) Is any action/follow-up needed for any issues identified in inspection?
- θ No (sign and date form)
- θ Yes (fill in #2)

2) Identify each issue* and follow-up/actions needed

| Description of issue and follow-up | compliance schedule ** (w/in 1 wk) |
|---|---|
| | |

3) Does SWPPP need to be changed/updated?
- θ No
- θ Yes: Date updated (within 12 weeks)_____
  - θ description of potential pollutant sources
  - θ identified pollution prevention measures and controls
  - θ other:_____

4) If Annual Site Compliance Inspection, were spill response forms reviewed? θ Yes θ No
5) If Non-Stormwater Discharge Observations, was maintenance contacted to verify SPCC fuel tank inspections are being conducted? θ Yes θ No

Signature:_____ Date:_____

*The Environmental Monitoring Program Lead identifies significant issues only, that require follow-up action. Some issues identified in the inspection reports may not be significant.
**Compliance schedule shall be completed within 1 week. Follow-up actions identified in the compliance schedule must be completed within 90 days or reported to the Regional Board.

**Attachment 7.5 Authorized Non-Stormwater Discharges and Corresponding BMPs**

| Activity | Drainage Area(s) | Potential | | BMPs |
|---|---|---|---|---|
| | | Pollutants Sources | Pollutants | |
| ***Non-Stormwater Discharges*** | | | | |
| Air Conditioning Condensate | | Equipment, material on the ground, if any | Oil and grease, metals, litter | • Volume is minimal (drips) but dependent on weather<br>• Areas and equipment are kept clean to minimize pollutant exposure |
| Air Handler Condensate | 2, 3 | Equipment, material on the ground, if any | Oil and grease, metals, litter | • Volume is dependent on weather and minimal<br>• Areas and equipment are kept clean to minimize pollutant exposure |
| Fire Auxiliary - building sprinkler testing | | Material on the ground, if any | Litter | • Volume is restricted to the minimum required by the test<br>• Areas are kept clean to minimize pollutant exposure |
| Fire Auxiliary - hydrant testing | | Material on the ground, if any | Litter | • Volume is restricted to the minimum required by the test<br>• Areas are kept clean to minimize pollutant exposure |
| Safety Wash - eye wash and shower testing | | None | None | • Volume is restricted to what is necessary to ensure the safe use of the eye wash and shower |
| Landscape/Lawn Irrigation | 1, 2, 4, 5, 6, 7, 8, ,9, 10, 14, 16, 17, 18, 19 | Landscaping activities (e.g., planting, mowing, etc.) fertilizers, pesticides | | • Apply pesticides and fertilizers at rates recommended by manufacturer<br>• Dispose of clippings and landscaping waste properly, not in storm drains<br>• Do not over irrigate landscape |
| Supply Water Tank or Line Maintenance | 13 | | | |

# APPENDIX G-3

Operating Procedures for Stormwater Discharge Visual Observations

# OPERATING PROCEDURE (OP)

Sandia/CA
UNCLASSIFIED

**Title:** Operating Procedure for Stormwater Discharge Visual Observations

Check One: (Type of OP)
___ Laboratory Location: Bldg./Rm.

__X__ Activity Description: Procedure to be followed to perform stormwater discharge visual observations.

**Document Release or Change History:**

| Procedure # | Issue | Date | Review Period |
|---|---|---|---|
| OP471090 | A | 11/24/93 | 2 Years |
| OP471090 | B | 3/30/95 | 2 Years |
| OP471090 | C | 8/28/97 | 2 Years |
| OP471090 | D | 11/09/99 | 2 Years |
| OP471090 | E | 10/01 | 2 Years |
| OP471090 | F | 8/29/03 | 2 Years |
| OP471090 | G | 1/06/05 | 2 Years |
| OP471090 | H | 1/08/07 | 2 Years |

Author/Contact Person: Robert Holland

| Org. | Phone | Date |
|---|---|---|
| 8516 | 4-3755 | |

_____
Signature

Reviewer: John Chavarria

| Org. | Phone | Date |
|---|---|---|
| 8516 | 4-3473 | |

_____
Signature

Reviewer: John Garcia

| Org. | Phone | Date |
|---|---|---|
| 8512 | 4-3822 | |

_____
Signature

Reviewer: Bob Clevenger

| Org. | Phone | Date |
|---|---|---|
| 8513 | 4-3320 | |

_____
Signature

Approved By Owner: Gary Shamber

| Org. | Phone | Date |
|---|---|---|
| 8516 | 4-2237 | |

_____
Signature

Summary of Changes Since Last Issue

1. Revised the following outfall location designations: removed discharge locations 4 and 5 and added sheet flow description, removed discharge location 8, added discharge location 10A, and added discharge location 15. Updated pictures, maps and forms as needed.

2. Revise language to indicate SNL/CA is not currently under a Construction Activities General Permit or Construction Activities SWPPP but that construction site inspections continue to be conducted as a part of the Industrial Activities SWPPP.

3. Added Maintenance Engineering responsible for storm drain system maintenance and clearing of blockages or obstructions. Subsequently, added Bob Clevenger, 8513, as a reviewer.

## 1.0 GENERAL

### 1.1 Purpose

This procedure describes the method for conducting visual inspections of stormwater at discharge points during the wet season. The intent of this procedure is to observe if pollutants are discharged from the site with stormwater. The primary aim of this procedure is to identify pollutants that are a result from the activities conducted onsite and not pollutants that are from other actions (e.g. flow from upstream sources, fallen leaves, etc.). These observations are required by the Industrial Activities Stormwater Discharge General Permit (Reference 6.1).

This procedure also includes observations of the former Navy Landfill (NLF) site for erosion and the potential for exposing subsurface waste according to the Erosion Control Action Plan (Reference 6.2).

This procedure also includes visual inspections of construction areas on-site for proper use and maintenance of best management practices (BMPs). These inspections will be conducted whether or not the site is operating under a Construction Activities Stormwater Discharge General Permit (Reference 6.3).

### 1.2 Scope

Stormwater monitoring activities apply to the Environmental Management Department (EMD), Environmental Monitoring Program.

### 1.3 Ownership

This procedure is maintained by the Environmental Management Department Manager. Comments should be sent to the Environmental Monitoring Program Lead.

## 2.0 RESPONSIBILITIES

**2.1 Environmental Monitoring Program Lead** is responsible for the following:

- Initiating activities to identify the source of pollutants discharged with stormwater;
- Assisting the Environmental Management Technicians with conducting the inspections;
- Initiating the follow-up of identifying and minimizing pollutants discharged with stormwater;
- Ensuring that the Industrial Activities Stormwater Pollution Prevention Plan (SWPPP) (Reference 6.4) and Construction Activities SWPPP, if applicable, are updated and that appropriate Best Management Practices (BMPs) are included; and
- Notifying the Environmental Restoration Lead if erosion, or the potential for erosion at the NLF, is identified.
- Reviewing the Stormwater Inspection Report Tracking Form (Attachment 7.7) and conducting any follow-up actions.

**2.2 Environmental Management Technician** is responsible for the following:

- Inspecting all storm drain outfalls;
- Completing the wet weather visual observation form;
- Verifying implementation of BMPs at construction sites and completing the construction site BMP Inspection Report log (Attachment 7.6);
- Ensuring the documentation is maintained at the records control center and in the Program files; and
- Informing the Environmental Monitoring Program Lead of any observation that might indicate pollutant discharge with stormwater.

- Attaching a Stormwater Inspection Report Tracking Form (Attachment 7.7) to the Stormwater Sampling Event Forms and submitting this form to the Environmental Monitoring Program Lead for review and any follow-up actions.

**2.3 Facilities Planning and Construction Management**
Point of contact is responsible for implementing and maintaining BMPs required at construction sites. There is a SNL/CA point of contact assigned to every construction project on site.

**2.4 Maintenance Engineering**
Responsible for maintenance of the site storm drain system.

## 3.0 DEFINITIONS

**3.1 Storm Drain Outfall** is the location where an identifiable stream of stormwater runoff discharges into the Arroyo Seco or ditch along East Avenue through either a pipe or open channel. All storm drain outfalls are illustrated in Attachment 7.1 and described in Attachment 7.3. The ditch along East Avenue eventually discharges into the Arroyo Seco. All stormwater discharges off site at one location: the Arroyo Seco as it flows beneath East Avenue.

**3.2 Best Management Practices** (BMPs) are structural and non-structural practices to eliminate or prevent pollutant discharges to the storm drains.

**3.3 Wet Season** is from October 1 through May 31.

## 4.0 PROCEDURE

### 4.1 General Information

4.1.1 Wet season inspections are performed to comply with stormwater monitoring requirements in California's Industrial Activities Storm Water NPDES General Permit (general permit; Reference 6.1). Sandia National Laboratories, California (SNL/CA) has filed a Notice of Intent (NOI) with the State Water Resources Control Board (SWRCB) and must comply with the conditions of the general permit.

4.1.2 Observations for erosion at the NLF is pursuant to a closure agreement with the San Francisco Bay Regional Water Quality Control Board (Regional Board) (Reference 6.2).

4.1.3 BMP inspections at construction sites are performed to comply with monitoring requirements in California's Construction Activities Storm Water NPDES General Permit (Reference 6.3), when applicable, and the SNL/CA Industrial Activities SWPPP (Reference 6.4). Currently, SNL/CA has not filed a NOI with the SWRCB to comply with the conditions of the Construction Activities General Permit.

### 4.2 Conducting Visual Observations

4.2.1 There are twenty-one storm drain outfalls onsite that discharge into either 1) the ditch which runs along East Avenue or 2) the Arroyo Seco (see Attachment 7.1). The ditch along the East Avenue eventually discharges into the Arroyo Seco beneath East Avenue. The Arroyo Seco is the one storm drain outfall discharging off the site. On site, stormwater runoff flows in a general south-east to north-west direction.

4.2.2 Visual observations are conducted during normal working hours (7:30 AM through 4:00 PM). Visual observations are initiated within the first hour of discharge, or as soon as safe and practicable thereafter.

4.2.3 This procedure will be performed for one storm event during each wet season month. The storm event should be preceded by at least three (3) working days without stormwater discharges.

**CAUTION: THE SAFETY OF THE TECHNICIANS CONDUCTING THE WET WEATHER OBSERVATIONS IS OF PRIMARY IMPORTANCE. STORM WEATHER CONDITIONS CAN MAKE ACCESS TO AND FROM STORM DRAIN OUTFALLS ALONG THE ARROYO SECO VERY HAZARDOUS. UNDER NO CONDITION SHOULD A TECHNICIAN ATTEMPT TO GAIN VISUAL ACCESS TO A STORM DRAIN OUTFALL IF THE TECHNICIAN FEELS THAT THE ROUTE IS TOO DANGEROUS. OBSERVATIONS MUST BE CONDUCTED BY AT LEAST TWO PEOPLE.**

If a significant storm event begins towards the end of the work day and observations continue past 4:00 PM, the technician proceeds to the next storm drain outfall only as long as the technician feels there is sufficient day light to continue safely.

4.2.4 Stormwater discharge visual observations must be conducted by two people for safety.

4.2.5 Visual observations are recorded on Stormwater Discharge Visual Observation Form (Attachment 7.4). The technician performing the visual observations completes a form for each storm event.

4.2.5.1 Complete Box 1 of the Stormwater Discharge Visual Observation Form before performing field activities.

4.2.5.2 Inspect each storm drain outfall (see Attachment 7.2 and 7.3). For each outfall, indicate the time of arrival in the space provided. Answer the questions in Box 2 of the form, describing the types of observations to look for in the storm water discharge: floating and/or suspended materials, oil and grease, discoloration, odors, or any other observations that may indicate the presence of pollutants in the storm water discharge.

4.2.5.3 If the technician observes pollutants in the storm water discharge, describe the conditions further in Box 3 of the form. (Note: descriptions should be aimed at identifying the source of the discharge.)

4.2.5.4 Visually monitor the entire NLF hillside (see Attachment 7.5). Note any erosion or potential for exposing subsurface waste on the map of the NLF (Attachment 7.5). Also note any observations or comments in Box 4 of the Observation Form. If there is erosion or potential for exposing subsurface waste observed, indicate this in Box 4 of the Form.

4.2.6 If blockages or obstructions are noted in any of the storm drains or channels, contact the Maintenance Engineering Department to have the situation corrected.

4.2.7 Attach a Stormwater Inspection Report Tracking Form (Attachment 7.7) to the Stormwater Discharge visual Observation Form(s) and submit to the Environmental Monitoring Program Lead for review and any follow-up actions. The technician reports observations of pollutant discharge to the Environmental Monitoring Program Lead, so that steps to identify the source and eliminate pollutant exposure to stormwater can be initiated.

### 4.3 Conducting Construction Site BMP Inspections

4.3.1 The number and location of construction sites on-site may vary from year to year. Inspections are done at sites with disturbed soil during the wet season, or other activities taking place that may have potential for pollutants coming in contact with stormwater (i.e. bulk material storage piles).

4.3.2 Construction site BMPs should be fully implemented prior to execution of the project. Facilities Planning and Construction Management staff make sure contractors implement standard controls specified in the contract language and work with the Environmental Monitoring Program Lead to determine other BMPs necessary during the planning process.

4.3.3 Inspections are conducted during normal business hours (7:30am through 4:00pm).

4.3.4 The procedure will be performed before and after storm events and once each 24-hour period during extended storm events to identify BMP effectiveness and implement repairs or design changes as soon as feasible.

4.3.5 BMP inspections are recorded on the BMP Inspection Report form (Attachment 7.6). The technician performing the inspection completes an entry for each site and day inspected.

4.3.6 Inspect each construction site. For each site indicate the type of inspection as before, during or after a storm event. Fill in the Inspection Report form with the location, BMPs implemented at the location, weather conditions, date and time of inspection, initials or name of inspector. Note the status of the BMPs (e.g., O.K., need repair, out of place, not working, etc.) and corrective actions required, including any changes to SWPPP necessary.

4.3.7 The technician shall inform the appropriate Facilities Planning and Construction Management SNL/CA point of contact for the construction site if any corrective actions are required at the site.

4.3.8 The Stormwater Inspection Report Tracking Form (Attachment 7.7) is used only if follow-up action is needed.

### 4.4 Data Management

4.4.1 The Stormwater Discharge Visual Observation Forms are maintained by EMD staff in Stormwater Program files in room 105, building 922 for one year. The forms are then maintained in the Records Center for five years.

4.4.2 Stormwater Discharge Report: Results from wet weather visual observations are summarized in the SNL/CA annual stormwater monitoring report to the Executive Officer of the San Francisco Regional Water Quality Control Board submitted by July 1 of each year.

4.4.3 The BMP Inspection Report forms (Attachment 7.6) are maintained by EMD staff in Stormwater Program files in room 105, building 922 for one year. The forms are then maintained in the Records Center for five years.

## 5.0 Records

**5.1 Records Control Center** (RRS# EM-0217.03): The original Wet Weather Visual Observation Forms are stored and maintained by the Records Manager according to OP471347, Administrative Procedure for Managing Sandia/CA ES&H Recorded Information (Reference 6.5).

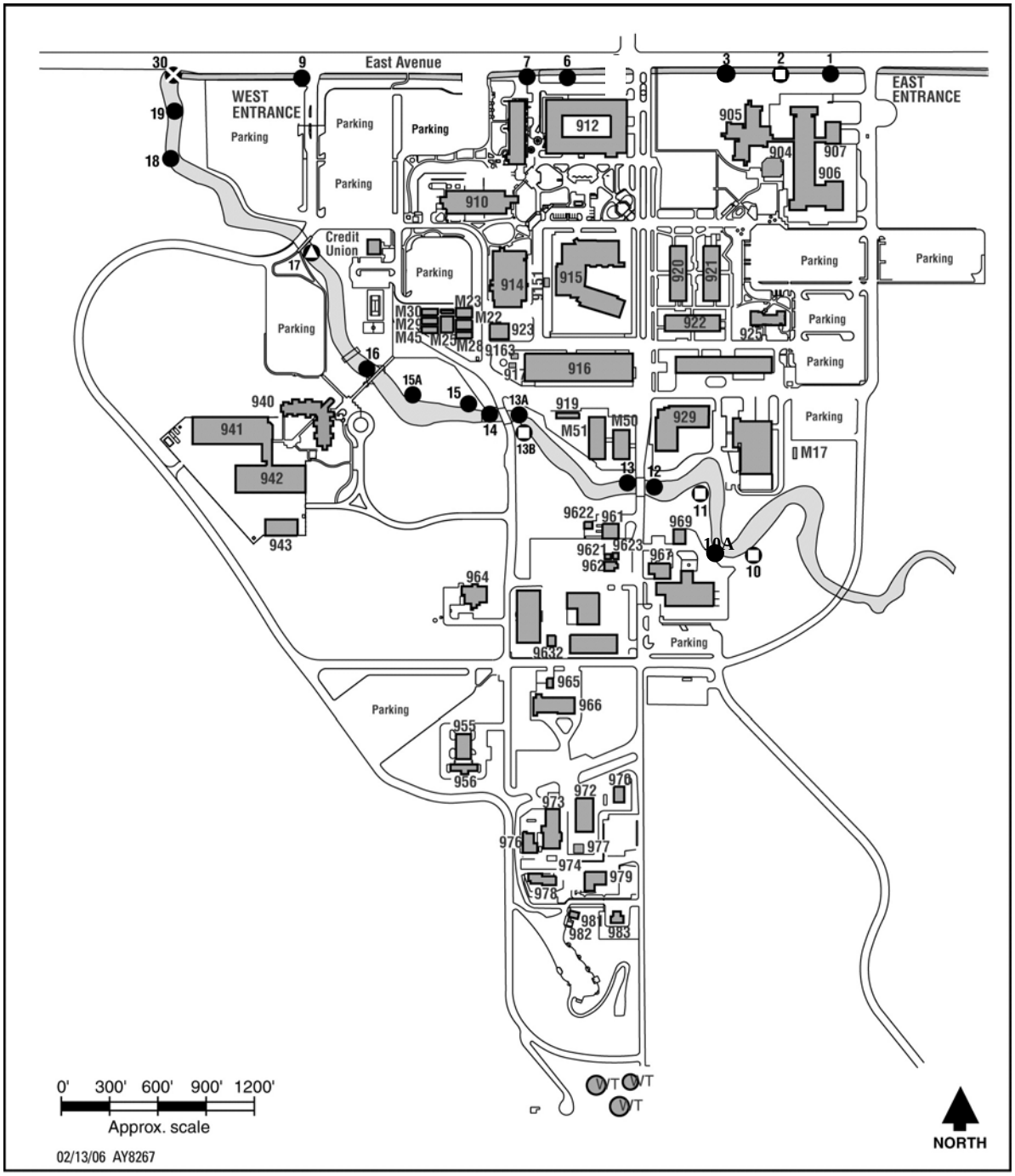
## 6.0 REFERENCES

6.1 California General Industrial Activities Storm Water NPDES Permit, CAS000001, April 17, 1997
6.2 Erosion Control Action Plan for the Navy Land Fill (NLF) at SNL/CA approved by the RWQCB in a March 17, 1998 letter to DOE
6.3 California General Construction Activities Storm Water NPDES Permit, CA000002, December 8, 1999
6.4 Industrial Activities Storm Water Pollution Prevention Plan for Sandia National Laboratories, California, November 2004
6.5 OP471347, Administrative Procedure for Managing Sandia/CA ES&H Recorded Information
6.6 OP471091 Operating Procedure for Stormwater Sampling and Analysis

## 7.0 ATTACHMENTS

7.1 Storm Drain Outfall Locations (figure)
7.2 Storm Drain Outfall Locations (photos)
7.3 Storm Drain Outfall Locations (table)
7.4 Storm Drain Outfall Stormwater Discharge Visual Observation Form
7.5 Location and Map of the Former Navy Landfill Area
7.6 BMP Inspection Report log
7.7 Stormwater Inspection Report Tracking Form

**Attachment 7.1 Storm Drain Outfall Locations**




**Legend**

- Site Outfall (Automatic Samples)
- Observation Only Locations
- Observation and Automatic Sample Locations
- Observation and Physical Sampling Locations
- Arroyo Seco
- Ditch along East Avenue

**SITE OUTFALL AND DRAINAGE POINTS**

| FIGURE: | DATE: |
|---|---|
| | |

**Attachment 7.2 Storm Drain Outfall Locations**

Location 1



Location 2 (Sampling Station A)



Location 3



Location 6



Location 7



**Attachment 7.2 Storm Drain Outfall Locations**

Location 9




Location 10 (Sampling Station X)



Location 10A



Location 11 (Sampling Station C)



Location 12



**Attachment 7.2 Storm Drain Outfall Locations**

Location 13



Location 13A



Location 13B (Sampling Station K)



Location 14



Location 15



Location 15A



**Attachment 7.2 Storm Drain Outfall Locations**

Location 16



Location 17 (Sampling Station G upstream)



Location 18



Location 19



Location 30 (Sampling Station Z)



Refer to OP471091 Operating Procedure for Stormwater Sampling and Analysis for discussion of Sampling Stations (Ref 6.6).

