

State of California
CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SANTA ANA REGION

3737 Main Street, Riverside, California 92501
(951) 782-4130 • Fax: (951) 781-6288
<http://www.waterboards.ca.gov>

ORDER NO. R8-2012-0029
NPDES NO. CAS618001

WASTE DISCHARGE REQUIREMENTS FOR STORM WATER RUNOFF FROM
OXY USA INC.
HUNTINGTON BEACH CRUDE OIL AND GAS PRODUCTION FACILITIES

The following Discharger is subject to waste discharge requirements as set forth in this Order:

Table 1. Discharger/Facility Information

Discharger	OXY USA Inc.
Name of Facility	OXY USA Inc. Huntington Beach Production Unit
Facility Address	20101 Golden West Street
	Huntington Beach, CA 92648
	County of Orange
Facility Contact	Diana Lang, Regulatory/Environmental Coordinator (562) 624-3314
Mailing Address	111 West Ocean Boulevard, Suite 800
	Long Beach, CA 90802
Type of Facility	Crude oil and gas production
Facility Design Flow	None

Table 2. Discharge Locations

Discharge Point	Effluent Description	Discharge Point Latitude	Discharge Point Longitude	Receiving Water
DP002	Storm Water	33°, 40', 10.79" N	- 118°, 0', 58.65" W	Pacific Ocean via Golden West Street Storm Drain
DP006	Storm Water	33°, 40', 42.51" N	-118°, 1', 38.20" W	Pacific Ocean via Palm Avenue Storm Drain
DP009	Storm Water	33°, 40', 7.78" N	-118°, 1', 1.32" W	Pacific Ocean via Golden West Street Storm Drain

Table 3. Administrative Information

This Order was adopted by the Regional Water Quality Control Board on:	June 15, 2012
This Order shall become effective on:	June 15, 2012
This Order shall expire on:	June 01, 2017
The Discharger shall file a Report of Waste Discharge in accordance with title 23, California Code of Regulations, as application for issuance of new waste discharge requirements no later than:	180 days prior to the Order expiration date

IT IS HEREBY ORDERED, that this Order supersedes Order No. R8-2002-0078 except for enforcement purposes, and, in order to meet the provisions contained in division 7 of the Water Code (commencing with section 13000) and regulations adopted thereunder, and the provisions of the federal Clean Water Act (CWA) and regulations and guidelines adopted thereunder, the Discharger shall comply with the requirements in this Order.

I, Kurt V. Berchtold, Executive Officer, do hereby certify that this Order with all attachments is a full, true, and correct copy of an Order adopted by the California Regional Water Quality Control Board, Santa Ana Region, on June 15, 2012.

Kurt V. Berchtold, Executive Officer

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I. FACILITY INFORMATION

The Discharger listed in Table 1 is subject to waste discharge requirements as set forth in this Order.

II. FINDINGS

The California Regional Water Quality Control Board, Santa Ana Region (hereinafter Regional Water Board), finds:

A. Background. OXY USA Inc. (hereinafter Discharger or OXY USA) operates a crude oil and gas production facility located at 20101 Golden West Street in Huntington Beach, Orange County. Storm water discharges from the facility are currently regulated under Order No. R8-2002-0078, National Pollutant Discharge Elimination System (NPDES) Permit No. CAS618001. This order expired October 1, 2007 and was administratively extended until revised waste discharge requirements are adopted.

Order No. R8-2002-0078 was issued to Aera Energy. On November 1, 2011, Aera Energy turned over the ownership and operations of the Huntington Beach Production Unit to OXY USA, which filed a NPDES Permit Transfer Request Form on November 2, 2011.

On January 15, 2007, Aera Energy submitted a Report of Waste Discharge and applied for NPDES permit renewal to discharge storm water from its Huntington Beach Production Unit (Facility). Additional information to complete the application and administratively extend R8-2002-0078 was provided June 22, 2007, July 12, 2007, January 20, 2009, and January 28, 2009. OXY USA's NPDES Permit Transfer Request Form satisfies the permit application process.

For the purposes of this Order, references to the "discharger" or "permittee" in applicable federal and state laws, regulations, plans, or policy are held to be equivalent to references to the Discharger hereinafter.

B. Facility Description. Facility Description. The Huntington Beach Production Facility extracts crude oil, produced water, and associated gas from subsurface petroleum reservoirs. The crude oil is de-watered and then shipped offsite for sales. The associated gas is processed to remove H₂S and CO₂ and shipped offsite via pipeline to So Cal Gas or used onsite in SCAQMD approved combustion devices. Produced water from the production of oil and gas is processed to remove residual oil and solids and is reinjected into the reservoirs to maintain pressure and enhance production. Reinjection activities are regulated by the State of California Department of Conservation, Division of Oil and Gas.

OXY USA's facility is located in the northwestern coastal section of Orange County. The facility is divided into three distinct onshore areas: the Highlands, Fort Apache, and the Bolsa Chica Wetlands area facilities. The facility also includes Platform Emmy which is located 1.3 miles offshore Huntington Beach on California State Oil and Gas Lease PRC 425. Attachments B and C include maps of all four areas:

1. *The Highlands* (also known as *the Strip*) is situated on approximately 93 acres along Pacific Coast Highway, running parallel to Bolsa Chica Beach State Park. This area includes wells, pipelines, storage tanks, oil and gas processing equipment, and storage and office

buildings. Produced fluids from all three onshore areas and from Platform Emmy are transferred to the Highlands for processing, storage and off-site distribution.

Runoff from the southwestern section of the Highlands is considered to be "oil impacted" because it comes in contact with the production facilities and processes. This runoff is contained within a series of collection pits and corridors running northwest to southeast along the length of the facility and is ultimately combined with the produced water and then reinjected into the oil reservoirs.

Runoff from the northeastern section of the Highlands, where there is no process equipment, is considered "non-impacted." The non-impacted storm water is collected and pumped via an oil skimming tank to two connected detention ponds located near the gate at Golden West Street in the southeast corner of the Highlands. The total storage volume of the ponds is approximately 4.72 acre-feet. When the capacity of the detention ponds is exceeded, runoff flows to the municipal separate storm sewer system (MS4) through a controlled underground outfall (DP009) or by overflow from the facility to Golden West Street (DP002). At the request of the city of Huntington Beach, OXY USA proposes to drain the ponds via DP009 prior to predicted storm events in order to avoid discharging during peak flows through DP002.

Non-impacted storm water runoff from the northern portion of the Highlands drains to the MS4 at Palm Avenue via Outfall 006 (DP006). In order to mitigate the risk of discharging pollutants during wet weather, a BaySaver™ unit and sampling port was installed in 2006. The commercial BaySaver unit is designed to remove sediment, floatables, and oil and grease in storm water runoff prior to entering the storm drain.

2. The *Fort Apache* area is located at 19th Street and Walnut Avenue. Produced fluids from Fort Apache are transferred to the Highlands via underground pipelines. The site is surrounded by a concrete block wall, which serves as a containment structure, and driveways are sloped to the interior. A cellar pump transfers accumulated storm water from this area to the production gathering line that directs flows to the Highlands Tank Farm. No discharge of storm water is anticipated from Fort Apache.
3. The *Bolsa Chica Wetlands* area facilities are dispersed over a total area of 1,267 acres located immediately north of the Highlands and within the Bolsa Chica Wetlands. This site includes production wells, injection wells and associated pipelines. No processing equipment is located within this area. This production area lies inland from the Bolsa Chica Ecological Reserve and the Full Tidal Basin within the Muted Tidal, Seasonal Ponds, and Future Full Tidal areas of the Bolsa Chica Restoration Project. There has not been any discharge from the production area to the surrounding wetlands since before 2006, and the previously permitted outfall no longer exists. Produced fluids from this area are shipped to the processing facilities within the Highlands area.
4. *Platform Emmy* is a two-platform structure located 1.3 miles offshore of Huntington Beach in approximately 45 feet of water. It consists of 46 wells (19 active, 27 inactive), ranging in depth from 1900 to 7800 feet. A satellite platform houses operational controls, living quarters, electrical switchgear equipment, a boat landing and a helipad. Storm water and any spilled liquids are contained onboard by platform decking, perimeter kick plates and deck drains. Drains from the upper two decks of the production platform are piped to the Atmospheric Drain Tank (ADT). Liquids from the ADT are pumped into the production pipeline to shore where they are combined with produced crude oil. The ADT liquids and crude oil are processed onshore at the Highlands. Drains from the satellite platform and

from the lowest level of the production platform, due to their elevation with respect to the ADT, are first piped to the lowest platform into a double-walled Satellite Drip Tank before being pumped to the ADT. Little, if any, storm water will drain from the platform to the ocean.

Platform Emmy has separate permit coverage under NPDES No. CAG998001, Order No. R8-2009-0003, General Waste Discharge Requirements for Discharges to Surface Waters that Pose an Insignificant (De Minimus) Threat to Water Quality.

During large storms or a series of storms where the capacities of the detention ponds in the Highlands area are exceeded, storm water is discharged to the local storm drains. Prior to its discharge, storm water in the pond will be analyzed for pollutants of concern. Detained storm water that does not meet the specifications in this permit will be pumped to the facility's produced fluid handling system and reinjected into the oil reservoirs. As summarized in Table 2, storm water from the facility that is not reinjected into the oil reserves drains to the City of Huntington Beach's MS4 system (local storm drain) that ultimately drains to the Pacific Ocean, a water of the United States. Attachment B provides a map of the area around the Facility. Attachment C provides a flow schematic of the Facility.

The Discharger has developed and implemented best management practices (BMPs) to control pollutants in runoff from the facility as part of its Oil Spill Containment and Response Plan, contained in the Oil Spill Contingency Plan (OSCP). The OSCP includes all the necessary elements for controlling pollutants in storm water discharges and is used in place of a Storm Water Pollution Prevention Plan (SWPPP) for this facility.

- C. Legal Authorities.** This Order is issued pursuant to CWA Section 402 and implementing regulations adopted by the U.S. Environmental Protection Agency (USEPA) and Chapter 5.5, Division 7 of the California Water Code (CWC), commencing with Section 13370. It shall serve as an NPDES permit for point source discharges from this facility. This Order also serves as Waste Discharge Requirements (WDRs) pursuant to CWC Article 4, Chapter 4, Division 7 commencing with Section 13260.
- D. Background and Rationale for Requirements.** The Regional Water Board developed the requirements in this Order based on information submitted as part of the permit renewal application, through monitoring and reporting programs, and other available information. The Fact Sheet (Attachment F), which contains background information and rationale for requirements in this Order, is hereby incorporated into this Order and constitutes part of the Findings for this Order. Attachments A through E and G through J are also incorporated into this Order.
- E. California Environmental Quality Act (CEQA).** Under CWC Section 13389, this action to adopt an NPDES permit is exempt from the provisions of CEQA, Public Resources Code Sections 21100-21177.
- F. Technology-based Effluent Limitations.** CWA Section 301(b) and USEPA permit regulations contained in 40 CFR 122.44 require that permits include conditions meeting applicable technology-based requirements at a minimum, and any more stringent effluent limitations necessary to meet applicable water quality standards. The discharge authorized by this Order must meet minimum federal technology-based requirements based on effluent limitation guidelines (ELGs) and Standards established in 40 CFR 419 and Best Professional Judgment

(BPJ) in accordance with 40 CFR 125.3. A detailed discussion of the technology-based effluent limitations (TBELs) development is included in the Fact Sheet (Attachment F).

G. Water Quality-Based Effluent Limitations. CWA Section 301(b) and 40 CFR 122.44(d) require that permits include limitations more stringent than applicable federal technology-based requirements where necessary to achieve applicable water quality standards. Section 122.44(d)(1)(i) mandates that permits include effluent limitations for all pollutants that are or may be discharged at levels that have the reasonable potential to cause or contribute to an exceedance of a water quality standard, including numeric or narrative objectives within a standard. Where reasonable potential has been established for a pollutant, but there is no numeric criterion or objective for the pollutant, water quality-based effluent limitations (WQBELs) must be established using: (1) USEPA criteria guidance under CWA Section 304(a), supplemented where necessary by other relevant information; (2) an indicator parameter for the pollutant of concern; or (3) a calculated numeric water quality criterion, such as a proposed state criterion or policy interpreting the state’s narrative criterion, supplemented with other relevant information, as provided in Section 122.44(d)(1)(vi).

