

Storm Water Pollution Prevention Plan

For:
MOLECULAR FOUNDRY

Prepared for:
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1 Cyclotron Road
Berkeley, CA 94720

Owner/Developer/Contractor:
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(510) 486-7486
Joe Harkins

Project Site Location/Address:
Building 67 and 67A
Lawrence Road

Contractor's Storm Water Pollution Prevention Manager
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Contents

Section 100 SWPPP Certifications and Approval	100-1
100.1 Initial SWPPP Certification by Contractor.....	100-1
100.2 Owner/Developer Approval and Certification of SWPPP.....	100-2
100.3 Annual Compliance Certification	100-3
Section 200 SWPPP Amendments	200-1
200.1 SWPPP Amendment Certification and Approval	200-1
200.2 Amendment Log.....	200-3
Section 300 Introduction and Project Description.....	300-1
300.1 Introduction and Project Description	300-1
300.2 Unique Site Features	300-1
300.3 Construction Site Estimates	300-2
300.4 Project Schedule/Water Pollution Control Schedule	300-2
300.5 Contact Information/List of Responsible Parties.....	300-2
Section 400 References	400-1
Section 500 Body of SWPPP.....	500-1
500.1 Objectives	500-1
500.2 Vicinity Map.....	500-2
500.3 Pollutant Source Identification and BMP Selection	500-2
500.3.1 Inventory of Materials and Activities that May Pollute Storm Water	500-2
500.3.2 Existing (pre-construction) Control Measures	500-3
500.3.3 Nature of Fill Material and Existing Data Describing the Soil	500-3
500.3.4 Erosion Control	500-4
500.3.5 Sediment Control	500-6
500.3.6 Tracking Control.....	500-7
500.3.7 Wind Erosion Control	500-8
500.3.8 Non-Storm Water Control.....	500-8
500.3.9 Waste Management and Materials Pollution Control	500-9
500.3.10 Cost Breakdown for Water Pollution Control.....	500-12
500.4 Water Pollution Control Drawings (WPCDs)	500-12
500.5 Construction BMP Maintenance, Inspection, and Repair	500-12
500.6 Post-Construction Storm Water Management.....	500-13
500.6.1 Post-Construction Control Practices	500-13
500.6.2 Operation/Maintenance after Project Completion	500-13

500.7	Training	500-13
500.8	List of Subcontractors	500-14
500.9	Other Plans/Permits	500-14
Section 600	Monitoring Program and Reports	600-1
600.1	Site Inspections	600-1
600.2	Non-Compliance Reporting	600-1
600.3	Record Keeping and Reports	600-2
600.4	Sampling and Analysis Plan for Sediment	600-2
600.5	Sampling and Analysis Plan for Non-Visible Pollutants	600-2
600.5.1	Scope of Monitoring Activities	600-2
600.5.2	Monitoring Strategy	600-3
600.5.3	Monitoring Preparation	600-5
600.5.4	Analytical Constituents	600-5
600.5.5	Sample Collection and Handling	600-7
600.5.6	Sample Analysis	600-9
600.5.7	Quality Assurance/Quality Control	600-121
600.5.8	Data Management and Reporting	600-121
600.5.9	Data Evaluation	600-121
600.5.10	Change of Conditions	600-132

SWPPP Attachments

Attachment A	Vicinity Map
Attachment B	Water Pollution Control Drawings
Attachment C	BMP Consideration Checklist
Attachment D	Computation Sheet for Determining Runoff Coefficients
Attachment E	Computation Sheet for Determining Run-on Discharges
Attachment F	Notice of Intent (NOI)
Attachment G	Program for Maintenance, Inspection, and Repair of Construction Site BMPs
Attachment H	Storm Water Quality Construction Site Inspection Checklist
Attachment I	Trained Contractor Personnel Log
Attachment J	Subcontractor Notification Letter and Log
Attachment K	Notice of Non-Compliance
Attachment L	SWPPP and Monitoring Program Checklist
Attachment M	Annual Certification of Compliance Form
Attachment N	Other Plans/Permits
Attachment O	Water Pollution Control Cost Breakdown
Attachment P	Notice of Termination (NOT)

Attachment Q..... BMPs Selected for the Project
Attachment R..... Sampling Activity Log
Attachment S..... Construction Material and Pollutant Testing Guidance Table – Non-Visible Pollutants

Section 100

SWPPP Certifications and Approval

100.1 Initial SWPPP Certification by Contractor

Project Name: MOLECULAR FOUNDRY

Project Number: RFB 841

"I certify under a 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, 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."

Contractor's Signature

Date

Curtis Faulkner, Senior Superintendent

Contractor's Name and Title

(650) 642-4619

Telephone Number

100.2 Owner/Developer Approval and Certification of SWPPP

**Owner/Developer
Approval and Certification of the
Storm Water Pollution Prevention Plan**

Project Name: MOLECULAR FOUNDRY

Project Number: RFB 841

"I certify under a 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, 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."

Owner/Developer Signature

Date

Lawrence Berkeley National Laboratory,
Joe Harkins, Project Manager

Owner/Developer Name

(510) 486-7486

Telephone Number

100.3 Annual Compliance Certification

By July 1 of each year, the Contractor shall submit an Annual Certification of Compliance to the appropriate Regional Water Quality Control Board (RWQCB), stating compliance with the terms and conditions of the Permit and the SWPPP. The Annual Certification of Compliance Form is included in Attachment M. Completed Annual Certifications of Compliance and Approvals can be found in the following pages.

Section 200

SWPPP Amendments

200.1 SWPPP Amendment Certification and Approval

This SWPPP shall be amended:

- Whenever there is a change in construction or operations which may affect the discharge of pollutants to surface waters, groundwater(s), or a municipal separate storm sewer system (MS4); or
- If any condition of the Permits is violated or the general objective of reducing or eliminating pollutants in storm water discharges has not been achieved. If the RWQCB determines that a Permit violation has occurred, the SWPPP shall be amended and implemented within 14-calendar days after notification by the RWQCB;
- Annually, prior to the defined rainy season; and
- When deemed necessary by the Owner/Developer/Contractor.

The following items will be included in each amendment:

- Who requested the amendment.
- The location of proposed change.
- The reason for change.
- The original BMP proposed, if any.
- The new BMP proposed.

The amendments for this SWPPP, along with the Owner/Developer/Contractor's Certification and the Owner/Developer/Contractor approval, can be found in the following pages. Amendments are listed in the Amendment Log in section 200.2.

SWPPP Amendment No.

Project Name: MOLECULAR FOUNDRY

Project Number: RFB 841

**Contractor Certification of the
Storm Water Pollution Prevention Plan Amendment**

"I certify under a 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, 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."

Contractor's Signature

Date

Contractor's Name and Title

Telephone Number

**Owner/Developer Approval of the
Storm Water Pollution Prevention Plan Amendment**

"I certify under a 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, 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."

Owner/Developer Signature

Date

Owner/Developer Name and Title

Telephone Number

Section 300

Introduction and Project Description

300.1 Introduction and Project Description

The project is located in Oakland, California, County of Alameda, between buildings 66 and 72, on Lawrence Road in Lawrence Berkeley National Laboratory. The existing site is currently undeveloped and consists of a grassy slope of about 2:1. The project consists of a six-story laboratory building and an adjacent utility center, access road, and landscaped areas. The project will be constructed in two phases. Drainage is to the site-owned storm drain system, which discharges at the bottom of the slope to No-Name Creek, and ultimately to Strawberry Creek in the City of Berkeley.

300.2 Unique Site Features

No-Name Creek, which receives the discharge from the location of the Molecular Foundry, is an ephemeral stream which normally runs only in the winter after rain. It is a tributary of Strawberry Creek, which runs westward at the bottom of the canyon, then through the campus of the University of California and the City of Berkeley, and ultimately to San Francisco Bay. Strawberry Creek is daylighted through some of the campus and the city, and on campus is stocked with native fish and used for student classes such as hydrology, biology, ecological studies, and stream restoration.

There are also two marshy areas just outside the project at the bottom (west side) of the site, which will remain untouched by the project.

There are no unusual construction activities that may impact storm water quality; however, the site is quite steep, so extra care will be taken to prevent erosion. Cut and fill will be 20,000 cu. yds., with about 2,000 cy to be imported.

300.3 Construction Site Estimates

The following are estimates of the construction site:

Construction site area	<u>2.7</u>	acres
Percentage impervious area before construction	<u>15</u>	%
Runoff coefficient before construction ⁽¹⁾	<u>0.48</u>	
Percentage impervious area after construction	<u>41</u>	%
Runoff coefficient after construction ⁽¹⁾	<u>0.62</u>	
Anticipated storm water flow on to the construction site ⁽²⁾	<u>5.20</u>	cfs

⁽¹⁾ Calculations are shown in Attachment D

⁽²⁾ Calculations are shown in Attachment E

300.4 Project Schedule/Water Pollution Control Schedule

A graphic project schedule can be found at the end of this section.

300.5 Contact Information/List of Responsible Parties

The Storm Water Pollution Prevention Manager (SWPPM) assigned to this project is:

Curtis Faulkner
(650) 642-4619 (cell)
Lawrence Berkeley National Laboratory
1 Cyclotron Road 90K
Berkeley, CA 94720

The SWPPM shall have primary responsibility and significant authority for the implementation, maintenance, inspection and amendments to the approved SWPPP. The SWPPM will be available at all times throughout the duration of the project. Duties of the Owner/Developer/Contractor's SWPPM include but are not limited to:

- Ensuring full compliance with the SWPPP and the Permit
- Implementing all elements of the SWPPP, including but not limited to:
 - Implementation of prompt and effective erosion and sediment control measures.
 - Implementing all non-storm water management, and materials and waste management activities such as: monitoring discharges (dewatering, diversion devices); general site clean-up; vehicle and equipment cleaning, fueling and maintenance; spill control; ensuring that no materials other than storm water are discharged in quantities which will have an adverse effect on receiving waters or storm drain systems; etc.
- Pre-storm inspections
- Storm event inspections
- Post-storm inspections
- Routine inspections as specified in the project's specifications or described in the SWPPP
- Updates/Amendments to the SWPPP, as needed
- Preparing annual compliance certification
- Ensuring elimination of all unauthorized discharges
- The SWPPM shall be assigned authority by the Owner/Developer/Contractor to mobilize crews in order to make immediate repairs to the control measures
- Coordinate with the Owner/Developer/Contractor to assure all of the necessary corrections/repairs are made immediately, and that the project complies with the SWPPP, the Permit and approved plans at all times
- Submitting Notices of Discharge and reports of Illicit Connections or Illegal Discharges

Tony Kopke, Jobsite Safety Coordinator and Labor Foreman, Rudolph and Sletten, Inc., will be responsible for installation, inspection, maintenance, and repair of stormwater BMPs.

Section 400

References

The following documents are made a part of this SWPPP by reference:

- Project plans and specifications labeled Project Manual, dated 25 September 2003, prepared by the Regents of the University of California, Lawrence Berkeley National Laboratory, and drawings done by SmithGroup, Architects, Title 2, 100%, September 25, 2003.
- State Water Resources Control Board (SWRCB) Order No. 99-08-DWQ, National Pollutant Discharge Elimination System (NPDES) General Permit No. CAS000002, Waste Discharge Requirements (WDRs) for Discharges of Storm Water Runoff Associated with Construction Activity.
- California Stormwater BMP Handbook – Construction, January 2003.
- State Water Resources Control Board (SWRCB) Order No. 97-03-DWQ, National Pollutant Discharge Elimination System (NPDES) General Permit No. CAS000001, Waste Discharge Requirements (WDRs) for Discharges of Storm Water Associated with Industrial Activities.
- Geotechnical Investigation, Proposed Molecular Foundry Building, Lawrence Berkeley National Laboratory, Berkeley, California, prepared by Kleinfelder as Project No. 41-7702-01, January 29, 2002.
- Geotechnical Investigation, Molecular Foundry Building, Lawrence Berkeley National Laboratory, Berkeley, California, prepared by Kleinfelder as Project No. 20258, revised October 15, 2002.
- Final Tiered Initial Study Checklist and Mitigated Negative Declaration for the Construction and Operation of the Molecular Foundry at Ernest Orlando Lawrence Berkeley National Laboratory, Berkeley, California, State Clearinghouse No. 2002122051, April 2003.