**Attachment 7.3 Storm Drain Outfall Locations**

| Discharge Location | SW Sample Location | Drainage Area ID# | Description of Drainage Area | Description of Drainage Area Activities |
|---|---|---|---|---|
| 1 | no sample | 1 | West side of Thunderbird Lane; south side of B906 | road; drains parking and driveway areas; storage sheds; significantly identical to Area 3 |
| 2 | A | 2 | East side of Combustion Research Facility (CRF) area | Outdoor maintenance and material handling; oils and solvents storage; significantly identical to Area 3 |
| 3 | No sample | 3 | West side CRF area | Outdoor maintenance and material handling; oils and solvents storage; significantly identical to Area 2 |
| | sheet flow | 4 | East side, north end A Street (B920, 921, 922) | Administration buildings/office areas |
| | sheet flow | 5 | West side, north end A Street;<br>➢ East side B912<br>➢ East side park area above underground Computer Facility | office areas, outdoor activities include Cushman parking, park area |
| 6 | no sample | 6 | Building 912 courtyard | Drains park in office courtyard |
| 7 | B (6) | 7 | B Street:<br>➢ East side B911<br>➢ West side B912<br>➢ West side park area above underground Computer Facility | Office buildings; indoor equipment room; outdoor activities include Cushman parking, park area |
| | no sample; connects underground | 8 | Park area in front of Gate 1 (west side B911 and north side B910) | Drains parking and office areas |
| 9 | no sample | 9 | North west parking area | Drains parking area |
| 10 | X | 10 | East side B968 (CDRL); parking lot south of B968 | Outdoor material handling; covered storage next to building; parking lot |
| 10A | no sample | 10A | Driveway on east side of equipment room | unused driveway |
| 11 | C | 11 | East parking area and area west and south Gate 15:<br>➢ South end east parking area<br>➢ South east side B927<br>➢ North side B928<br>➢ West and east side B928 | Outdoor materials handling; materials receiving area for entire site; parking area |
| 12 | no sample | 12 | M24 and south west side of B927 | Office trailer; indoor office equipment warehouse |
| | no sample | 12A | West side B967 | Offices; catch basin in landscaping; location 10 captures possible runoff from CDRL facility |

| Discharge Location | SW Sample Location | Drainage Area ID# | Description of Drainage Area | Description of Drainage Area Activities |
|---|---|---|---|---|
| 13 | no sample | 13 | Water Tanks | Drains water supply tanks |
| 13A | no sample | 13A | Area south of B916; M51, M50, B919 | Indoor research laboratories; outdoor storage for B916; paved area surrounding electrical switching stations; office trailers |
| 13B | K | 13B | Maintenance yard and Hazardous Materials Building:<br>➢ 7th Street<br>➢ B961 (Hazardous Materials Facility)<br>➢ Maintenance Yard | ➢ Outdoor hazardous materials handling<br>➢ Outdoor materials storage and stockpiling<br>➢ Outdoor raw stock metals stock storage; process chemicals, gas bottles, and storage sheds<br>➢ Heavy equipment storage (on pervious surface-dirt)<br>➢ Sand/aggregate material storage<br>➢ Covered vehicle fueling area<br>➢ Site maintenance area |
| 14 | no sample | 14A | North end C Street:<br>➢ Area west of B9631<br>➢ South side B9633<br>➢ Former FOS site (closed)<br>➢ B964 | south west of maintenance area; raw stock metals storage, storage sheds; significantly identical to sample K and L |
| | E (1), N (5) | 14B | South end Sandia Drive/C Street:<br>➢ Areas north and west B965 and 966<br>➢ B970 through 983<br>➢ Storage bunkers<br>➢ Security firing range | ➢ Outdoor materials handling<br>➢ Outdoor storage sheds<br>➢ Outdoor firing shed<br>➢ Explosives storage<br>➢ Indoor research laboratories<br>➢ NFL site (closed) |
| 15 | no sample | 15 | Open asphalt area south of Redwood Park | office buildings |
| 15A | F | 15A | West end Third Street and north end Fifth Street:<br>➢ South west corner of B915 (DISL)<br>➢ Area east and south B923<br>➢ Areas west B916<br>South end D Street:<br>East end Mobile 28&29 (Redwood Park) | Indoor research laboratories |
| 16 | no sample | 16 | Area east of MANTL (B940) | Drains parking and office area |
| 17 | G (2) | 17 | Second Street west of A Street:<br>➢ North west corner of B915 | Outdoor material handling and storage sheds; parking, offices |

| Discharge Location | SW Sample Location | Drainage Area ID# | Description of Drainage Area | Description of Drainage Area Activities |
|---|---|---|---|---|
| | | | ➢ Area east and south B910<br>➢ Area west B10<br>➢ Area north and east of Credit Union<br>➢ Area north B914 | |
| 18 | H (3) | 18A | North end Sandia Drive:<br>➢ MANTL | Outdoor maintenance, material handling, storage sheds, vacuum, pumps |
| | no sample | 18B | Area surrounding B955 and 956 | Drains parking area; indoor environmental testing |
| 19 | no sample | 19 | Far northwest parking area | Drains parking area |
| | D (4,7) | | | |
| | L | | Sample location in Arroyo downstream of 14 and 15A sample locations | |
| | sheet flow | 22 | B919 south side | Sheet flow to Arroyo, no outdoor activities |
| | Y (4) | | Arroyo Seco as it enters the site | |
| 30 | Z (4) | | Arroyo Seco as it leaves the site | |

(1) Discontinued after baseline information determined no significant erosion from hill area.
(2) Automatic sampler installed for the 1996/97 wet season.
(3) Discontinued after baseline information on new facility onsite identified significantly identical to Area 7.
(4) Automatic sampler installed for the 1995/96 wet season.
(5) Sample location N is for monitoring the closure of the NLF site and is not part of the stormwater monitoring program for the General Permit.
(6) Discontinued after site construction changed site drainage patterns. This location only receives stormwater drainage from office areas.
(7) Discontinued after site construction changed site drainage patterns. This location formally received sheet flow from hazardous waste facility and maintenance area. These drainage areas are now sampled at location K, 13B.

**Attachment 7.4 Stormwater Discharge Visual Observation Form**

**BOX 1**

1. Date: _____
2. Technicians: (a) _____ (b) _____
3. Estimate start of storm event: (a) Date: _____ (b) Time: _____
4. Are observations being initiated within the first hour of discharge? yes [ ] no [ ]
   If no, describe reason for delay. _____

**BOX 2**

| **Outfall Identification Number** | **1** | **2** | **3** | **6** | **7** | **9** | **10** | **10A** | **11** | **12** | **13** |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Time of arrival: | | | | | | | | | | | |
| *Answer yes or no to the following questions:* | | | | | | | | | | | |
| Are there floating and/or suspended materials? | | | | | | | | | | | |
| Do you detect the presence of oil and grease? | | | | | | | | | | | |
| Is the discharge discolored? | | | | | | | | | | | |
| Do you detect an odor? | | | | | | | | | | | |

| **Outfall Identification Number** | **13A** | **13B** | **14** | **15** | **15A** | **16** | **17** | **18** | **19** | **30** | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Time of arrival: | | | | | | | | | | | |
| *Answer yes or no to the following questions:* | | | | | | | | | | | |
| Are there floating and/or suspended materials? | | | | | | | | | | | |
| Do you detect the presence of oil and grease? | | | | | | | | | | | |
| Is the discharge discolored? | | | | | | | | | | | |
| Do you detect an odor? | | | | | | | | | | | |

**BOX 3**

*If you answered yes to any of the questions in Box 2, describe each of the observations:*

| **Outfall ID** | **Observations** |
|---|---|
| | |
| | |
| | |
| | |
| | |

**BOX 4**

Observe the entire NLF hillside. Mark on the NLF map any areas of erosion or potential for exposing subsurface waste. Add any additional notes, comments, or observations below. ☐ No erosion or potential for exposing subsurface waste was observed
☐ See attached map for areas of erosion or potential for exposing subsurface waste

| **BOX 4 continued** |
| --- |
| Additional notes, comments, or observations: |

**Attachment 7.5 Location of the Former Navy Landfill Area**







Note: These pictures are of the general hillside area. Visual observations should be conducted in closer proximity to the entire hillside area of the NLF as shown on the NLF map on the following page.

**Attachment 7.5 Map of the Former Navy Landfill Area**

**Attachment 7.6 BMP Inspection Report**

| Type of Inspection* | Location or Coordinate | BMPs Implemented | Status | Action(s) Taken | Weather Conditions | Title | Date & Time Of Inspection | Inspection By |
|---|---|---|---|---|---|---|---|---|
| Bulk Material<br><br>Pre-Storm | Soil/gravel piles near B970 | Tarp covering pile, straw pigs around pile | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |

**(*Pre-Storm, During Extended Storm, or Post-Storm)**

**Attachment 7.7 STORMWATER INSPECTION REPORT TRACKING FORM**

Report Identification:_____

_____

Requester:_____ Date:_____

To be completed by Environmental Monitoring Program Lead

Reviewer:_____

1) Is any action/follow-up needed for any issues identified in inspection?
- θ No (sign and date form)
- θ Yes (fill in #2)

2) Identify each issue* and follow-up/actions needed

| Description of issue and follow-up | compliance schedule ** (w/in 1 wk) |
|---|---|
| | |

3) Does SWPPP need to be changed/updated?
- θ No
- θ Yes: Date updated (within 12 weeks)_____
  - θ description of potential pollutant sources
  - θ identified pollution prevention measures and controls
  - θ other:_____

4) If Annual Site Compliance Inspection, were spill response forms reviewed? θ Yes θ No

5) If Non-Stormwater Discharge Observations, was maintenance contacted to verify SPCC fuel tank inspections are being conducted? θ Yes θ No

6) If Non-Stormwater Discharge Observations, was Industrial Hygiene contacted to review previous quarter inspection records for wastewater issues? θ Yes θ No

Signature:_____ Date:_____

*The Environmental Monitoring Program Lead identifies significant issues only, that require follow-up action. Some issues identified in the inspection reports may not be significant.

**Compliance schedule shall be completed within 1 week. Follow-up actions identified in the compliance schedule must be completed within 90 days or reported to the Regional Board.

# APPENDIX G-4

Operating Procedures for Annual Comprehensive Site Compliance Evaluation

# OPERATING PROCEDURE (OP)

Sandia/CA
UNCLASSIFIED

**Title:** Operating Procedure for Annual Comprehensive Site Storm Water Compliance Evaluation

Check One: (Type of OP)
___ Laboratory

_x_ Activity Description: Procedure to follow to perform annual comprehensive site compliance evaluations

**Document Release or Change History:**

| Procedure # | Issue | Date | Review Period |
|---|---|---|---|
| OP471724 | A | 12/8/97 | 2 Years |
| OP471724 | B | 12/17/02 | 2 Years |
| OP471724 | C | 3/18/04 | 2 Years |
| OP471724 | D | 2/21/06 | 2 Years |

Author/Contact Person: Robert Holland

| | Org. | Phone | Date |
|---|---|---|---|
| _____ | 8516 | 4-3755 | |
| Signature | | | |

Reviewer: John Chavarria

| | Org. | Phone | Date |
|---|---|---|---|
| _____ | 8516 | 4-3473 | |
| Signature | | | |

Approved By Owner: Gary Shamber

| | Org. | Phone | Date |
|---|---|---|---|
| _____ | 8516 | 4-2237 | |
| Signature | | | |

## 1.0 GENERAL

### 1.1 Purpose

This procedure describes the methods for conducting a comprehensive site compliance evaluation (annual evaluation) of the site's stormwater program components, including a visual inspection of the site, evaluation of BMPs and review of records. This evaluation is required by the California Industrial Activities Storm Water NPDES General Permit (Industrial General Permit), and is used to measure effectiveness of Storm Water Pollution Prevention Plan (SWPPP) activities for the Industrial General Permit and the General Permit for Storm Water Discharges from Small Municipal Separate Storm Sewer Systems.

### 1.2 Scope

Storm water monitoring activities apply to the Environmental Management Department (EMD), 8516, Environmental Monitoring Program.

### 1.3 Ownership

This procedure is maintained by the Environmental Management Department Manager, 8516. Comments should be sent to the Environmental Monitoring Program Lead.

## 2.0 RESPONSIBILITIES

**2.1 Environmental Monitoring Program Lead** is responsible for initiating the comprehensive site compliance evaluation and any corrective or follow-up actions. The Environmental Monitoring Program Lead also assists the Environmental Operations Technologist conduct the evaluation.

**2.2 Environmental Operations Technologist** is responsible for inspecting potential pollutant sources, inspecting BMPs implemented onsite, completing the annual inspection form, and ensuring the documentation is maintained at the records control center or EMD staff's office. The technologist is also responsible for informing the Environmental Monitoring Program Lead of any observation that might indicate a non-stormwater discharge.

## 3.0 DEFINITIONS

**3.1 Best Management Practices (BMPs)** are structural and non-structural practices to eliminate or prevent non-stormwater discharges.

**3.2 Drainage Area** is the portion of the site that discharges through a single stormwater discharge location. Drainage areas and discharge locations are identified and described in Attachments 7.1 and 7.2.

## 4.0 PROCEDURE

### 4.1 Pre-operation Conditions

4.1.1 Annual evaluations are performed to comply with Storm Water Pollution Prevention Plan (SWPPP; Reference 6.1) requirements in the California Industrial Activities Storm Water NPDES General Permit (General Permit; Reference 6.2), and is used to measure effectiveness of Storm Water Pollution Prevention Plan (SWPPP) activities for the Industrial General Permit and the General Permit for Storm Water Discharges from Small

Municipal Separate Storm Sewer Systems (Reference 6.3). Sandia National Laboratories, California (SNL/CA) has filed a Notice of Intent (NOI) to comply with the permit and is covered by the Industrial General Permit.

4.1.2 Conduct this procedure once every reporting period of the annual stormwater report required by the General Permit (July 1 - June 30).

4.1.3 Conduct site inspections by drainage areas (Attachment 7.1 and 7.2).

4.1.4 Inspect drainage areas during normal, daylight working hours (7:30 AM through 4:00 PM).

4.1.5 Inspection teams must consist of at least two people.

4.1.6 Evaluations are recorded on Annual Evaluation Forms (Attachment 7.3).

**4.2 Conducting Evaluation**

4.2.1 Review all visual observation records (including non-stormwater discharge observations), follow up activities, and sampling and analysis results for the current reporting period to evaluate program effectiveness, compliance with the General Permit, and background data for the site inspections. Records are maintained by EMD (8516) for one year and then submitted to the Records Center.

4.2.2 Conduct site inspections of all drainage areas (Attachment 7.1 and 7.2) to document the potential for non-stormwater discharges and BMP effectiveness.

4.2.3 Complete an Annual Evaluation Form (Attachment 7.3) for each drainage area.

4.2.4 Complete Box 1 of the Form identifying the personnel performing the evaluation and the date of the evaluation.

4.2.5 Answer the questions in Box 2 of the Form describing the general conditions and BMP effectiveness at each drainage area, where 1 is “Good” and 4 is “Poor”.

4.2.6 Answer the questions in Box 4 and 5 of the Form if directed by instructions in Box 2. Questions in Box 4 and 5 describe BMP effectiveness for material handling and vehicle and heavy equipment storage and maintenance, where 1 is “Good” and 4 is “Poor”.

4.2.7 Box 3 and 6 provide space for comments. Comments should pertain to compliance issues, suggested follow-up or corrective actions, and suggested SWPPP revisions.

4.2.8 Attach a Stormwater Inspection Report Tracking Form (Attachment 7.4) to the Annual Evaluation Forms and submit to the Environmental Monitoring Program Lead for review and documenting of any follow-up actions.

4.2.9 Include an evaluation report as part of the annual storm water report. Components of the evaluation report are identified in Section A.9.d of the General Permit.

## 5.0 Records

**5.1 Records Control Center** (RRS# EM-217.03): Annual Evaluation Forms are stored and maintained by the Records Manager according to OP471347, Administrative Procedures for Managing Sandia/CA ES&H Recorded Information (Reference 6.4).

**5.2 Annual Evaluation Forms** (Attachment 7.3): Copies of the Annual Evaluation Forms are maintained by EMD staff for at least one year and retained for five years by the Records Control Center.

**5.3 Annual Storm Water Monitoring Report**: Results from annual site inspections are summarized in the SNL/CA annual storm water monitoring report to the Executive Officer of the San Francisco Regional Water Quality Control Board submitted by July 1 of each year.

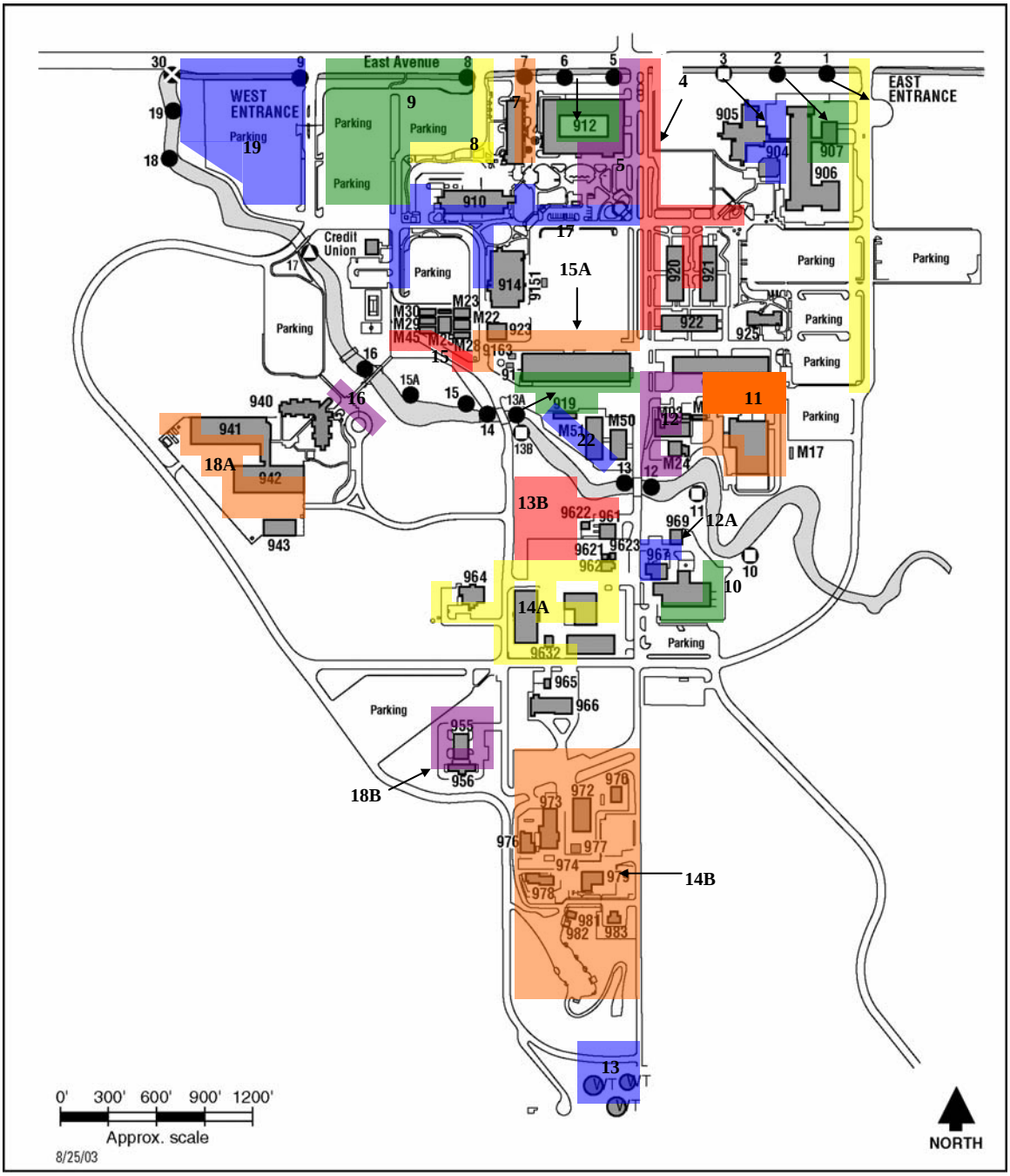
## 6.0 REFERENCES

6.1 Storm Water Pollution Prevention Plan for Sandia National Laboratories, California, August 2005
6.2 California Reissued Industrial Activities Storm Water NPDES General Permit, CAS000001, October 15, 1992, Water Quality Order No. 97-03-DWQ, April 25, 1997.
6.3 Waste Discharge Requirements (WDRS) for Storm Water Discharges From Small Municipal Separate Storm Sewer Systems (General Permit), CAS000004, Water Quality Order No. 2003-0005-DWQ, April 30, 2003.
6.4 OP471347, Administrative Procedures for Managing Sandia/CA ES&H Recorded Information