H. Water Quality Control Plans. A revised Water Quality Control Plan for the Santa Ana River Basin (Basin Plan) was adopted by the Regional Board and became effective on January 24, 1995. Subsequently, the Basin Plan was updated a number of times. Beneficial uses applicable to the Pacific Ocean are as follows:

Table 4. Basin Plan Beneficial Uses

Discharge Points	Receiving Water Name	Beneficial Uses
DP002 DP006 DP009	Pacific Ocean (Nearshore Zone)	<u>Existing or Potential:</u> Industrial service supply (IND) Navigation (NAV) Contact water recreation (REC-1) Non-contact water recreation (REC-2) Commercial and sport fishing (COMM) Wildlife habitat (WILD) Preservation of rare, threatened or endangered species (RARE) Spawning, reproduction and development (SPWN) Marine habitat (MAR) Shellfish harvesting (SHEL)

Requirements contained in this Order are necessary to implement the Basin Plan.

- I. National Toxics Rule (NTR) and California Toxics Rule (CTR).** USEPA adopted the NTR on December 22, 1992 and later amended it on May 4, 1995 and November 9, 1999. On May 18, 2000, USEPA adopted the CTR. The CTR promulgated new toxics criteria for California and, in addition, incorporated the previously adopted NTR criteria that were applicable in the state. The CTR was amended on February 13, 2001. These rules contain water quality criteria for priority pollutants. The CTR is implemented through the State Implementation Policy (see below).
- J. State Implementation Policy.** On March 2, 2000, the State Water Board adopted the *Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California* (State Implementation Policy or SIP). The SIP became effective on April 28, 2000 with respect to the priority pollutant criteria promulgated for California by the USEPA through the NTR and to the priority pollutant objectives established by the Regional Water

Board in the Basin Plan. The SIP became effective on May 18, 2000 with respect to the priority pollutant criteria promulgated by the USEPA through the CTR. The State Water Board adopted amendments to the SIP on February 24, 2005 that became effective on July 13, 2005. The SIP establishes implementation provisions for priority pollutant criteria and objectives and provisions for chronic toxicity control. Requirements in this Order implement the SIP.

K. Compliance Schedules and Interim Requirements for Compliance with CTR. (Not Applicable)

L. Alaska Rule. On March 30, 2000, USEPA revised its regulation that specifies when new and revised state and tribal water quality standards become effective for CWA purposes (40 CFR 131.21; 65 Fed. Reg. 24641 (April 27, 2000)). Under the revised regulation (also known as the Alaska rule), new and revised standards submitted to USEPA after May 30, 2000, must be approved by USEPA before being used for CWA purposes. The final rule also provides that standards already in effect and submitted to USEPA by May 30, 2000 may be used for CWA purposes, whether or not approved by USEPA, until the EPA has promulgated more stringent Water Quality Standards.

M. Stringency of Requirements for Individual Pollutants. (Not Applicable)

N. Water Quality-Based Effluent Limitations (WQBELs). WQBELs have been scientifically derived to implement water quality objectives that protect beneficial uses. Both the beneficial uses and the water quality objectives have been approved pursuant to federal law and are the applicable federal water quality standards. To the extent that toxic pollutant water quality-based effluent limitations were derived from the CTR, the CTR is the applicable standard pursuant to 40 CFR 131.38. The scientific procedures for calculating the individual water quality-based effluent limitations for priority pollutants are based on the CTR-SIP, which was approved by USEPA on May 18, 2000. All beneficial uses and water quality objectives contained in the Basin Plans were approved under state law and submitted to and approved by USEPA prior to May 30, 2000. Any water quality objectives and beneficial uses submitted to USEPA prior to May 30, 2000, but not approved by USEPA before that date, are nonetheless "applicable water quality standards for purposes of the CWA" pursuant to 40 CFR 131.21(c)(1). Collectively, this Order's restrictions on individual pollutants are no more stringent than required to implement the requirements of the CWA.

O. Antidegradation Policy. 40 CFR 131.12 requires that the state water quality standards include an antidegradation policy consistent with the federal policy. The State Water Board established California's antidegradation policy in State Water Board Resolution No. 68-16. Resolution No. 68-16 incorporates the federal antidegradation policy where the federal policy applies under federal law. Resolution No. 68-16 requires that existing quality of waters be maintained unless degradation is justified based on specific findings. The Basin Plan implements, and incorporates by reference, both the state and federal antidegradation policies. As discussed in detail in the Fact Sheet the permitted discharge is consistent with the antidegradation provision of 40 CFR 131.12 and State Water Board Resolution No. 68-16. The Fact Sheet is provided in Attachment F.

P. Anti-Backsliding Requirements. CWA Sections 402(o)(1) and 303(d)(4) and 40 CFR 122.44(l) prohibit backsliding in NPDES permits. These anti-backsliding provisions require effluent limitations in a reissued permit to be as stringent as those in the previous permit, with some exceptions where limitations may be relaxed. All effluent limitations in this Order are at

least as stringent as the effluent limitations in the previous Order.

- Q. Endangered Species Act.** This Order does not authorize any act that results in the taking of a threatened or endangered species or any act that is now prohibited, or becomes prohibited in the future, under either the California Endangered Species Act (Fish and Game Code Sections 2050 to 2115.5) or the Federal Endangered Species Act (16 USC Sections 1531 to 1544). This Order requires compliance with effluent limits, receiving water limits, and other requirements to protect the beneficial uses of waters of the state. The Discharger is responsible for meeting all requirements of the applicable Endangered Species Act.
- R. Monitoring and Reporting.** 40 CFR 122.48 requires that all NPDES permits specify requirements for recording and reporting monitoring results. CWC Sections 13267 and 13383 authorize the Regional Board to require technical and monitoring reports. The Monitoring and Reporting Program establishes monitoring and reporting requirements to implement federal and State requirements. This Monitoring and Reporting Program is provided in Attachment E.
- S. Standard and Special Provisions.** Standard provisions, which apply to all NPDES permits in accordance with 40 CFR 122.41, and additional conditions applicable to specified categories of permits in accordance with 40 CFR 122.42, are provided in Attachment D. The Discharger must comply with all standard provisions and with those additional conditions that are applicable under 40 CFR 122.42. The Regional Board has also included in this Order special provisions applicable to the Discharger. A rationale for the special provisions contained in this Order is provided in the attached Fact Sheet.
- T. Pollution Prevention Plan.** In accordance with CWC Section 13263.3(d), OXY USA is required to prepare a pollution prevention plan. The Regional Board has determined that such a plan is necessary to achieve water quality objectives for the Pacific Ocean (Nearshore Zone). An equivalent document incorporated into the ICP satisfies this requirement.
- U. Provisions and Requirements Implementing State Law.** The provisions/requirements in subsection IV.B of this Order are included to implement state law only. These provisions/requirements are not required or authorized under the federal CWA. Consequently, violations of these provisions/requirements are not subject to the enforcement remedies that are available for NPDES violations.
- V. Notification of Interested Parties.** The Regional Board has notified the Discharger and interested agencies and persons of its intent to prescribe Waste Discharge Requirements for the discharge and has provided them with an opportunity to submit their written comments and recommendations. Details of notification are provided in the Fact Sheet of this Order.
- W. Consideration of Public Comment.** The Regional Board, in a public meeting, heard and considered all comments pertaining to the discharge. Details of the Public Hearing are provided in the Fact Sheet of this Order.

IT IS HEREBY ORDERED that OXY USA Inc., in order to meet the provisions contained in Division 7 of the California Water Code and regulations adopted thereunder and the provisions of the Federal Clean Water Act and regulations and guidelines thereunder, shall comply with the following:

III. DISCHARGE PROHIBITIONS

- A. The discharge of wastewater at a location different from that described in this Order is prohibited.

- B. Only storm water runoff from the facility shall be discharged to waters of the United States under this Order. The discharge of non-storm water to the ground or to any surface waterbody is prohibited.
- C. The discharge of water, materials, thermal wastes, elevated temperature wastes, toxic wastes, deleterious substances or wastes other than those authorized by this Order to waters of the State is prohibited.
- D. The discharge of any substance in concentrations toxic to animal or plant life is prohibited.
- E. The discharge of designated waste or hazardous waste, as defined in CWC Section 13173 and Title 23 of the California Code of Regulations (CCR) Section 2521(a), respectively, is prohibited.
- F. The discharge of any hazardous substance equal to or in excess of a reportable quantity listed in 40 CFR 117 and/or 40 CFR 302 is prohibited.
- G. Discharges of liquids or materials other than storm water or landscape irrigation runoff either directly or indirectly into U.S. waters are prohibited.
- H. Storm water discharges shall not contain pollutants that cause or threaten to cause pollution, contamination or nuisance as defined in CWC Section 13050.
- I. The discharge specifications are designed to prevent a violation of any applicable water quality standards for receiving waters. These water quality standards for receiving waters are contained in, but not limited to, the Basin Plan.

IV. EFFLUENT LIMITATIONS AND DISCHARGE SPECIFICATIONS

A. Effluent Limitations

The discharge of wastes shall not contain constituent concentrations in excess of the following limits:

Table 5. Effluent Limitations

Parameter	Units	Instantaneous Maximum
Total Suspended Solids (TSS)	mg/L	100
Oil and Grease	mg/L	15
Total Organic Carbon (TOC)	mg/L	100
pH	pH units	6.5-8.5

B. Best Management Practices (BMPs) and Pollution Prevention

1. The Discharger must implement appropriate control measures to meet the effluent limitations and discharge specifications.
2. The Discharger shall update, consistent with the requirements in this Order, and continue to

implement its SWPPP/ICP.

3. The Discharger shall implement the minimum and other source-specific operational control measures and structural source control measures, as applicable, as specified in Attachment J.
4. The Discharger shall evaluate the current control measures to see if they are properly implemented. Every potential source of pollutant should have a corresponding control measure(s) to reduce the potential pollutants.
5. The Discharger shall determine if the designated control measures are appropriate and effective to reduce the pollutants.
6. The Discharger shall determine if there are pollutants that cannot be linked to facility activity. If such pollutants are found in the discharge, it may be necessary to do further monitoring to determine their source.
7. The SWPPP/OSCP, including all control measures that are being implemented, will serve as the equivalent of Technology-Based Effluent Limits, in the absence of established Effluent Limitation Guidelines, in order to carry out the purposes and intent of the CWA.

C. Land Discharge Specifications (Not Applicable)

D. Reclamation Specifications (Not Applicable)

V. RECEIVING WATER LIMITATIONS

A. Surface Water Limitations

1. Receiving water limitations are specific interpretations of water quality standards from applicable water quality control plans. As such, they are a required part of this Order. However, a receiving water condition not in conformance with the limitation is not necessarily a violation of this Order. The Regional Board may require an investigation to determine cause and culpability prior to asserting a violation has occurred, or requiring that corrective action be taken.
2. The discharge shall not cause any of the following:
 - a. The undesirable discoloration of the receiving waters;
 - b. The deposition of objectionable bottom deposits;
 - c. The presence of visible oil, grease, scum, floating or suspended materials, or foam in the receiving waters;
 - d. The presence of objectionable odor in the receiving waters;
 - e. The natural taste and odor of fish, shellfish, or other receiving water resources used for human consumption to be impaired;

- f. The concentration of pollutants in the water column, sediments, or biota to adversely affect the beneficial uses of the receiving waters;
 - g. The bioaccumulation of chemicals in aquatic resources to levels which are harmful to human health.
3. The discharge shall not cause or contribute to a violation of any applicable water quality standards for receiving waters adopted by the Regional Board or the State Water Resources Control Board.
 4. A receiving water condition not in conformance with this limitation is not necessarily a violation of this Order. The Discharger shall investigate the cause of such conditions and shall reevaluate their SWPPP/OSCP. The SWPPP/OSCP shall be revised and implemented, if necessary, in accordance with a time schedule approved by the Executive Officer. If more stringent applicable water quality standards are promulgated or approved pursuant to CWA Section 303 and amendments thereto, the Regional Board will revise and modify this Order in accordance with such more stringent standards.
 5. The discharge shall not result in acute toxicity in ambient receiving waters. The effluent shall be deemed to cause acute toxicity when the toxicity test of 100% effluent, as required by Monitoring and Reporting Program No. R8-2012-0029, results in failure of the test as determined using the pass or fail test¹ protocol specified in *Methods for Measuring the Acute Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms* (EPA/600/4-90/027F, August 1993). The Discharger shall immediately stop the discharge whenever the discharge fails the toxicity test(s). Prior to resuming the discharge, the discharger shall identify and correct the source of the toxicity to the satisfaction of the Executive Officer.