Section 500

Body of SWPPP

500.1 Objectives

This Storm Water Pollution Prevention Plan (SWPPP) has six main objectives:

- Identify all pollutant sources, including sources of sediment that may affect the quality of storm water discharges associated with construction activity (storm water discharges) from the construction site, and
- Identify non-storm water discharges, and
- Identify, construct, implement in accordance with a time schedule, and maintain Best Management Practices (BMPs) to reduce or eliminate pollutants in storm water discharges and authorized non-storm water discharges from the construction site during construction, and
- Develop a maintenance schedule for BMPs installed during construction designed to reduce or eliminate pollutants after construction is completed (post-construction BMPs).
- Identify a sampling and analysis strategy and sampling schedule for discharges from construction activity which discharge directly into water bodies listed on Attachment 3 of the Permit (Clean Water Act Section 303(d) [303(d)] Water Bodies listed for Sedimentation).
- For all construction activity, identify a sampling and analysis strategy and sampling schedule for discharges that have been discovered through visual monitoring to be potentially contaminated by pollutants not visually detectable in the runoff.

This SWPPP conforms with the required elements of the General Permit No. CAS000002 issued by the State of California, State Water Resources Control Board (SWRCB). This SWPPP will be modified and amended to reflect any amendments to the Permit, or any changes in construction or operations that may affect the discharge of pollutants from the construction site to surface waters, groundwaters, or the municipal separate storm sewer system (MS4). The SWPPP will also be amended if it is in violation of any condition of the Permit or has not achieved the general objective of reducing pollutants in storm water discharges. The SWPPP shall be readily available on-site for the duration of the project.

500.2 Vicinity Map

The construction project vicinity map showing the project location, surface water boundaries, geographic features, construction site perimeter, and general topography, is located in Attachment A. The project's Title Sheet provides more detail regarding the project location and is also included in Attachment A.

500.3 Pollutant Source Identification and BMP Selection

500.3.1 Inventory of Materials and Activities that May Pollute Storm Water

The following is a list of construction materials that will be used and activities that will be performed that will have the potential to contribute pollutants, other than sediment, to storm water runoff (control practices for each activity are identified in the Water Pollution Control Drawings (WPCDs) and/or in Sections 500.3.4 through 500.3.9):

- Vehicle fluids, including oil, grease, petroleum, and coolants
- Asphaltic emulsions associated with asphalt-concrete paving operations
- Cement materials associated with PCC concrete paving operations, drainage structures, walkways, or walls
- Base and subbase material
- Joint and curing compounds
- Concrete curing compounds
- Paints
- Solvents, thinners, acids
- Mortar mix
- Raw landscaping materials and wastes (topsoil, plant materials, herbicides, fertilizers, mulch, pesticides)
- BMP materials (sandbags, hay bales, straw wattles)
- Treated lumber (materials and waste) PCC rubble
- General litter
- Portable toilets.

Construction activities that have the potential to contribute sediment to storm water discharges include:

- Clear and grub operations
- Grading operations
- Soil import operations
- Utility excavation operations
- Landscaping operations
- Dewatering of groundwater
- Dewatering of excavations and footings
- Pumping from water collection points
- Storage spoils piles
- Unsurfaced, unrocked roads and laydown areas.

Attachment C lists all Best Management Practices (BMPs) that have been selected for implementation in this project. Implementation and location of BMPs are shown on the WPCDs in Attachment B. Narrative descriptions of BMPs to be used during the project are listed by category in each of the following SWPPP sections. Attachment Q includes a list, and/or copies of the fact sheets of all the BMPs selected for this project.

500.3.2 Existing (pre-construction) Control Measures

The following are existing (pre-construction) control measures encountered within the project site:

- Existing vegetation consisting of native grass and trees
- Transverse concrete collection ditches
- The existing storm drain line crossing the site (aboveground) is to be re-routed.

500.3.3 Nature of Fill Material and Existing Data Describing the Soil

The site is a former undeveloped area, and is not believed to contain any toxic materials as a result of past usage. According to the manager of Berkeley Lab's Environmental Restoration Program, there is no reason to suspect the presence of any pollutants that might contaminate storm water.

Existing site features that, as a result of past usage, may contribute pollutants to storm water (e.g., toxic materials that are known to have been treated, stored, disposed, spilled, or leaked onto the construction site) include:

- None.

The site consists of surface soils underlain by bedrock. The surface soils are colluvium, slide debris, and fill. The colluvial soils consist mostly of stiff clays and silts that are moderately to highly expansive. Landslide debris encountered during geotechnical boring is consistent with a previously mapped landslide at this location (see Drawing C-2.0, Existing Conditions). The fill on the site was placed during development of the area and for repair of the landslide adjacent to what is now Lawrence Road.

The excavation for the building will remove much, if not all, of these materials. In the existing landslide repair area (see Site and Boring Location Plan in the Kleinfelder Geotechnical Investigation from January 29, 2002), subdrains will be reconfigured so as to be functional. On-site and imported soil will be used in fills. No groundwater was encountered in the two borings drilled for the geotechnical investigation.

Permanent cut and fill slopes will be 2:1 or flatter. Fills will be designed with a keyway and notched into stiff native soil or bedrock, and will contain a subdrain system consisting of perforated plastic pipe and drainrock. Topsoil will first be stripped and stockpiled for dressing finished slopes and for use in landscaped areas in all areas where excavations are to be made or fill deposited. Landscaping will be begun as soon as surface disturbances are finished for each area.

500.3.4 Erosion Control

Erosion control, also referred to as soil stabilization, consists of source control measures that are designed to prevent soil particles from detaching and becoming transported in storm water runoff. Erosion control BMPs protect the soil surface by covering and/or binding soil particles. This project will incorporate erosion control measures required by the contract documents, and other measures selected by the Contractor. This project will implement the following practices for effective temporary and final erosion control during construction:

- 1) Preserve existing vegetation where required and when feasible.
- 2) Apply temporary erosion control to remaining active and non-active areas as required by the California Stormwater BMPs Handbook - Construction, and the contract documents. Reapply as necessary to maintain effectiveness. This includes wattles, rice rolls, hydromulch and jute netting, Murify geotextile fabric, and polyethylene sheeting.

- 3) Implement temporary erosion control measures (as in 2. above) at regular intervals throughout the defined rainy season to achieve and maintain the contract's disturbed soil area requirements. Implement erosion control prior to the defined rainy season.
- 4) Stabilize non-active areas as soon as feasible after the cessation of construction activities.
- 5) Control erosion in concentrated flow paths by applying erosion control blankets, erosion control seeding, and lining swales as required in the contract documents.
- 6) Apply seed to areas deemed substantially complete by the Owner during the defined rainy season.
- 7) At completion of construction, apply permanent erosion control to all remaining disturbed soil areas.

Sufficient erosion control materials will be maintained on-site to allow implementation in conformance with Permit requirements and as described in this SWPPP. This includes implementation requirements for active areas and non-active areas that require deployment before the onset of rain.

Implementation and locations of temporary erosion control BMPs are shown on the Water Pollution Control Drawings (WPCDs) in Attachment B and/or described in this section. The BMP Consideration Checklist in Attachment C indicates the BMPs that will be implemented to control erosion on the construction site; these are:

- EC-1, Scheduling
- EC-2, Preservation of Existing Vegetation
- EC-5, Soil Binders
- EC-7, Geotextiles and Mats
- EC-9, Earth Dike and Drainage Swales
- EC-10, Velocity Dissipation Devices.

Implementation of Erosion Control BMPs

The Storm Water Pollution Prevention Manager (SWPPM) will monitor weather using National Weather Service reports to track conditions and alert crews to the onset of rainfall events.

Disturbed soil areas will be stabilized with temporary or permanent erosion control as soon as possible after grading or construction is complete.

Disturbed areas will be stabilized with temporary or permanent erosion control before rain events.

Prior to forecast storm events, temporary erosion control BMPs will be deployed and inspected.

Polyethylene covers will be used to cover exposed soil and sand stockpiled material areas. Covers will be placed over stockpiles prior to forecast storm events, and anchored to prevent damage by wind.

The project schedule will sequence construction activities with the installation of both erosion control and sediment control measures. The construction schedule will be arranged as much as practicable to leave existing vegetation undisturbed until immediately prior to grading.

500.3.5 Sediment Control

Sediment controls are structural measures that are intended to complement and enhance the selected erosion control measures and reduce sediment discharges from active construction areas. Sediment controls are designed to intercept and settle out soil particles that have been detached and transported by the force of water. This project will incorporate sediment control measures required by the contract documents, and other measures selected by the Owner/Developer/Contractor.

Sufficient quantities of temporary sediment control materials will be maintained on-site throughout the duration of the project to allow implementation of temporary sediment controls in the event of predicted rain, and for rapid response to failures or emergencies, in conformance with other Permit requirements and as described in this SWPPP. This includes implementation requirements for active areas and non-active areas before the onset of rain.

Implementation and locations of temporary sediment control BMPs are shown on the Water Pollution Control Drawings (WPCDs) in Attachment B. The BMP Consideration Checklist in Attachment C indicates all the BMPs that will be implemented to control sediment on the construction site; these are:

- SE-1, Silt Fence
- SE-3, Sediment Trap
- SE-5, Fiber Rolls
- SE-7, Street Sweeping and Vacuuming
- SE-8, Sandbag Barrier
- SE-10, Storm Drain Inlet Protection.

Implementation of Temporary Sediment Controls

Temporary Sediment Control BMPs will be deployed according to the schedule shown in SWPPP Section 300.4.

During the rainy season, temporary sediment controls will be implemented at the draining perimeter of disturbed soil areas, at the toe of slopes, at storm drain inlets, and at outfall areas at all times.

During the non-rainy season, temporary sediment controls will be implemented at the draining perimeter of disturbed soil areas and at storm drains downstream from disturbed areas before rain events.

Silt fences will be deployed along the toe of exterior slopes to filter storm water runoff.

Storm drain inlet protection will be used at all operational internal inlets to the storm drain system during the rainy season.

During the non-rainy season, in the event of a predicted storm, the following temporary sediment control materials will be maintained on-site: silt fence materials, sandbags for linear barriers, fiber rolls.

500.3.6 Tracking Control

The following BMPs have been selected to reduce sediment tracking from the construction site onto private or public roads:

- SE-7, Street Sweeping and Vacuuming
- TC-1, Stabilized Construction Entrance/Exit

Three stabilized construction entrance/exits will be constructed and maintained. These will be stabilized to reduce tracking of sediment as a result of construction traffic. The entrance will be designated and graded to prevent runoff from leaving the site. Stabilization material will be 3- to 6-inch aggregate. The entrance will be flared where it meets the existing road to provide an adequate turning radius.

500.3.7 Wind Erosion Control

The following BMPs have been selected to control dust from the construction site:

- WE-1, Wind Erosion Control
- NS-1, Water Conservation Practices
- WM-3, Stockpile Management.

Dust Control

Potable water will be applied to disturbed soil areas of the project site to control dust and maintain optimum moisture levels for compaction. Water application will be concentrated during the late summer and early fall months, or whenever the dryness of the soil warrants it.

BMP WE-1, Wind Erosion Control, and BMP NS-1, Water Conservation Practices, will be implemented to provide dust control and prevent discharges from dust control activities and water supply equipment. Water application rates will be minimized as necessary to prevent runoff and ponding, and water leaks will be repaired immediately.

During windy conditions (forecast or actual wind conditions of approximately 25 mph or greater), dust control will be applied to disturbed areas, including haul roads, to adequately control erosion.

BMP WM-3, Stockpile Management, using silt fences and plastic covers, will be implemented to prevent wind dispersal of sediment from stockpiles.

500.3.8 Non-Storm Water Control

An inventory of construction activities and potential non-storm water discharges is provided in Section 5.3.1. The BMP Consideration Checklist in Attachment C and the following list indicates the BMPs that have been selected to control non-storm water pollution on the construction site. Implementation and locations of some non-storm water control BMPs are shown on the Water Pollution Control Drawings (WPCDs) in Attachment B. A narrative description of each BMP follows.

- NS-6, Illicit Connection/Illegal Discharge Detection and Reporting
- NS-8, Vehicle and Equipment Cleaning
- NS-9, Vehicle and Equipment Fueling
- NS-10, Vehicle and Equipment Maintenance
- NS-1, Water Conservation Practices
- NS-2, Dewatering Operations
- NS-7, Potable Water, Irrigation
- NS-12, Concrete Curing.

Vehicle and Equipment Operations

Several types of vehicles and equipment will be used on-site throughout the project, including graders, scrapers, excavators, loaders, paving equipment, rollers, trucks and trailers, backhoes, forklifts, generators, and compressors. BMPs NS-9, Vehicle and Equipment Fueling, and NS-10, Vehicle and Equipment Maintenance, will be utilized to prevent discharges of fuel and other vehicle fluids. Except for concrete washout, which is addressed in Section 500.3.9, vehicle cleaning will not be performed on site.

All self-propelled vehicles will be fueled off-site or in a designated area which is level and is protected by berms and dikes to contain spills and prevent runoff and runoff. Absorbent spill cleanup materials and spill kits will be available at the fueling area. Drip pans or absorbent pads will be used during vehicle and equipment fueling, and will be disposed of properly if soiled. Employees and subcontractors will be trained in proper fueling and cleanup procedures. Nozzles used will be equipped with an automatic shutoff to control drips. Fueling operations will not be left unattended.