## 7.0 ATTACHMENTS

7.1 Site Map
7.2 Drainage Area Activities
7.3 Annual Evaluation Form
7.4 Stormwater Inspection Report Tracking Form

**Attachment 7.1. Site Map**



**Attachment 7.2. Description of Drainage Area Activities**

| Discharge Location | SW Sample Location | Drainage Area ID# | Description of Drainage Area | Description of Drainage Area Activities |
|---|---|---|---|---|
| 1 | no sample | 1 | West side of Thunderbird Lane; south side of B906 | road; drains parking and driveway areas; storage sheds; significantly identical to Area 3 |
| 2 | no sample | 2 | East side of Combustion Research Facility (CRF) area | Outdoor maintenance and material handling; oils and solvents storage; significantly identical to Area 3 |
| 3 | A | 3 | West side CRF area | Outdoor maintenance and material handling; oils and solvents storage |
| | Sheet flow | 4 | East side, north end A Street (B920, 921, 922) | Administration buildings/office areas |
| 5 | No sample | 5 | West side, north end A Street;<br>➢ East side B912<br>➢ East side park area above underground Computer Facility | office areas, outdoor activities include Cushman parking, park area |
| 6 | no sample | 6 | Building 912 courtyard | Drains park in office courtyard |
| 7 | B (6) | 7 | B Street:<br>➢ East side B911<br>➢ West side B912<br>➢ West side park area above underground Computer Facility | Office buildings; indoor equipment room; outdoor activities include Cushman parking, park area |
| 8 | no sample | 8 | Park area in front of Gate 1 (west side B911 and north side B910) | Drains parking and office areas |
| 9 | no sample | 9 | North west parking area | Drains parking area |
| 10 | X | 10 | East side B968 (CDRL); parking lot south of B968 | Outdoor material handling; covered storage next to building; parking lot |
| 11 | C | 11 | East parking area and area west and south Gate 15:<br>➢ South end east parking area<br>➢ South east side B927<br>➢ North side B928<br>➢ West and east side B928 | Outdoor materials handling; materials receiving area for entire site; parking area |
| 12 | no sample | 12 | South west side of B927 | Office trailer; indoor office equipment warehouse |
| | no sample | 12A | West side B967 | Offices; catch basin in landscaping; location 10 captures possible runoff from CDRL facility |
| 13 | no sample | 13 | Water Tanks | Drains water supply tanks |

| Discharge Location | SW Sample Location | Drainage Area ID# | Description of Drainage Area | Description of Drainage Area Activities |
|---|---|---|---|---|
| 13A | no sample | 13A | Area south of B916; M51, M50, B919 | Indoor research laboratories; outdoor storage for B916; paved area surrounding electrical switching stations; office trailers |
| 13B | K | 13B | Maintenance yard and Hazardous Materials Building:<br>➢ 7th Street<br>➢ B961 (Hazardous Materials Facility)<br>➢ Maintenance Yard | ➢ Outdoor hazardous materials handling<br>➢ Outdoor materials storage and stockpiling<br>➢ Outdoor raw stock metals stock storage; process chemicals, gas bottles, and storage sheds<br>➢ Heavy equipment storage (on pervious surface-dirt)<br>➢ Sand/aggregate material storage<br>➢ Covered vehicle fueling area<br>➢ Site maintenance area |
| 14 | no sample | 14A | North end C Street:<br>➢ Area west of B9631<br>➢ South side B9633<br>➢ Former FOS site (closed)<br>➢ B964 | south west of maintenance area; raw stock metals storage, storage sheds; significantly identical to sample K and L |
| | E (1), N (5) | 14B | South end Sandia Drive/C Street:<br>➢ Areas north and west B965 and 966<br>➢ B970 through 983<br>➢ Storage bunkers<br>➢ Security firing range | ➢ Outdoor materials handling<br>➢ Outdoor storage sheds<br>➢ Outdoor firing shed<br>➢ Explosives storage<br>➢ Indoor research laboratories<br>➢ NFL site (closed) |
| 15 | no sample | 15 | Open asphalt area south of Redwood Park | office buildings |
| 15A | F | 15A | West end Third Street and north end Fifth Street:<br>➢ South west corner of B915 (DISL)<br>➢ Area east and south B923<br>➢ Areas west B916<br>South end D Street:<br>East end Mobile 28&29 (Redwood Park) | Indoor research laboratories |
| 16 | no sample | 16 | Area east of MANTL (B940) | Drains parking and office area |
| 17 | G (2) | 17 | Second Street west of A Street:<br>➢ North west corner of B915 | Outdoor material handling and storage sheds; parking, offices |

| Discharge Location | SW Sample Location | Drainage Area ID# | Description of Drainage Area | Description of Drainage Area Activities |
|---|---|---|---|---|
| | | | ➢ Area east and south B910<br>➢ Area west B10<br>➢ Area north and east of Credit Union<br>➢ Area north B914 | |
| 18 | H (3) | 18A | North end Sandia Drive:<br>➢ MANTL | Outdoor maintenance, material handling, storage sheds, vacuum, pumps |
| | no sample | 18B | Area surrounding B955 and 956 | Drains parking area; indoor environmental testing |
| 19 | no sample | 19 | Far northwest parking area | Drains parking area |
| | D (4,7) | | | |
| | L | | Sample location in Arroyo downstream of 14 and 15A sample locations | |
| | sheet flow | 22 | B919 south side | Sheet flow to Arroyo, no outdoor activities |
| | Y (4) | | Arroyo Seco as it enters the site | |
| 30 | Z (4) | | Arroyo Seco as it leaves the site | |

(1) Discontinued after baseline information determined no significant erosion from hill area.
(2) Automatic sampler installed for the 1996/97 wet season.
(3) Discontinued after baseline information on new facility onsite identified significantly identical to Area 7.
(4) Automatic sampler installed for the 1995/96 wet season.
(5) Sample location N is for monitoring the closure of the NLF site and is not part of the stormwater monitoring program for the General Permit.
(6) Discontinued after site construction changed site drainage patterns. This location only receives stormwater drainage from office areas.
(7) Discontinued after site construction changed site drainage patterns. This location formally received sheet flow from hazardous waste facility and maintenance area. These drainage areas are now sampled at location K, 13B.

*last updated September 2003*

**Attachment 7.3. Annual Evaluation Form**
**SNL/CA ANNUAL STORMWATER BMP INSPECTION**
Environmental Operations Department

Page _____ of _____

| **BOX 1** | | | | | |
|---|---|---|---|---|---|
| Date: | | | | | |
| Inspectors: | | | | | |
| **BOX 2** | | | | | |
| Drainage area number (as described in the SWPPP) or description of area: | | | | | |
| | **General Area Conditions** | **BMP Effectiveness[a]** | | | |
| 1 | Is the area kept free of litter? | 1 | 2 | 3 | 4 |
| 2 | Are materials and equipment stored in the area kept neat and well organized? | 1 | 2 | 3 | 4 |
| 3 | Are storm drain structures (including inlets, channels, and ditches) kept free of debris and litter? | 1 | 2 | 3 | 4 |
| 4 | Are pollutants kept from discharging with rain? Is pollutant exposure minimized? | 1 | 2 | 3 | 4 |
| 5 | Are non-stormwater discharges kept from discharging to the storm drains? | 1 | 2 | 3 | 4 |
| 6 | Is the discharge location (sanitary or storm drain) known for all drains in the area? | Yes | | No | |
| | Does the area include material handling activities? If yes, answer questions in Box 4. | Yes | | No | |
| | Does the area include vehicle and heavy equipment storage and maintenance activities? If yes, answer questions in Box 5. | Yes | | No | |
| **BOX 3** | | | | | |
| *Comments:* | | | | | |

a. BMP Effectiveness: 1= Good, 4 = Poor

**SNL/CA ANNUAL STORMWATER BMP INSPECTION** (continued)

Date: _____

Drainage Area Number: _____

| BOX 4 | | | | | |
|---|---|---|---|---|---|
| **Material Handling** | | **BMP Effectiveness** | | | |
| 1 | Are pollutants in dumpsters and other waste containers protected from rain? | 1 | 2 | 3 | 4 |
| 2 | Do liquid storage containers have adequate secondary containment in case of spill? | 1 | 2 | 3 | 4 |
| 3 | Are material containers clearly labeled? | 1 | 2 | 3 | 4 |
| 4 | Are material containers in good condition? | 1 | 2 | 3 | 4 |
| 5 | Are stock piled materials covered or protected from run-on and/or runoff? | 1 | 2 | 3 | 4 |
| 6 | Is absorbent material stored nearby? | 1 | 2 | 3 | 4 |
| 7a | Is absorbent material placed on fresh spills? | 1 | 2 | 3 | 4 |
| 7b | N/A<br>Is absorbent material removed afterwards?<br>N/A | 1 | 2 | 3 | 4 |

| BOX 5 | | | | | |
|---|---|---|---|---|---|
| **Vehicle & Heavy Equipment Storage & Maintenance** | | **BMP Effectiveness** | | | |
| 1. | Are pollutants from vehicle or equipment stored/parked outdoors protected from exposure to runoff? | 1 | 2 | 3 | 4 |
| 2. | Are cars and equipment free of leaks or spills? | 1 | 2 | 3 | 4 |
| 3. | Is absorbent material stored near vehicle maintenance and fueling areas? | 1 | 2 | 3 | 4 |
| 4a | Is absorbent material placed on fresh spills? | 1 | 2 | 3 | 4 |
| 4b | Is absorbent material removed afterwards? | 1 | 2 | 3 | 4 |
| 5. | Are all vehicle and equipment cleaning conducted on the wash pad? | 1 | 2 | 3 | 4 |

| BOX 6 |
|---|
| *Additional Comments:*<br>_____<br>_____<br>_____<br>_____<br>_____<br>_____ |

**Attachment 7.4 Stormwater Inspection Report Tracking Form**

Report Identification:_____

_____

Requester:_____ Date:_____

To be completed by Environmental Monitoring Program Lead

Reviewer:_____

1) Is any action/follow-up needed for any issues identified in inspection?
- θ No (sign and date form)
- θ Yes (fill in #2)

2) Identify each issue* and follow-up/actions needed

| Description of issue and follow-up | compliance schedule ** (w/in 1 wk) |
|---|---|
| | |

3) Does SWPPP need to be changed/updated?
- θ No
- θ Yes: Date updated (within 12 weeks)_____
  - θ description of potential pollutant sources
  - θ identified pollution prevention measures and controls
  - θ other:_____

4) If Annual Site Compliance Inspection, were spill response forms reviewed? θ Yes θ No
5) If Non-Stormwater Discharge Observations, was maintenance contacted to verify SPCC fuel tank inspections are being conducted? θ Yes θ No
6) If Non-Stormwater Discharge Observations, was Industrial Hygiene contacted to review previous quarter inspection records for wastewater issues? θ Yes θ No

Signature:_____ Date:_____

*The Environmental Monitoring Program Lead identifies significant issues only, that require follow-up action. Some issues identified in the inspection reports may not be significant.

**Compliance schedule shall be completed within 1 week. Follow-up actions identified in the compliance schedule must be completed within 90 days or reported to the Regional Board.

## 8.0 AUTHORIZED USERS LIST

By my signature below, I affirm that I have read and understood this OP and all references called out in procedural steps, and I agree to operate within the stated constraints.

| | | | |
|---|---|---|---|
| | _____ | | |
| Name | Signature | Org./Company | Date |
| | _____ | | |
| Name | Signature | Org./Company | Date |
| | _____ | | |
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# APPENDIX H

Stormwater/Wastewater Website

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# Environmental Restoration & Long Term Stewardship

### Environmental Remediation

Several areas at the SNL/California site have been investigated to determine if environmental contamination was present. One contaminated site, Navy Landfill site, has been remediated and formally closed. Remediation activities were discontinued at another site, Fuel Oil Spill Site, and only monitoring is currently required by the regulatory agency. The history and activities at these sites are described below.

The Environmental Monitoring Program continues to monitor for potential environmental contamination through groundwater monitoring, stormwater monitoring, visual observations of potential areas of concern and soil monitoring when necessary. Please report any spills or potential areas of concern (e.g. cracked or leaky secondary containment for outside chemical/fuel storage) to Environmental Monitoring or the ES&H Hotline.

### Fuel Oil Spill Site (FOS)

In 1975, as the result of an accidental puncture of an underground transfer line, 59,500 gallons of #2 diesel fuel spilled into the groundwater. SNL/California completed a remedial investigation of the spill site in November 1988. In-situ bioremediation was determined to be the technology of choice for clean up of the FOS. The bioremediation facility operated from June 1995 through July 1999. Data collected during this time period indicated that the diesel plume was not migrating, and that natural degradation of the diesel would be sufficient to prevent negative impacts from the plume. The Regional Water Quality Control Board (RWQCB) allowed SNL/California to dismantle the bioremediation facility.

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SNL/California is required to monitor two wells at the FOS semi-annually. Periodically, the Regional Water Quality Control Board may review the data, and decide if further action is required.

**Navy Landfill**

An inactive landfill is located at the southern end of the SNL/California site. It was used by the Navy during and shortly after World War II, and again by LLNL in the 1950s and early 1960s. A survey of historical records and landfill contents indicated that only general construction debris and machine turnings were disposed of at the site. SNL/California investigated this site from 1988 through 1998.

In October of 1997, a risk assessment and closure plan were submitted to the Regional Water Quality Control Board. The closure request was approved in March 1998. Closure of the NLF was approved if certain conditions were satisfied, including groundwater monitoring, adequate vegetative cover applied to the landfill and erosion control measures implemented. All NLF site closure activities were completed and the site is considered closed as of that date.

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# SNL/CA Environmental Metrics

### Impact Metrics

Metrics that relate to environmental impacts of site operations .

- Air Quality - Mobile Source Emissions
- Air Quality - Fueling Operations on Spare The Air Days
- Ecology - Species Diversity
- **Energy**
  - Executive Order 13423 Target Status
  - General Site Metric
- Environmental Monitoring - Sewer Flow
- Environmental Monitoring - Sewer Water Contamination
- Environmental Monitoring - Stormwater System Controls
- Environmental Monitoring - Water Use
- Hazardous Material - Inventory
- Hazardous Waste
- Pollution Prevention - Environmentally Preferred Procurement
- Pollution Prevention - Landfill Waste
- Pollution Prevention - Recycling

### EMS Management Metrics

Metrics that relate to the effectiveness of the site Environmental Management System (EMS).

- Published Communications
- Outreach Activities
- Environmental Awareness
- Hazardous Material Inventory/CIS Reconciliation
- IDT Reviews of Site Projects & Activities
- NEPA Reviews
- Environmental Violations

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# SNL/CA Environmental Monitoring Program Annual Report



**Point of Contact**:
Robert Holland
(4-3755)

Environmental Monitoring Program Report - March 2007

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# SNL/CA Environmental Monitoring Program

**Point of Contact:** Robert Holland (4-3755)

Welcome to the Sandia, California Environmental Monitoring Program web page. The Environmental Monitoring Program monitors storm water, wastewater, groundwater, and gamma radiation.



### Stormwater

All storm water runoff from SNL/CA is conveyed to the Arroyo Seco, which discharges into Alameda Creek and eventually to the San Francisco Bay. Storm water that flows off buildings, material-handling areas, parking lots, and other impervious surfaces, may pick up pollutants, such as oil and grease, soil, litter, pesticides, and fertilizers. During heavy or continuing storms, runoff may transport pollutants to Arroyo Seco before the storm water has time to evaporate or infiltrate into the ground.

To assess the impact of site operations to storm water discharges, SNL/CA collects samples of surface runoff at nine locations around the site. These locations, were selected because they provide the best representation of drainage areas and activities onsite. Each of the nine locations is sampled twice each wet season, once each during two separate storm events, provided there is sufficient runoff. The wet season is from October 1 through May 31. Because any one storm may not produce enough runoff to allow for sample collection at all nine locations, sampling during more than two storm events is generally required.



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**Wastewater**



Wastewater effluent generated at SNL/CA consists of sanitary and laboratory discharges. Sanitary effluent is discharged directly to the sewer system. Sewer discharges exit the site through a sewer outfall located at the northern boundary, and join with the Lawrence Livermore National Laboratory (LLNL) sewer system. Laboratory discharges are generated from general research activities, and from operations that qualify as categorical processes subject to Federal pretreatment standards. Laboratory effluent from most laboratory areas is diverted to liquid effluent control system (LECS) holding tanks prior to discharge to the sanitary sewer. SNL/CA monitors wastewater at the sewer outfall, LECS tanks, and at categorical process point sources.

**Environmental Restoration/Groundwater**

SNL/CA has eight groundwater monitoring wells. Sandia monitors groundwater at three former restoration areas and along Arroyo Seco. Four groundwater monitoring wells are used to monitor residual contamination at former restoration areas under a 1989 site clean-up order issued by the Regional Water Quality Control Board, San Francisco Bay Region. Two of these wells are located at the Fuel Oil Spill site, and one each at the Trudell Auto Repair Shop site and the Navy Landfill. Four monitoring wells are located along Arroyo Seco to monitor the effect of site operations on groundwater quality. Well# AS-4 is located upgradient of the developed area of the site and provides background data about local groundwater quality.



**External Radiation**

SNL/CA monitors gamma radiation to ensure that site operations are not contributing significantly to the ambient radiation dose in the surrounding environment. Onsite sources that could

contribute to gamma radiation include small, unsealed radioactive isotopes, sealed sources, and several radiation generating devices. SNL/CA maintains four onsite monitoring stations equipped with thermoluminescent dosimeters. The dosimeters are collected and evaluated quarterly. The data obtained from Sandia monitoring stations is combined with that from LLNL monitoring stations located around the perimeter of the Sandia site to determine the average annual gamma radiation dose at the site perimeter. The combined dose is then compared to the average annual gamma radiation dose at more distant locations in the Livermore Valley. If site operations were contributing significantly to the gamma radiation dose, the dosimeters at the site perimeter would show a higher dose than those at more distant locations.

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# Spill Prevention Control and Countermeasures



### Spill Prevention Control and Countermeasures Plan (SPCC)

Spill prevention and spill control activities are implemented in compliance with Title 40 of the Code of Federal Regulations, Part 112, the site's Wastewater Discharge Permit issued by the Livermore Water Reclamation Plant, and California's Industrial Activities General Permit. The SPCC Plan applies to all liquid fuel and chemical transport and storage activities.

There are approximately 24 above ground fuel storage tanks on site that range in capacity from 10 gallons to 1,000 gallons. There is one underground fuel storage tank (600 gallons) on site. Tanks are equipped with spill containment devices and/or leak detection devices that include double walled tank, concrete berms, volume gauge, leak alert systems, and access to annular space for visual inspections.

### Spill Prevention of Liquid Fuel for Maintenance Personnel



- Rainwater captured in spill containment devices are removed by maintenance personnel according to OP471446 Operating Procedure for Monitoring and

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Pumping of Secondary Containment Systems.

- Preventative Maintenance team will conduct weekly, visual inspections of all above ground fuel storage tanks.
- Preventative Maintenance Team will test fuel storage tank monitoring system equipment annually.
- Keep valves, fittings, and nozzles clean to facilitate visual inspections.
- Use drip trays and empty them promptly.
- Reduce the likelihood of leaks by maintaining O-rings, valves, and fittings.
- Clean up small drips immediately that occur during operation of the dispensing or filling systems.
- Maintain spill containment equipment on the Preventative Maintenance vehicles to provide containment during loading and off loading.
- Exercise extra caution when transporting the portable fuel tank to the location of the tank to be filled.
- During transfer, check for leaks in the transfer line. Disconnect transfer lines and tighten caps before departure.

**Spill Prevention of Chemicals for Line Personnel**



- Environmental Operations staff verify that BMPs are implemented to prevent pollutant discharge as part of an Annual Comprehensive Site Compliance Evaluation and quarterly Non-stormwater Discharge Visual Observations conducted.
- All site personnel should implement Best Management Practices (BMPs) for material handling and storage of chemicals.

**Spill Containment and Cleanup for Site**

Annually Environmental Operations staff evaluate locations onsite with significant potential to discharge materials and determine the need to maintain spill kits nearby.

**Spill Containment:**

- If a spill occurs, determine whether you are trained and it is safe to contain the spilled material. As

possible, contain spilled material to prevent spread. Use absorbent pads, spill booms, etc. as appropriate.
- Mitigate or eliminate sources of the spill or leak. Tighten fittings, place container upright, etc., as appropriate. Call the ES&H Hotline at 4-3724 to report to Environmental Monitoring Program staff the spill and the activities conducted to mitigate and clean up the spill.
- If additional support is needed to contain and/or eliminate the source of the spill, call the ES&H Hotline 4-3724 to contact Waste Management for assistance.



- Spill clean-up will vary depending on the material spilled and the amount that has spilled. Absorb and/or collect the spill with appropriate spill clean-up materials. Spilled material MUST NOT be swept, washed, or allowed to flow or spill into a sanitary or storm drain.
- Appropriately dispose of materials used to contain and clean-up spills. Proper disposal will vary depending on the material spilled, and the material used to contain and/or clean-up the spill. If uncertain about the proper disposal method, contact Waste Management for advice.
- Spill kits should be located near outdoor chemical storage areas and fuleing transfer stations.
- If additional support is needed to clean the spill, call the ES&H Hotline 4-3724 to contact Waste Management for assistance.