B. Groundwater Limitations (Not Applicable)

VI. PROVISIONS

A. Standard Provisions

1. This Order shall serve as a National Pollutant Discharge Elimination System (NPDES) Permit pursuant to CWA Section 402 or amendments thereto, which shall become effective upon its adoption provided the Regional Administrator of the USEPA has no objection. If the Regional Administrator objects to its issuance, the Order shall not serve as an NPDES permit until such objection is withdrawn.
2. The Discharger shall comply with all Standard Provisions included in Attachment D of this Order.
3. The Discharger shall comply with the Monitoring and Reporting Program (MRP), and future revisions thereto, in Attachment E of this Order.

¹ The pass/fail survival limits for acute toxicity test require tests consisting of a control and a single concentration of effluent with a pass/fail endpoint. Control survival must be 90% or greater for an acceptable test. The test "passes" if survival in the control and effluent concentration equals or exceeds 90%. The test "fails" if survival in the effluent is less than 90% and is significantly different from control survival (which must be 90% or greater), as determined by hypothesis testing.

4. The Discharger shall comply with the lawful requirements of municipalities, counties, drainage districts, and other local agencies regarding discharges of storm water to storm drain systems or other courses under their jurisdiction.
5. The Discharger shall comply with all federal, state, county and local laws and regulations pertaining to the discharge of wastes from the facility.
6. The requirements prescribed herein do not authorize the commission of any act causing injury to the property of another, nor protect the Discharger from liabilities under federal, state, or local laws, nor guarantee the Discharger a capacity right in the receiving waters.
7. An authorization to discharge wastes under this Order is not transferable to any person without written authorization from the Executive Officer.
8. Compliance determination with the terms of this Order shall be based on the following:
 - a. Periodic inspections by Regional Board staff;
 - b. Evaluation of the annual report submitted according to the MRP (Attachment E); and
 - c. Any other information deemed necessary by the Executive Officer.
9. Failure to comply with provisions or requirements of this Order, or violation of other applicable laws or regulations governing discharges from this facility, may subject the Discharger to administrative or civil liabilities, criminal penalties, and/or other enforcement remedies to ensure compliance. Additionally, certain violations may subject the Discharger to civil or criminal enforcement from appropriate local, state, or federal law enforcement entities.

B. Special Provisions

1. Reopener Provisions

- a. If more stringent applicable water quality standards are promulgated or approved pursuant to CWA Section 303, or amendments thereto, the Regional Board will revise and modify this Order in accordance with such standards.
- b. This Order may be reopened to address any changes in state or federal plans, policies or regulations that would affect the quality requirements for the discharges.

2. Safeguard to Electric Power Failure

- a. The Discharger shall provide appropriate safeguards to assure compliance with the terms and conditions of this Order should there be reduction, loss, or failure of electric power. Such safeguards may include alternate power sources, standby generators, retention capacity, operating procedures, or other means. The adequacy of the safeguards is subject to the approval of the Executive Officer; and,
- b. Should the treatment works not include safeguards against reduction, loss or failure of electric power, or should the Executive Officer not approve the existing safeguards, the Discharger shall, within 90 days of the effective date of this Order or within 90 days of

having been advised by the Executive Officer that the existing safeguards are inadequate, provide to the Regional Board office a schedule of compliance for providing safeguards such that in the event of reduction, loss, or failure of electric power, the Discharger shall comply with the terms and conditions of this Order. The schedule of compliance shall, upon approval of the Executive Officer, become a condition of this Order.

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ATTACHMENT A – DEFINITIONS

Arithmetic Mean (μ), also called the average, is the sum of measured values divided by the number of samples. For ambient water concentrations, the arithmetic mean is calculated as follows:

Arithmetic mean = $\mu = \Sigma x / n$ where: Σx is the sum of the measured ambient water concentrations, and n is the number of samples.

Average Monthly Effluent Limitation (AMEL): the highest allowable average of daily discharges over a calendar month, calculated as the sum of all daily discharges measured during a calendar month divided by the number of daily discharges measured during that month.

Average Weekly Effluent Limitation (AWEL): the highest allowable average of daily discharges over a calendar week (Sunday through Saturday), calculated as the sum of all daily discharges measured during a calendar week divided by the number of daily discharges measured during that week.

Bioaccumulative pollutants are those substances taken up by an organism from its surrounding medium through gill membranes, epithelial tissue, or from food and subsequently concentrated and retained in the body of the organism.

Carcinogenic pollutants are substances that are known to cause cancer in living organisms.

Coefficient of Variation (CV) is a measure of the data variability and is calculated as the estimated standard deviation divided by the arithmetic mean of the observed values.

Daily Discharge: Daily Discharge is defined as either: (1) the total mass of the constituent discharged over the calendar day (12:00 am through 11:59 pm) or any 24-hour period that reasonably represents a calendar day for purposes of sampling (as specified in the permit), for a constituent with limitations expressed in units of mass or; (2) the unweighted arithmetic mean measurement of the constituent over the day for a constituent with limitations expressed in other units of measurement (e.g., concentration).

The daily discharge may be determined by the analytical results of a composite sample taken over the course of one day (a calendar day or other 24-hour period defined as a day) or by the arithmetic mean of analytical results from one or more grab samples taken over the course of the day.

For composite sampling, if 1 day is defined as a 24-hour period other than a calendar day, the analytical result for the 24-hour period will be considered as the result for the calendar day in which the 24-hour period ends.

Detected, but Not Quantified (DNQ) are those sample results less than the RL, but greater than or equal to the laboratory's MDL.

Dilution Credit is the amount of dilution granted to a discharge in the calculation of a

water quality-based effluent limitation, based on the allowance of a specified mixing zone. It is calculated from the dilution ratio or determined through conducting a mixing zone study or modeling of the discharge and receiving water.

Effluent Concentration Allowance (ECA) is a value derived from the water quality criterion/objective, dilution credit, and ambient background concentration that is used, in conjunction with the coefficient of variation for the effluent monitoring data, to calculate a long-term average (LTA) discharge concentration. The ECA has the same meaning as waste load allocation (WLA) as used in USEPA guidance (Technical Support Document For Water Quality-based Toxics Control, March 1991, second printing, EPA/505/2-90-001).

Effluent Limitation Guidelines (ELGs) are national standards, based on the performance of treatment and control technologies, for wastewater discharges to surface waters and municipal sewage treatment plants.

Enclosed Bays means indentations along the coast that enclose an area of oceanic water within distinct headlands or harbor works. Enclosed bays include all bays where the narrowest distance between the headlands or outermost harbor works is less than 75 percent of the greatest dimension of the enclosed portion of the bay. Enclosed bays include, but are not limited to, Humboldt Bay, Bodega Harbor, Tomales Bay, Drake's Estero, San Francisco Bay, Morro Bay, Los Angeles-Long Beach Harbor, Upper and Lower Newport Bay, Mission Bay, and San Diego Bay. Enclosed bays do not include inland surface waters or ocean waters.

Estimated Chemical Concentration is the estimated chemical concentration that results from the confirmed detection of the substance by the analytical method below the ML value.

Estuaries means waters, including coastal lagoons, located at the mouths of streams that serve as areas of mixing for fresh and ocean waters. Coastal lagoons and mouths of streams that are temporarily separated from the ocean by sandbars shall be considered estuaries. Estuarine waters shall be considered to extend from a bay or the open ocean to a point upstream where there is no significant mixing of fresh water and seawater. Estuarine waters included, but are not limited to, the Sacramento-San Joaquin Delta, as defined in Water Code Section 12220, Suisun Bay, Carquinez Strait downstream to the Carquinez Bridge, and appropriate areas of the Smith, Mad, Eel, Noyo, Russian, Klamath, San Diego, and Otay rivers. Estuaries do not include inland surface waters or ocean waters.

Inland Surface Waters are all surface waters of the State that do not include the ocean, enclosed bays, or estuaries.

Instantaneous Maximum Effluent Limitation: the highest allowable value for any single grab sample or aliquot (i.e., each grab sample or aliquot is independently compared to the instantaneous maximum limitation).

Instantaneous Minimum Effluent Limitation: the lowest allowable value for any single grab sample or aliquot (i.e., each grab sample or aliquot is independently compared to the instantaneous minimum limitation).

Maximum Daily Effluent Limitation (MDEL) means the highest allowable daily discharge of a pollutant, over a calendar day (or 24-hour period). For pollutants with limitations expressed in units of mass, the daily discharge is calculated as the total mass of the pollutant discharged over the day. For pollutants with limitations expressed in other units of measurement, the daily discharge is calculated as the arithmetic mean measurement of the pollutant over the day.

Median is the middle measurement in a set of data. The median of a set of data is found by first arranging the measurements in order of magnitude (either increasing or decreasing order). If the number of measurements (n) is odd, then the median = $X_{(n+1)/2}$. If n is even, then the median = $(X_{n/2} + X_{(n/2)+1})/2$ (i.e., the midpoint between the $n/2$ and $n/2+1$).

Method Detection Limit (MDL) is the minimum concentration of a substance that can be measured and reported with 99 percent confidence that the analyte concentration is greater than zero, as defined in Title 40 of the Code of Federal Regulations, Part 136, Attachment B, revised as of July 3, 1999.

Minimum Level (ML) is the concentration at which the entire analytical system must give a recognizable signal and acceptable calibration point. The ML is the concentration in a sample that is equivalent to the concentration of the lowest calibration standard analyzed by a specific analytical procedure, assuming that all the method specified sample weights, volumes, and processing steps have been followed.

Mixing Zone is a limited volume of receiving water that is allocated for mixing with a wastewater discharge where water quality criteria can be exceeded without causing adverse effects to the overall water body.

Not Detected (ND) are those sample results less than the laboratory's MDL.

Ocean Waters are the territorial marine waters of the State as defined by California law to the extent these waters are outside of enclosed bays, estuaries, and coastal lagoons. Discharges to ocean waters are regulated in accordance with the State Water Board's California Ocean Plan.

Persistent pollutants are substances for which degradation or decomposition in the environment is nonexistent or very slow.

Pollutant Minimization Program (PMP) means waste minimization and pollution prevention actions that include, but are not limited to, product substitution, waste stream recycling, alternative waste management methods, and education of the public and businesses. The goal of the PMP shall be to reduce all potential sources of a priority pollutant(s) through pollutant minimization (control) strategies, including pollution prevention measures as appropriate, to maintain the effluent concentration at or below the water quality-based effluent limitation. Pollution prevention measures may be particularly appropriate for persistent bioaccumulative priority pollutants where there is evidence that beneficial uses are being impacted. The Regional Water Board may consider cost effectiveness when establishing the requirements of a PMP. The completion and implementation of a Pollution Prevention Plan, if required pursuant to Water Code Section 13263.3(d), shall be considered to fulfill the PMP requirements.

Pollution Prevention means any action that causes a net reduction in the use or generation of a hazardous substance or other pollutant that is discharged into water and includes, but is not limited to, input change, operational improvement, production process change, and product reformulation (as defined in Water Code Section 13263.3). Pollution prevention does not include actions that merely shift a pollutant in wastewater from one environmental medium to another environmental medium, unless clear environmental benefits of such an approach are identified to the satisfaction of the State or Regional Water Board.

Reporting Level (RL) is the ML (and its associated analytical method) chosen by the Discharger for reporting and compliance determination from the MLs included in this Order. The MLs included in this Order correspond to approved analytical methods for reporting a sample result that are selected by the Regional Water Board either from Appendix 4 of the SIP in accordance with Section 2.4.2 of the SIP or established in accordance with Section 2.4.3 of the SIP. The ML is based on the proper application of method-based analytical procedures for sample preparation and the absence of any matrix interferences. Other factors may be applied to the ML depending on the specific sample preparation steps employed. For example, the treatment typically applied in cases where there are matrix-effects is to dilute the sample or sample aliquot by a factor of ten. In such cases, this additional factor must be applied to the ML in the computation of the RL.

Satellite Collection System is the portion, if any, of a sanitary sewer system owned or operated by a different public agency than the agency that owns and operates the wastewater treatment facility that a sanitary sewer system is tributary to.

Source of Drinking Water is any water designated as municipal or domestic supply (MUN) in a Regional Water Board Basin Plan.

Standard Deviation (σ) is a measure of variability that is calculated as follows:

$$\sigma = (\sum[(x - \mu)^2]/(n - 1))^{0.5}$$

where:

- x is the observed value;
- μ is the arithmetic mean of the observed values; and
- n is the number of samples.