500.3.9 Waste Management and Materials Pollution Control

An inventory of construction activities, materials, and wastes is provided in Section 5.3.1. The BMP Consideration Checklist in Attachment C and the following list indicate the BMPs that have been selected to handle materials and control construction site wastes. A narrative description of each BMP follows.

- WM-1, Material Delivery and Storage
- WM- 2, Material Use
- WM-3, Stockpile Management
- WM-4, Spill Prevention and Control
- WM-5, Solid Waste Management
- WM-9, Sanitary/Septic Waste Management
- WM-6, Hazardous Waste Management
- WM-8, Concrete Waste Management
- WM-10, Liquid Waste Management.

Material Delivery, Storage, and Use

In general, BMPs WM-1 and WM-2 will be implemented to help prevent discharges of construction materials during delivery, storage, and use. The general material storage area will be located as shown on the Site Staging/Storage/Access Road Plan. A sandbag barrier (BMP SE-8) will be provided around the storage area to prevent runoff from adjacent areas. Two types of storage/containment facilities will be provided within the storage area to minimize storm water contact with construction materials:

- A watertight shipping container will be used to store hand tools, small parts, and most construction materials that can be carried by hand, such as paint cans, solvents, and grease.
- A separate covered storage/containment facility will be constructed adjacent to the shipping container to provide storage for larger items such as drums and items shipped or stored on pallets. The containment facility will consist of a 10' by 20' paved area with bermed sides. A wood frame and corrugated tin roof and sides will be constructed to protect the facility from sun and rain. The facility will provide about 530 gal. of containment volume, or enough to store 9 55-gallon drums pursuant to BMP WM-1.

Very large items, such as light standards, framing materials, and stockpiled lumber, will be stored in the open in the general storage area. Such materials will be elevated with wood blocks to minimize contact with runoff.

Spill cleanup materials, material safety data sheets, a material inventory, and emergency contact numbers will be maintained in the contractor's trailer.

Stockpile Management

BMP WM-3, Stockpile Management, will be implemented to reduce or eliminate pollution of storm water from stockpiles of soil and paving materials such as Portland cement concrete rubble, asphalt concrete, asphalt concrete rubble, aggregate base, aggregate subbase, pre-mixed aggregate, and asphalt binder (so-called "cold mix" asphalt). Stockpiles will be surrounded with sediment controls (SE-5, Fiber Rolls, or SE-8, Sandbag Barrier). Plastic covers (EC-7, Geotextiles and Mats), or EC-5, Soil Binders, will be used.

Waste Management

BMP WM-5, Solid Waste Management, and BMP WM-6, Hazardous Waste Management, will be implemented to minimize storm water contact with waste materials and prevent waste discharges. Solid wastes will be loaded directly into trucks for off-site disposal. When on-site storage is necessary, solid wastes will be stored in watertight dumpsters in the general storage area. Solid waste, including any rubble stockpiles, will be removed and disposed off-site at least weekly. XXXXX Waste Disposal Company will provide waste disposal services. Hazardous wastes will be stored in the shipping containers or covered containment area discussed above for materials storage. Hazardous waste will be in appropriate and clearly marked containers and segregated from other non-waste materials.

Concrete Residuals and Washout Wastes

This project includes placement of 440 cubic yards of concrete. The estimated maximum washout volume is 100 cubic yards. Discharges will consist of rinsewater and residual concrete (Portland cement, aggregates, admixture, and water). Estimated pour dates are shown on the project schedule in 300.4. Concrete pours will not be conducted during or immediately prior to rainfall events.

BMP WM-8, Concrete Waste Management, will be implemented, and a 6-cubic yard lined dumpster will be maintained as shown on the Site Staging/Storage/Access Road Plan, No. 1. All excess concrete and concrete washout slurries will be discharged to the washout facility for drying. The minimum-sized washout facility will provide more than sufficient volume to contain concrete washout wastes. BMP maintenance, waste disposal, and BMP removal will be conducted as described in WM-8. Concrete waste solids/liquids will be removed and disposed of as required by WM-8.

Sanitary and Septic Wastes

The Contractor will implement BMP WM-9, Sanitary and Septic Waste Management, and portable toilets will be located and maintained at the Contractor's trailer for the duration of the project. Weekly maintenance will be provided by Acme and Sons, and wastes will be disposed of off-site. The toilets will be located away from concentrated flow paths and traffic flow, and will have collection pans underneath as secondary containment.

500.3.10 Cost Breakdown for Water Pollution Control

A cost breakdown itemizing the contract lump sum for water pollution control has been developed for this project and included in Attachment O. The cost breakdown reflects the items of work, quantities, and costs for BMPs shown in the SWPPP, except for those construction site BMPs and permanent BMPs that are shown on the project plans and for which there is a contract item of work.

500.4 Water Pollution Control Drawings (WPCDs)

The Water Pollution Control Drawings can be found in Attachment B of the SWPPP.

500.5 Construction BMP Maintenance, Inspection, and Repair

Inspections will be conducted as follows:

- Prior to a forecast storm
- after a rain event that causes runoff from the construction site
- at 24-hour intervals during extended rain events
- at any other time(s) or intervals of time specified in the contract documents.

Completed inspection checklists will be submitted to the SWPPM within 24 hours of inspection. Copies of the completed checklists will be kept with the SWPPP.

A tracking or follow-up procedure shall follow any inspection that identifies deficiencies in BMPs. A program for Maintenance, Inspection and Repair of BMPs is shown in Attachment G.

500.6 Post-Construction Storm Water Management

500.6.1 Post-Construction Control Practices

The following are the post-construction BMPs that are to be used at this construction site after all construction is complete:

- Permanent erosion control, seeding and planting, as detailed in landscape drawings
- Drainage swales and lined ditches
- Outlet protection/velocity dissipation at storm water outfall.

500.6.2 Operation/Maintenance after Project Completion

The post-construction BMPs that are described above will be funded and maintained by the owner, i.e., the Department of Energy and Lawrence Berkeley National Laboratory.

500.7 Training

Section 300.5 shows the name of the Owner/Developer/Contractor's Storm Water Pollution Prevention Manager (SWPPM). This person has received the following training:

- Construction Site Planning and Management for Water Quality Protection -- 2003 Workshop, Concord, CA. Conducted by the San Francisco Estuary Project, the San Francisco Bay Regional Water Quality Control Board, and the Friends of the San Francisco Estuary. 8-hr. lecture and field instruction course.
- Site Winterization, Foster City, CA. Conducted by Rudolph and Sletten for site storm water managers and Project Superintendents. 2-hr. review of SWPPP requirements and review of practical applications of site best management practices.
- Over 15 years' experience in managing Storm Water Pollution Prevention Programs.
- Rudolph and Sletten 10-hr. Emergency Response Team training.

The training log showing formal and informal training of various Contractor personnel is shown in Attachment I.

This SWPPP was prepared by Regina Lackner, Water Quality Program Manager in the Environmental Services Group at Lawrence Berkeley National Laboratory. Dr. Lackner has over 10 years' experience in managing the water quality program at LBNL, and wrote the original SWPPP and SWMP for its industrial storm water permit. She has regularly

attended California Storm Water Quality Association (CASQA, formerly California Storm Water Quality Task Force, SWQTF) meetings for the past 8 years and has attended the following training:

- Storm Water Pollution Prevention for Industrial Facilities, given by Prof. David Duke, UCLA, at HAZMACON 1994.
- Clean Water Act Compliance Course, Government Institutes, Alexandria, VA, 1993.
- Western Region Pollution Prevention Conference, Santa Rosa, CA, 2001
- Training on the California Stormwater BMP Handbooks (Construction and Industrial), provided by CASQA, 2003.

500.8 List of Subcontractors

All contractors and subcontractors will be notified of the requirement for storm water management measures during the project. A list of contractors will be maintained and included in the SWPPP. If subcontractors change during the project, the list will be updated accordingly. The portion of the contract documents referring to the SWPPP and the requirement for storm water management measures is included in the SWPPP as Attachment J.

500.9 Other Plans/Permits

Attachment N includes copies of other local, state, and federal plans and permits. Following is a list of the plans and permits included in Attachment N:

- State Water Resources Control Board (SWRCB) Order No. 99-08-DWQ, National Pollutant Discharge Elimination System (NPDES) General Permit No. CAS000002, Waste Discharge Requirements (WDRs) for Discharges of Storm Water Runoff Associated with Construction Activity.
- State Water Resources Control Board (SWRCB) Order No. 97-03-DWQ, National Pollutant Discharge Elimination System (NPDES) General Permit No. CAS000001, Waste Discharge Requirements (WDRs) for Discharges of Storm Water Associated with Industrial Activities.
- Geotechnical Investigation, Proposed Molecular Foundry Building, Lawrence Berkeley National Laboratory, Berkeley, California, prepared by Kleinfelder as Project No. 41-7702-01, January 29, 2002.

- Geotechnical Investigation, Molecular Foundry Building, Lawrence Berkeley National Laboratory, Berkeley, California, prepared by Kleinfelder as Project No. 20258, revised October 15, 2002.
- Final Tiered Initial Study Checklist and Mitigated Negative Declaration for the Construction and Operation of the Molecular Foundry at Ernest Orlando Lawrence Berkeley National Laboratory, Berkeley, California, State Clearinghouse No. 2002122051, April 2003.

Section 600

Monitoring Program and Reports

600.1 Site Inspections

The Owner/Developer/Contractor will inspect the site prior to a forecast storm, after a rain event that causes runoff from the construction site, at 24-hour intervals during extended rain events, and as specified in the contract documents. The results of all inspections and assessments will be documented, a copy shall be provided to the Owner/Developer/Contractor within 24 hours of the inspection, and copies of the completed inspection checklists will be maintained with the SWPPP. Site inspections conducted for monitoring purposes will be performed using the inspection checklist shown in Attachment H.

The name(s) and contact number(s) of the assigned inspection personnel are listed below:

Assigned inspector: Tony Kopke Contact phone: (650) 642-4624

600.2 Non-Compliance Reporting

If a discharge occurs or if the project receives a written notice of non-compliance, the Contractor will immediately notify the Owner/Developer; will file a written report to the Owner/Developer within 7 days of the discharge or notice; and will file a written report to the Regional Water Quality Control Board (RWQCB) within 30 days of identification of non-compliance. Corrective measures will be implemented immediately following the discharge, notice, or order. A sample Notice of Non-Compliance (NONC) form is provided in Attachment K.

The report to the Owner/Developer and to the RWQCB will contain the following items:

- The date, time, location, nature of operation, and type of unauthorized discharge, including the cause or nature of the notice or order,
- The control measures (BMPs) deployed before the discharge event, or prior to receiving notice or order,
- The date of deployment and type of control measures (BMPs) deployed after the discharge event, or after receiving the notice or order, including additional measures installed or planned to reduce or prevent re-occurrence, and
- An implementation and maintenance schedule for any affected BMPs.

600.3 Record Keeping and Reports

Records shall be retained for a minimum of three years for the following items:

- Site inspections
- Compliance certifications
- Discharge reports
- Approved SWPPP document and amendments.

600.4 Sampling and Analysis Plan for Sediment

This project does not have the potential to discharge directly to a water body listed as impaired due to Sedimentation/Siltation and/or Turbidity pursuant to Clean Water Act, Section 303(d).

600.5 Sampling and Analysis Plan for Non-Visible Pollutants

This Sampling and Analysis Plan (SAP) for Non-Visible Pollutants describes the sampling and analysis strategy and schedule for monitoring non-visible pollutants in storm water discharges from the project site and off-site activities directly related to the project, in accordance with the requirements of Section B of the General Permit, including SWRCB Resolution 2001-046.

600.5.1 Scope of Monitoring Activities

The following construction materials, wastes, or activities, as identified in Section 500.3.1, are potential sources of non-visible pollutants to storm water discharges from the project. Storage, use, and operational locations are shown on the WPCDs in Attachment B.

- Vehicle fluids
- Asphaltic emulsions
- Cement materials
- Base and subbase
- Joint and curing compounds
- Concrete curing compounds
- Paints
- Solvents, thinners, acids

- Mortar mix
- Fertilizers, herbicides, and pesticides
- Treated lumber
- PCC rubble.

As identified in Section 500.3.3, there are no potential sources of non-visible pollutants to storm water discharges from the project.

It is not planned to use any soil amendments which have the potential to change the chemical properties, engineering properties, or erosion resistance of the soil.

The project does not have the potential to receive storm water run-on with the potential to contribute non-visible pollutants to storm water discharges from the project.