**Training**

Annually, the Preventative Maintenance Team and Waste Management staff are trained on the use of spill control equipment, internal reporting procedures, and requirements of applicable regulations. This course

(ENV203) is available online.

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# Storm Water Control - Best Management Practices

See below for best storm water management practices related to:

- Construction
- Vehicle and Equipment Maintenance
- Site and Building Maintenance
- Material Handling and Storage



### Construction Activities

#### General Practices

- Regularly inspect outdoor areas to ensure the effective implementation of these BMPs.
- Store all materials that could discharge to the storm drain system under cover (e.g., tarp, roof, leanto), protected from rainfall and runoff. For stockpiled materials that are too tall to cover, berm the material to minimize the amount discharged with runoff.
- Do not stockpile construction materials or waste along the side of the Arroyo or near storm drains.
- When working on or cleaning pieces of equipment, use tarps on the ground to collect fallen debris or splatters.
- Pick up litter and other waste regularly from outside areas, especially around storm drains and grates.
- Do not discharge process or washwater to the storm drain system or the Arroyo. Contact the Environmental Monitoring Program on ext. 4-3755 before discharging to the sanitary sewers

#### Material Storage and Handling

- Store materials onsite only where and when needed to complete your construction activity.
- Minimize on-site storage of construction materials that could discharge to the storm drain system.
- Properly store, in approved facilities, containers of paints, chemicals, solvents, and other liquid materials that could discharge to the storm drain. Use secondary containment where runoff can reach

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floor drains or unroofed areas.
- All spills will be cleaned up immediately. Call the ES&H Hotline (ext. 4-3724) for spill cleanup assistance.

**Material Disposal**

- Arrange for regular waste collection and regularly clean the project area using dry cleanup methods (such as sweeping).
- Prevent rain from entering waste containers. For example, place waste containers under a roof or cover with plastic sheeting during rainy weather and/or at the end of each workday. Make sure dumpster lids are closed.
- Hose-down waste containers only on the wash pad. (Contact the Environmental Monitoring Program on ext. 4-3755 before washing a large number of waste containers.
- Handle hazardous wastes in accordance with laws and regulations. Toxic liquid wastes (used oils, solvents, paints) and chemicals (acids, pesticides, additives, and curing compounds) may not be disposed of in dumpsters designated for construction debris. Contact the Waste Management Program (ext. 4-2145) for more information about disposing of hazardous wastes.
- Do not clean or rinse tools or equipment in the street, gutters, storm drains, or the Arroyo.
- Do not leave waste material in the street, gutter, or the Arroyo.

**Paving and Other Concrete/Asphalt Operations**

- Prevent washwater from concrete cutting and other concrete operations from entering the storm drain system. If possible, divert the water to the sanitary sewers. Contact the Environmental Monitoring Program on ext. 4-3755 before discharging to the sanitary sewers.
- Wash concrete mixers in a designated area, where the water will flow onto dirt. Do not dispose of washwater in the street, storm drain system, drainage ditches, or the Arroyo.
- Place all excess concrete in a form, holder, box, or area where it may be removed once it has hardened.
- Cover catch basins and open manholes with an impervious material (such as a rubber mat) when applying seal coat, tack coat, slurry seal, or other such material.
- Secure bags of cement after they have been opened.

**Trenching, Excavation, and other Earthwork**

- Close and stabilize open trenches as soon as possible. Sequence trenching projects so that most open portions are closed before new trenching is begun.
- Remove designated material from the construction site as instructed by the project manager. Cover piles of backfill, which could discharge sediment to the storm drain system, if rainy weather is forecast and at the end of each workday during the wet season.
- Minimize the amount of sediment discharged to the storm drains or the Arroyo as a result of earthwork activities. Cover nearby storm drain inlets to prevent sediment from entering the inlets.



**Vehicle and Equipment Maintenance**

**Maintenance and Repair**

- Regularly inspect vehicles, carts, and equipment used on site for leaks. Place drip pans under leaks until the leaks can be fixed.
- Keep maintenance areas clean. Do not allow excess buildup of oil and grease. Remove any excess buildup of oil and grease on impervious surfaces using dry cleanup methods (e.g., absorbent materials).
- Sweep maintenance areas regularly. Clean up all spills immediately. Call the ES&H Hotline (ext. 4-3724) for spill cleanup assistance.
- Send oil filters to Waste Management for recycling.
- Use tarps on the ground to collect fallen debris or splatters.

**Washing/Cleaning**

- Conduct all on-site vehicle, cart, and heavy equipment washing/cleaning on the wash pad by Building 963.

**Storage**

- Keep vehicle, cart, and equipment storage areas clean. Do not allow excess buildup of oil and grease.
- Sweep vehicle, cart, and equipment storage areas regularly.
- If practical, store equipment under cover.

**Site and Building Maintenance**

**Site Maintenance**



- Minimize the amount of fertilizer and pesticides used, whenever possible.
- Sweep paved areas regularly,

including parking lots.
- Pick up litter and other wastes from outside areas, especially around storm drain grates, regularly.
- Clean storm drain inlets annually. Minimize the amount of pollutants discharged to the storm drains or the Arroyo during cleaning.
- Properly dispose of washwater, swept debris, and sediment. Do not dispose of them in the storm drains or the Arroyo.

#### Building Maintenance

- Use tarps on the ground to collect fallen debris or splatters.
- When stripping or cleaning building exteriors with high-pressure water, prevent washwater from entering the storm drain system. For example, block nearby storm drains and inlets with sandbags. If possible divert the water to pervious areas to allow it to evaporate.
- Do not clean brushes or rinse paint containers in a street, gutter, storm drain, or the Arroyo.

### Material Handling and Storage

#### Material Handling/Transfer



- Park trucks and other delivery vehicles so that materials that leak or spill during transfer can be contained.
- Implement a spill plan for material transfer areas to prevent the discharge of materials in case of a spill.
- Clean up all spills immediately. Call the ES&H Hotline (ext. 4-3724) for spill cleanup assistance.

#### Container Storage

- Clearly label all storage containers.
- Maintain storage containers in good condition. Inspect all storage containers regularly for leaks.
- Keep liquid material in secondary containment and in a designated area on a paved or other impervious surface.

#### Open Storage

- Store stockpiled materials under a roof or covered with a tarp to prevent contact with rain.
- Sweep open storage areas regularly.

#### Waste Handling

- Prevent rain from entering waste containers. Make

sure outdoor waste containers have a lid or are covered (roof or tarp). Keep lids on all dumpsters closed.
- Sweep up and remove litter in waste disposal areas regularly.
- Contact the Waste Management Program (4-2145) for more information about disposing of hazardous wastes.

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# Stormwater Program




### Program

SNL/CA is required by both state permit and city ordinance to minimize the site's impact on rainwater quality. The State's permit requires SNL/CA to eliminate unauthorized non-stormwater discharges, implement a stormwater pollution prevention plan, and perform monitoring.

### Stormwater Drainage On Site

Gutters, ditches, channels, and most outdoor drains at SNL/CA are part of the site's storm drain system. The storm drain system was built to collect and transport rainwa-ter off the site to prevent flooding in paved areas. The water that flows through the storm drain system receives **NO TREATMENT**. Anything that flows or is dumped into the storm drain system goes untreated to the Arroyo Seco, which flows to Alameda Creek and eventually to San Francisco Bay. Even if the Arroyo is dry, pollutants are transported during the rainy season.

### Monitoring and Inspections



Stormwater program staff have identified the following objectives for managing stormwater pollution. These objectives are:

- Keep pollutants from coming into

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contact with rain, and
- Keep pollutants from being dumped, poured, or spilled into storm drains or the arroyo.

Industry has developed what are called Best Management Practices (BMPs) to best manage storm water to achieve these objectives. The BMPs address the following activities:

- Construction
- Maintenance personnel
- Line personnel.



**Stormwater Sampler**

Stormwater program staff sample stormwater discharge at several locations onsite, including where the Arroyo enters and leaves the site, and perform quarterly and annual inspections to determine the effectiveness of the BMPs.

If you have any questions please contact Robert Holland (4-3755). If you see any material spilled or leaking in the Arroyo, storm drain or onsite contact the ES&H hotline (4-3724).

Remember: **Only rain in the storm drain**

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# Wastewater Program



### Regulatory Compliance Discharge Limits

The City of Livermore issues a wastewater discharge permit to SNL/CA. SNL/CA must demonstrate compliance with the standards and requirements in the permit. If any of these effluent limitations are violated, SNL/CA must contact DOE and the City of Livermore. The City can issue SNL/CA a violation and collect fines and penalties. The City can also revoke the permit, which would mean the site shuts down.

To help prevent violations at the outfall, discharges from laboratory areas are contained in holding tanks that are part of the Liquid Effluent Control System (LECS). The tank contents are analyzed for metals and pH before it is released. Most of the site's wastewater, however, discharges directly to the sanitary sewer. Site practice is to allow ***No chemicals down the drain***. This message is on stickers placed over every sink in laboratories to remind people. If you have any questions concerning the proper disposal of your wastewater, please contact Robert Holland of Environmental Monitoring.

### Regulatory Compliance

All wastewater from SNL/CA is monitored prior to being discharged to the City of Livermore's municipal sanitary treatment plant.

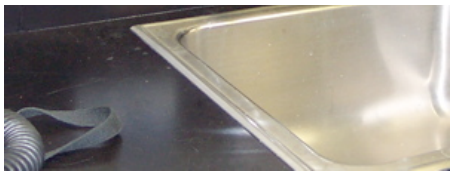



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Gary Shamber

**Email Address**
gwshamb@sandia.gov

**Phone Number**
294-2237



SNL/CA collects a sample of the wastewater every 1000 gallons using an automatic sampler. The sampling is conducted 24 hours a day seven days a week. The samples are sent to an offsite laboratory for analyses. The results of the analyses are compiled in a monthly report which is submitted to the City of Livermore.

#### Discharge Limits

The City of Livermore annually issues SNL/CA a wastewater discharge permit . The permit defines discharge limits for specific substances such as metals and organics in the wastewater. The discharge limits are defined in the table below.

The amount of chemical that can cause SNL/CA to exceed the permit limit is very small. For example: 1.3 grams of copper sulfate or 0.5 grams of dissolved copper ions will result in one of the Liquid Effluent Control Systems (LECS volume is 5000 gallons) exceeding the copper permit limit of 1.0 mg/L.

If these discharge limits are exceeded, the result is a **violation** and possibly a **fine**.

| Sample Parameter | Discharge Limit (in mg/L) |
|---|---|
| pH | 5 - 10 |
| oil/grease | 100 |
| Arsenic | 0.06 |
| Cadmium | 0.14 |
| Copper | 1.0 |
| Chromium | 0.62 |
| Lead | 0.20 |
| Mercury | 0.01 |
| Nickel | 0.61 |
| Silver | 0.20 |
| Zinc | 3.00 |
| Cyanide | 0.04 |
| TTO (total toxic organics) | 1.00 |

111 reads

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# APPENDIX I

Wetlands and Restoration Maps

# APPENDIX I-1

SNL/CA Wetlands Schematic

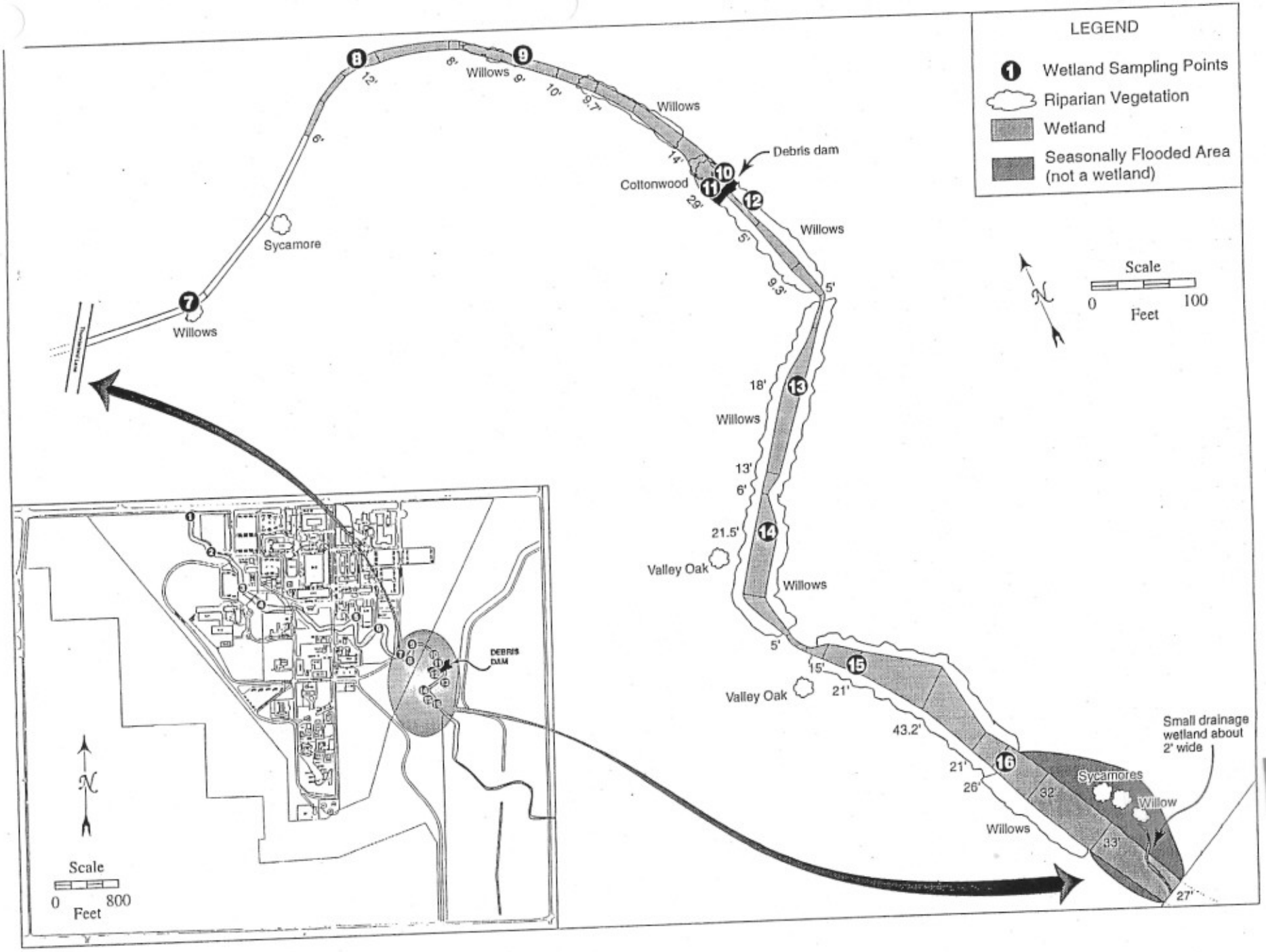
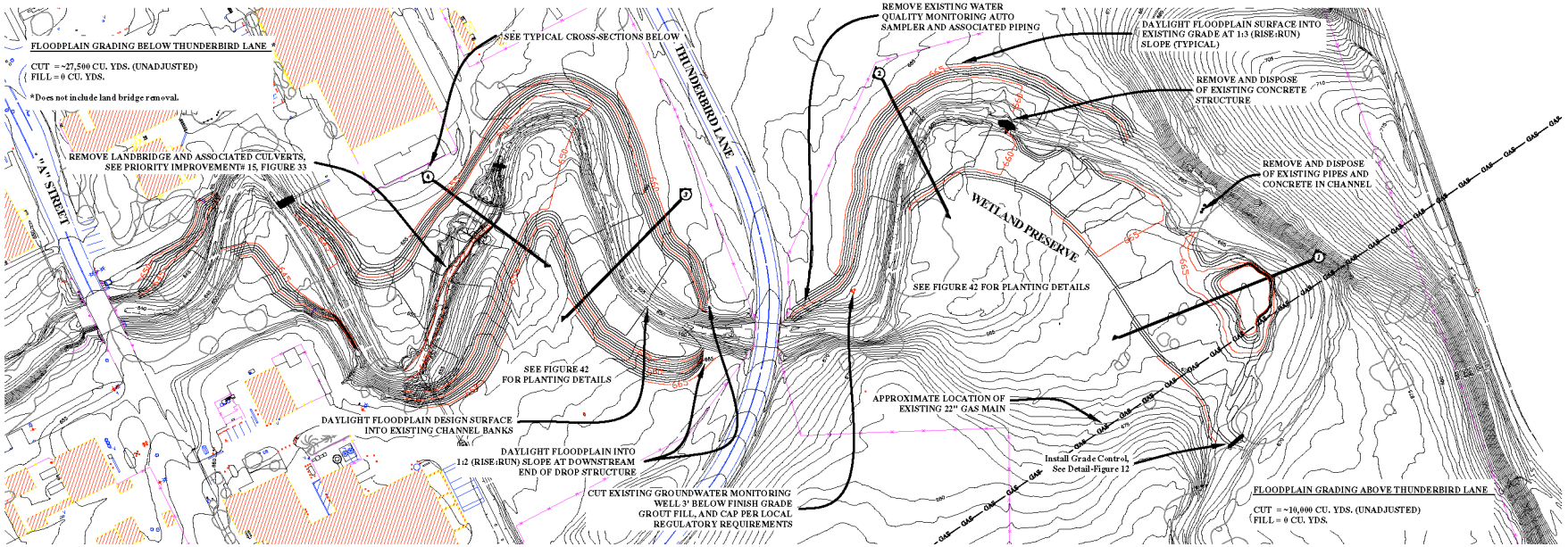


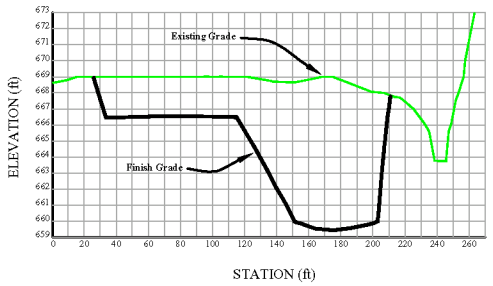

**Figure 2. Sandia National Laboratories: Wetlands Schematic**

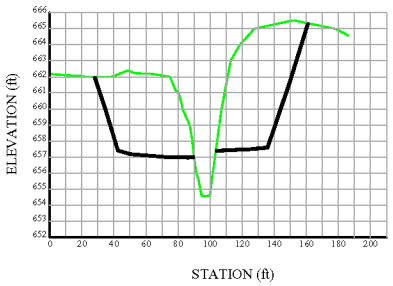
# APPENDIX I-2

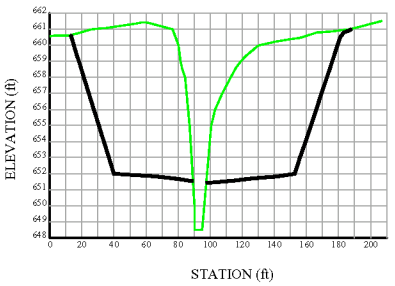
## SNL/CA Habitat Enhancement Alternative 1- FloodPlain, Pond, and Woodlands Creation

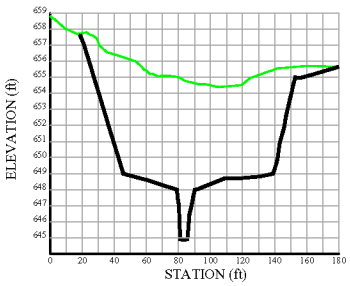
# HABITAT ENHANCEMENT ALTERNATIVE 1-FLOODPLAIN, POND, AND WOODLAND CREATION




CROSS-SECTIONS LOOKING DOWNSTREAM. VERTICAL EXAGGERATION: 10X

| | | DATE | REV DATE |
|---|---|---|---|
| DESIGNED BY | | | 2/02,WRN |
| PREPARED BY | WRN | 8/01 | |

PREPARED FOR
SANDIA NATIONAL LABORATORIES
MAIL STOP 9902
7011 EAST AVE.
LIVERMORE, CA 94550

**MANAGEMENT PLAN FOR ARROYO SECO AT SANDIA NATIONAL LABORATORIES, LIVERMORE, CALIFORNIA**

**PROJECT# MP00024**

GMA
GRAHAM MATTHEWS & ASSOCIATES
Hydrology · Geomorphology · Stream Restoration
P.O. Box 1316 Weaverville, CA 96093-1316
(530) 623-5927 ph. (530) 623-5928 fax wwgma@snowcrest.net

N

SCALE 0 60 FEET

FIGURE 41

# APPENDIX J

Construction Activities

# APPENDIX J-1

Standard contract language

PART 1 GENERAL

1.01 CONSTRUCTION CLEANING

A. The Contractor shall keep all debris clear from work areas, passageways, stairs, and in and around buildings or other structures by continuous policing of all work areas.

B. Comply with regulatory requirements and anti-pollution ordinances during conduct of cleaning and disposal operations.

C. Provide on-site containers for the collection of waste materials, debris, and rubbish.

D. Remove waste materials, debris, and rubbish from the site periodically, and dispose of at legal disposal areas away from the site. This includes all waste materials generated from Sandia furnished, Contractor installed items.