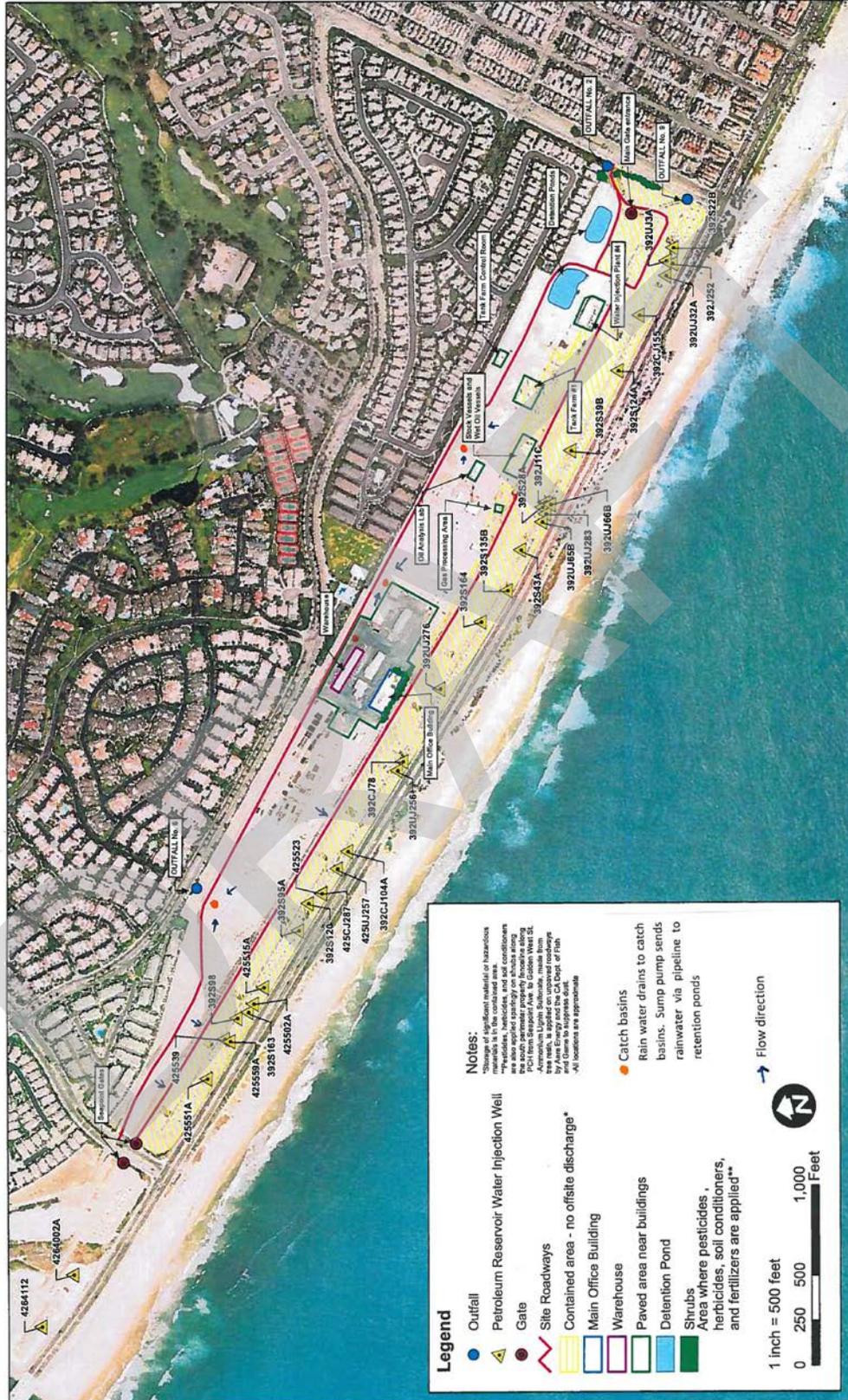
Toxicity Reduction Evaluation (TRE) is a study conducted in a step-wise process designed to identify the causative agents of effluent or ambient toxicity, isolate the sources of toxicity, evaluate the effectiveness of toxicity control options, and then confirm the reduction in toxicity. The first steps of the TRE consist of the collection of data relevant to the toxicity, including additional toxicity testing, and an evaluation of facility operations and maintenance practices, and best management practices. A Toxicity Identification Evaluation (TIE) may be required as part of the TRE, if appropriate. (A TIE is a set of procedures to identify the specific chemical(s) responsible for toxicity. These procedures are performed in three phases (characterization, identification, and confirmation) using aquatic organism toxicity tests.)

ATTACHMENT B – MAP



ATTACHMENT C – FLOW SCHEMATIC

Highlands Strip Facility Map





ATTACHMENT D –STANDARD PROVISIONS

I. STANDARD PROVISIONS – PERMIT COMPLIANCE

A. Duty to Comply

1. The Discharger shall comply with all of the conditions of this Order. Any noncompliance constitutes a violation of the Clean Water Act (CWA) and the CWC and is grounds for enforcement action, for permit termination, revocation and reissuance, or modification; or denial of a permit renewal application (40 CFR 122.41(a)).
2. The Discharger shall comply with effluent standards or prohibitions established under CWA Section 307(a) of the CWA for toxic pollutants (40 CFR 122.41(a)(1)).

B. Need to Halt or Reduce Activity Not a Defense

It shall not be a defense for a Discharger in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this Order (40 CFR 122.41(c)).

C. Duty to Mitigate

The Discharger shall take all reasonable steps to minimize or prevent any discharge in violation of this Order that has a reasonable likelihood of adversely affecting human health or the environment (40 CFR 122.41(d)).

D. Proper Operation and Maintenance

The Discharger shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the Discharger to achieve compliance with the conditions of this Order. Proper operation and maintenance also includes adequate laboratory controls and appropriate quality assurance procedures. This provision requires the operation of backup or auxiliary facilities or similar systems that are installed by a Discharger only when necessary to achieve compliance with the conditions of this Order (40 CFR 122.41(e)).

E. Property Rights

1. This Order does not convey any property rights of any sort or any exclusive privileges (40 CFR 122.41(g)).
2. The issuance of this Order does not authorize any injury to persons or property or invasion of other private rights, or any infringement of state or local law or regulations (40 CFR 122.5(c)).

F. Inspection and Entry

The Discharger shall allow the Regional Board, State Water Board, United States Environmental Protection Agency (USEPA), and/or their authorized

representatives (including an authorized contractor acting as their representative), upon the presentation of credentials and other documents, as may be required by law (40 CFR 122.41(i); CWC 13383) to:

1. Enter upon the Discharger's premises where a regulated facility or activity is located or conducted, or where records are kept under the conditions of this Order (40 CFR 122.41(i)(1));
2. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this Order (40 CFR 122.41(i)(2));
3. Inspect and photograph, at reasonable times, any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this Order (40 CFR 122.41(i)(3)); and
4. Sample or monitor, at reasonable times, for the purposes of assuring Order compliance or as otherwise authorized by the CWA or the Water Code, any substances or parameters at any location (40 CFR 122.41(i)(4)).

G. Bypass

1. Definitions
 - a. "Bypass" means the intentional diversion of waste streams from any portion of a treatment facility (40 CFR 122.41(m)(1)(i)).
 - b. "Severe property damage" means substantial physical damage to property, damage to the treatment facilities, which causes them to become inoperable, or substantial and permanent loss of natural resources that can reasonably be expected to occur in the absence of a bypass. Severe property damage does not mean economic loss caused by delays in production (40 CFR 122.41(m)(1)(ii)).
2. Bypass not exceeding limitations. The Discharger may allow any bypass to occur which does not cause exceedances of effluent limitations, but only if it is for essential maintenance to assure efficient operation. These bypasses are not subject to the provisions listed in Standard Provisions – Permit Compliance I.G.3, I.G.4, and I.G.5 below (40 CFR 122.41(m)(2)).
3. Prohibition of bypass. Bypass is prohibited, and the Regional Board may take enforcement action against a Discharger for bypass, unless (40 CFR 122.41(m)(4)(i)):
 - a. Bypass was unavoidable to prevent loss of life, personal injury, or severe property damage (40 CFR 122.41(m)(4)(i)(A));
 - b. There were no feasible alternatives to the bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, or maintenance during normal periods of equipment downtime. This condition is not satisfied if adequate back-up equipment should have

been installed in the exercise of reasonable engineering judgment to prevent a bypass that occurred during normal periods of equipment downtime or preventive maintenance (40 CFR 122.41(m)(4)(i)(B)); and,

- c. The Discharger submitted notice to the Regional Board as required under Standard Provisions – Permit Compliance I.G.5 below (40 CFR 122.41(m)(4)(i)(C)).
4. The Regional Board may approve an anticipated bypass, after considering its adverse effects, if the Regional Board determines that it will meet the three conditions listed in Standard Provisions – Permit Compliance I.G.3 above (40 CFR 122.41(m)(4)(ii)).
5. Notice
 - a. Anticipated bypass. If the Discharger knows in advance of the need for a bypass, it shall submit a notice, if possible at least 10 days before the date of the bypass (40 CFR 122.41(m)(3)(i)).
 - b. Unanticipated bypass. The Discharger shall submit notice of an unanticipated bypass as required in Standard Provisions - Reporting V.E below (24-hour notice) (40 CFR 122.41(m)(3)(ii)).

H. Upset

1. Upset means an exceptional incident in which there is unintentional and temporary noncompliance with technology based permit effluent limitations because of factors beyond the reasonable control of the Discharger. An upset does not include noncompliance to the extent caused by operational error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventive maintenance, or careless or improper operation (40 CFR 122.41(n)(1)).
2. Effect of an upset. An upset constitutes an affirmative defense to an action brought for noncompliance with such technology based permit effluent limitations if the requirements of Standard Provisions – Permit Compliance I.H.3 below are met. No determination made during administrative review of claims that noncompliance was caused by upset, and before an action for noncompliance, is final administrative action subject to judicial review (40 CFR 122.41(n)(2)).
3. Conditions necessary for a demonstration of upset. A Discharger who wishes to establish the affirmative defense of upset shall demonstrate, through properly signed, contemporaneous operating logs or other relevant evidence that (40 CFR 122.41(n)(3)):
 - a. An upset occurred and that the Discharger can identify the cause(s) of the upset (40 CFR 122.41(n)(3)(i));
 - b. The permitted facility was, at the time, being properly operated (40 CFR 122.41(n)(3)(ii));

- c. The Discharger submitted notice of the upset as required in Standard Provisions – Reporting V.E.2.b below (24-hour notice) (40 CFR 122.41(n)(3)(iii)); and
 - d. The Discharger complied with any remedial measures required under Standard Provisions – Permit Compliance I.C above (40 CFR 122.41(n)(3)(iv)).
4. Burden of proof. In any enforcement proceeding, the Discharger seeking to establish the occurrence of an upset has the burden of proof (40 CFR 122.41(n)(4)).

II. STANDARD PROVISIONS – PERMIT ACTION

A. General

This Order may be modified, revoked and reissued, or terminated for cause. The filing of a request by the Discharger for modification, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance does not stay any Order condition (40 CFR 122.41(f)).

B. Duty to Reapply

If the Discharger wishes to continue an activity regulated by this Order after the expiration date of this Order, the Discharger must apply for and obtain a new permit (40 CFR 122.41(b)).

C. Transfers

This Order is not transferable to any person except after notice to the Regional Board. The Regional Board may require modification or revocation and reissuance of the Order to change the name of the Discharger and incorporate such other requirements as may be necessary under the CWA and the CWC (40 CFR 122.41(l)(3) and 122.61).

III. STANDARD PROVISIONS – MONITORING

- A. Samples and measurements taken for the purpose of monitoring shall be representative of the monitored activity (40 CFR 122.41(j)(1)).
- B. Monitoring results must be conducted according to test procedures under 40 CFR 136 or, in the case of sludge use or disposal, approved under 40 CFR 136 unless otherwise specified in 40 CFR 503 unless other test procedures have been specified in this Order (40 CFR 122.41(j)(4) and 122.44(i)(1)(iv)).

IV. STANDARD PROVISIONS – RECORDS

- A. Except for records of monitoring information required by this Order related to the Discharger's sewage sludge use and disposal activities, which shall be retained for a period of at least five years (or longer as required by 40 CFR 503), the Discharger shall retain records of all monitoring information, including all

calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation, copies of all reports required by this Order, and records of all data used to complete the application for this Order, for a period of at least three (3) years from the date of the sample, measurement, report or application. This period may be extended by request of the Regional Board Executive Officer at any time (40 CFR 122.41(j)(2)).