Sampling for non-visible pollutants will be conducted when (1) a breach, leakage, malfunction, or spill is observed; and (2) the leak or spill has not been cleaned up prior to the rain event; and (3) there is the potential for discharge of non-visible pollutants to surface waters or drainage system.

600.5.2 Monitoring Strategy

Sampling Schedule

Samples for the applicable non-visible pollutant(s) and a sufficiently large uncontaminated background sample shall be collected during the first two hours of discharge from rain events that result in a sufficient discharge for sample collection. Samples shall be collected during daylight hours (sunrise to sunset) and shall be collected regardless of the time of year, status of the construction site, or day of the week.

In conformance with the U.S. Environmental Protection Agency definition, a minimum of 72 hours of dry weather will be used to distinguish between separate rain events.

Collection of discharge samples for non-visible pollutant monitoring will be triggered when any of the following conditions are observed during the required inspections conducted before or during rain events:

- Materials or wastes containing potential non-visible pollutants are not stored under watertight conditions. Watertight conditions are defined as (1) storage in a watertight container, (2) storage under a watertight roof or within a building, or (3) protected by

temporary cover and containment that prevents storm water contact and runoff from the storage area.

- Materials or wastes containing potential non-visible pollutants are stored under watertight conditions, but (1) a breach, malfunction, leakage, or spill is observed, (2) the leak or spill is not cleaned up prior to the rain event, and (3) there is the potential for discharge of non-visible pollutants to surface waters or a storm sewer system.
- An operational activity, including but not limited to those in Section 600.5.1, with the potential to contribute non-visible pollutants (1) was occurring during or within 24 hours prior to the rain event, (2) applicable BMPs were observed to be breached, malfunctioning, or improperly implemented, and (3) there is the potential for discharge of non-visible pollutants to surface waters or a storm sewer system.
- Soil amendments that have the potential to change the chemical properties, engineering properties, or erosion resistance of the soil have been applied, and there is the potential for discharge of non-visible pollutants to surface waters or a storm sewer system.
- Storm water runoff from an area contaminated by historical usage of the site has been observed to combine with storm water runoff from the site, and there is the potential for discharge of non-visible pollutants to surface waters or a storm sewer system.

Sampling Locations

Sampling locations are based on proximity to planned non-visible pollutant storage, occurrence or use; accessibility for sampling, personnel safety; and other factors in accordance with the applicable requirements in the Permit.

- A location will be identified for the collection of an uncontaminated sample of runoff as a background sample for comparison with the samples being analyzed for non-visible pollutants. This location will be selected such that the sample will not have come in contact with (1) operational or storage areas associated with the materials, wastes, and activities identified in Section 500.3.1; (2) potential non-visible pollutants due to historical use of the site as identified in Section 500.3.3; (3) areas in which soil amendments that have the potential to change the chemical properties, engineering properties, or erosion resistance of the soil have been applied; or (4) disturbed soil areas.

If an operational activity or storm water inspection conducted 24 hours prior to or during a rain event identifies the presence of a material storage, waste storage, or operations area with spills or the potential for the discharge of non-visible pollutants to surface waters or a storm sewer system that was an unplanned location and has not been identified on the

WPCDs, sampling locations will be selected using the same rationale as that used to identify planned locations.

600.5.3 Monitoring Preparation

Samples on the project site will be collected by the following Contractor sampling personnel:

Name/Telephone Number: Steve Daly (650) 222-4956

Prior to the rainy season, all sampling personnel and alternates will review the Sampling and Analysis Plan (SAP). Qualifications of designated Contractor personnel describing environmental sampling training and experience are provided in Attachment I.

An adequate stock of monitoring supplies and equipment for monitoring non-visible pollutants will be available on the project site prior to a sampling event. Monitoring supplies and equipment will be stored in a cool-temperature environment that will not come into contact with rain or direct sunlight. Sampling personnel will be available to collect samples in accordance with the sampling schedule.

Supplies maintained at the project site will include, but are not limited to, surgical gloves, sample collection equipment, coolers, appropriate number and volume of sample bottles, identification labels, re-sealable storage bags, paper towels, personal rain gear, ice, Sampling Activity Log forms, and Chain of Custody (COC) forms. The Contractor will obtain and maintain any field-testing instruments, as identified in Section 600.5.6, for analyzing samples in the field by Contractor sampling personnel.

Safety practices for sample collection will be in accordance with the procedures itemized in this SWPPP in Section 600.5.5.

SWPPM will contact Steve Daly 24 hours prior to a predicted rain event and if one of the triggering conditions is identified during an inspection before, during, or after a storm event to ensure that adequate sample collection personnel and supplies for monitoring non-visible pollutants are available and will be mobilized to collect samples on the project site in accordance with the sampling schedule.

600.5.4 Analytical Constituents

Identification of Non-Visible Pollutants

Table 600-2 lists the specific sources and types of potential non-visible pollutants on the project site and the applicable water quality indicator constituent(s) for that pollutant.

**Table 600-2
Potential Non-Visible Pollutants and Water Quality Indicator Constituents**

Pollutant Source	Pollutant	Water Quality Indicator Constituent
Adhesives	Adhesives, glues Resins, epoxy Caulks, sealers, etc. Coal tars	Phenolics, formaldehydes Phenolics, formaldehydes Phenolics, formaldehydes Benzene, phenols, naphthalene
Cleaners	Polishes Etching agents Ammonia, lye, soda Bleaching agents Chromate salts	Metals Metals Acidity/alkalinity Acidity/alkalinity Chromium
Plumbing	Solder Pipe fitting Galvanized metal Electric wiring	Lead, copper, zinc, tin Copper Zinc Copper, lead
Woods	Sawdust Particle board Treated woods	BOD Formaldehyde Copper, creosote
Masonry Concrete	Dusts Pigments Curing compounds Cleaning	Acidity, sediments Metals Calcium carbonate, acidity, alkalinity Acidity
Yard Operations	Vehicle maintenance Gasoline, oils Portable toilets Wash waters	Oil, grease, coolants Benzene, oil, grease, and derivatives BOD, disinfectant Herbicides, oil, grease

Note: Many of these potential pollutants are only hazardous if they are water soluble, leachable, in powder form, or solvents and liquids that can be transported by water. Cured polymers and coated metals do not present a significant pollution risk.

Also note that these are generic in nature. The specific chemicals used on site will have material safety data sheet (MSDS) information that will specify ingredients that are potential pollutants. The Rudolf and Sletten Jobsite Safety Coordinator will function as the gatekeeper, tracking new chemicals on site, updating the SWPPP, and notifying the LBNL Environmental Services Group.

600.5.5 Sample Collection and Handling

Sample Collection Procedures

Samples of discharge will be collected at the designated sampling locations shown on the WPCDs for observed breaches, malfunctions, leakages, spills, operational areas, soil amendment application areas, and historical site usage areas that triggered the sampling event.

Grab samples will be collected and preserved in accordance with the methods identified in the Table 600-3, "Sample Collection, Preservation, and Analysis for Monitoring Non-Visible Pollutants," provided in Section 600.5.6. Only personnel trained in proper water quality sampling will collect samples.

Samples will be collected by placing a separate lab-provided sample container directly into a stream of water downgradient and within close proximity to the potential non-visible pollutant discharge location. This separate lab-provided sample container will be used to collect water, which will be transferred to sample bottles for laboratory analysis. The upgradient and uncontaminated background samples shall be collected first prior to collecting the downgradient to minimize cross-contamination. The sampling personnel will collect the water upgradient of where they are standing. Once the separate lab-provided sample container is filled, the water sample will be poured directly into sample bottles provided by the laboratory for the analyte(s) being monitored.

To maintain sample integrity and prevent cross-contamination, sampling collection personnel will:

- Wear a clean pair of surgical gloves prior to the collection and handling of each sample at each location.
- Not contaminate the inside of the sample bottle by not allowing it to come into contact with any material other than the water sample.
- Discard sample bottles or sample lids that have been dropped onto the ground prior to sample collection.
- Not leave the cooler lid open for an extended period of time once samples are placed inside.
- Not sample near a running vehicle where exhaust fumes may impact the sample.
- Not touch the exposed end of a sampling tube, if applicable.
- Avoid allowing rainwater to drip from rain gear or other surfaces into sample bottles.
- Not eat, smoke, or drink during sample collection.
- Not sneeze or cough in the direction of an open sample bottle.
- Minimize the exposure of the samples to direct sunlight, as sunlight may cause biochemical transformation of the sample to take place.

- Decontaminate sampling equipment prior to sample collection using a TSP-soapy water wash, distilled water rinse, and final rinse with distilled water.
- Dispose of decontamination water/soaps appropriately; i.e., not discharge to the storm drain system or receiving water.

Sample Handling Procedures

Immediately following collection, sample bottles for laboratory analytical testing will be capped, labeled, documented on a Chain of Custody form provided by the analytical laboratory, sealed in a re-sealable storage bag, placed in an ice-chilled cooler, at as near to 4 degrees Celsius as practicable, and delivered within 24 hours to the following California state-certified laboratory:

Laboratory Name: STL Chromalab
Address: 1220 Quarry Lane
Pleasanton, CA 94566
Telephone Number: (925) 484-1919
Point of Contact: Vincent Vancil, Project Manager

Immediately following collection, samples for field analysis will be tested in accordance with the field instrument manufacturer's instructions and results recorded on the Sampling Activity Log.

Sample Documentation Procedures

All original data documented on sample bottle identification labels, Chain of Custody forms, Sampling Activity Logs, and Inspection Checklists will be recorded using waterproof ink. These will be considered accountable documents. If an error is made on an accountable document, the individual will make corrections by lining through the error and entering the correct information. The erroneous information will not be obliterated. All corrections will be initialed and dated. Copies of the Sampling Activity Log and Chain of Custody form are provided in Attachment R.

Sampling and field analysis activities will be documented using the following:

- Sample Bottle Identification Labels: Sampling personnel will attach an identification label to each sample bottle. At a minimum, the following information will be recorded on the label, as appropriate:
 - Project name
 - Project number
 - Unique sample identification number and location.
[Project Number]-[Six digit sample collection date]-[Location]
(Example: 0G5304-081801-Inlet472).
Quality assurance/quality control (QA/QC) samples shall be identified similarly using a unique sample number or designation
(Example: 0G5304-081801-DUP1).
 - Collection date/time (No time applied to QA/QC samples)
 - Analysis constituent

- Sampling Activity Logs: A log of sampling events will identify:
 - Sampling date
 - Separate times for collected samples and QA/QC samples recorded to the nearest minute
 - Unique sample identification number and location
 - Analysis constituent
 - Names of sampling personnel
 - Weather conditions (including precipitation amount)
 - Field analysis results
 - Other pertinent data

- Chain of Custody (COC) forms: All samples to be analyzed by a laboratory will be accompanied by a COC form provided by the laboratory. Only the sample collectors will sign the COC form over to the lab. COC procedures will be strictly adhered to for QA/QC purposes.

- Storm Water Quality Construction Inspection Checklists: When applicable, the Contractor's storm water inspector will document on the checklist that samples for non-visible pollutants were taken during a rain event.

600.5.6 Sample Analysis

Samples will be analyzed for the applicable constituents using the analytical methods identified in Table 600-3, "Sample Collection, Preservation, and Analysis for Monitoring Non-Visible Pollutants" in this section.

Table 600-3
Sample Collection, Preservation, and Analysis for Monitoring Non-Visible Pollutants

Constituent	Analytical Method	Minimum Sample Volume	Sample Bottle	Sample Preservation	Reporting Limit	Maximum Holding Time
Metals (Pb, Cu, Zn, Sn)	EPA 6010B/7470A	250 ml	Polypropylene	Store@ 4C, HNO ₃ to <pH2	0.1 mg/l	6 mos.
pH	EPA 150.1	100 ml	Polypropylene	None	0-14	Immediate
Paint, solvents – VOCs	EPA 8260B	3 x 40 ml	VOA – glass	Store @ 4 C, HCl to pH < 2	1 ug/l	14 days
Alkalinity	SM 2320B	250 ml	Polypropylene	Store @ 4 C	1 mg/l	14 days
Oil and Grease	EPA 1664	1000 ml	Glass	Store @ 4 C, HCl to pH <2	1 mg/l	28 days
BOD	EPA 405.1	500 ml	Polypropylene	Store @ 4 C	1 mg/l	48 hours
Notes:						

For samples collected for field analysis, collection, analysis, and equipment calibration will be in accordance with the field instrument manufacturer's specifications.

The following field instrument will be used to analyze the following constituent:

- pH meter for pH.

The instrument will be maintained in accordance with the manufacturer's instructions, and will be calibrated before each sampling and analysis event. Maintenance and calibration records will be maintained with the SWPPP.