E. The SDR may, at any time during construction, request a general clean-up of site as part of work under this section.

F. Cleaning for specific products or work is specified in the appropriate individual specification sections.

1.02 DUST CONTROL

A. Cooperate with Sandia if dust becomes objectionable. Provide periodic dust control in the form of site watering or whatever other means are necessary to control the problem.

1.03 NOISE CONTROL

A. Cooperate with Sandia if an ongoing construction activity becomes objectionable by its longevity, or by overlapping into an activity started later by Sandia. It is understood and agreed that both parties shall cooperate so that neither will be unduly inconvenienced by this requirement.

B. Comply with requirements specified in the various sections.

1.04 POLLUTION CONTROL

A. Burning of refuse, debris, or other materials will not be permitted on the site.

B. Comply with regulatory requirements and anti-pollution ordinances during the duration of construction and disposal operations.

1.05 STORM WATER POLLUTION PREVENTION

A. Nonhazardous material waste management

1. Material, delivery, storage, and waste collection areas shall be located near the construction site but away from catch basins, gutters, drainage courses, and creeks.

2. Granular material shall be stored at least 30m (10 feet) from catch basins and curb returns, and shall not be allowed to enter the storm drains or creeks. During wet weather the SDR may require that all granular material be covered and surrounded with sand bags.

3. At the end of each working day or as directed by the SDR, the Contractor shall clean and sweep the roadways and on-site paved areas of all materials attributed to or involved with the work. Water shall not be used to flush down streets in lieu of street sweeping.

B. Spill prevention and control

1. Keep a stockpile of spill cleanup materials, such as rags or absorbents, readily accessible on-site.

2. Immediately contain and prevent leaks and spills from entering the storm drains, and properly clean-up and dispose of the waste and clean-up materials. In addition, if the waste is hazardous, the SDR shall be notified immediately.

C. Activity specific requirements

1. All water from dewatering operations shall be routed through a control measure, such as a sediment trap, sediment basin, or Baker tank to remove settleable solids prior to discharge to the storm drain system.

2. During saw cutting, all catch basins shall be covered or barricaded using control measures, such as filter fabric, straw bales, sand bags, or fine gravel dams to keep slurry out of the storm drain system. If slurry accidentally enters a catch basin, it shall be removed immediately.

3. Concrete trucks and equipment shall not be washed out into gutters, storm drains, or creeks. Washout shall occur off-site or on-site in an area where the water will flow onto dirt or into a temporary pit in a dirt area.

1.06 SURFACE WATER CONTROL

A. Do not permit surface or subsurface water to accumulate in or about the premises and vicinity thereof. Should such conditions be encountered or develop, control the water, and suitably dispose of it by means of temporary pumps, piping, drainage lines, troughs, ditches, dams, and other methods, as approved.

B. Maintain the existing building in a weathertight condition throughout construction. Repair damage caused by construction operations. Take precautions necessary to protect the building and occupants during the construction period.

PART 2 PRODUCTS - Not Used

PART 3 EXECUTION - Not Used

END OF SECTION 01560

# APPENDIX J-2

Pre-work checklist

# PRE-WORK CHECK LIST

**Project Number:** Number
**Project Name:** Name

**SDR Approval to Start Construction:** Name

**Contract Number:** Number
**Contractor:** Name
**Superintendant:** Name

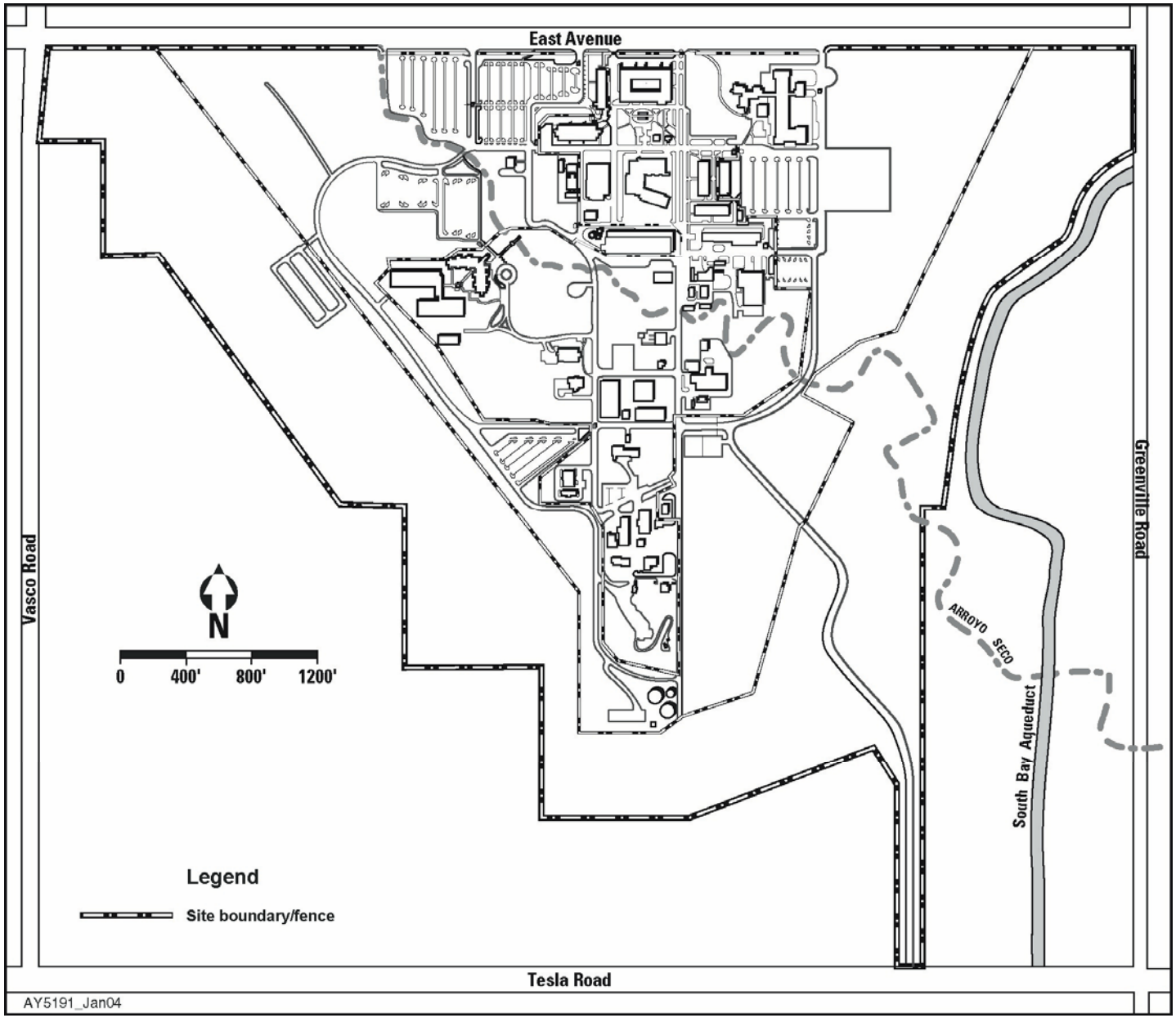
**Date:** Date

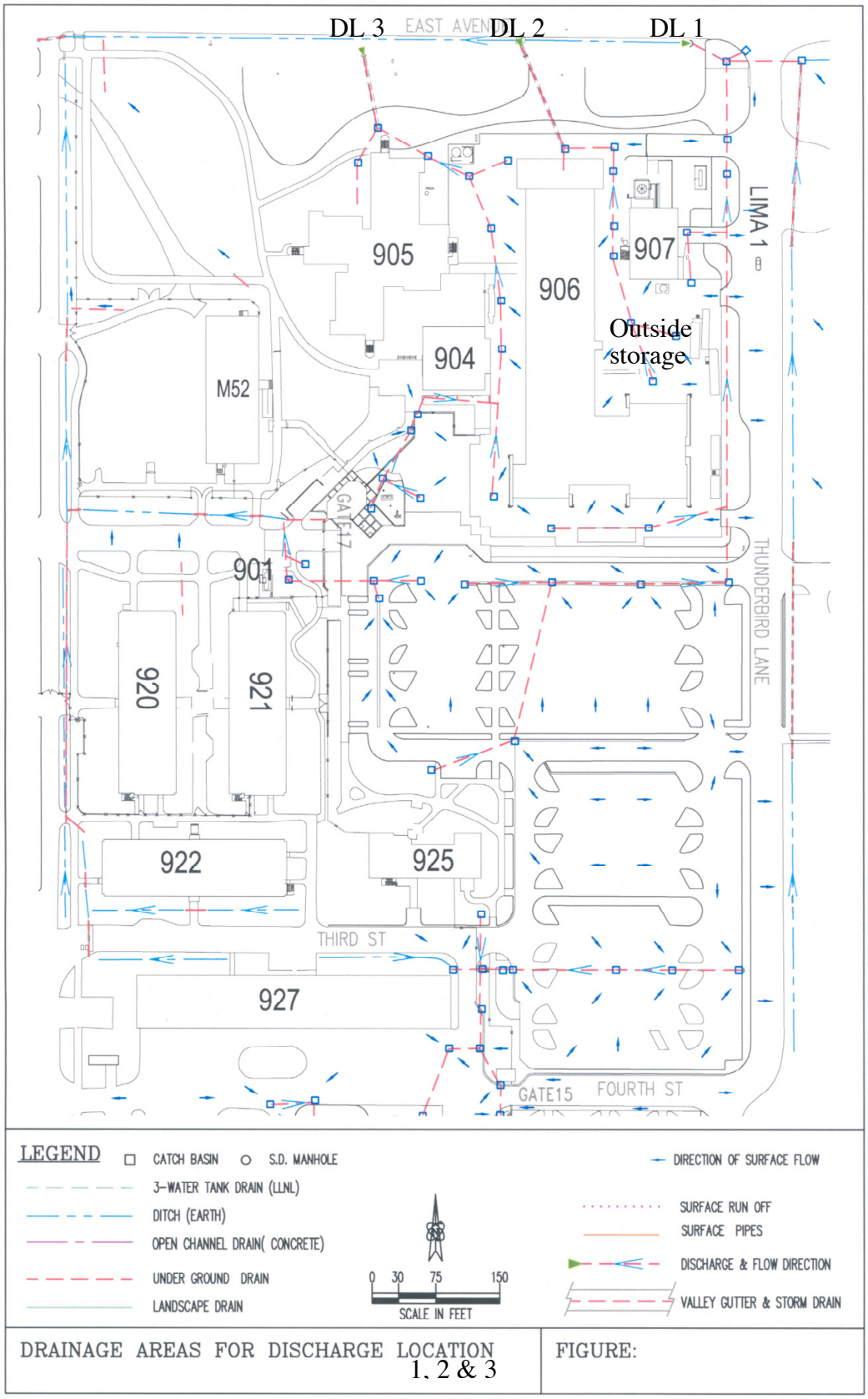
| Date Completed | Item and Action Required | |
|---|---|---|
| | 1. | Project Safety and Health Plan Submitted and Approved |
| | 2. | Activity Hazard Assessment Submitted and Approved |
| | 3. | Progress Schedule Submitted and Approved |
| | 4. | Personnel Lists Submitted |
| | 5. | Preconstruction Conference Completed |
| | 6. | Construction Permits Obtained |
| | 7. | Construction Fencing Installed |
| | 8. | Storm Water Pollution Prevention Measures Installed |
| | 9. | Property Survey Completed |
| | 10. | Construction Site |
| | a. | Job Trailer Installed |
| | b. | Electrical Service Installed |
| | c. | Telephone Service Installed |
| | d. | Water Service Installed |
| | e. | Potable Water Available |
| | f. | Toilet Facilities Available |
| | g. | Fire Extinguishers Available |
| | h. | First Aid Kits Available |
| | i. | Signage Posted |
| | j. | Complete Bid Package at Site |
| | k. | Required OSHA Documents at Site |
| | l. | Safety Bulletin Board Complete and Posted |
| | 11. | Notice to Proceed Given by SCR |
| | 12. | *Other* |

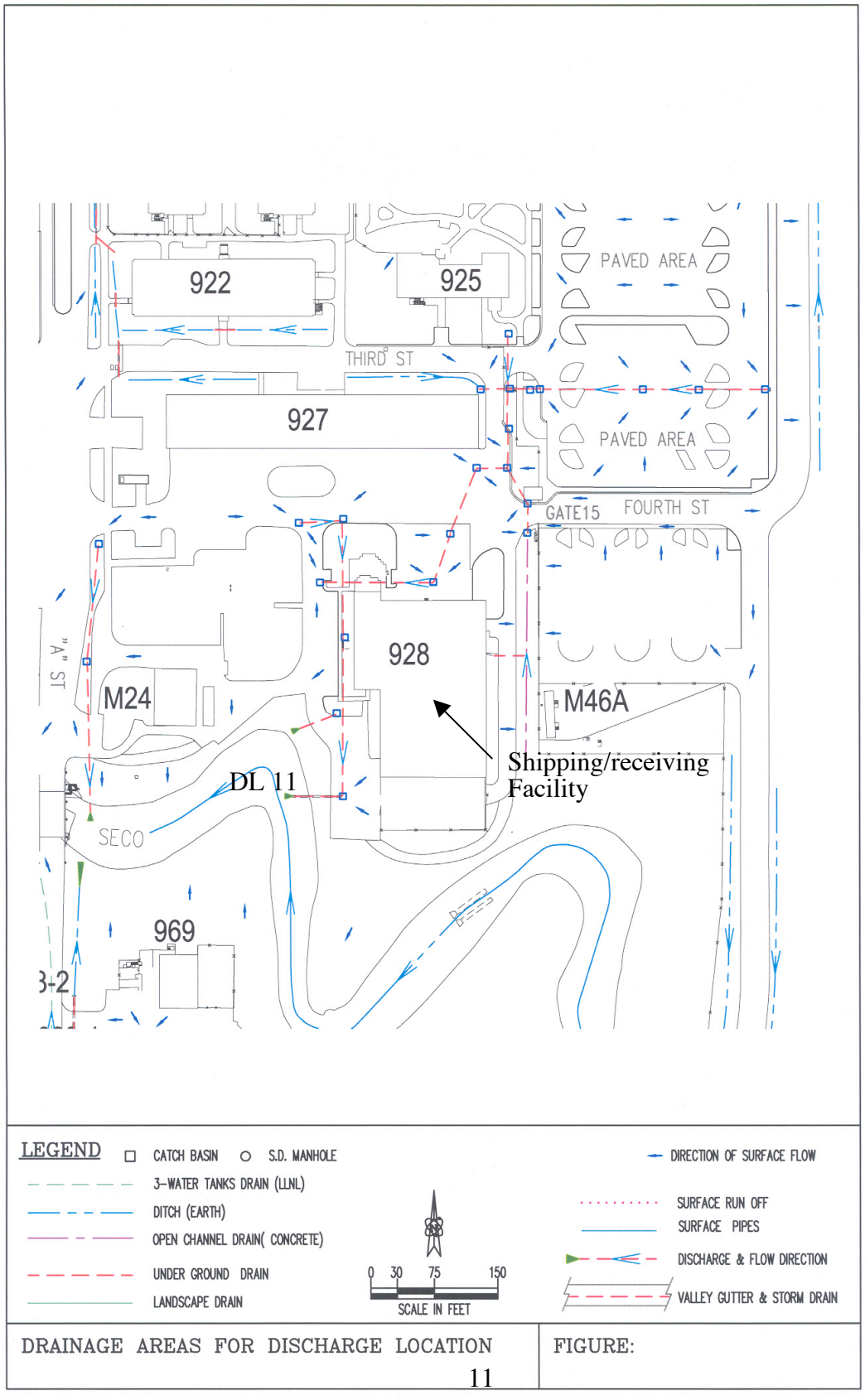
# APPENDIX K

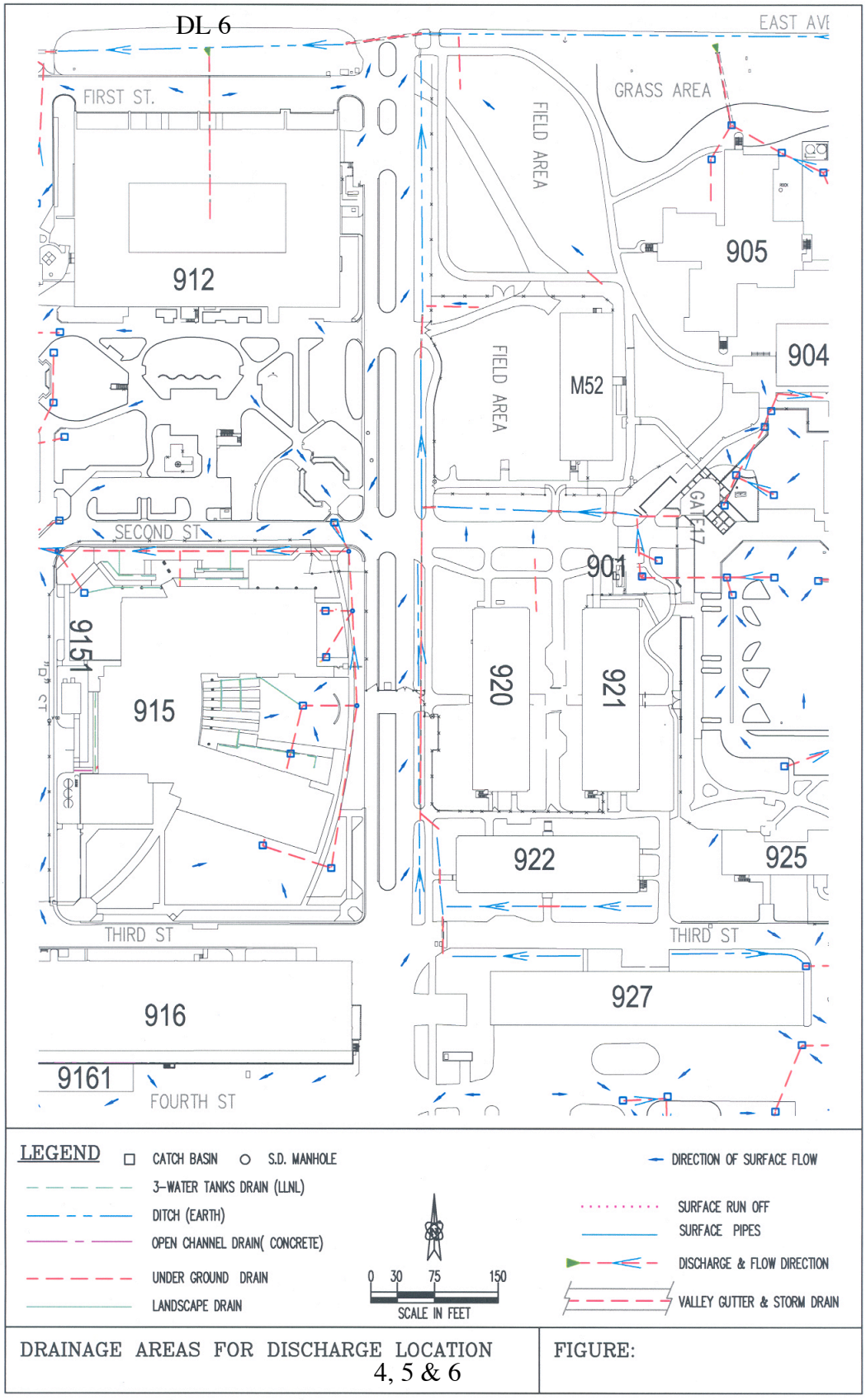
Drainage Areas and Discharge Locations Figures