B. Records of monitoring information shall include:

1. The date, exact place, and time of sampling or measurements (40 CFR 122.41(j)(3)(i));
2. The individual(s) who performed the sampling or measurements (40 CFR 122.41(j)(3)(ii));
3. The date(s) analyses were performed (40 CFR 122.41(j)(3)(iii));
4. The individual(s) who performed the analyses (40 CFR 122.41(j)(3)(iv));
5. The analytical techniques or methods used (40 CFR 122.41(j)(3)(v)); and
6. The results of such analyses (40 CFR 122.41(j)(3)(vi)).

C. Claims of confidentiality for the following information will be denied (40 CFR 122.7(b)):

1. The name and address of any permit applicant or Discharger (40 CFR 122.7(b)(1)); and
2. Permit applications and attachments, permits and effluent data (40 CFR 122.7(b)(2)).

V. STANDARD PROVISIONS – REPORTING

A. Duty to Provide Information

The Discharger shall furnish to the Regional Board, State Water Board, or USEPA within a reasonable time, any information which the Regional Board, State Water Board, or USEPA may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this Order or to determine compliance with this Order. Upon request, the Discharger shall also furnish to the Regional Board, State Water Board, or USEPA copies of records required to be kept by this Order (40 CFR 122.41(h); CWC Section 13267).

B. Signatory and Certification Requirements

1. All applications, reports, or information submitted to the Regional Board, State Water Board, and/or USEPA shall be signed and certified in accordance with Standard Provisions – Reporting V.B.2, V.B.3, V.B.4, and V.B.5 below (40 CFR 122.41(k)).

2. All permit applications shall be signed by a responsible corporate officer. A responsible corporate officer means: (i) A president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy- or decision-making functions for the corporation, or (ii) the manager of one or more manufacturing, production, or operating facilities, provided, the manager is authorized to make management decisions which govern the operation of the regulated facility including having the explicit or implicit duty of making major capital investment recommendations, and initiating and directing other comprehensive measures to assure long term environmental compliance with environmental laws and regulations; the manager can ensure that the necessary systems are established or actions taken to gather complete and accurate information for permit application requirements; and where authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures (40 CFR 122.22(a)(1)).
3. All reports required by this Order and other information requested by the Regional Board, State Water Board, or USEPA shall be signed by a person described in Standard Provisions – Reporting V.B.2 above, or by a duly authorized representative of that person. A person is a duly authorized representative only if:
 - a. The authorization is made in writing by a person described in Standard Provisions – Reporting V.B.2 above (40 CFR 122.22(b)(1));
 - b. The authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility or activity such as the position of plant manager, operator of a well or a well field, superintendent, position of equivalent responsibility, or an individual or position having overall responsibility for environmental matters for the company. (A duly authorized representative may thus be either a named individual or any individual occupying a named position.) (40 CFR 122.22(b)(2)); and,
 - c. The written authorization is submitted to the Regional Board and State Water Board (40 CFR 122.22(b)(3)).
4. If an authorization under Standard Provisions – Reporting V.B.3 above is no longer accurate because a different individual or position has responsibility for the overall operation of the facility, a new authorization satisfying the requirements of Standard Provisions – Reporting V.B.3 above must be submitted to the Regional Board and State Water Board prior to or together with any reports, information, or applications, to be signed by an authorized representative (40 CFR 122.22(c)).
5. Any person signing a document under Standard Provisions – Reporting V.B.2 or V.B.3 above shall make the following certification:

“I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate

the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations" (40 CFR 122.22(d)).

C. Monitoring Reports

1. Monitoring results shall be reported at the intervals specified in the Monitoring and Reporting Program (Attachment E) in this Order (40 CFR 122.41(l)(4)).
2. Monitoring results must be reported on a Discharge Monitoring Report (DMR) form or forms provided or specified by the Regional Board or State Water Board for reporting results of monitoring of sludge use or disposal practices (40 CFR 122.41(l)(4)(i)).
3. If the Discharger monitors any pollutant more frequently than required by this Order using test procedures approved under 40 CFR 136 or, in the case of sludge use or disposal, approved under 40 CFR 136 unless otherwise specified in 40 CFR 503, or as specified in this Order, the results of this monitoring shall be included in the calculation and reporting of the data submitted in the DMR or sludge reporting form specified by the Regional Board (40 CFR 122.41(l)(4)(ii)).
4. Calculations for all limitations, which require averaging of measurements, shall utilize an arithmetic mean unless otherwise specified in this Order (40 CFR 122.41(l)(4)(iii)).

D. Compliance Schedules

Reports of compliance or noncompliance with, or any progress reports on, interim and final requirements contained in any compliance schedule of this Order, shall be submitted no later than 14 days following each schedule date (40 CFR 122.41(l)(5)).

E. Twenty-Four Hour Reporting

1. The Discharger shall report any noncompliance that may endanger health or the environment. Any information shall be provided orally within 24 hours from the time the Discharger becomes aware of the circumstances. A written submission shall also be provided within five (5) days of the time the Discharger becomes aware of the circumstances. The written submission shall contain a description of the noncompliance and its cause; the period of noncompliance, including exact dates and times, and if the noncompliance has not been corrected, the anticipated time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance (40 CFR 122.41(l)(6)(i)).
2. The following shall be included as information that must be reported within 24 hours under this paragraph (40 CFR 122.41(l)(6)(ii)):

- a. Any unanticipated bypass that exceeds any effluent limitation in this Order (40 CFR 122.41(l)(6)(ii)(A)); and,
 - b. Any upset that exceeds any effluent limitation in this Order (40 CFR 122.41(l)(6)(ii)(B)).
3. The Regional Board may waive the above-required written report under this provision on a case-by-case basis if an oral report has been received within 24 hours. (40 CFR 122.41(l)(6)(iii))

F. Planned Changes

1. The Discharger shall give notice to the Regional Board as soon as possible of any planned physical alterations or additions to the permitted facility. Notice is required under this provision only when (40 CFR 122.41(l)(1)):
 - a. The alteration or addition to a permitted facility may meet one of the criteria for determining whether a facility is a new source in 40 CFR 122.29(b) (40 CFR 122.41(l)(1)(i)); or,
 - b. The alteration or addition could significantly change the nature or increase the quantity of pollutants discharged. This notification applies to pollutants that are not subject to effluent limitations in this Order (40 CFR 122.41(l)(1)(ii)).
2. The alteration or addition results in a significant change in the Discharger's sludge use or disposal practices, and such alteration, addition, or change may justify the application of permit conditions that are different from or absent in the existing permit, including notification of additional use or disposal sites not reported during the permit application process or not reported pursuant to an approved land application plan (40 CFR 122.41(l)(1)(iii)).

G. Anticipated Noncompliance

The Discharger shall give advance notice to the Regional Board or State Water Board of any planned changes in the permitted facility or activity that may result in noncompliance with General Order requirements (40 CFR 122.41(l)(2)).

H. Other Noncompliance

The Discharger shall report all instances of noncompliance not reported under Standard Provisions – Reporting V.C, V.D, and V.E above at the time monitoring reports are submitted. The reports shall contain the information listed in Standard Provision – Reporting V.E above (40 CFR 122.41(l)(7)).

I. Other Information

When the Discharger becomes aware that it failed to submit any relevant facts in a permit application, or submitted incorrect information in a permit application or in any report to the Regional Board, State Water Board, or USEPA, the Discharger shall promptly submit such facts or information (40 CFR 122.41(l)(8)).

VI. STANDARD PROVISIONS – ENFORCEMENT

The Regional Board is authorized to enforce the terms of this permit under several provisions of the CWC, including, but not limited to, Sections 13385, 13386, and 13387.

VII. ADDITIONAL PROVISIONS – NOTIFICATION LEVELS

A. Non-Municipal Facilities

1. Existing manufacturing, commercial, mining, and silvicultural Dischargers shall notify the Regional Board as soon as they know or have reason to believe (40 CFR122.42(a)):
 - a. That any activity has occurred or will occur that would result in the discharge, on a routine or frequent basis, of any toxic pollutant that is not limited in this Order, if that discharge will exceed the highest of the following "notification levels" (40 CFR122.42(a)(1)):
 - i. 100 micrograms per liter ($\mu\text{g/L}$) (40 CFR122.42(a)(1)(i));
 - ii. 200 $\mu\text{g/L}$ for acrolein and acrylonitrile; 500 $\mu\text{g/L}$ for 2,4-dinitrophenol and 2-methyl-4,6-dinitrophenol; and 1 milligram per liter (mg/L) for antimony (40 CFR122.42(a)(1)(ii));
 - iii. Five (5) times the maximum concentration value reported for that pollutant in the Report of Waste Discharge (40 CFR122.42(a)(1)(iii)); or
 - iv. The level established by the Regional Board in accordance with Section 122.44(f) (40 CFR122.42(a)(1)(iv)).
 - b. That any activity has occurred or will occur that would result in the discharge, on a non-routine or infrequent basis, of any toxic pollutant that is not limited in this Order, if that discharge will exceed the highest of the following "notification levels" (40 CFR122.42(a)(2)):
 - i. 500 micrograms per liter ($\mu\text{g/L}$) (40 CFR122.42(a)(2)(i));
 - ii. 1 milligram per liter (mg/L) for antimony (40 CFR122.42(a)(2)(ii));
 - iii. Ten (10) times the maximum concentration value reported for that pollutant in the Report of Waste Discharge (40 CFR122.42(a)(2)(iii)); or
 - iv. The level established by the Regional Board in accordance with Section 122.44(f) (40 CFR 122.42(a)(2)(iv)).

ATTACHMENT E.1 – MONITORING AND REPORTING PROGRAM

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ATTACHMENT E.1 – MONITORING AND REPORTING PROGRAM (MRP)

The Code of Federal Regulations (CFR) Title 40 Section 122.48 requires that all NPDES permits specify monitoring and reporting requirements. California Water Code (CWC) Sections 13267 and 13383 also authorize the Regional Water Quality Control Board (Regional Board) to require technical and monitoring reports. This MRP establishes monitoring and reporting requirements, which implement the federal and state regulations.

I. GENERAL MONITORING PROVISIONS

- A. **Record Retention.** All monitoring data shall be maintained for at least five years and shall be made available to Regional Board, SWRCB, USEPA staff and/or their authorized representatives (including an authorized contractor acting as their representative), upon request.
- B. **Laboratory Certification.** Laboratories analyzing monitoring samples shall be certified by the Department of Health Services, in accordance with the provision of CWC Section 13176, and must include quality assurance/quality control (QA/QC) data with their reports.

II. MONITORING LOCATIONS

The Discharger shall establish the following monitoring locations to demonstrate compliance with the effluent limitations, discharge specifications, and other requirements in this Order:

Table 1. Monitoring Station Locations

Discharge Point Name	Monitoring Location Name	Monitoring Location Description (include Latitude and Longitude when available)
DP002 (see below)	EFF002	Golden West Storm Drain: 33° 40' 10.79", -118°00'58.65"
DP006 (see below)	EFF006	Palm Gate Ave. Storm Drain: 33° 40' 41.52", -118°01'38.20"
DP009 (see below)	EFF009	Golden West Storm Drain: 33° 40' 7.78", -118°01'1.32"

Samples for discharge points DP002 and DP009 shall be collected from the Highlands area detention pond prior to any discharge from the pond.

Samples from discharge point DP006 shall be collected prior to its discharge to the City's storm drain system.

III. INFLUENT MONITORING REQUIREMENTS (NOT APPLICABLE)

IV. EFFLUENT MONITORING REQUIREMENTS

- A. The Discharger shall monitor discharges from DP006 twice per year. Storm water detained in the Highlands area detention pond shall be sampled and analyzed prior to any proposed discharge either through DP002 or DP009.

These discharges shall be monitored as follows. The minimum frequency of analysis specified in Table 2, below, applies to discharges from DP006 only. Each sample collected from the detention pond shall be analyzed as specified in Table 3. If more than one analytical test method is listed in Attachment H for a given parameter, the Discharger must select from the listed methods to meet the corresponding Minimum Levels in Attachment G.