600.5.7 Quality Assurance/Quality Control

For an initial verification of laboratory or field analysis, duplicate samples will be collected at a rate of 10 percent or 1 duplicate per sampling event. The duplicate sample will be collected, handled, and analyzed using the same protocols as primary samples. A duplicate sample will be collected at each location immediately after the primary sample has been collected. Duplicates will be collected where contamination is likely, not on the background sample. Duplicate samples will not influence any evaluations or conclusions; however, they will be used as a check on laboratory quality assurance.

600.5.8 Data Management and Reporting

A copy of all water quality analytical results and QA/QC data will be submitted to the Owner/Developer within 5 days of sampling (for field analyses) and within 30 days (for laboratory analyses).

Lab reports and COCs will be reviewed for consistency between lab methods, sample identifications, dates, and times for both primary samples and QA/QC samples. All data, including COC forms and Sampling Activity Logs, shall be kept with the SWPPP.

600.5.9 Data Evaluation

An evaluation of the water quality sample analytical results, including figures with sample locations, will be submitted to the Owner/Developer with the water quality analytical results and the QA/QC data.

Should the runoff/downgradient sample show an increased level of the tested analyte relative to the background sample, the BMPs, site conditions, and surrounding influences will be assessed to determine the probable cause for the increase. As determined by the site and data evaluation, appropriate BMPs will be repaired or modified to mitigate

discharges of non-visual pollutant concentrations. Any revisions to the BMPs will be recorded as an amendment to the SWPPP.

600.5.10 Change of Conditions

Whenever SWPPP monitoring, pursuant to Section B of the General Permit, indicates a change in site conditions that might affect the appropriateness of sampling locations or introduce additional non-visible pollutants of concern, testing protocols will be revised accordingly. All such revisions will be recorded as amendments to the SWPPP.

Attachment A

Vicinity Map

Attachment B

Water Pollution Control Drawings (WPCDs)

Site Staging/Storage/Access

G0.2 – Project Information/Applicable Codes/Location Map/General Notes

C1.0 – General Notes, Legends, and Abbreviations

C2.0 – Existing Conditions Plan

C3.0 – Site Demolition Plan

C4.0 – Erosion Control Plan

C5.0 – Grading Plan

C5.1 – Fine Grading Plan

C7.1 – Building and Road Layout

C7.2 – Road Profile

C8.0 – Site Sections Location

C8.1 – Site Sections A-B-C

C8.2 – Site Sections D-E-F

C8.3 – Site Sections G-H-I

C8.4 – Site Sections J-K-L

C8.5 – Site Sections M-N-O

C8.6 – Site Sections P-Q-R-S-T-U-V

C9.2 – Storm Drainage Profile

C9.2.1 – Storm Drainage Profile - 2

C.10.4 – Utilities Details - 4

L0.1 – Landscape Area Definitions Plan

L3.0 – On-Structure Grading Plan

L4.0 – Landscape Drainage Plan

L5.0 – Landscape Planting Soil Plan

L6.0 – Landscape Planting Plan

Attachment C

BMP Consideration Checklist

CONSTRUCTION SITE BMPs CONSIDERATION CHECKLIST					
The BMPs listed here should be considered for every project. Those BMPs that are not included in the SWPPP must be checked as "Not Used" with a brief statement describing why it is not being used.					
EROSION CONTROL BMPs					
BMP No.	BMP	CONSIDERED FOR PROJECT	CHECK IF USED	CHECK IF NOT USED	IF NOT USED, STATE REASON
ES-1	Scheduling				
ES-2	Preservation of Existing Vegetation				
ES-3	Hydraulic Mulch				
ES-4	Hydroseeding				
ES-5	Soil Binders				
ES-6	Straw Mulch				
ES-7	Geotextiles & Mats				
ES-8	Wood Mulching				
ES-9	Earth Dikes & Drainage Swales				
ES-10	Velocity Dissipation Devices				
ES-11	Slope Drains				

CONSTRUCTION SITE BMPs CONSIDERATION CHECKLIST					
The BMPs listed here should be considered for every project. Those BMPs that are not included in the SWPPP must be checked as "Not Used" with a brief statement describing why it is not being used.					
SEDIMENT CONTROL BMPs					
BMP No.	BMP	CONSIDERED FOR PROJECT	CHECK IF USED	CHECK IF NOT USED	IF NOT USED, STATE REASON
SC-1	Silt Fence				
SC-2	Sediment Basin				
SC-3	Sediment Trap				
SC-4	Check Dam				
SC-5	Fiber Rolls				
SC-6	Gravel Bag Berm				
SC-7	Street Sweeping and Vacuuming				
SC-8	Sand Bag Barrier				
SC-9	Straw Bale Barrier				
SC-10	Storm Drain Inlet Protection				
WIND EROSION CONTROL BMPs					
WE-1	Wind Erosion Control				
TRACKING CONTROL BMPs					
TC-1	Stabilized Construction Entrance/Exit				
TC-2	Stabilized Construction Roadway				
TC-3	Entrance/Outlet Tire Wash				

**CONSTRUCTION SITE BMPs
CONSIDERATION CHECKLIST**

The BMPs listed here should be considered for every project. Those BMPs that are not included in the SWPPP must be checked as "Not Used" with a brief statement describing why it is not being used.

NON-STORM WATER MANAGEMENT BMPs

BMP No.	BMP	CONSIDERED FOR PROJECT	CHECK IF USED	CHECK IF NOT USED	IF NOT USED, STATE REASON
NS-1	Water Conservation Practices				
NS-2	Dewatering Operations				
NS-3	Paving and Grinding Operations				
NS-4	Temporary Stream Crossing				
NS-5	Clear Water Diversion				
NS-6	Illicit Connection/ Discharge				
NS-7	Potable Water/Irrigation				
NS-8	Vehicle and Equipment Cleaning				
NS-9	Vehicle and Equipment Fueling				
NS-10	Vehicle and Equipment Maintenance				
NS-11	Pile Driving Operations				
NS-12	Concrete Curing				
NS-13	Concrete Finishing				
NS-14	Material and Equipment Use Over Water				
NS-15	Demolition Adjacent to Water				
NS-16	Temporary Batch Plants				

**CONSTRUCTION SITE BMPs
 CONSIDERATION CHECKLIST**

The BMPs listed here should be considered for every project. Those BMPs that are not included in the SWPPP must be checked as "Not Used" with a brief statement describing why it is not being used.

WASTE MANAGEMENT AND MATERIALS POLLUTION CONTROL BMPs

BMP No.	BMP	CONSIDERED FOR PROJECT	CHECK IF USED	CHECK IF NOT USED	IF NOT USED, STATE REASON
WM-1	Material Delivery and Storage				
WM-2	Material Use				
WM-3	Stockpile Management				
WM-4	Spill Prevention and Control				
WM-5	Solid Waste Management				
WM-6	Hazardous Waste Management				
WM-7	Contaminated Soil Management				
WM-8	Concrete Waste Management				
WM-9	Sanitary/Septic Waste Management				
WM-10	Liquid Waste Management				

Attachment D

Computation Sheet for Determining Runoff Coefficients

$$\text{Total Site Area} = \underline{\hspace{2cm}} \text{ Acres} \quad (\text{A})$$

Existing Site Conditions

$$\text{Impervious Site Area}^1 = \underline{\hspace{2cm}} \text{ Acres} \quad (\text{B})$$

$$\text{Impervious Site Area Runoff Coefficient}^{2,4} = \underline{\hspace{2cm}} \quad (\text{C})$$

$$\text{Pervious Site Area}^3 = \underline{\hspace{2cm}} \text{ Acres} \quad (\text{D})$$

$$\text{Pervious Site Area Runoff Coefficient}^4 = \underline{\hspace{2cm}} \quad (\text{E})$$

$$\text{Existing Site Area Runoff Coefficient} \frac{(\text{B} \times \text{C}) + (\text{D} \times \text{E})}{(\text{A})} = \underline{\hspace{2cm}} \quad (\text{F})$$

Proposed Site Conditions (after construction)

$$\text{Impervious Site Area}^1 = \underline{\hspace{2cm}} \text{ Acres} \quad (\text{G})$$

$$\text{Impervious Site Area Runoff Coefficient}^{2,4} = \underline{\hspace{2cm}} \quad (\text{H})$$

$$\text{Pervious Site Area}^3 = \underline{\hspace{2cm}} \text{ Acres} \quad (\text{I})$$

$$\text{Pervious Site Area Runoff Coefficient}^4 = \underline{\hspace{2cm}} \quad (\text{J})$$

$$\text{Proposed Site Area Runoff Coefficient} \frac{(\text{G} \times \text{H}) + (\text{I} \times \text{J})}{(\text{A})} = \underline{\hspace{2cm}} \quad (\text{K})$$

1. Includes paved areas, areas covered by buildings, and other impervious surfaces.
2. Use 0.95 unless lower or higher runoff coefficient can be verified.
3. Includes areas of vegetation, most unpaved or uncovered soil surfaces, and other pervious areas.
4. Refer to local Hydrology Manual for typical C values.

Attachment E

Computational Sheet for Determining Run-on Discharges

Existing Site Conditions

Area Runoff Coefficient = _____ (A)

Area Rainfall Intensity = _____ in/hr (B)

Drainage Area = _____ Acres (C)

Site Area Run-on Discharge (A) x (B) x (C) = _____ ft³/sec (D)

Attachment F

Notice of Intent (NOI)



NOTICE OF INTENT
TO COMPLY WITH THE TERMS OF THE
GENERAL PERMIT TO DISCHARGE STORM WATER
ASSOCIATED WITH CONSTRUCTION ACTIVITY (WQ ORDER No. 99-08-DWQ)

**I. NOI STATUS (SEE INSTRUCTIONS)**

MARK ONLY ONE ITEM 1. New Construction 2. Change of Information for WDID#

II. PROPERTY OWNER

Name	Contact Person		
Mailing Address	Title		
City	State	Zip	Phone () --

III. DEVELOPER/CONTRACTOR INFORMATION

Developer/Contractor	Contact Person		
Mailing Address	Title		
City	State	Zip	Phone () --

IV. CONSTRUCTION PROJECT INFORMATION

Site/Project Name		Site Contact Person		
Physical Address/Location		Latitude _____°	Longitude _____°	County
City (or nearest City)		Zip	Site Phone Number () --	Emergency Phone Number () --
A. Total size of construction site area: _____ Acres	C. Percent of site imperviousness (including rooftops):		D. Tract Number(s): _____, _____	
B. Total area to be disturbed: _____ Acres (% of total _____)	Before Construction: _____%		E. Mile Post Marker: _____	
F. Is the construction site part of a larger common plan of development or sale? <input type="checkbox"/> YES <input type="checkbox"/> NO		G. Name of plan or development:		
H. Construction commencement date: ____/____/____		J. Projected construction dates: Complete grading: ____/____/____ Complete project: ____/____/____		
I. % of site to be mass graded: _____				
K. Type of Construction (Check all that apply):				
1. <input type="checkbox"/> Residential 2. <input type="checkbox"/> Commercial 3. <input type="checkbox"/> Industrial 4. <input type="checkbox"/> Reconstruction 5. <input type="checkbox"/> Transportation				
6. <input type="checkbox"/> Utility Description: _____ 7. <input type="checkbox"/> Other (Please List): _____				

V. BILLING INFORMATION

SEND BILL TO: <input type="checkbox"/> OWNER (as in II. above)	Name	Contact Person
<input type="checkbox"/> DEVELOPER (as in III. above)	Mailing Address	Phone/Fax
<input type="checkbox"/> OTHER (enter information at right)	City	State Zip

VI. REGULATORY STATUS

A. Has a local agency approved a required erosion/sediment control plan?..... YES NO
Does the erosion/sediment control plan address construction activities such as infrastructure and structures?..... YES NO
Name of local agency: _____ Phone: () -- _____

B. Is this project or any part thereof, subject to conditions imposed under a CWA Section 404 permit of 401 Water Quality Certification?..... YES NO
If yes, provide details: _____

VII. RECEIVING WATER INFORMATION

A. Does the storm water runoff from the construction site discharge to (Check all that apply):

1. Indirectly to waters of the U.S.

2. Storm drain system - Enter owner's name: _____

3. Directly to waters of U.S. (e.g., river, lake, creek, stream, bay, ocean, etc.)

B. Name of receiving water: (river, lake, creek, stream, bay, ocean): _____

VIII. IMPLEMENTATION OF NPDES PERMIT REQUIREMENTS

A. STORM WATER POLLUTION PREVENTION PLAN (SWPPP) (check one)

A SWPPP has been prepared for this facility and is available for review: Date Prepared: ___/___/___ Date Amended: ___/___/___

A SWPPP will be prepared and ready for review by (enter date): ___/___/___

A tentative schedule has been included in the SWPPP for activities such as grading, street construction, home construction, etc.