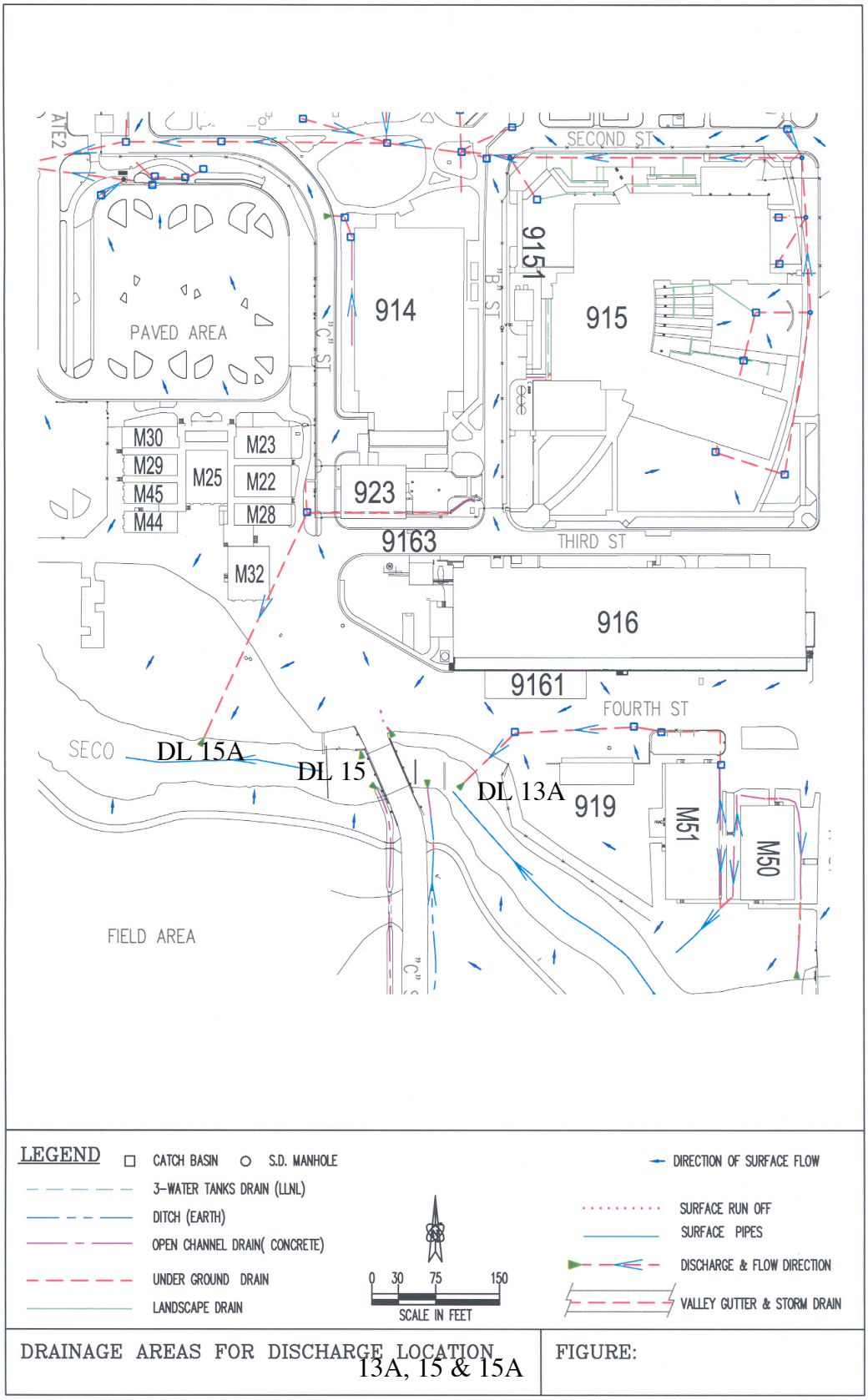


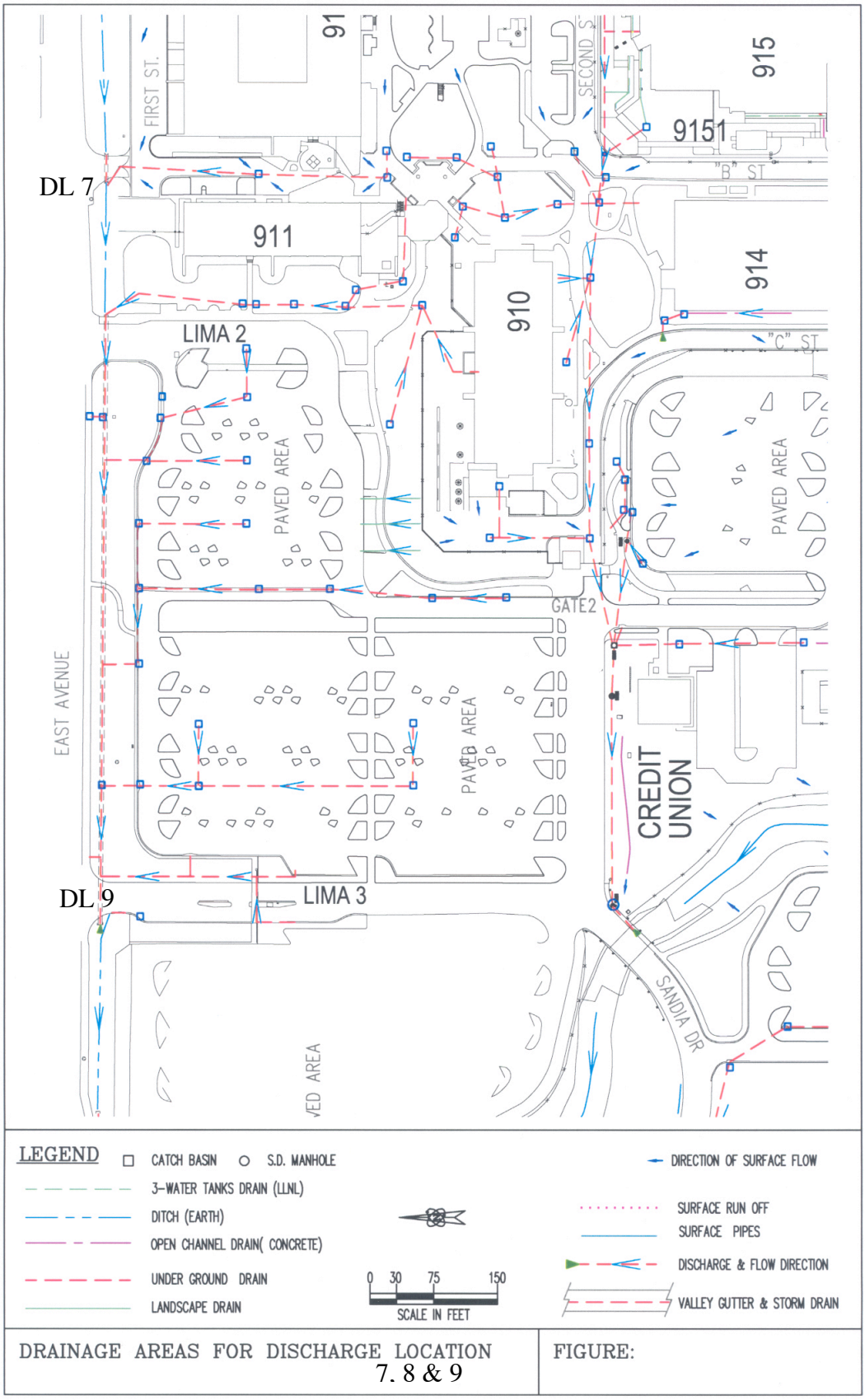

East Avenue
Vasco Road
Greenville Road
Tesla Road
N
0
400'
800'
1200'
ARROYO SECO
South Bay Aqueduct
Legend
Site boundary/fence
AY5191_Jan04

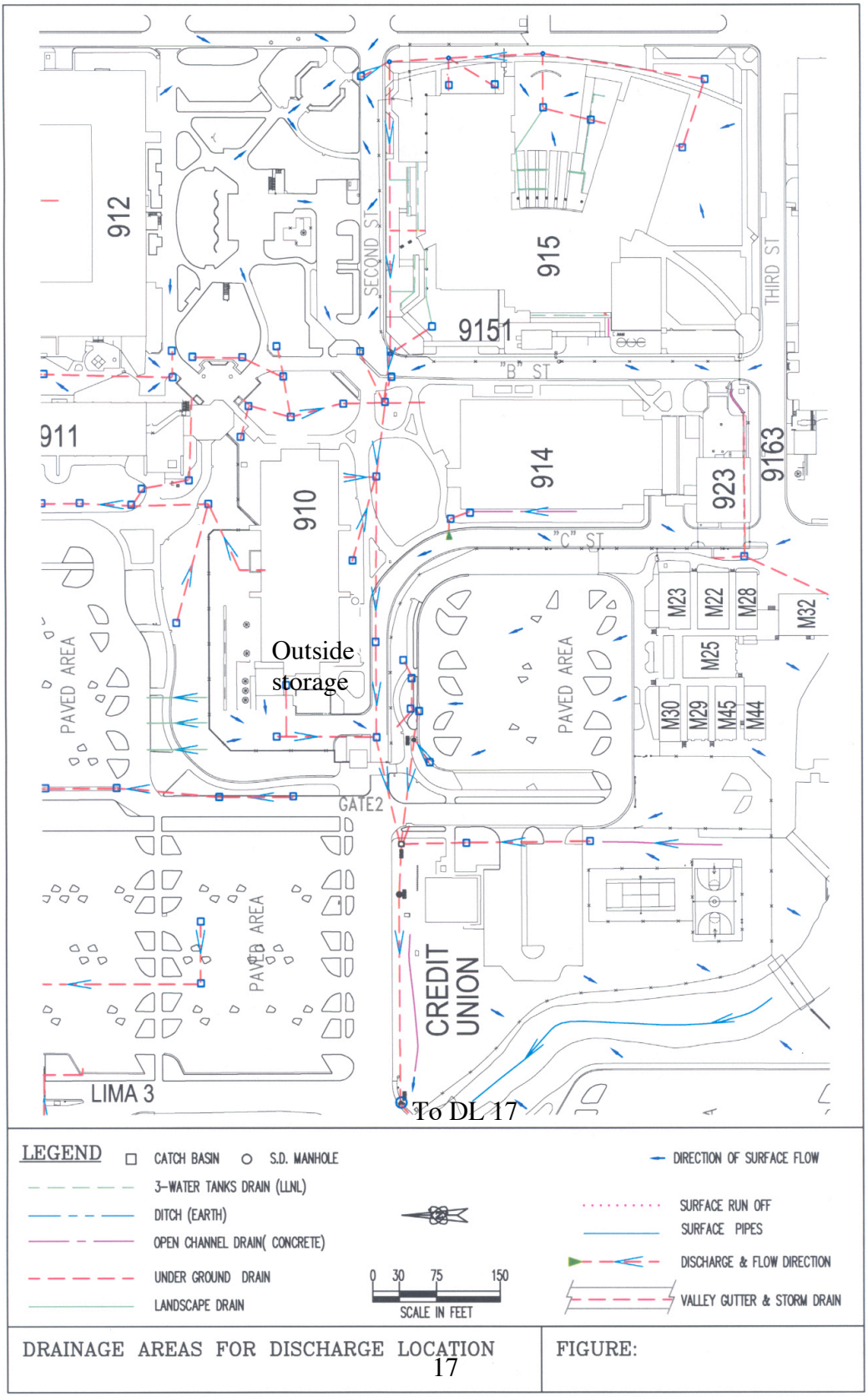

DL 3
EAST AVEN
DL 2
DL 1
LIMA 1
905
907
906
Outside storage
904
M52
GATE17
901
THUNDERBIRD LANE
920
921
922
925
THIRD ST
927
GATE15
FOURTH ST
LEGEND
CATCH BASIN
S.D. MANHOLE
3-WATER TANK DRAIN (LLNL)
DITCH (EARTH)
OPEN CHANNEL DRAIN( CONCRETE)
UNDER GROUND DRAIN
LANDSCAPE DRAIN
0 30 75 150
SCALE IN FEET
DIRECTION OF SURFACE FLOW
SURFACE RUN OFF
SURFACE PIPES
DISCHARGE & FLOW DIRECTION
VALLEY GUTTER & STORM DRAIN
DRAINAGE AREAS FOR DISCHARGE LOCATION 1, 2 & 3
FIGURE:

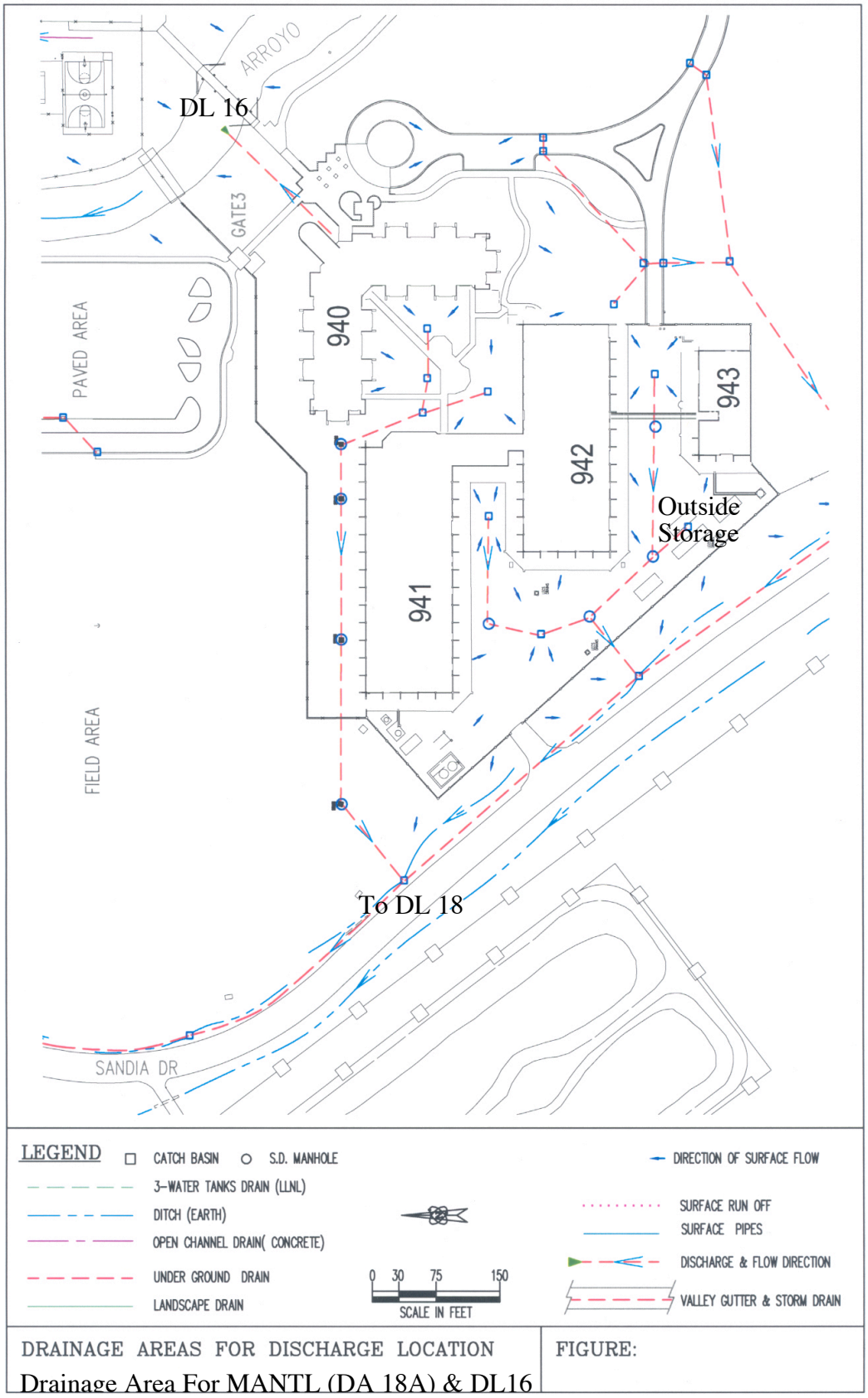

922
925
PAVED AREA
THIRD ST
927
PAVED AREA
GATE15
FOURTH ST
928
"A" ST
M24
M46A
Shipping/receiving
Facility
DL 11
SECO
969
LEGEND
CATCH BASIN
S.D. MANHOLE
3-WATER TANKS DRAIN (LLNL)
DITCH (EARTH)
OPEN CHANNEL DRAIN( CONCRETE)
UNDER GROUND DRAIN
LANDSCAPE DRAIN
0 30 75 150
SCALE IN FEET
DIRECTION OF SURFACE FLOW
SURFACE RUN OFF
SURFACE PIPES
DISCHARGE & FLOW DIRECTION
VALLEY GUTTER & STORM DRAIN
DRAINAGE AREAS FOR DISCHARGE LOCATION
11
FIGURE:

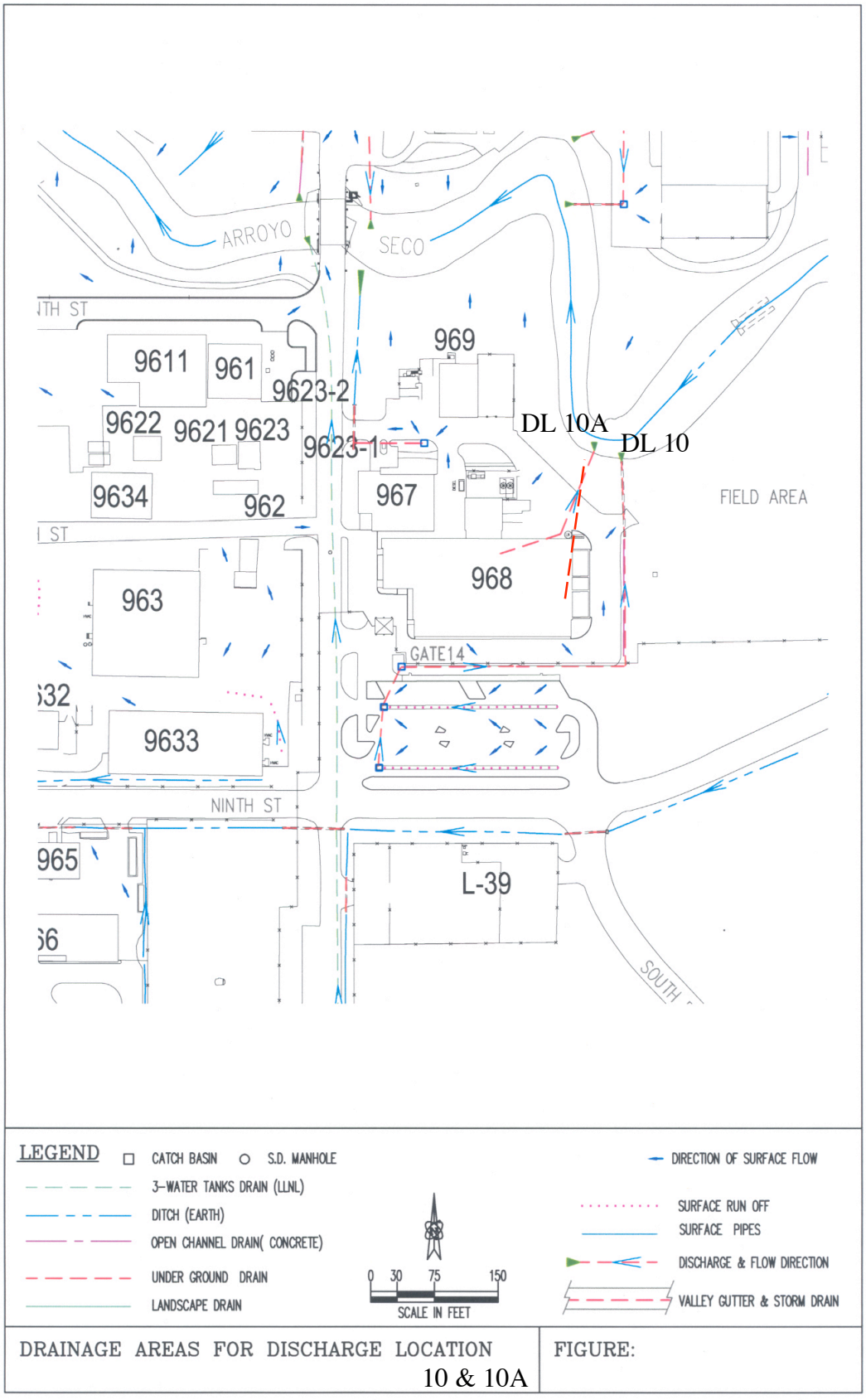

DL 6
EAST AVE
FIRST ST.
GRASS AREA
FIELD AREA
912
905
904
FIELD AREA
M52
GATE 17
SECOND ST
901
9151
"D" ST
915
920
921
922
925
THIRD ST
THIRD ST
916
927
9161
FOURTH ST
LEGEND
CATCH BASIN
S.D. MANHOLE
3-WATER TANKS DRAIN (LLNL)
DITCH (EARTH)
OPEN CHANNEL DRAIN( CONCRETE)
UNDER GROUND DRAIN
LANDSCAPE DRAIN
0 30 75 150
SCALE IN FEET
DIRECTION OF SURFACE FLOW
SURFACE RUN OFF
SURFACE PIPES
DISCHARGE & FLOW DIRECTION
VALLEY GUTTER & STORM DRAIN
DRAINAGE AREAS FOR DISCHARGE LOCATION 4, 5 & 6
FIGURE:

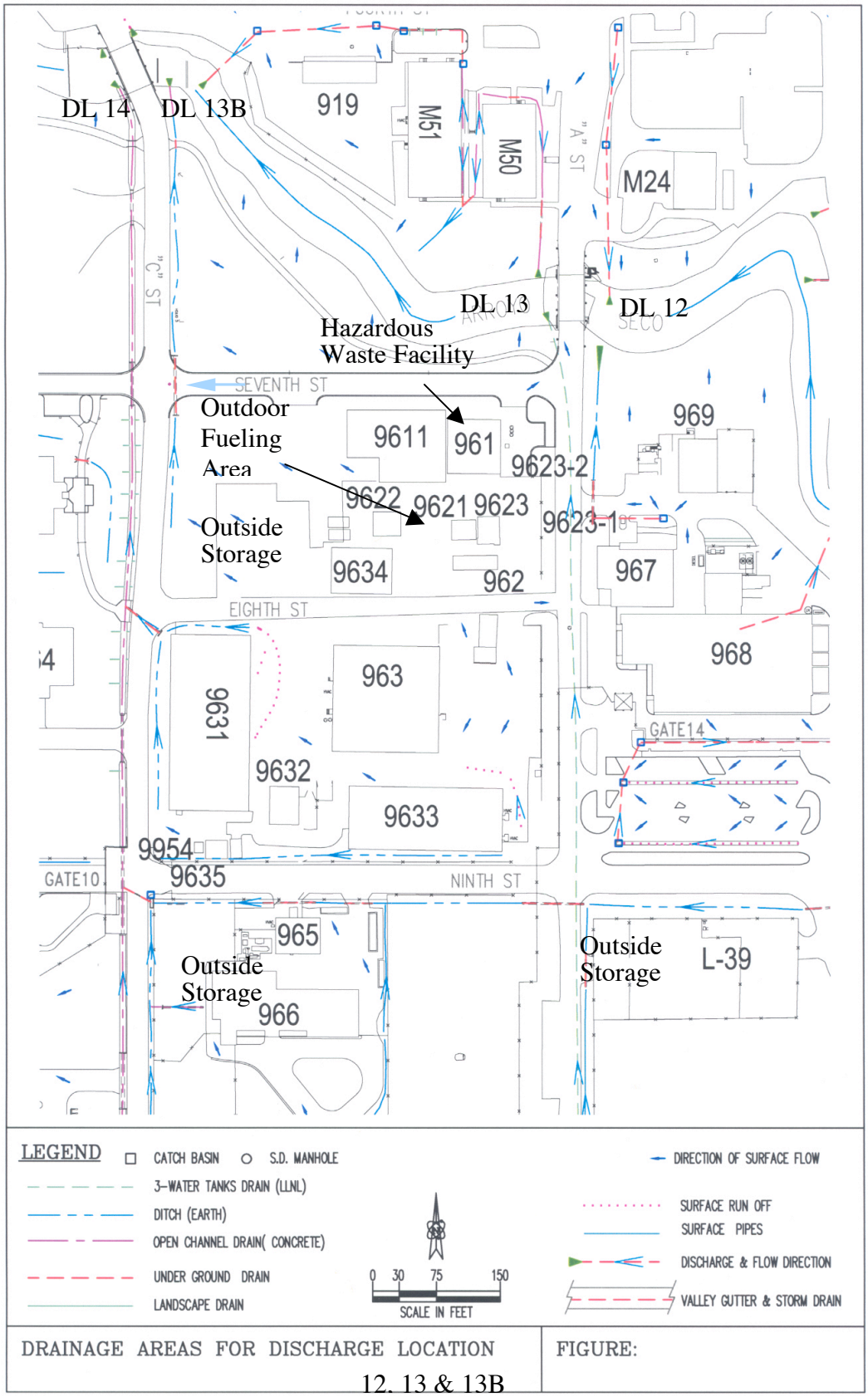

SECOND ST
PAVED AREA
914
915
9151
B ST
C ST
M30
M29
M45
M44
M25
M23
M22
M28
923
9163
THIRD ST
M32
916
9161
FOURTH ST
SECO
DL 15A
DL 15
DL 13A
919
M51
M50
FIELD AREA
LEGEND
CATCH BASIN
S.D. MANHOLE
3-WATER TANKS DRAIN (LLNL)
DITCH (EARTH)
OPEN CHANNEL DRAIN( CONCRETE)
UNDER GROUND DRAIN
LANDSCAPE DRAIN
0 30 75 150
SCALE IN FEET
DIRECTION OF SURFACE FLOW
SURFACE RUN OFF
SURFACE PIPES
DISCHARGE & FLOW DIRECTION
VALLEY GUTTER & STORM DRAIN
DRAINAGE AREAS FOR DISCHARGE LOCATION 13A, 15 & 15A
FIGURE:

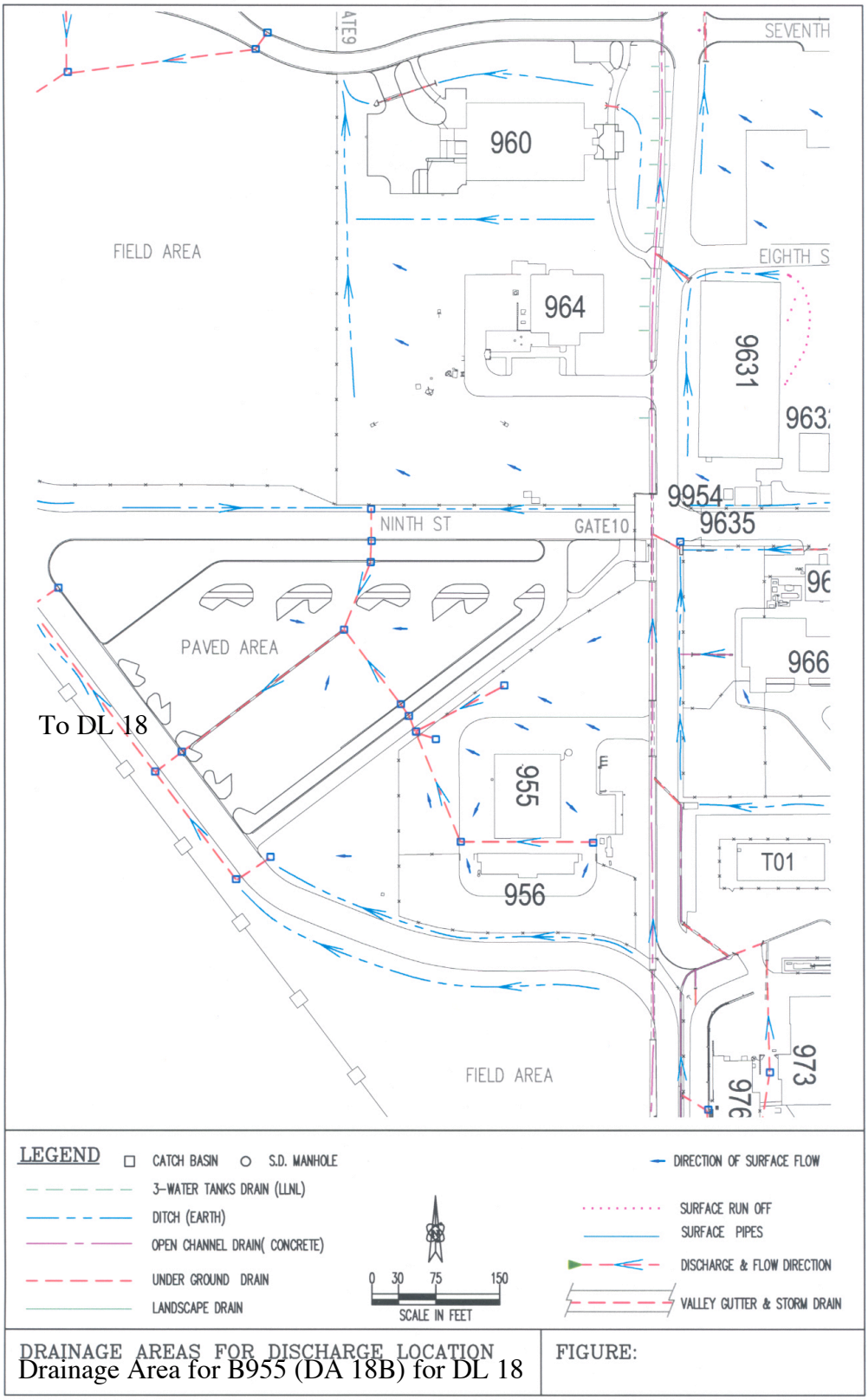

DL 7
DL 9
LIMA 2
LIMA 3
911
910
914
915
9151
FIRST ST.
SECOND S
"B" ST
"C" ST
PAVED AREA
GATE2
EAST AVENUE
CREDIT UNION
SANDIA DR
LEGEND
CATCH BASIN
S.D. MANHOLE
3-WATER TANKS DRAIN (LLNL)
DITCH (EARTH)
OPEN CHANNEL DRAIN( CONCRETE)
UNDER GROUND DRAIN
LANDSCAPE DRAIN
DIRECTION OF SURFACE FLOW
SURFACE RUN OFF
SURFACE PIPES
DISCHARGE & FLOW DIRECTION
VALLEY GUTTER & STORM DRAIN
0 30 75 150
SCALE IN FEET
DRAINAGE AREAS FOR DISCHARGE LOCATION 7. 8 & 9
FIGURE:


912
915
SECOND ST
THIRD ST
9151
"B" ST
911
914
923
9163
910
"C" ST
M23
M22
M28
M32
M25
M30
M29
M45
M44
PAVED AREA
Outside storage
PAVED AREA
PAVED AREA
GATE2
CREDIT UNION
LIMA 3
To DL 17
LEGEND
CATCH BASIN
S.D. MANHOLE
3-WATER TANKS DRAIN (LLNL)
DITCH (EARTH)
OPEN CHANNEL DRAIN( CONCRETE)
UNDER GROUND DRAIN
LANDSCAPE DRAIN
0 30 75 150
SCALE IN FEET
DIRECTION OF SURFACE FLOW
SURFACE RUN OFF
SURFACE PIPES
DISCHARGE & FLOW DIRECTION
VALLEY GUTTER & STORM DRAIN
DRAINAGE AREAS FOR DISCHARGE LOCATION 17
FIGURE:


DL 16
ARROYO
GATE3
PAVED AREA
940
941
942
943
Outside
Storage
FIELD AREA
To DL 18
SANDIA DR
LEGEND
CATCH BASIN
S.D. MANHOLE
3-WATER TANKS DRAIN (LLNL)
DITCH (EARTH)
OPEN CHANNEL DRAIN( CONCRETE)
UNDER GROUND DRAIN
LANDSCAPE DRAIN
0 30 75 150
SCALE IN FEET
DIRECTION OF SURFACE FLOW
SURFACE RUN OFF
SURFACE PIPES
DISCHARGE & FLOW DIRECTION
VALLEY GUTTER & STORM DRAIN
DRAINAGE AREAS FOR DISCHARGE LOCATION
Drainage Area For MANTL (DA 18A) & DL16
FIGURE:


ARROYO
SECO
9611
961
9623-2
969
9622
9621
9623
9623-1
DL 10A
DL 10
9634
962
967
FIELD AREA
968
963
GATE 14
9633
NINTH ST
965
L-39
LEGEND
CATCH BASIN
S.D. MANHOLE
3-WATER TANKS DRAIN (LLNL)
DITCH (EARTH)
OPEN CHANNEL DRAIN( CONCRETE)
UNDER GROUND DRAIN
LANDSCAPE DRAIN
0 30 75 150
SCALE IN FEET
DIRECTION OF SURFACE FLOW
SURFACE RUN OFF
SURFACE PIPES
DISCHARGE & FLOW DIRECTION
VALLEY GUTTER & STORM DRAIN
DRAINAGE AREAS FOR DISCHARGE LOCATION 10 & 10A
FIGURE:


DL 14
DL 13B
919
M51
M50
"A" ST
M24
"C" ST
DL 13
DL 12
Hazardous
Waste Facility
SEVENTH ST
Outdoor
Fueling
Area
9611
961
9623-2
969
9622
9621
9623
9623-1
Outside
Storage
9634
962
967
EIGHTH ST
968
963
9631
GATE14
9632
9633
9954
9635
GATE10
NINTH ST
965
Outside
Storage
966
Outside
Storage
L-39
LEGEND
CATCH BASIN
S.D. MANHOLE
3-WATER TANKS DRAIN (LLNL)
DITCH (EARTH)
OPEN CHANNEL DRAIN( CONCRETE)
UNDER GROUND DRAIN
LANDSCAPE DRAIN
0 30 75 150
SCALE IN FEET
DIRECTION OF SURFACE FLOW
SURFACE RUN OFF
SURFACE PIPES
DISCHARGE & FLOW DIRECTION
VALLEY GUTTER & STORM DRAIN
DRAINAGE AREAS FOR DISCHARGE LOCATION
12, 13 & 13B
FIGURE:


SEVENTH
960
FIELD AREA
EIGHTH S
964
9631
963
9954
9635
NINTH ST
GATE10
PAVED AREA
966
To DL 18
955
956
T01
FIELD AREA
973
LEGEND
CATCH BASIN
S.D. MANHOLE
3-WATER TANKS DRAIN (LLNL)
DITCH (EARTH)
OPEN CHANNEL DRAIN( CONCRETE)
UNDER GROUND DRAIN
LANDSCAPE DRAIN
0 30 75 150
SCALE IN FEET
DIRECTION OF SURFACE FLOW
SURFACE RUN OFF
SURFACE PIPES
DISCHARGE & FLOW DIRECTION
VALLEY GUTTER & STORM DRAIN
DRAINAGE AREAS FOR DISCHARGE LOCATION
Drainage Area for B955 (DA 18B) for DL 18
FIGURE:

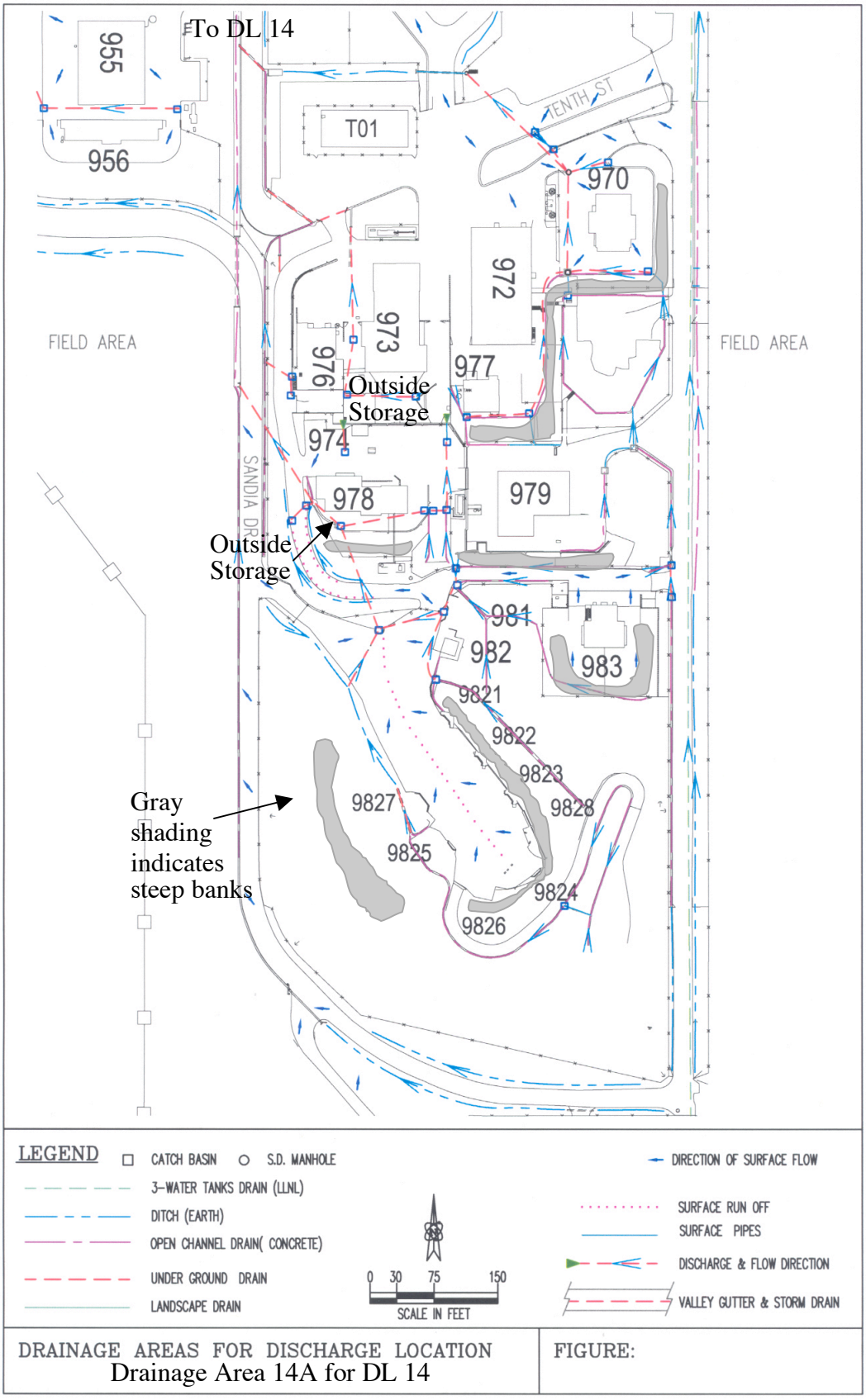

To DL 14
955
956
T01
TENTH ST
970
972
973
976
977
974
978
979
981
982
983
9821
9822
9823
9827
9828
9825
9824
9826
FIELD AREA
FIELD AREA
SANDIA DR
Outside Storage
Outside Storage
Gray shading indicates steep banks
LEGEND
CATCH BASIN
S.D. MANHOLE
3-WATER TANKS DRAIN (LLNL)
DITCH (EARTH)
OPEN CHANNEL DRAIN( CONCRETE)
UNDER GROUND DRAIN
LANDSCAPE DRAIN
0 30 75 150
SCALE IN FEET
DIRECTION OF SURFACE FLOW
SURFACE RUN OFF
SURFACE PIPES
DISCHARGE & FLOW DIRECTION
VALLEY GUTTER & STORM DRAIN
DRAINAGE AREAS FOR DISCHARGE LOCATION
Drainage Area 14A for DL 14
FIGURE:

**Figure 1 Locations of 55 Gallon Storage Containers**

| Barcode | Location | Org. | Quantity | Unit | Purchase Date | Name |
|---|---|---|---|---|---|---|
| LV00127573 | CA/906/SHEDB2 | 8362 | 55 | GAL | 6/28/02 | DIESEL FUEL NO. 2 |
| LV00021053 | CA/906/SHEDB2 | 8362 | 55 | GAL | 3/24/93 | FUEL OIL NO. 6 |
| LV00021054 | CA/906/SHEDB2 | 8362 | 55 | GAL | 3/24/93 | FUEL OIL NO. 6 |
| LV00136414 | CA/906/SHEDB2 | 8362 | 55 | GAL | 2/11/03 | UA68SP (SYNTHETIC OILS) |
| LV00155319 | CA/906/SHEDB2 | 8362 | 55 | GAL | 5/3/05 | UA68SP (SYNTHETIC OILS) |
| LV00162184 | CA/914/130 | 82362 | 55 | GAL | 8/2/06 | TRANSFORMER OIL |
| LV00141019 | CA/9611/0 | 8516 | 55 | GAL | 9/15/03 | MOBILFLUID 424 |
| LV00078405 | CA/9623/SHED4 | 8513 | 55 | GAL | 6/17/97 | BIOSOYGARD |
| XX00001289 | CA/9623/SHED6 | 8513 | 55 | GAL | 7/16/02 | BIOSOYGARD |
| XX00001287 | CA/9623/SHED6 | 8513 | 55 | GAL | 7/16/02 | CHEVRON SPECIAL MOTOR OIL SAE 30 |
| XX00001288 | CA/9623/SHED6 | 8513 | 55 | GAL | 7/16/02 | CHEVRON SPECIAL MOTOR OIL SAE 30 |
| XX00001290 | CA/9623/SHED6 | 8513 | 55 | GAL | 7/16/02 | HYDRAULIC FLUID |
| XX00001291 | CA/9623/SHED6 | 8513 | 55 | GAL | 7/16/02 | SYNESSTIC 32 |
| XX00001292 | CA/9623/SHED6 | 8513 | 55 | GAL | 7/16/02 | TERESSTIC SHP 46 |
| LV00174206 | CA/9623/SHED8 | 8513 | 55 | GAL | 7/21/06 | AMOCO RYKON AW OIL |
| LV00157431 | CA/9623/SHED9 | 8513 | 55 | GAL | 9/8/05 | SULLAIR SRF 1/4000 COMPRESSOR FLUID |
| LV00157293 | CA/965/0 | 8224 | 54.2 | GAL | 8/25/05 | HYDREX AW 22, 32, 46, 68, 80, 100 |
| LV00149820 | CA/972/111 | 85131 | 55 | GAL | 10/18/04 | MOBIL DTE 24 |
| LV00128997 | CA/972/111 | 85131 | 55 | GAL | 7/16/03 | MOBIL DTE 25 HYDRAULIC OIL |
| LV00120088 | CA/979/113B | 82362 | 55 | GAL | 12/17/99 | GUN DRILL OIL 2190 |
| LV00149884 | CA/979/114 | 8132 | 55 | GAL | 3/14/05 | BC-525 |
| LV00149945 | CA/979/114 | 8132 | 55 | GAL | 5/18/05 | WHITE MINERAL OIL |

Note:

1. All fuel storage containers are tracked by the SNL/CA cradle to grave Chemical Inventory System (CIS).

**TABLE 1**
**BULK STORAGE TANKS - GENERAL INFORMATION**
**Sandia National Laboratories - Livermore California**

| Location | Description | Contents | Tank Capacity (gal) | Containment Devices | Leak Detection Devices | Direction of Flow |
|---|---|---|---|---|---|---|
| Bldg. 907<br>(decommissioned in place) | Boiler Backup Fuel Tank<br>Above-ground, double-walled tank<br>Above-ground piping from tank to the building. Piping located above a catch tray | Fuel Oil | 1,000 | Double Walled Tank (Steel/Concrete Convault) | Leak detection standpipe[4] for visual inspection<br>No automated detection<br>"At a Glance" volume gauge | Area fenced and paved.<br>Offloading area not contained. Drainage is toward storm drains located within the fenced area.<br>Potential spills are small and likely to be confined to local area, especially if storm drains are blocked. |
| Bldg. 943<br>(decommissioned in place) | Boiler Backup Fuel Tank<br>Above-ground, double-walled tank<br>Below-ground piping located within an open grated trench | Fuel Oil | 2,000 | Double Walled Tank (Steel/Concrete Convault) | Leak Alert annular space monitor, model LA-01<br>Leak detection standpipe[4] for visual inspection<br>"At a Glance" volume gauge | Area fenced and paved.<br>Offloading area not contained. Drainage is northwest toward storm drains located within the fenced area.<br>Potential spills are small and likely to be confined to local area, especially if storm drains are blocked. |
| Bldg. 963-4 | Above-ground, double-walled tank<br>Located on concrete pad<br>Provides fuel for onsite vehicles<br>Tanks are filled by a commercial supplier (tanker truck) | Unleaded Gasoline | 1,000 | Double Walled Tank (Steel/Concrete Convault) | Access to leak detection standpipe[4] for visual inspection<br>No automated leak detection<br>"At a Glance" volume gauge is broken; a dipstick is used to measure fuel level instead | Loading and offloading in containment area with a large concrete pad to accommodate both the tank and tanker truck. Grated trenches constructed in the pad provide approximately 2,200 gallons of containment capacity. A spill in excess of this amount would flow off the pad to paved and unpaved areas, and eventually to the storm drain system. |
| Bldg. 963-4 | Above-ground, double-walled tank<br>Provides fuel for onsite tanks<br>Tanks are filled by a commercial supplier (tanker truck) | Fuel Oil (Diesel) | 1,000 | Double Walled Tank (Steel/Concrete Convault) | Leak detection standpipe[4] for visual inspection<br>No automated leak detection<br>"At a Glance" volume gauge<br>Access for using a dipstick to verify fuel level | Loading and offloading in containment area with a large concrete pad to accommodate both the tank and tanker truck. Grated trenches constructed in the pad provide approximately 2,200 gallons of containment capacity. A spill in excess of this amount would flow off the pad to paved and unpaved areas, and eventually to the storm drain system. |
| Bldg. 963-4 | Portable Fuel Tank (cylindrical, steel tank mounted on a mobile trailer)<br>Single-walled, Steel<br>Provides fuel to onsite tanks | Fuel Oil | 500 (maintained empty) | None | "At a Glance" volume gauge | Tank stored empty and loaded only at the permanent tanks containment area.<br>Offloading areas paved but not contained (see Bldg. 907 tank and |

**TABLE 1**
**GENERAL INFORMATION**
**ABOVE GROUND TANKS WITH A CAPACITY GREATER THAN 660 GALLONS**
**Sandia National Laboratories - Livermore California (Continued)**

| Location | Description | Contents | Tank Capacity (gal) | Containment Devices | Leak Detection Devices | Direction of Flow |
|---|---|---|---|---|---|---|
| | | | | | | Bldg. 943 tank descriptions above.) |
| Bldg. 9151 | Backup fuel tank | Fuel Oil | 175 | Double walled tank | Volume (Fuel) gauge | Contained in building. If room remains empty flow is to middle of room. If path is blocked flow is south, out the door to the storm drains. |
| Bldg. 9151 | Backup fuel tank (Katolight Corporation) | Fuel Oil | 200 | Double walled tank | Volume (Fuel) gauge<br>Access for visual inspection of fuel level | Contained in building. If room remains empty flow is to middle of room. If path is blocked flow is south, out the door to the storm drains. |
| Bldg. 968 | Boiler backup fuel tank<br>Protected by yellow vehicle posts | Fuel Oil | 500 | Double walled tank (steel/ concrete Convault) | Leak detection standpipe[4] for visual inspection<br>"At a Glance" volume gauge<br>Pneumercator liquid level control system Model E-14 S/N B3691 | Offloading area not contained. Drainage is towards storm drain to the north. |
| Bldg. 976 | Heat exchange system oil storage tank | Fuel Oil | 300 | PIG Build-A-Berm, Sili-Thane Sealant and Industrial-Strength Vinyl Cement used to create a barrier around the fuel tank and operating equipment inside the building | | Drainage contained inside building. |
| Miscellaneous storage sheds and laboratories | 55 gallon drums stored by individual laboratories | (see Figure 1 attached table for locations and contents) | 55 | secondary containment pallets or secondary containment built into storage sheds | | All drums stored inside laboratories or storage sheds. |

NOTES:
1. All tanks are double-walled, located in an unbermed area.
2. The primary potential for a spill is during loading/unloading of fuel.
3. Tanks located at Bldg. 963 are filled by commercial tanker trucks. All other tanks are filled with the 550 gallon portable tank.
4. ConVault tanks have a foam filling between the steel inside layer of the tank and the concrete outside layer. The leak detection pipe connects to the space filled with foam. Any leak would dissolve the foam and create a space for liquid. The liquid would rise in the leak detection pipe.

# APPENDIX L

Delegation of Authority for Approval of SNL/CA Environmental Reports, Permit Applications, and Permit Fee Payments Memorandum

Sandia National Laboratories
Operated for the U.S. Department of Energy by
**Sandia Corporation**

P.O. Box 969
Livermore, CA 94551-0969

**Linda A. Houston**
Director of Site Operations (acting)

Phone: (925) 294-2284
Fax: (925) 294-3422
Internet: lahoust@sandia.gov

October 22, 2007

To: Distribution

Subject: Delegation of Authority for Approval of SNL/CA Environmental Reports, Permit Applications, and Permit Fee Payments.

This memo provides the Delegation of Authority for the authorization and processing of various environmental reports, permit applications, and fees as required by Federal, State and local regulatory agencies, and the DOE/SSO as indicated on the attached table.

Approved: ___original in document center_____ ____10/25/07___
Paul Hommert, 8000 Vice President, Site Manager Date

Sincerely,

Linda Houston

GWS:lah

Attachment

Distribution:
P. Hommert, MS 9001
K. Olsen, MS 9031
B. Krauss, MS 0141
A. Blumburg, MS 0141
P. Newman, MS 0777
E. Cull, MS 9221
G. Shamber, MS 9221
Authorized persons

## Environmental Documents - Review & Approval

| Program Area | Document | Submittal Frequency | Next Due Date | Prepared By: | Highest SNL/CA Signature Level | Normally Requires SNL Legal Review | Submitted To: | Regulatory Agency receiving document |
|---|---|---|---|---|---|---|---|---|
| Waste Management - Hazardous | Annual Hazardous Waste Report | annual as required | 1-Mar-08 | Brynildson | 8516 Dept. Mgr. | No | DOE/SSO - Rast | CA/EPA/Dept. of Toxic Substances Control |
| Waste Management - Hazardous | Waste Management Annual Program Report | annual | April | Brynildson | 8516 Dept. Mgr. | No | courtesy copy to Dave Rast | none |
| Waste Management - Hazardous | **Biennial Generators Report** | Every 2 Yrs | 1-Mar-08 | Brynildson | 8516 Dept. Mgr. | No | DOE/SSO - Rast | CA/EPA/Dept. of Toxic Substances Control |
| Waste Management - Hazardous | **Treatment Permits - PBR(2), CA(2)** | annual | 31-Aug-07 | Brynildson | **SNL/CA Vice President** | Yes | DOE/SSO - Rast | CA/EPA/Dept. of Toxic Substances Control |
| Waste Management - Hazardous | **Hazardous Waste Facility Part B Permit** | Every 10 Yrs | 30-Mar-14 | Brynildson | **SNL/CA Vice President** | Yes | DOE/SSO - Rast | CA/EPA/Dept. of Toxic Substances Control |
| Waste Management - Hazardous | **Part B Permit Modifications** | as req'd | as req'd | Brynildson | **SNL/CA Vice President** | Yes | DOE/SSO - Rast | CA/EPA/Dept. of Toxic Substances Control |
| Waste Management - Hazardous | Hazardous Waste Manifests/Shippers | as req'd | N/A | Brynildson | 8516 Dept. Mgr. | No | CA/EPA/DTSC | CA/EPA/Dept. of Toxic Substances Control |
| Waste Management - Hazardous | Hazardous Waste Facility Fee | annual | 28-Feb-08 | Brynildson | 8516 Dept. Mgr. | No | CA/EPA/DTSC | CA/EPA/Dept. of Toxic Substances Control |
| Waste Management - Hazardous | EPA ID and Manifest Fee | annual | 30 days from receipt | Brynildson | 8516 Dept. Mgr. | No | CA/EPA/DTSC | CA/EPA/Dept. of Toxic Substances Control |
| Waste Management - Hazardous | Transporter Permit | annual | 30-Jun-08 | Brynildson | 8516 Dept. Mgr. | Yes | CA/EPA/DTSC | CA/EPA/Transportation Unit |
| Waste Management - Hazardous | Site Treatment Tiered Report | annual | 30 days from receipt | Brynildson | 8516 Dept. Mgr. | No | CA/EPA/DTSC | CA/EPA/Dept. of Toxic Substances Control |
| Waste Management - Hazardous | Facility Environmental Fee | annual | 28-Feb-08 | Brynildson | 8516 Dept. Mgr. | No | CA/EPA/DTSC | CA/EPA/Dept. of Toxic Substances Control |

## Environmental Documents - Review & Approval

| Program Area | Document | Submittal Frequency | Next Due Date | Prepared By: | Highest SNL/CA Signature Level | Normally Requires SNL Legal Review | Submitted To: | Regulatory Agency receiving document |
|---|---|---|---|---|---|---|---|---|
| Waste Management - Hazardous | CUPA Fees - RCRA HW Generator | annual | 31-Aug-07 | Brynildson | 8516 Dept. Mgr. | No | Alameda Co | Alameda County - Dept. of Environmental Health |
| Waste Management - Mixed | Application for Generator Site Access Permit | annual | 31-Jan-08 | Brynildson | 8516 Dept. Mgr. | Yes | Utah Dept.of Envirn. Quality Regulatory Agency | Utah Dept. of Env. Quality, Division of Radiation Control |
| | | | | | | | | |
| Environmental Planning & Ecology | Annual Site Environmental Report | annual | 1-Jun-08 | Larsen | No signature on document - DOE/SSO cover letter | No | Jeff Irwin, Dept. Mgr, Karen Agogino (SSO), Public Distribution | DOE, fed/state agencies, other DOE facilities, public |
| Environmental Planning & Ecology | Environmental Planning and Ecology Annual Program Report | annual | April | Larsen | 8516 Dept Mgr | No | courtesy copy to DOE,SSO Susan Lacy | none |
| Environmental Planning & Ecology | Site Wide EA / NEPA Document | every 5 yrs | 30-Jun-08 | Larsen | No signature on document - DOE/SSO cover letter | No | DOE/SSO - Susan Lacy | DOE |
| Environmental Planning & Ecology | Cultural Resources Management Plan | Every 5 Yrs | 1-Nov-10 | Larsen | Prog. Lead & DOE/SSO Cultural Resources Lead | Yes | DOE/SSO - Susan Lacy | DOE / CA State Historic Preservation Office |
| Environmental Planning & Ecology | Biological Assessment | Every 10 Yrs or as species are listed | 2014 | Larsen / Sartor | DOE / SSO, Bilogical Resources Lead | No | DOE/SSO - Susan Lacy | US Fish and Wildlife Service |
| Environmental Planning & Ecology | Wildlife Survey Report | Annual | 31-Dec-08 | Sartor | 8516 Dept. Mgr. | No | Internal | Internal |
| Environmental Planning & Ecology | Monthly NEPA Reports | monthly | 10th of each | Larsen | 8516 Dept. Mgr. | No | DOE/SSO NEPA Compliance Officer | DOE |
| | | | | | | | | |
| Hazardous Material Mgmt. | Hazardous Material Management Annual Program Report | annual | April | Brynildson | 8516 Dept. Mgr. | No | courtesy copy to DOE/SSO - Carolyn Holloway | none |
| Hazardous Material Mgmt. | CA Hazardous Material Business Plan - UST | annual | 1-Mar-08 | Brynildson | 8510 Level II Mgr. | Yes | DOE/SSO - Carolyn Holloway | Alameda Co. CUPA |

## Environmental Documents - Review & Approval

| Program Area | Document | Submittal Frequency | Next Due Date | Prepared By: | Highest SNL/CA Signature Level | Normally Requires SNL Legal Review | Submitted To: | Regulatory Agency receiving document |
|---|---|---|---|---|---|---|---|---|
| Hazardous Material Mgmt. | CA Hazardous Material Business Plan - Inventory | annual | 1-Mar-08 | Brynildson | 8516 Dept. Mgr. | Yes | DOE/SSO - Carolyn Holloway | Alameda Co CUPA |
| Hazardous Material Mgmt. | EPCRA 311 | annual | 1-Mar-08 | Brynildson | 8516 Dept. Mgr. | Yes | DOE/SSO - Carolyn Holloway | EPA/Alameda Co. CUPA/LLNL Fire Dept. |
| Hazardous Material Mgmt. | EPCRA 312 (Tier II) | annual | 1-Mar-08 | Brynildson | 8516 Dept. Mgr. | Yes | DOE/SSO - Carolyn Holloway | EPA/Alameda Co. CUPA/LLNL Fire Dept. |
| Hazardous Material Mgmt. | EPCRA 313 (TRI) | annual | 1-Jul-08 | Brynildson | 8516 Dept. Mgr. | Yes | DOE/SSO - Carolyn Holloway | EPA |
| | | | | | | | | |
| Air Quality | Air Quality Annual Program Report | annual | April | Gardizi | 8516 Dept. Mgr. | No | courtesy copy to DOE/SSO - Carolyn Holloway | none |
| Air Quality | Air Permits to Operate - existing sources | annual | Around May | Gardizi | 8516 Dept. Mgr. | No | DOE/SSO - Carolyn Holloway | Bay Area Air Quality Management District |
| Air Quality | Air Permits to Operate - new sources | as needed | N/A | Gardizi | 8516 Dept. Mgr. | Yes | DOE/SSO - Carolyn Holloway | Bay Area Air Quality Management District |
| Air Quality | Air Permits/Registrations | as needed | N/A | Gardizi | 8516 Dept. Mgr. | No | DOE/SSO - Carolyn Holloway | CA Air Resources Board |
| Air Quality | BAAQMD Permit to Operate Fee | annual | 1-Jul-08 | Gardizi | 8516 Dept. Mgr. | No | BAAQMD | Bay Area Air Quality Management District |
| | | | | | | | | |
| Environmental Monitoring | Environmental Monitoring Annual Program Report | annual | April | Holland | 8516 Dept. Mgr. | No | courtesy copy to DOE/SSO - Karen Agogino | none |
| Environmental Monitoring - Wastewater | **Wastewater Discharge Permit Application** | annual | 4-Jun-08 | Holland | **SNL/CA Vice President** | Yes | DOE/SSO - Karen Agogino | City of Livermore |
| Environmental Monitoring - Wastewater | Wastewater Discharge Permit Fee | annual | August | Holland | 8516 Dept. Mgr. | No | DOE/SSO - Karen Agogino | City of Livermore |
| Environmental Monitoring - Wastewater | Categorical Process Report | semi-annual | 15-Jan-08 and 15-Jul-08 | Holland | 8516 Dept. Mgr. | No | DOE/SSO - Karen Agogino | City of Livermore |
| Environmental Monitoring - Wastewater | Spill Prevention Control and Countermeasures Plan | Every 5 Yrs | 1-Aug-09 | Holland | 8516 Dept. Mgr. | Yes | DOE/SSO - Karen Agogino | Regional Water Quality Control Board (kept on file on site) |

## Environmental Documents - Review & Approval

| Program Area | Document | Submittal Frequency | Next Due Date | Prepared By: | Highest SNL/CA Signature Level | Normally Requires SNL Legal Review | Submitted To: | Regulatory Agency receiving document |
|---|---|---|---|---|---|---|---|---|
| Environmental Monitoring - Wastewater | Wastewater Discharge Report | monthly | 20th of each month | Holland | 8516 Dept. Mgr. | No | DOE/SSO - Karen Agogino | City of Livermore Water Reclamation Plant |
| Environmental Monitoring - Wastewater | Spill/Slug Plan (Spill Prevention and Containment Plan) | Every 2 Yrs | 30-Jun-09 | Holland | 8516 Dept. Mgr. | Yes | DOE/SSO - Karen Agogino | Regional Water Quality Control Board (kept on file on site) |
| Environmental Monitoring - Wastewater | Groundwater Protection Management Program Plan | Every 3-5 Yrs | 1-Dec-08 | Holland | 8516 Dept. Mgr. | Yes | DOE/SSO - Karen Agogino | Regional Water Quality Control Board |
| Environmental Monitoring - Stormwater | **Stormwater Permit (Notice of Intent) (Industrial and Construction)** | Renewed July 1997 - no updates required | Possible reissue following state litigation | Holland | **SNL/CA Vice President** | Yes | DOE/SSO - Karen Agogino | Regional Water Quality Control Board |
| Environmental Monitoring - Stormwater | Storm Water Pollution Prev. Plans (SWPPP) - Industrial and Construction Activities | reviewed annual - living document | 30-Jun-08 | Holland | 8516 Dept. Mgr. | Yes | DOE/SSO - Karen Agogino | Regional Water Quality Control Board (kept on file on site) |
| Environmental Monitoring - Stormwater | Storm Water Discharge Report | annual | 1-Jul-08 | Holland | 8516 Dept. Mgr. | No | DOE/SSO - Karen Agogino | Regional Water Quality Control Board and State Water Resources Control Board |
| Environmental Monitoring - Stormwater | Groundwater Monitoring Plan | as needed | N/A | Holland | 8516 Dept. Mgr. | Yes | N/A | DOE |
| Environmental Monitoring - Air | **NESHAPS Rad. Letter Report** | annual | 30-Jun-08 | Holland | **SNL/CA Vice President** | No | DOE/SSO - Karen Agogino | US EPA - Region IX |
| Environmental Monitoring | Above Ground Storage Tank Statement and Fee | Every 2 Yrs | 1-Jun-08 | Holland | 8516 Dept. Mgr. | No | | CA State Water Resources Board |
| | | | | | | | | |
| Pollution Prevention | Pollution Prevention/Waste Minimization Annual Program Report | annual | April | Farren/Harris | 8516 Dept. Mgr. | No | courtesy copy to DOE/SSO - Carolyn Holloway | none |
| Pollution Prevention | **Waste Minimization Certification** | annual | 1-Mar-08 | Farren/Harris | **SNL/CA Vice President** | No | DOE/SSO - David Rast | CA/EPA/Dept. of Toxic Substances Control |
| Pollution Prevention | Environmental Preferable Purchasing | annual | 31-Dec-08 | Farren/Harris | 8516 Dept. Mgr. | No | DOE Data Base | DOE HQ |

## Environmental Documents - Review & Approval

| Program Area | Document | Submittal Frequency | Next Due Date | Prepared By: | Highest SNL/CA Signature Level | Normally Requires SNL Legal Review | Submitted To: | Regulatory Agency receiving document |
|---|---|---|---|---|---|---|---|---|
| Pollution Prevention | Waste Generation & Pollution Prevention Progress | annual | 31-Dec-08 | Farren/Harris | 8516 Dept. Mgr. | No | DOE Data Base | DOE HQ |
| Pollution Prevention | Source Reduction Evaluation Review and Plan Summary | Every 4 Yrs | 1-Sep-07 | Farren/Harris | 8516 Dept. Mgr. | No | DOE/SSO - Karen King for group Lab report. | CA/EPA/Dept. of Toxic Substances Control |
| Pollution Prevention | Annual Report for Handlers/Recyclers of Universal Waste or CRT Materials | annual | | Farren/Harris | 8516 Dept. Mgr. | No | courtesy copy to DOE/SSO - Carolyn Holloway | CA/EPA/Dept. of Toxic Substances Control |
| | | | | | | | | |
| EMS | EMS Program Manual | annual | 30-Sep-07 | Larsen | 8516 Dept. Mgr. | No | internal | Internal |
| EMS | Environmental Program Reports | annual | Jan | Program Leads | 8516 Dept. Mgr. | No | DOE/SSO Program Leads | none |
| EMS | 8000 Envir "Scorecard" | quarterly | | Leo | 8516 Dept. Mgr. | No | SNL/CA VP, directors, managers, MOW | Internal |