Table 2. Effluent Monitoring (for DP006)

Parameters	Units	Type of Sample	Minimum Frequency of Analysis
Flow	MGD	Estimate	Daily
Suspended Solids	mg/L	Grab	Twice Annually
Oil and Grease	mg/L	Grab	Twice Annually
Total Organic Carbon	mg/L	Grab	Twice Annually
pH	pH units	Grab	Twice Annually
Salinity Testing	mg/L	Grab	Annually
Metals (See Attachment E.2)	mg/L	Grab	Twice Annually
Volatile Organic Compounds (See Attachment E.2)	µg/L	Grab	Twice Annually

Table 3. Monitoring for Detention Pond (prior to discharges through DP002 or DP009)

Parameters	Units	Type of Sample	Minimum Frequency of Analysis
Flow	MGD	Estimate	Daily
Suspended Solids	mg/L	Grab	Prior to Each Discharge
Oil and Grease	mg/L	Grab	Prior to Each Discharge
Total Organic Carbon	mg/L	Grab	Prior to Each Discharge
pH	pH units	Grab	Prior to Each Discharge
Salinity Testing	mg/L	Grab	Annually (first discharge after October 1 of each year)
Metals (See Attachment E.2)	mg/L	Grab	Annually (first discharge after October 1 of each year)
Volatile Organic Compounds (See Attachment E.2)	µg/L	Grab	Prior to Each Discharge

- B. For DP006: During the wet season (October 1 through May 31) at least two samples shall be collected per year from storm events that produce significant storm water discharge. In each case, the sampling event shall be preceded by at least 3 days of dry weather. A significant storm water discharge is a continuous

discharge of storm water for approximately one hour or more. Grab samples of storm water runoff from all discharge points shall be collected during the first 30 minutes of discharge. If collection of the grab sample during the first 30 minutes is impracticable, the grab sample can be taken as soon as practicable thereafter, and the Discharger shall explain in the monitoring report why the grab sample could not be taken in the first 30 minutes. These samples shall be analyzed for the constituents listed under Table 2, above.

- C. The Discharger shall record the approximate time of each storm event-related discharge to the storm drain, its approximate duration and the flow rate.
- D. All drainage control and containment structures shall be inspected monthly and their condition recorded in a permanent log.
- E. Information such as date, volume, name of the licensed hauler, and the disposal location for the hazardous wastes hauled from the facility shall be recorded in a permanent log.
- F. Each outfall shall be inspected daily to determine if any dry weather discharge is occurring.

V. WHOLE EFFLUENT TOXICITY TESTING REQUIREMENTS

The discharger shall conduct acute toxicity testing on the effluent which is representative of the discharge from DP006 collected during the first significant storm water discharge after October 1, of each year, as specified in *Methods for Measuring the Acute Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms* (EPA/600/4-90/027F, August 1993). Using a control and 100% effluent, static non-renewal survival (pass/fail) tests for 96 hours shall be conducted using the two test species specified in the table below corresponding to the salinity of the effluent, for the first required annual test under this Order. Based on the results of this testing, the discharger shall determine the test species most sensitive to the effluent at this location. For the required succeeding toxicity monitoring, the discharger shall use the most sensitive species, with prior approval from the Regional Board's Executive Officer. The discharger shall submit documentation supporting the discharger's determination of the most sensitive test species. The effluent tests must be conducted concurrent with reference toxicant tests. The effluent and reference toxicant tests must meet all test acceptability criteria as specified in the acute manual (referenced above). If the test acceptability criteria are not achieved, then the discharger must resample and retest within 14 days. The test results must be reported according to the acute manual chapter on Report Preparation, and shall be attached to the monitoring reports. If a reference toxicant test is routinely performed by the toxicity testing laboratory on at least a once per month basis, the required concurrent reference toxicant testing is not necessary. The use of alternative methods for measuring acute toxicity may be considered by the Executive Officer on a case-by-case basis.

Test species may be determined using the following table:

Table 4. Whole Effluent Toxicity Testing Species

IF THE EFFLUENT OR RECEIVING WATER SALINITY IS:	TEST SPECIES	TEST
Less than 1,000 mg/L salinity	Fathead minnow, <u>Pimphales promelas</u>	Larval survival test
Less than 1,000 mg/L salinity	Water flea, <u>Ceriodaphnia dubia</u>	Survival test
Equal to or greater than 1,000 mg/L salinity	Silverside, <u>Menedia beryllina</u>	Survival test
Equal to or greater than 1,000 mg/L salinity	Pacific mysid, <u>Holmesimysis costata</u>	Survival test

In the event that the required annual toxicity test fails, the discharger shall stop any discharge of storm water to waters of the U.S. and shall retest within 14 days of receiving the test results and shall determine the cause of the failure. The discharger shall stop any discharge of storm water to waters of the U.S. until such time that the cause of toxicity is determined and appropriately addressed. Commencement of any discharge shall be with prior approval by the Executive Officer.

- VI. **LAND DISCHARGE MONITORING REQUIREMENTS (NOT APPLICABLE)**
- VII. **RECLAMATION MONITORING REQUIREMENTS (NOT APPLICABLE)**
- VIII. **RECEIVING WATER MONITORING REQUIREMENTS (NOT APPLICABLE)**
- IX. **OTHER MONITORING REQUIREMENTS (NOT APPLICABLE)**
- X. **REPORTING REQUIREMENTS**

A. General Monitoring and Reporting Requirements

1. The Discharger shall comply with all Standard Provisions (Attachment D) related to monitoring, reporting, and recordkeeping.
2. The reporting period is July 1 through June 30. By August 1 of each year, the Discharger shall submit an annual report for the prior reporting year.
3. The annual report shall contain a separate section titled "Summary of Non-Compliance" which discusses the compliance record and corrective actions taken or planned that may be needed to bring the discharge into full compliance with waste discharge requirements. This Section shall clearly list all non-compliance (if any) with waste discharge requirements, as well as any exceedances of effluent limitations.
4. The Discharger shall inform the Regional Board well in advance of any proposed construction activity that could potentially affect compliance with

applicable requirements.

5. The Discharger shall notify the Regional Board by telephone within 24 hours of any unauthorized discharge of wastes. This notification shall be followed by a written report submitted to the Regional Board within two weeks of the discharge. The written report shall contain:
 - a. The approximate date and time of the discharge;
 - b. The estimated flow rate and duration of the discharge; and,
 - c. A time schedule and a plan to implement necessary corrective actions to prevent the recurrence of the discharge.
6. All reports shall be signed by a responsible officer or duly authorized representative of the Discharger(s) and shall be submitted under penalty of perjury.

B. Self-Monitoring Reports (SMRs)

1. At any time during the term of this permit, the State or Regional Board may notify the Discharger to electronically submit Self-Monitoring Reports (SMRs) using the State Board's California Integrated Water Quality System (CIWQS) Program website (<http://www.waterboards.ca.gov/ciwqs/index.html>). Until such notification is given, the Discharger shall submit hardcopy SMRs. The CIWQS website will provide additional directions for SMR submittal in the event there will be service interruption for electronic submittal.
2. The Discharger shall submit annual monitoring results to the Regional Board by August 1 for the preceding reporting year. The Discharger shall report in the SMR the results for all monitoring specified in this Monitoring and Reporting Plan (MRP).
3. The Discharger shall report with each sample result the applicable reported Minimum Level (ML) and the current Method Detection Limit (MDL), as determined by the procedure in 40 CFR 136.
4. The Discharger shall report the results of analytical determinations for the presence of chemical constituents in a sample using the following reporting protocols:
 - a. Sample results greater than or equal to the reported ML shall be reported as measured by the laboratory (i.e., the measured chemical concentration in the sample).
 - b. Sample results less than the Reporting Limit (RL), but greater than or equal to the laboratory's MDL, shall be reported as "Detected, but Not Quantified," or DNQ. The estimated chemical concentration of the sample shall also be reported.
 - c. For the purposes of data collection, the laboratory shall write the

estimated chemical concentration next to DNQ as well as the words "Estimated Concentration" (may be shortened to "Est. Conc."). The laboratory may, if such information is available, include numerical estimates of the data quality for the reported result. Numerical estimates of data quality may be percent accuracy (+ a percentage of the reported value), numerical ranges (low to high), or any other means considered appropriate by the laboratory.

- d. Sample results less than the laboratory's MDL shall be reported as "Not Detected," or ND.
5. The Discharger shall instruct laboratories to establish calibration standards so that the MDL value (or its equivalent if there is differential treatment of samples relative to calibration standards) is the lowest calibration standard. At no time is the Discharger to use analytical data derived from extrapolation beyond the lowest point of the calibration curve.
6. The Discharger shall submit SMRs in accordance with the following requirements:
 - a. The Discharger shall arrange all reported data in a tabular format. The data shall be summarized to clearly illustrate whether the facility is operating in compliance with interim and/or final effluent limitations. The Discharger is not required to duplicate the submittal of data that is entered in a tabular format within CIWQS. When electronic submittal of data is required and CIWQS does not provide for entry into a tabular format within the system, the Discharger shall electronically submit the data in a tabular format as an attachment.
 - b. The Discharger shall attach a cover letter to the SMR. The information contained in the cover letter shall clearly identify any and all violations of the WDRs; discuss corrective actions taken or planned; and the proposed time schedule for corrective actions. Identified violations must include a description of the requirement that was violated and a description of the violation.
 - c. SMRs must be submitted to the Regional Board, signed and certified as required by the Standard Provisions (Attachment D), to the address listed below:

Santa Ana Regional Water Quality Control Board
Attn: Coastal Storm Water Unit
3737 Main St., Suite 500
Riverside, CA 92501

C. Discharge Monitoring Reports (Not Applicable)

D. Other Reports (Not Applicable)

ATTACHMENT E.2 – LIST OF METALS & VOCs

Metals	US EPA Method
Antimony, Total	200.7
Arsenic, Total	200.7
Barium, Total	200.7
Beryllium, Total	200.7
Cadmium, Total	200.7
Chromium, Total	200.7
Cobalt, Total	200.7
Copper, Total	200.7
Lead, Total	200.7
Mercury, Total	245.1
Nickel, Total	200.7
Selenium, Total	200.7
Silver, Total	200.7
Thallium, Total	200.7
Tin, Total	200.7
Vanadium, Total	200.7
Zinc, Total	200.7
Volatile Organic Compounds	US EPA Method
Acrolein	8260
Acrylonitrile	8260
Benzene	8260
Bromoform	8260
Carbon Tetrachloride	8260
Chlorobenzene	8260
Chlorodibromomethane	8260
Chloroethane	8260
2-Chloroethylvinyl Ether	8260
Chloroform	8260
Dichlorobromomethane	8260
1,1-Dichloroethane	8260
1,2-Dichloroethane	8260
1,1-Dichloroethylene	8260
1,2-Dichloropropane	8260
1,3-Dichloropropylene	8260
Ethylbenzene	8260
Methyl Bromide	8260
Methyl Chloride	8260
Methylene Chloride	8260
1,1,2,2-Tetrachloroethane	8260
Tetrachloroethylene	8260
Toluene	8260
Trans-1,2 Dichloroethylene	8260
1,1,1-Trichloroethane	8260
1,1,2-Trichloroethane	8260
Trichloroethylene	8260
Vinyl Chloride	8260

ATTACHMENT F – FACT SHEET

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ATTACHMENT F – FACT SHEET

This Fact Sheet includes the legal requirements and technical rationale that serve as the basis for the requirements of Order No. R8-2012-0029.

This Order has been prepared under a standardized format to accommodate a broad range of requirements for dischargers in California. Only those sections or subsections of this Order that are specifically identified as “not applicable” have been determined not to apply to this Discharger. Sections or subsections of this Order not specifically identified as “not applicable” are fully applicable to this Discharger.

I. PERMIT INFORMATION

The following table summarizes administrative information related to the facility.

Table 1. Facility Information

Discharger	OXY USA, Inc.
Name of Facility	OXY USA, Inc. Huntington Beach Production Unit
Facility Address	20101 Golden West Street
	Huntington Beach, CA 92648
	County of Orange
Facility Contact	Diana Lang, Regulatory / Environmental Coordinator, (562) 624-3314
Authorized Person to Sign and Submit Reports	Diana Lang, Regulatory / Environmental Coordinator, (562) 624-3314
Mailing Address	SAME
Billing Address	SAME
Type of Facility	Crude Oil and Gas Production
Major or Minor Facility	Minor
Threat to Water Quality	Category 2 (see Fee Schedule)
Complexity	Category C (see Fee Schedule)
Pretreatment Program	N/A
Reclamation Requirements	N/A
Facility Permitted Flow	N/A
Facility Design Flow	N/A
Watershed	Pacific Ocean - Nearshore Zone
Receiving Water	Pacific Ocean - Nearshore Zone
Receiving Water Type	Ocean / Potentially Wetland

- A. OXY USA, Inc. (OXY USA or Discharger) operates a crude oil and gas production facility located at 20101 Golden West Street in Huntington Beach, Orange County.
- B. The Facility discharges storm water to the Pacific Ocean, a water of the United States, and is currently regulated by Order No. R8-2002-0078 and National Pollutant Discharge Elimination System (NPDES) Permit No. CAS618001.

This order expired October 1, 2007 and was administratively extended until revised waste discharge requirements are adopted.