B. MONITORING PROGRAM

A monitoring and maintenance schedule has been developed that includes inspection of the construction BMPs before anticipated storm events and after actual storm events and is available for review.

If checked above: A qualified person has been assigned responsibility for pre-storm and post-storm BMP inspections to identify effectiveness and necessary repairs or design changes..... YES NO

Name: _____ Phone: () _____

C. PERMIT COMPLIANCE RESPONSIBILITY

A qualified person has been assigned responsibility to ensure full compliance with the Permit, and to implement all elements of the Storm Water Pollution Prevention Plan including:

1. Preparing an annual compliance evaluation..... YES NO
Name: _____ Phone: () -- _____

2. Eliminating all unauthorized discharges..... YES NO

IX. VICINITY MAP AND FEE (must show site location in relation to nearest named streets, intersections, etc.)

Have you included a vicinity map with this submittal? YES NO

Have you included payment of the annual fee with this submittal?..... YES NO

X. CERTIFICATIONS

"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 or imprisonment. In addition, I certify that the provisions of the permit, including the development and implementation of a Storm Water Pollution Prevention Plan and a Monitoring Program Plan will be complied with."

Printed Name: _____

Signature: _____ Date: _____

Title: _____

Attachment G

Program for Maintenance, Inspection, and Repair of Construction Site BMPs

<i>The contractor shall use the following guidelines for maintenance, inspection, and repair of BMPs identified in the SWPPP</i>		
BEST MANAGEMENT PRACTICES (BMPs)	INSPECTION FREQUENCY (all controls)	MAINTENANCE/REPAIR PROGRAM
TEMPORARY EROSION CONTROL BMPs		
		<ul style="list-style-type: none"> ■ ■ ■
		<ul style="list-style-type: none"> ■ ■ ■
TEMPORARY SEDIMENT CONTROL BMPs		
		<ul style="list-style-type: none"> ■ ■ ■ ■ ■ ■
		<ul style="list-style-type: none"> ■ ■
		<ul style="list-style-type: none"> ■ ■ ■ ■ ■ ■
WIND EROSION CONTROL BMPs		
		<ul style="list-style-type: none"> ■
TRACKING CONTROL BMPs		
		<ul style="list-style-type: none"> ■ ■ ■

<i>The contractor shall use the following guidelines for maintenance, inspection, and repair of BMPs identified in the SWPPP</i>		
BEST MANAGEMENT PRACTICES (BMPs)	INSPECTION FREQUENCY (all controls)	MAINTENANCE/REPAIR PROGRAM
NON-STORM WATER MANAGEMENT BMPs		
		<ul style="list-style-type: none"> ■ ■ ■ ■ ■ ■ ■
WASTE MANAGEMENT AND MATERIALS POLLUTION CONTROL BMPs		
		<ul style="list-style-type: none"> ■ ■ ■ ■ ■ ■ ■
		<ul style="list-style-type: none"> ■

Attachment H

Storm Water Quality Construction Site Inspection Checklist

GENERAL INFORMATION				
Project Name				
Project N°				
Contractor				
Inspector's Name				
Inspector's Title				
Signature				
Date of Inspection				
Inspection Type (Check Applicable)	<input type="checkbox"/> Prior to forecast rain			<input type="checkbox"/> After a rain event
	<input type="checkbox"/> 24-hr intervals during extended rain			<input type="checkbox"/> Other _____
Season (Check Applicable)	<input type="checkbox"/> Rainy		<input type="checkbox"/> Non-Rainy	
Storm Data	Storm Start Date & Time:		Storm Duration (hrs):	
	Time elapsed since last storm (Circle Applicable Units)	Min.	Hr.	Days
			Approximate Rainfall Amount (inches)	

PROJECT AREA SUMMARY AND DISTURBED SOIL AREA (DSA) SIZE	
Total Project Area	_____ Acres
Field Estimate of Active DSAs	_____ Acres
Field Estimate of Non-Active DSAs	_____ Acres

INSPECTION OF BMPs				
BMP	Yes	No	N/A	Corrective Action
Preservation of Existing Vegetation				
Is temporary fencing provided to preserve vegetation in areas where no construction activity is planned?				
Location:				
Erosion Control				
Does the applied temporary erosion control provide 100% coverage for the affected areas?				
Are any non-vegetated areas that may require temporary erosion control?				
Is the area where erosion controls are used required free from visible erosion?				
Location:				
Temporary Linear Sediment Barriers (Silt Fence, Fiber Rolls, Sandbag Barriers, etc.)				
Are temporary linear sediment barriers properly installed, functional and maintained?				
Are temporary linear sediment barriers free of accumulated litter?				
Is the built-up sediment less than 1/3 the height of the barrier?				
Are cross barriers installed where necessary and properly spaced?				
Location:				
Storm Drain Inlet Protection				
Are storm drain inlets internal to the project properly protected?				
Are storm drain inlet protection devices in working order and being properly maintained?				
Location:				
Sediment Basins				

INSPECTION OF BMPs				
BMP	Yes	No	N/A	Corrective Action
Are basins designed in accordance with the requirements of the General Permit?				
Are basins maintained to provide the required retention/detention?				
Are basin controls (inlets, outlets, diversions, weirs, spillways, and racks) in working order?				
Location:				
Stockpiles				
Are all locations of temporary stockpiles, including soil, hazardous waste, and construction materials in approved areas?				
Are stockpiles protected from run-on, run-off from adjacent areas and from winds?				
Are stockpiles located at least 15 m from concentrated flows, downstream drainage courses and storm drain inlets?				
Are required covers and/or perimeter controls in place?				
Location:				
Concentrated Flows				
Are concentrated flow paths free of visible erosion?				
Location:				
Tracking Control				
Is the entrance stabilized to prevent tracking				
Is the stabilized entrance inspected daily to ensure that it is working properly				
Are points of ingress/egress to public/private roads inspected and swept and vacuumed as needed?				
Are all paved areas free of visible sediment tracking or other particulate matter?				
Location:				
Wind Erosion Control				
Is dust control implemented?				

INSPECTION OF BMPs				
BMP	Yes	No	N/A	Corrective Action
Location:				
Dewatering Operations				
Are all one-time dewatering operations covered by the General Permit inspected before and as they occur and BMPs implemented as necessary during discharge?				
Is ground water dewatering handled in conformance with the dewatering permit issued by the RWQCB?				
Is required treatment provided for dewatering effluent?				
Location:				
Vehicle & Equipment Fueling, Cleaning, and Maintenance				
Are vehicle and equipment fueling, cleaning and maintenance areas reasonably clean and free of spills, leaks, or any other deleterious material?				
Are vehicle and equipment fueling, cleaning and maintenance activities performed on an impermeable surface in dedicated areas?				
If no, are drip pans used?				
Are dedicated fueling, cleaning, and maintenance areas located at least 15 m away from downstream drainage facilities and watercourses and protected from run-on and runoff?				
Is wash water contained for infiltration/ evaporation and disposed of appropriately?				
Is on-site cleaning limited to washing with water (no soap, soaps substitutes, solvents, or steam)?				
On each day of use, are vehicles and equipment inspected for leaks and if necessary, repaired?				
Location:				
Waste Management & Materials Pollution Control				
Are material storage areas and washout areas protected from run-on and runoff, and located at least 15 m from concentrated flows and downstream drainage facilities?				
Are all material handling and storage areas clean; organized; free of spills, leaks, or any other deleterious material; and stocked with appropriate clean-up supplies?				
Are liquid materials, hazardous materials, and hazardous wastes stored in temporary containment facilities?				

INSPECTION OF BMPs				
BMP	Yes	No	N/A	Corrective Action
Are bagged and boxed materials stored on pallets?				
Are hazardous materials and wastes stored in appropriate, labeled containers?				
Are proper storage, clean-up, and spill-reporting procedures for hazardous materials and wastes posted in open, conspicuous and accessible locations adjacent to storage areas?				
Are temporary containment facilities free of spills and rainwater?				
Are temporary containment facilities and bagged/boxed materials covered?				
Are temporary concrete washout facilities designated and being used?				
Are temporary concrete washout facilities functional for receiving and containing concrete waste and are concrete residues prevented from entering the drainage system?				
Do temporary concrete washout facilities provide sufficient volume and freeboard for planned concrete operations?				
Are concrete wastes, including residues from cutting and grinding, contained and disposed of off-site or in concrete washout facilities?				
Are spills from mobile equipment fueling and maintenance properly contained and cleaned up?				
Is the site free of litter?				
Are trash receptacles provided in the yard, field trailer areas, and at locations where workers congregate for lunch and break periods?				
Is litter from work areas collected and placed in watertight dumpsters?				
Are waste management receptacles free of leaks?				
Are the contents of waste management receptacles properly protected from contact with storm water or from being dislodged by winds?				
Are waste management receptacles filled at or beyond capacity?				
Location:				
Temporary Water Body Crossing or Encroachment				
Are temporary water body crossings and encroachments constructed appropriately?				
Does the project conform to the requirements of the 404 permit and/or 1601 agreement?				
Location:				
Illicit Connection/ Discharge				

INSPECTION OF BMPs				
BMP	Yes	No	N/A	Corrective Action
Is there any evidence of illicit discharges or illegal dumping on the project site?				
If yes, has the Owner/Operator been notified?				
Location:				
Discharge Points				
Are discharge points and discharge flows free from visible pollutants?				
Are discharge points free of any significant sediment transport?				
Location:				
SWPPP Update				
Does the SWPPP and Project Schedule adequately reflect the current site conditions and contractor operations?				
Are all BMPs shown on the water pollution control drawings installed in the proper location(s) and according to the details in the SWPPP?				
Location:				
General				
Are there any other potential concerns at the site?				
Location:				
Storm Water Monitoring				
Does storm water discharge directly to a water body listed in the General Permit as impaired for sediment/sedimentation or turbidity?				
If yes, were samples for sediment/sedimentation or turbidity collected pursuant to the sampling and analysis plan in the SWPPP?				
Did the sampling results indicate that the discharges are causing or contributing to further impairment?				

INSPECTION OF BMPs				
BMP	Yes	No	N/A	Corrective Action
If yes, were the erosion/sediment control BMPs improved or maintained to reduce the discharge of sediment to the water body?				
Were there any BMPs not properly implemented or breaches, malfunctions, leakages or spills observed which could result in the discharge of pollutants to surface waters that would not be visually detectable in storm water?				
If yes, were samples for non-visually detectable pollutants collected pursuant to the sampling and analysis plan during rain events?				
If sampling indicated pollution of the storm water, were the leaks, breaches, spills, etc. cleaned up and the contaminated soil properly disposed of?				
Were the BMPs maintained or replaced?				
Were soil amendments (e.g., gypsum, lime) used on the project?				
If yes, were samples for non-visually detectable pollutants collected pursuant to the sampling and analysis plan in the SWPPP?				
If sampling indicated pollution of the storm water by the use of the soil amendments, is there a contingency plan for retention onsite of the polluted storm water?				
Did storm water contact stored materials or waste and run off the construction site? (Materials not in watertight containers, etc.)				
If yes, were samples for non-visually detectable pollutants collected pursuant to the sampling and analysis plan in the SWPPP?				

Attachment I
Trained Contractor Personnel Log

Name	Company	Phone

COMMENTS:

Attachment J

Subcontractor Notification Letter and Notification Log

SWPPP Notification

Company
Address
City, State, ZIP

Dear Sir/Madam,

Please be advised that the California State Water Resources Control Board has adopted the General Permit (General Permit) for Storm Water Discharges Associated with Construction Activity (CAS000002). The goal of these permits is prevent the discharge of pollutants associated with construction activity from entering the storm drain system, ground and surface waters.

[Owner/Developer/Contractor] has developed a Storm Water Pollution Prevention Plan (SWPPP) in order to implement the requirements of the Permits.

As a subcontractor, you are required to comply with the SWPPP and the Permits for any work that you perform on site. Any person or group who violates any condition of the Permits may be subject to substantial penalties in accordance with state and federal law. You are encouraged to advise each of your employees working on this project of the requirements of the SWPPP and the Permits. A copy of the Permits and the SWPPP are available for your review at the construction office. Please contact me if you have further questions.

Sincerely,

Name
Title

Attachment K

Notice of Non-Compliance

To:

Date:

Subject: Notice of Non-Compliance

Project Name: _____

Project Number/Location: _____

In accordance with the NPDES Statewide Permit for Storm Water Discharges Associated with Construction Activity, the following instance of discharge is noted:

Date, time, and location of discharge

Nature of the operation that caused the discharge

Initial assessment of any impact cause by the discharge

Existing BMP(s) in place prior to discharge event

Date of deployment and type of BMPs deployed after the discharge.

Steps taken or planned to reduce, eliminate and/or prevent recurrence of the discharge

Implementation and maintenance schedule for any affected BMPs

If further information or a modification to the above schedule is required, notify the contact person below.