- C. On January 15, 2007, Aera Energy LLC, the previous owner, submitted a Report of Waste Discharge and applied for NPDES permit renewal to discharge storm water from what is now the OXY USA Huntington Beach Production Unit (Facility). Additional information to complete the application and administratively extend the existing order was provided June 22, 2007, July 12, 2007, January 20, 2009 and January 20, 2009.
- D. For the purposes of this Order, references to the “discharger” or “permittee” in applicable federal and state laws, regulations, plans, or policy are held to be equivalent to references to the Discharger hereinafter.

II. FACILITY DESCRIPTION

A. Description of Facility and Discharge

The Huntington Beach Production Facility extracts crude oil, produced water and associated gas from subsurface petroleum reservoirs. The crude oil is de-watered then shipped offsite for sales. The associated gas is processed to remove H₂S and CO₂ and shipped offsite via pipeline to So Cal Gas or used onsite in SCAQMD approved combustion devices. Produced water from the production of oil and gas is processed to remove residual oil and solids and is reinjected into the reservoirs to maintain pressure and enhance production. Reinjection activities are regulated by the State of California Department of Conservation, Division of Oil and Gas.

The OXY USA facility is located in the northwestern coastal section of Orange County. The facility is divided into four distinct areas: the Highlands, Fort Apache, the Bolsa Chica Wetlands area facilities, and Platform Emmy. Attachments B and C include maps of all four areas.

1. *The Highlands* (also known as *the Strip*) is owned by OXY USA and is situated on approximately 93 acres along Pacific Coast Highway, running parallel to Bolsa Chica Beach State Park. This area includes wells, pipelines, storage tanks, oil and gas processing equipment, and storage and office buildings. Produced fluids from all three onshore areas and also from Platform Emmy are transferred to the Highlands for processing, storage and off-site distribution. Platform Emmy is located approximately 1.3 miles offshore on leases in State waters. The processing facilities have a maximum handling capacity of 18,500 barrels (bbl) of crude oil and 290,000 bbl of produced water. Current levels of production from all areas are approximately 5,000 bbl of crude oil equivalent¹ and 135,000 bbl of produced water.

¹ Crude oil equivalent is measured in barrels of crude oil plus that volume of natural gas that would generate the equivalent amount of heat as a barrel of crude oil. (Approximately 6,000 cubic feet of natural gas is equivalent to one barrel of crude oil.)

Runoff from the southwestern section of the Highlands is considered to be "oil impacted" because it comes in contact with the production facilities and processes. This runoff is contained within a series of collection pits and corridors running northwest to southeast along the length of the facility and is ultimately combined with the produced water and reinjected into the subsurface reservoirs.

The northeastern 38.1 acres of the Highlands does not have any process equipment. Therefore, runoff from this portion is considered "non-impacted." The non-impacted storm water is collected via designated sumps and pumped via an oil skimming tank to two detention ponds located near the gate at Golden West Street in the southeast corner of the Highlands. The total storage volume of the ponds is approximately 4.72 acre-feet. When the capacity of the detention ponds is exceeded, runoff flows to the municipal separate storm sewer system (MS4) through a controlled underground outfall (DP009) or by overflow from the facility to Golden West Street (DP002).

Runoff from the northern 3.6 acres of the Highlands drains to the MS4 at Palm Avenue via DP006. In order to mitigate the risk of discharging excess solids during wet weather, a BaySaver™ unit and sampling port were installed in 2006. The commercial BaySaver unit is designed to remove sediment, floatables, and oil and grease in storm water runoff prior to entering the storm drain.

2. The *Fort Apache* area is located at 19th Street and Walnut Avenue. Produced fluids from Fort Apache are transferred to the Highlands via underground pipelines. Except for access ways, the site is surrounded by a concrete block wall that serves as a containment structure. No discharge of storm water is anticipated from Fort Apache. There is no outfall at Fort Apache.
3. The *Bolsa Chica Wetlands* area facilities are dispersed over a total area of 1,267 acres located immediately north of the Highlands and within the Bolsa Chica Wetlands. OXY USA leases this land from the State of California. This site includes 122 production wells (71 active production wells, 51 idle) and 45 injection wells (23 active, 22 idle) and associated pipelines. No processing equipment is located within this area. This production area lies inland from the Bolsa Chica Ecological Reserve and the Full Tidal Basin within the Muted Tidal, Seasonal Ponds, and Future Full Tidal areas of the Bolsa Chica Restoration Project. Outer Bolsa Bay is subject to tidal influence via Huntington Harbor, and Inner Bolsa Bay has muted tidal influence via tide gates that connect the inner and outer bays. These tide gates may be closed in the event of a spill to contain pollutants for cleanup. There has not been any discharge from the production area to the surrounding wetlands since before 2006, and the previously permitted outfall no longer exists. Storm water that has come in contact with equipment in the Bolsa Chica Wetlands area is contained within pipe chases and is allowed to evaporate or is removed by vactor truck to prevent overflow to the surrounding wetlands.

Except in the event of a spill, no discharge is anticipated from this portion of the facility. OXY USA has an Integrated Contingency Plan (ICP) in place should a spill occur.

4. Platform Emmy is a two-platform structure located 1.3 miles offshore of Huntington Beach, between Golden West and Seapoint Avenue, in approximately 45 feet of water. The main production platform was built in 1962. It consists of 46 wells (19 active, 27 inactive), ranging in depth from 1900 to 7800 feet. A satellite platform was constructed in 1988 to house operational controls, living quarters, electrical switchgear equipment, a boat landing and a helipad. Storm water and any spilled liquids are contained onboard by platform decking, perimeter kick plates and deck drains. Drains on the upper two decks of the production platform are piped to the Atmospheric Drain Tank (ADT). Liquids from the ADT are pumped into the production pipeline to shore where they are combined with produced crude oil. The ADT liquids and crude oil are processed at the Highlands. Drains from the satellite platform and from the lowest level of the production platform, due to their elevation with respect to the ADT, are first piped to the lower elevation into a double-walled Satellite Drip Tank before being pumped to the ADT. Little, if any, storm water will drain from the platform to the ocean, but in the event that there is drainage from the platform to the ocean, Platform Emmy has separate permit coverage under NPDES No. CAG998001, Order No. R8-2009-003, General Waste Discharge Requirements for Discharges to Surface Waters that Pose an Insignificant (De Minimus) Threat to Water Quality.

B. Potential Pollutants in Storm Water Discharges from OXY USA

Storm water runoff from crude oil and gas producing and processing facilities could come in contact with petroleum products and equipment used in the production and transport of these products and could erode unpaved surfaces within the production facilities. Pollutants in the runoff could include the following:

- Crude oil (including hydrocarbons, benzene, toluene and xylenes and other volatile organics), sulfur, metals and process wastewater from the production of oil and natural gas;
- Total suspended solids from unpaved surfaces; and,
- Oil and grease from vehicles, pumps and other mechanical devices.

The Discharger has developed and implemented best management practices (BMPs) as part of its Oil Spill Containment and Response Plan that is contained in the OSCP that is overseen by the Health / Environmental Safety Department (HES) at OXY USA. The OSCP includes all the necessary elements for controlling pollutants in storm water discharges and is used in place of a Storm Water Pollution Prevention Plan (SWPPP) for this facility. The SWPPP portion of the OSCP is maintained and implemented by OSCP and Operations personnel.

C. Discharge Points and Receiving Waters

Storm water from the facility drains to the City of Huntington Beach’s storm drain system which ultimately drains to the Pacific Ocean, a water of the United States. If the City requests that OXY USA drain the two detention ponds in the southeast corner of the Highlands through DP009 prior to a predicted storm event in order to avoid discharging from the facility during peak flows, the Discharger will analyze the water in the pond prior to its discharge to the storm drains to ensure that it meets the permit requirements. Storm water that does not meet the requirements in this Order is pumped into the produced fluids system for reinjection into the oil reservoirs. Attachment B provides a map of the area around the facility. Attachment C provides a flow schematic of the facility.

The outfall locations are summarized in the following table:

Table 2. Outfall Locations

Outfall Number	Description	Latitude	Longitude	Receiving Water
DP002	Golden West Street Entrance	33° 40' 10.79"	-118° 00' 58.65"	Golden West Street Storm Drain to the Pacific Ocean
DP006	Palm Avenue	33° 40' 42.51"	-118° 01' 38.20"	Palm Avenue Storm Drain to the Pacific Ocean
DP009	Golden West Street Storm Drain	33° 40' 7.78"	-118° 01' 1.32"	Golden West Street Storm Drain to the Pacific Ocean

Several outfalls have been eliminated since the previous permit was adopted. Outfall DP001, which provided for storm water pumping (discharge) to Inner Bolsa Bay, no longer exists. Aera abandoned its wells and operations in that area in 2006 to allow for the construction of the new Bolsa Chica Full Tidal Basin. Also, as a result of development northeast of the Highlands and the Bolsa Chica Wetlands Restoration Project, outfalls DP003, DP004, DP007 and DP008 have been eliminated. Additionally, the southwestern portion of the facility adjacent to Pacific Coast Highway and southeast of Seapoint Avenue has been bermed for full containment, eliminating the need for outfall DP005.

D. Summary of Existing Requirements and Self-Monitoring Report (SMR) Data

Effluent Limitations contained in the existing Order for discharges from selected discharge points and representative monitoring data based on the SMR reports are included in Table 3, below:

Table 3. Historic Effluent Limitations and Monitoring Data

Outfall Number	Total Suspended Solids (mg/L) Monitoring Range	Oil and Grease (mg/L) Monitoring Range	Total Organic Carbon (mg/L) Monitoring Range	pH (pH units) Monitoring Range
Order No. R8-2002-0078 Maximum Concentration Limit	100	15	100	6.5 -8.5
DP002	36-110	ND-1.7	5.5-9.6	6.5-7.8
DP006	130-164	ND-1.6	4.3-11	6.5-7.2

E. Compliance Summary

A Mandatory Penalties Complaint was issued to Aera Energy on February 14, 2005 for exceedances of the maximum concentration limit of TSS at DP006 during the 2002-2003 reporting year. A second Mandatory Penalties Complaint was issued to Aera Energy on August 8, 2005 for an exceedance of the maximum concentration limit of TSS at DP006 during the 2004-2005 reporting year. In 2006, Area Energy installed a BaySaver treatment unit to remove excess sediment, floatables, and oil and grease in storm water runoff prior to entering the storm drain at Palm Avenue.

F. Planned Changes (Not Applicable)

III. APPLICABLE LAWS, REGULATIONS, PLANS, AND POLICIES

The requirements contained in the proposed Order are based on the requirements and authorities described in this section.

A. Legal Authorities

The discharge of pollutants to waters of the United States (also referred to as waters of the Nation, generally surface waters) must be regulated under an NPDES permit (Section 301(a) of the Clean Water Act (CWA)). In California, the State Water Resources Control Board and the nine regional boards implement the requirements of the CWA, including the federal NPDES permit program, under authorization from the USEPA. Section 402(p)(3)(A) of the CWA requires that storm water runoff from industrial facilities be regulated under the NPDES permit program. This section of the CWA requires that NPDES permits for discharges associated with industrial activity must implement CWA § 301, which requires that dischargers comply with technology-based effluent limitations, as well as any more stringent limitations necessary to meet water quality standards (CWA § 402(p)(3)(A)). Technology-based effluent limitations applicable to industrial

activities are best practicable control technology currently achievable (BCT) for conventional pollutants, and best available technology economically achievable (BAT) for toxic and non-conventional pollutants (CWA §§ 301(b)(1)(A) and (2)(A)). To ensure strict compliance with water quality standards, NPDES permits can require a discharger to implement best management practices (BMPs), narrative effluent limitations, and/or numeric effluent limitations (CWA §§ 301(b), 402; Title 40 Code of Federal Regulations (CFR) 122.26, 122.28, 125.3). In accordance with these laws and regulations, this Order includes narrative and numeric effluent limitations.

On November 16, 1990, the USEPA promulgated Phase I storm water regulations that established application requirements for storm water permits (40 CFR 122, 123 and 124). These regulations require that storm water runoff associated with industrial activities discharging either directly to surface waters or indirectly through municipal separate storm sewer systems (MS4) must be regulated under the NPDES permit program. In 1992, the USEPA revised the monitoring requirements for industrial storm water discharges (40 CFR 122.44(i)(2), (4), and (5)). The monitoring and reporting program under this Order is consistent with these requirements.