Name of Contact Person

Title

Company

Telephone Number

Signature

Date

Attachment L

Storm Water Pollution Prevention Plan (SWPPP) and Monitoring Program Checklist

CONSTRUCTION PROJECT: LBNL Molecular Foundry

CONTRACTOR: Rudolf and Sletten

CONTRACT NO: RFB 841

SECTION A: STORM WATER POLLUTION PREVENTION PLAN (SWPPP)				
CHECK IF ADDRESSED N/A IF NOT APPLICABLE	SWPPP Section	ITEM	GENERAL PERMIT REF.	COMMENTS
X	100	<i>SWPPP Certification and Approval</i>	C.10	
X	100.1	SWPPP Certification	C.10	
X	100.2	SWPPP Approval	C.10	
X	200	<i>SWPPP Amendments</i>	A.4.a, A.16	
NA	200.1	Amendment number and date entered into SWPPP – Amendment Log	A.4.a, A.16	To be done if necessary
NA	200.2	Amendment Certification and Approval	A.4.a, A.16	To be done if necessary
X	300	<i>Introduction/Project Description</i>		
X	300.1	Project Description and Location (narrative)	A.5.a.1	
X	300.2	Unique Site Features (narrative)	A.5.a.1	
X	300.4	<i>Project Schedule (narrative and graphical)</i>	A.5.c.5	
X	400	<i>References</i>	A.14	
X	500.2	<i>Vicinity Map (narrative or graphic)</i>	A.5.a.1	
X	500.2	Site perimeter	A.5.a.1	
X	500.2	Geographic Features	A.5.a.1	
X	500.2	General topography	A.5.a.1	
X	500.4	<i>Water Pollution Control Drawings (WPCDs) (graphic or narrative)</i>	A.5.a.2	
X	500.4	Site perimeter	A.5.a.2	

SECTION A: STORM WATER POLLUTION PREVENTION PLAN (SWPPP)				
CHECK IF ADDRESSED N/A IF NOT APPLICABLE	SWPPP Section	ITEM	GENERAL PERMIT REF.	COMMENTS
X	500.4	Existing and proposed buildings, lots, and roadways	A.5.a.2	
	500.4	Storm water collection and discharge points	A.5.a.2	To come from contractor
X	500.4	General topography before and after construction	A.5.a.2	
X	500.4	Anticipated discharge location(s)	A.5.a.2	
X	500.4	Drainage patterns including the entire relevant drainage areas	A.5.a.2	
X	500.4	Temporary on-site drainage(s)	A.5.a.2	
X	500.3	<i>Pollutant Source and BMP Identification (narrate/ or indicate on site map)</i>	A.5.b	
X		<i>Drainage</i>	A.5.b.1	
X	500.4	Drainage patterns after major grading	A.5.b.1	
X	500.4	Slopes after major grading	A.5.b.1	
X	Attach. E	Calculations for storm water run-on	A.5.b.1	
X	500.4	BMPs that divert off-site drainage from passing through site	A.5.b.1	
X	500.4	<i>Storm Water Inlets</i>	A.5.b.2	
X	500.4	Drainage patterns to storm water inlets or receiving water	A.5.b.2	
X	500.4	BMPs that protect storm water inlets or receiving water	A.5.b.2	
X		<i>Site History (narrative; if possible, indicate location(s) on the Water Pollution Control Drawings)</i>	A.5.b	
X	500.3.3	Nature of fill material and data describing the soil. Description of toxic materials treated, stored, disposed, spilled or leaked on site	A.5.b.3	
X	500.3.8 & 500.3.9	BMPs that minimize contact of contaminants with storm water	A.5.b.3	
		<i>Location of Areas Designated for:</i>	A.5.b.4	
X	500.3.8 & 500.4	Vehicle storage & service	A.5.b.4	
X	500.3.8 & 500.4	Equipment storage, cleaning, maintenance	A.5.b.4	
X	500.3.9 & 500.4	Soil or waste storage	A.5.b.4	
X	500.3.9 & 500.4	Construction material loading, unloading, storage and access	A.5.b.4	
X	500.3.8 & 500.3.9	Areas outside of physical site (yards, borrow areas, etc.)		
		<i>BMP Locations or Descriptions for:</i>	A.5.b.5	
X	500.3.9 & 500.4	Waste handling and disposal areas	A.5.b.5	

SECTION A: STORM WATER POLLUTION PREVENTION PLAN (SWPPP)				
CHECK IF ADDRESSED N/A IF NOT APPLICABLE	SWPPP Section	ITEM	GENERAL PERMIT REF.	COMMENTS
X	500.3.9 & 500.4	On-site storage and disposal of construction materials and waste	A.5.b.5	
X	500.3.8, 500.3.9 & 500.4	Minimum exposure of storm water to construction materials, equipment, vehicles, waste	A.5.b.5	
X	500.6	Post Construction BMPs	A.5.b.6	
X	500.6.1	Listing or Description of Post-construction BMPs	A.5.b.6	
X	500.4	Location of post-construction BMPs	A.5.b.6	
X	500.6.2	Parties responsible for long-term maintenance	A.5.b.6	
X		Additional Information	A.5.c	
X	500.3.1	Description of other pollutant sources and BMPs	A.5.c.1	
X	500.3.2	Pre-construction control practices	A.5.c.1	
X	500.3.1	Inventory of materials and activities that may pollute storm water	A.5.c.2	
X	500.3.8 & 500.3.9	BMPs to reduce/eliminate potential pollutants listed in the inventory	A.5.c.2	
X	300.4	Runoff coefficient (before & after)	A.5.c.3	
X	300.4	Percent impervious (before & after)	A.5.c.3	
X	Attach. F	Copy of the NOT	A.5.c.4	
X	300.3	Construction activity schedule	A.5.c.5	
X	300.5	Contact information	A.5.c.6	
X	500.4.1	SOIL STABILIZATION (EROSION CONTROL)	A.6	
		<i>The SWPPP shall include:</i>	A.6.a-c	
X	500.4	Areas of vegetation on site	A.6.a.1	
X	500.4	Areas of soil disturbance that will be stabilized during rainy season	A.6.a.2	
X	500.4	Areas of soil disturbance which will be exposed during any part of the rainy season	A.6.a.3	
X	300.4	Implementation schedule for erosion control measures	A.6.a.4	
X	500.3.4	BMPs for erosion control	A.6.b	
X	500.3.7	BMPs to control wind erosion	A.6.c	
X	500.3.5	SEDIMENT CONTROL	A.8	
X	500.3.5 & 500.4	Description/Illustration of BMPs to prevent increase of sediment load in discharge	A.8	

SECTION A: STORM WATER POLLUTION PREVENTION PLAN (SWPPP)				
CHECK IF ADDRESSED N/A IF NOT APPLICABLE	SWPPP Section	ITEM	GENERAL PERMIT REF.	COMMENTS
X	300.4, 500.3.5	Implementation schedule for sediment control measures	A.8	
X	500.3.6	BMPs to control sediment tracking	A.8	
X	500.3.8 & 500.3.9	NON-STORM WATER MANAGEMENT	A.9	
X	500.3.8 & 500.3.9	Description of non-storm water discharges to receiving waters	A.9	
X	500.3.8 & 500.3.9	Locations of discharges	A.9	
X	500.3.8 & 500.3.9	Description of BMPs	A.9	
X	300.5	Name and phone number of person responsible for non-storm water management	A.9	
X	500.6	POST-CONSTRUCTION	A.10	
X	500.6.1	Description of post-construction BMPs	A.10	
X	500.6.2	Operation/Maintenance of BMPs after project completion (including short-term funding, long-term funding and responsible party)	A.10	
X	500.5	MAINTENANCE, INSPECTIONS, AND REPAIR	A.11	
X	300.5, 600.1	Name and phone number of person(s) responsible for inspections	A.11	
X	600.1, Attach. H	Complete inspection checklist: date, weather, inadequate BMPs, visual observations of BMPs, corrective action, inspector's name, title, signature	A.11.a-f	
		OTHER REQUIREMENTS	A.12-16	
X	500.7	Documentation of all training	A.12	
	500.8	List of Contractors/Subcontractors	A.13	To come when awarded

SECTION B: MONITORING AND REPORTING REQUIREMENTS				
CHECK IF ADDRESSED N/A IF NOT APPLICABLE	SWPPP Section	ITEM	GENERAL PERMIT REF.	COMMENTS
X	600.1	Description of Site Inspection Plans	B.3	To come from contractor
X	100.3	Compliance certification (annually 7/1)	B.4	To come in 6 months
X	600.2	Discharge reporting	B.5	To be submitted if necessary
X	600.3	Keep records of all inspections, compliance certifications, and noncompliance reports on site for a period of at least three years	B.6	
NA	600.4	Sampling and Analysis Plan for Sediment	B.7	

SECTION B: MONITORING AND REPORTING REQUIREMENTS				
CHECK IF ADDRESSED N/A IF NOT APPLICABLE	SWPPP Section	ITEM	GENERAL PERMIT REF.	COMMENTS
X	600.5	Sampling and Analysis Plan for Non-Visible Pollutants	B.8	

SECTION C: STANDARD PROVISIONS FOR CONSTRUCTION ACTIVITIES				
CHECK IF ADDRESSED N/A IF NOT APPLICABLE	SWPPP Section	ITEM	GENERAL PERMIT REF.	COMMENTS
X	100.1	Signed SWPPP Certification	C.9,10	

Attachment M

Annual Certification of Compliance Form

Project Name: _____

Project Number: _____

Contractor Company Name: _____

Contractor Address: _____

Construction Start Date: _____ **Completion Date:** _____

Description of Work:

description of work

Work Now in Progress:

work in progress

Work Planned for Next 12 Months:

work planned

"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."

Owner/Developer/Contractor Signature

Date

Attachment N

Other Plans and Permits

State Water Resources Control Board (SWRCB) Order No. 99-08-DWQ, National Pollutant Discharge Elimination System (NPDES) General Permit No. CAS000002, Waste Discharge Requirements (WDRs) for Discharges of Storm Water Runoff Associated with Construction Activity.

State Water Resources Control Board (SWRCB) Order No. 97-03-DWQ, National Pollutant Discharge Elimination System (NPDES) General Permit No. CAS000001, Waste Discharge Requirements (WDRs) for Discharges of Storm Water Associated with Industrial Activities.

Geotechnical Investigation, Proposed Molecular Foundry Building, Lawrence Berkeley National Laboratory, Berkeley, California, prepared by Kleinfelder as Project No. 41-7702-01, January 29, 2002.

Geotechnical Investigation, Molecular Foundry Building, Lawrence Berkeley National Laboratory, Berkeley, California, prepared by Kleinfelder as Project No. 20258, revised October 15, 2002.

Final Tiered Initial Study Checklist and Mitigated Negative Declaration for the Construction and Operation of the Molecular Foundry at Ernest Orlando Lawrence Berkeley National Laboratory, Berkeley, California, State Clearinghouse No. 2002122051, April 2003.

Attachment O

Water Pollution Control Cost Breakdown

Project Name: _____

Project Number: _____

ITEM	ITEM DESCRIPTION	UNIT	ESTIMATED QUANTITY	VALUE	AMOUNT
EC-3	Hydraulic Mulch	FT ²			
EC-4	Hydroseeding	FT ²			
EC-5	Soil Binders	FT ²			
EC-6	Straw Mulch	FT ²			
EC-7	Geotextiles & Mats	FT ²			
EC-8	Wood Mulching	FT ²			
EC-9	Earth Dikes & Drainage Swales	FT			
EC-10	Velocity Dissipation Devices	EA			
EC-11	Slope Drains	EA			
EC-12	Streambank Protection	LS			
EC-13	Polyacrylamide	LS			
SE-1	Silt Fence	FT			
SE-2	Sediment Basin	EA			
SE-3	Sediment Trap	EA			
SE-4	Check Dam	EA			
SE-5	Fiber Rolls	FT			
SE-6	Gravel Bag Berm	FT			
SE-7	Street Sweeping and Vacuuming	LS			
SE-8	Sandbag Barrier	FT			
SE-9	Straw Bale Barrier	FT			
SE-10	Storm Drain Inlet Protection	EA			
WE-1	Wind Erosion Control	LS			
TC-1	Stabilized Construction Entrance/Exit	EA			
TC-2	Stabilized Construction Roadway	EA			
TC-3	Entrance/Outlet Tire Wash	EA			

Attachment O
Water Pollution Control Cost Breakdown

ITEM	ITEM DESCRIPTION	UNIT	ESTIMATED QUANTITY	VALUE	AMOUNT
NS-1	Water Conservation Practices	LS			
NS-2	Dewatering Operations	EA			
NS-3	Paving and Grinding Operations	LS			
NS-4	Temporary Stream Crossing	EA			
NS-5	Clear Water Diversion	EA			
NS-6	Illicit Connection/ Discharge	LS			
NS-7	Potable Water/Irrigation	LS			
NS-8	Vehicle and Equipment Cleaning	LS			
NS-9	Vehicle and Equipment Fueling	LS			
NS-10	Vehicle and Equipment Maintenance	LS			
NS-11	Pile Driving Operations	LS			
NS-12	Concrete Curing	LS			
NS-13	Material and Equipment Use Over Water	LS			
NS-14	Concrete Finishing	LS			
NS-15	Demolition Adjacent to Water	LS			
NS-16	Temporary Batch Plants	LS			
WM-1	Material Delivery and Storage	LS			
WM-2	Material Use	LS			
WM-3	Stockpile Management	LS			
WM-4	Spill Prevention and Control	LS			
WM-5	Solid Waste Management	LS			
WM-6	Hazardous Waste Management	LS			
WM-7	Contaminated Soil Management	LS			
WM-8	Concrete Waste Management	LS			
WM-9	Sanitary/Septic Waste Management	LS			
WM-10	Liquid Waste Management	LS			
			TOTAL		

Attachment P

Notice of Termination

Attachment Q

BMPs Selected for the Project

EC-1, Scheduling
EC-2, Preservation of Existing Vegetation
EC-5, Soil Binders
EC-7, Geotextiles and Mats
EC-9, Earth Dikes and Drainage Swales
EC-10, Velocity Dissipation Devices

SE-1, Silt Fence
SE-3, Sediment Trap
SE-5, Fiber Rolls
SE-7, Street Sweeping and Vacuuming
SE-8, Sandbag Barrier
SE-10, Storm Drain Inlet Protection

TC-1, Stabilized Construction Entrance/Exit

WE-1, Wind Erosion Control

NS-1, Water Conservation Practices
NS-2, Dewatering Operations
NS-6, Illicit Connection/Discharge
NS-7, Potable Water/Irrigation
NS-8, Vehicle and Equipment Cleaning
NS-9, Vehicle and Equipment Fueling
NS-10, Vehicle and Equipment Maintenance
NS-12, Concrete Curing

WM-1, Material Delivery and Storage
WM-2, Material Use
WM-3, Stockpile Management
WM-4, Spill Prevention and Control
WM-5, Solid Waste Management
WM-6, Hazardous Waste Management
WM-8, Concrete Waste Management
WM-9, Sanitary/Septic Waste Management
WM-10, Liquid Waste Management

Attachment S

Pollutant Testing Guidance Table

Attachment S
Pollutant Testing Guidance Table ¹

Category	Construction Site Material	Visually Observable?	Pollutant Indicators ²	Suggested Analyses Field ³	Laboratory
Asphalt Products	Hot Asphalt	Yes - Rainbow Surface or Brown Suspension	Visually Observable - No Testing Required		
	Asphalt Emulsion				
	Liquid Asphalt (tack coat)				
	Cold Mix				
	Crumb Rubber	Yes – Black, solid material	Visually Observable - No Testing Required		
	Asphalt Concrete (Any Type)	Yes - Rainbow Surface or Brown Suspension	Visually Observable - No Testing Required		
Cleaning Products	Acids	No	<p>pH Acidity Anions (acetic acid, phosphoric acid, sulfuric acid, nitric acid, hydrogen chloride)</p>	pH Meter Acidity Test Kit	EPA 150.1 (pH)
					SM 2310B (Acidity)
					EPA 300.0 (Anion)
	Bleaches	No	Residual Chlorine	Chlorine	SM 4500-CL G (Res. Chlorine)
Detergents	Yes - Foam	Visually Observable - No Testing Required			

Attachment S Pollutant Testing Guidance Table ¹

Category	Construction Site Material	Visually Observable?	Pollutant Indicators ²	Suggested Analyses Field ³	Laboratory
	TSP	No	Phosphate	Phosphate	EPA 365.3 (Phosphate)
	Solvents	No	VOC	None	EPA 601/602 or EPA 624 (VOC)
			SVOC	None	EPA 625 (SVOC)
Portland Concrete Cement & Masonry Products	Portland Cement (PCC)	Yes - Milky Liquid	Visually Observable - No Testing Required		
	Masonry products	No	pH	pH Meter Alkalinity or Acidity Test Kit	EPA 150.1 (pH)
			Alkalinity		SM 2320 (Alkalinity)
	Sealant (Methyl Methacrylate - MMA)	No	Methyl Methacrylate	None	EPA 625 (SVOC)
			Cobalt		EPA 200.8 (Metal)
			Zinc		
	Incinerator Bottom Ash Bottom Ash Steel Slag Foundry Sand Fly Ash Municipal Solid Waste	No	Aluminum Calcium Vanadium Zinc	Calcium Test	EPA 200.8 (Metal) EPA 200.7 (Calcium)
	Mortar	Yes - Milky Liquid	Visually Observable - No Testing Required		
	Concrete Rinse Water	Yes - Milky Liquid	Visually Observable - No Testing Required		
	Non-Pigmented Curing Compounds	No	Acidity	pH Meter Alkalinity or Acidity Test Kit	SM 2310B (Acidity)

Attachment S Pollutant Testing Guidance Table ¹

Category	Construction Site Material	Visually Observable?	Pollutant Indicators ²	Suggested Analyses Field ³	Laboratory
			Alkalinity		SM 2320 (Alkalinity)
			pH		EPA 150.1 (pH)
			VOC		EPA 601/602 or EPA 624 (VOC)
			SVOC		EPA 625 (SVOC)
Landscaping and Other Products	Aluminum Sulfate	No	Aluminum	TDS Meter Sulfate	EPA 200.8 (Metal)
			TDS		EPA 160.1 (TDS)
			Sulfate		EPA 300.0 (Sulfate)
	Sulfur-Elemental	No	Sulfate	Sulfate	EPA 300.0 (Sulfate)
	Fertilizers-Inorganic ⁴	No	Nitrate	Nitrate	EPA 300.0 (Nitrate)
			Phosphate	Phosphate	EPA 365.3 (Phosphate)
			Organic Nitrogen	None	EPA 351.3 (TKN)
			Potassium	None	EPA 200.8 (Metal)
	Fertilizers-Organic	No	TOC	Nitrate	EPA 415.1 (TOC)
			Nitrate		EPA 300.0 (Nitrate)
			Organic Nitrogen		EPA 351.3 (TKN)
			COD		EPA 410.4 (COD)
	Natural Earth (Sand, Gravel, and Topsoil)	Yes - Cloudiness and turbidity	Visually Observable - No Testing Required		

Attachment S Pollutant Testing Guidance Table ¹

Category	Construction Site Material	Visually Observable?	Pollutant Indicators ²	Suggested Analyses Field ³	Laboratory
	Herbicide	No	Herbicide	None	Check lab for specific herbicide or pesticide
	Pesticide		Pesticide		
	Lime		Alkalinity	pH Meter Alkalinity or Acidity Test Kit	SM 2320 (Alkalinity)
			pH		EPA 150.1 (pH)
Painting Products	Paint	Yes	Visually Observable - No Testing Required		
	Paint Strippers	No	VOC	None	EPA 601/602 or EPA 624 (VOC)
			SVOC	None	EPA 625 (SVOC)
	Resins	No	COD	None	EPA 410.4 (COD)
			SVOC		EPA 625 (SVOC)
	Sealants	No	COD	None	EPA 410.4 (COD)
	Solvents	No	COD	None	EPA 410.4 (COD)
			VOC		EPA 601/602 or EPA 624 (VOC)
			SVOC		EPA 625 (SVOC)
	Lacquers, Varnish, Enamels, and Turpentine	No	COD	None	EPA 410.4 (COD)
			VOC		EPA 601/602 or EPA 624 (VOC)
			SVOC		EPA 625 (SVOC)

Attachment S Pollutant Testing Guidance Table ¹

Category	Construction Site Material	Visually Observable?	Pollutant Indicators ²	Suggested Analyses Field ³	Laboratory
	Thinners	No	VOC	None	EPA 601/602 or EPA 624 (VOC)
			COD		EPA 410.4 (COD)
Portable Toilet Waste Products	Portable Toilet Waste	Yes	Visually Observable - No Testing Required		
Contaminated Soil ⁵	Aerially Deposited Lead ³	No	Lead	None	EPA 200.8 (Metal)
	Petroleum	Yes – Rainbow Surface Sheen and Odor	Visually Observable - No Testing Required		
	Other	No	Contaminant Specific	Contaminant Specific	Contaminant Specific
Line Flushing Products	Chlorinated Water	No	Total chlorine	Chlorine	SM 4500-CL G (Res. Chlorine)
Adhesives	Adhesives	No	COD	None	EPA 410.4 (COD)
			Phenols	Phenol	EPA 420.1 (Phenol)
			SVOC	None	EPA 625 (SVOC)
Dust Palliative Products	Salts (Magnesium Chloride, Calcium Chloride, and Natural Brines)	No	Chloride	Chloride	EPA 300.0 (Chloride)
			TDS	TDS Meter	EPA 160.1 (TDS)
			Cations (Sodium, Magnesium, Calcium)	None	EPA 200.7 (Cations)
Vehicle	Antifreeze and Other Vehicle Fluids	Yes - Colored Liquid	Visually Observable - No Testing Required		
	Batteries	No	Sulfuric Acid	None	EPA 300.0 (Sulfate)

Attachment S Pollutant Testing Guidance Table ¹

Category	Construction Site Material	Visually Observable?	Pollutant Indicators ²	Suggested Analyses Field ³	Laboratory
			Lead	None	EPA 200.8 (Metal)
			pH	pH Meter Alkalinity or Acidity Test Kit	EPA 150.1 (pH)
			Fuels, Oils, Lubricants	Yes - Rainbow Surface Sheen and Odor	Visually Observable - No Testing Required
Soil Amendment/Stabilization Products	Polymer/Copolymer ^{6,7}	No	Organic Nitrogen	None	EPA 351.3 (TKN)
			BOD	None	EPA 405.1 (BOD)
			COD	None	EPA 410.4 (COD)
			DOC	None	EPA 415.1 (DOC)
			Nitrate	Nitrate	EPA 300.0 (Nitrate)
			Sulfate	Sulfate	EPA 300.0 (Sulfate)
			Nickel	None	EPA 200.8 (Metal)
	Straw/Mulch	Yes - Solids	Visually Observable - No Testing Required		
	Lignin Sulfonate	No	Alkalinity	Alkalinity	SM 2320 (Alkalinity)
			TDS	TDS Meter	EPA 160.1 (TDS)
	Psyllium	No	COD	None	EPA 410.4 (COD)
			TOC		EPA 415.1 (TOC)
	Guar/Plant Gums	No	COD	None	EPA 410.4 (COD)
			TOC		EPA 415.1 (TOC)
			Nickel		EPA 200.8 (Metal)
	Gypsum	No	pH	pH Meter Alkalinity or Acidity Test Kit	EPA 150.1 (pH)
Calcium			Calcium	EPA 200.7 (Calcium)	

Attachment S Pollutant Testing Guidance Table ¹

Category	Construction Site Material	Visually Observable?	Pollutant Indicators ²	Suggested Analyses Field ³	Laboratory
			Sulfate	Sulfate	EPA 300.0 (Sulfate)
			Aluminum	None	EPA 200.8 (Metal)
			Barium		
			Manganese		
			Vanadium		
Treated Wood Products	Ammoniacal-Copper-Zinc-Arsenate (ACZA)	No	Arsenic	Total Chromium	EPA 200.8 (Metal)
	Copper-Chromium-Arsenic (CCA)		Total Chromium		
	Ammoniacal-Copper-Arsenate (ACA)		Copper		
	Copper Naphthenate		Zinc		
	Creosote	Yes - Rainbow Surface or Brown Suspension	Visually Observable - No Testing Required		

Notes:

1. 1 If specific pollutant is known, analyze only for that specific pollutant. See MSDS to verify.
2. For each construction material, test for one of the pollutant indicators. Bolded pollutant indicates lowest analysis cost or best indicator. However, the composition of the specific construction material, if known, is the first criterion for selecting which analysis to use.
3. See www.hach.com, www.lamotte.com, www.ysi.com and www.chemetrics.com for some of the test kits
4. If the type of inorganic fertilizer is unknown, analyze for all pollutant indicators listed.

5. Only if special handling requirements are required in the contract documents for aerially deposited lead (ADL)
6. If used with a dye or fiber matrix, it is considered visually observable and no testing is required.
7. Based upon research conducted by the State of California Department of Transportation (Caltrans), the following copolymers/polymers do not discharge pollutants and water quality sampling and analysis is **not** required: Super Tak™, M-Binder™, Fish Stik™, Pro40dc™, Fisch-Bond™, and Soil Master WR™.