The California Water Code (CWC) incorporates the CWA (Title 23, Division 7, Chapter 5.5). This Order is issued pursuant to CWA Section 402, regulations adopted by the USEPA and Chapter 5.5, Division 7 of the CWC commencing with Section 13370. It serves as an NPDES permit for point source discharges from this facility to surface waters. This Order also serves as WDRs pursuant to Article 4, Chapter 4, Division 7 of the CWC commencing with Section 13260.

The CWC and the CWA require the regional boards to develop regional water quality control plans (CWC, Chapter 4, Article 3) including water quality objectives and beneficial uses (collectively referred to as the water quality standards in the CWA). The most recent Basin Plan for the Santa Ana River Basin was adopted in 1995. Since then, the Basin Plan has been amended a number of times and the latest version of the Basin Plan is available at:

http://www.waterboards.ca.gov/santaana/water_issues/programs/basin_plan/index.shtml

The Basin Plan identifies beneficial uses of waters of the region and contains water quality objectives to protect those beneficial uses. The discharges from the facility are tributary to the Pacific Ocean (near-shore zone). Table 4, below, lists the beneficial uses of the receiving waters for the discharges specified in this Order. The Basin Plan also incorporates the statewide water quality control plans and policies. The requirements specified in this Order are essential to protect the beneficial uses in the receiving waters and meet water quality standards.

The requirements specified in this Order implement the Clean Water Act, the California Water Code, federal and state regulations implementing these laws and the Basin Plan.

- 1. Beneficial uses** applicable to Near-shore Zone of the Pacific Ocean are as follows:

Table 4. Basin Plan Beneficial Uses

Discharge Points	Receiving Water Name	Beneficial Use(s)
DP002 DP006 DP009	Pacific Ocean (Near-shore Zone)	<u>Existing or Potential:</u> Industrial service supply (IND); Navigation (NAV); contact (REC-1) water recreation; non-contact (REC-2) water recreation; commercial and sport fishing (COMM); wildlife habitat (WILD); preservation of rare, threatened or endangered species (RARE); spawning, reproduction and development (SPWN); marine habitat (MAR); and shellfish harvesting (SHEL)

Requirements of this Order implement the Basin Plan.

- 2. National Toxics Rule (NTR) and California Toxics Rule (CTR).** USEPA adopted the NTR on December 22, 1992, and later amended it on May 4, 1995 and November 9, 1999. Approximately forty of the water quality criteria in the NTR are applicable in California. On May 18, 2000, USEPA adopted the CTR. The CTR promulgated new toxics criteria for California and, in addition, incorporated the previously adopted NTR criteria that were applicable in the state. The CTR was amended on February 13, 2001. These rules contain water quality criteria for priority pollutants. The State Implementation Policy is the guidance document for implementing the CTR.
- 3. State Implementation Policy.** On March 2, 2000, the State Water Board adopted the *Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California* (State Implementation Policy or SIP). The SIP became effective on April 28, 2000 with respect to the priority pollutant criteria promulgated for California by the USEPA through the NTR and to the priority pollutant objectives established by the Regional Water Board in the Basin Plan. The SIP became effective on May 18, 2000 with respect to the priority pollutant criteria promulgated by the USEPA through the CTR. The State Water Board adopted amendments to the SIP on February 24, 2005 that became effective on July 13, 2005. The SIP establishes implementation provisions for priority pollutant criteria and objectives and provisions for chronic toxicity control. Requirements of this Order implement the SIP.
- 4. Alaska Rule.** On March 30, 2000, USEPA revised its regulation that specifies when new and revised state and tribal water quality standards

become effective for CWA purposes (40 CFR 131.21, 65 Fed. Reg. 24641 (April 27, 2000)). Under the revised regulation (also known as the Alaska Rule), new and revised standards submitted to USEPA after May 30, 2000, must be approved by USEPA before being used for CWA purposes. The final rule also provides that standards already in effect and submitted to USEPA by May 30, 2000, may be used for CWA purposes, whether or not approved by USEPA.

- 5. Antidegradation Policy.** 40 CFR 131.12 requires that the state water quality standards include an antidegradation policy consistent with the federal policy. The State Water Board established California's antidegradation policy in State Water Board Resolution No. 68-16. Resolution No. 68-16 incorporates the federal antidegradation policy where the federal policy applies under federal law. Resolution No. 68-16 requires that existing water quality be maintained unless degradation is justified based on specific findings. The Regional Water Board's Basin Plan implements, and incorporates by reference, both the State and federal antidegradation policies. The permitted discharge must be consistent with the antidegradation provision of Section 131.12 and State Water Board Resolution No. 68-16.
- 6. Anti-Backsliding Requirements.** CWA §§ 402(o)(2) and 303(d)(4) and 40 CFR 122.44(l) prohibit backsliding in NPDES permits. These anti-backsliding provisions require that effluent limitations in a reissued permit must be as stringent as those in the previous permit, with some exceptions in which limitations may be relaxed.
- 7. California Environmental Quality Act (CEQA).** Under CWC Section 13389, this action to adopt an NPDES permit is exempt from the provisions of CEQA, Public Resources Code Sections 21100 through 21177.

IV. RATIONALE FOR EFFLUENT LIMITATIONS AND DISCHARGE SPECIFICATIONS

The CWA requires point source dischargers to control the amount of conventional, non-conventional, and toxic pollutants that are discharged into the waters of the United States. The control of pollutants is regulated through discharge prohibitions, effluent limitations and other requirements specified in NPDES permits. There are two principal bases for effluent limitations: 40 CFR 122.44(a) requires that permits include applicable technology-based effluent limitations and standards, and 40 CFR 122.44(d) requires that permits include water quality-based effluent limitations to attain and maintain applicable numeric and narrative water quality criteria to protect the beneficial uses of the receiving water. In addition, industrial storm water discharges must meet the technology-based BCT/BAT limitations (CWA § 402(p)(3)(A)).

A. Discharge Prohibitions

As defined in 40 CFR 122.26(b)(14), this Order regulates the discharge of storm water associated with industrial activities and it prohibits non-storm water discharges. The Order also includes waste discharge prohibitions consistent with Chapter 5 of the Basin Plan. These prohibitions are designed to prevent a violation of any applicable water quality standards contained in the Basin Plan for the receiving waters.

B. Technology-Based Effluent Limitations

All NPDES permits are required to consider technology-based limitations (water quality-based effluent limitations may be more stringent). 40 CFR 122.44(a)(1) and 125.3 CWA §§ 301(b)(1)(A) for (BPT); 301(b)(2)(A) for (BAT); and 301(b)(2)(E) for (BCT). CWA § 301(b) and 40 CFR 122.44 require that permits include conditions meeting applicable technology-based requirements at a minimum and any more stringent effluent limitations necessary to meet applicable water quality standards (WQS). The discharge authorized by this Order must meet minimum federal technology-based requirements based on Best Professional Judgment (BPJ) in accordance with 40 CFR 125.3.

1. The CWA requires that technology-based effluent limitations be established based on several levels of controls:
 - a. Best practicable treatment control technology (BPT) represents the average of the best performance by facilities within an industrial category or subcategory. BPT standards apply to toxic, conventional, and non-conventional pollutants.
 - b. Best available technology economically achievable (BAT) represents the best existing performance of treatment technologies that are economically achievable within an industrial point source category. BAT standards apply to toxic and non-conventional pollutants.
 - c. Best conventional pollutant control technology (BCT) represents the control from existing industrial point sources of conventional pollutants including BOD, TSS, fecal coliform, pH, and oil and grease. The BCT standard is established after considering the “cost reasonableness” of the relationship between the cost of attaining a reduction in effluent discharge and the benefits that would result, and also the cost effectiveness of additional industrial treatment beyond BPT.
 - d. New source performance standards (NSPS) represent the best available demonstrated control technology standards. The intent of NSPS guidelines is to set limitations that represent state-of-the-art treatment technology for new sources.
2. The CWA requires USEPA to develop effluent limitations, guidelines and standards (ELGs) representing application of BPT, BAT, BCT, and NSPS. Technology-based effluent limits are intended to achieve a minimum level of

treatment of pollutants for point source discharges. ELGs that would apply to an Oil and Gas Extraction Point Source Category are defined in 40 CFR 435. These ELGs do not address storm water runoff from such facilities. CWA § 402(a)(1) and 40 CFR 125.3 authorize the use of BPJ to derive technology-based effluent limitations on a case-by-case basis where ELGs are not available for certain industrial categories and/or pollutants of concern.

3. Under USEPA's regulations, non-numeric effluent limits are authorized in lieu of numeric limits, where "numeric effluent limitations are infeasible" (40 CFR 122.44(k)(3)). The Discharger has developed and implemented best management practices (BMPs) as part of its Oil Spill Containment and Response Plan that is contained in the Integrated Contingency Plan (ICP). The ICP includes all the necessary elements for controlling pollutants in storm water discharges and is consistent with the requirements specified in Attachment I for a Storm Water Pollution Prevention Plan (SWPPP). As such, the facility is not required to develop a separate SWPPP.

The ICP identifies appropriate control measures to control the discharge of pollutants in storm water runoff from the facility. The Discharger shall continue to implement these control measures and other source-specific operational BMPs and structural source control BMPs, as applicable (see Attachment J). The SWPPP/ICP, including all BMPs that are being implemented, will serve as the equivalent of technology-based effluent limitations (TBELs), in the absence of established ELGs, in order to carry out the purposes and intent of the CWA.

C. Water Quality-Based Effluent Limitations

Water quality-based effluent limitations (WQBELs) are required by CWA § 301(b)(1)(C). Chapters 3 and 4 of the Basin Plan includes water quality standards applicable to surface waters. This Order requires the Discharger to meet water quality objectives specified in the Basin Plan for the receiving waters.

D. Interim Effluent Limitations (Not Applicable)

E. Land Discharge Specifications (Not Applicable)

F. Reclamation Specifications (Not Applicable)

V. RATIONALE FOR RECEIVING WATER LIMITATIONS

A. Surface Water Limitations

Receiving water limitations are in accordance with the water quality standards specified in the Basin Plan.

B. Groundwater Limitations

Again, consistent with the Basin Plan, the discharge shall not cause the underlying groundwater to be degraded, exceed water quality objectives, unreasonably affect beneficial uses, or cause a condition of pollution or nuisance.

VI. RATIONALE FOR MONITORING AND REPORTING REQUIREMENTS

Attachment E of this Order establishes monitoring and reporting requirements to implement federal and state requirements. These requirements are consistent with the federal and state laws and regulations. 40 CFR 122.48 requires that all NPDES permits specify requirements for monitoring and reporting. CWC §§ 13267 and 13383 authorize the Regional Water Board to require technical and monitoring reports.

A. Influent Monitoring (Not Applicable)

B. Effluent Monitoring

The Monitoring and Reporting Program requires effluent monitoring to ensure that the discharge is in compliance with the requirements specified in this Order.

C. Whole Effluent Toxicity (WET) Testing Requirements

Acute toxicity testing is needed to determine that the discharges are not impacting the beneficial uses in the receiving waters.

D. Receiving Water Monitoring (Not Applicable)

E. Other Monitoring Requirements (Not Applicable)

VII. RATIONALE FOR PROVISIONS

A. Standard Provisions

Standard Provisions, which apply to all NPDES permits in accordance with 40 CFR 122.41, and additional conditions applicable to specified categories of permits in accordance with 40 CFR 122.42, are provided in Attachment D. The discharger must comply with all standard provisions and with those additional conditions that are applicable under 40 CFR 122.42.

40 CFR 122.41(a)(1) and (b) through (n) establish conditions that apply to all State-issued NPDES permits. These conditions must be incorporated into the permits either expressly or by reference. If incorporated by reference, a specific citation to the regulations must be included in the Order. 40 CFR 123.25(a)(12) allows the state to omit or modify conditions to impose more stringent requirements. In accordance with 40 CFR 123.25, this Order omits federal conditions that address enforcement authority specified in 40 CFR

122.41(j)(5) and (k)(2) because the enforcement authority under the CWC is more stringent. In lieu of these conditions, this Order incorporates by reference CWC § 13387(e).

B. Special Provisions

1. Reopener Provisions

If more stringent applicable water quality standards are promulgated or approved pursuant to CWA § 303, or amendments thereto, the Regional Water Board will reopen and modify this order in accordance with such standards. This order may be reopened to address any changes in state or federal plans, policies or regulations that would affect the quality requirements for the discharges.

2. Special Studies and Additional Monitoring Requirements (Not Applicable)

3. Best Management Practices and Pollution Prevention

The Discharger has developed and implemented best management practices (BMPs) as part of its Oil Spill Containment and Response Plan, contained in the Integrated Contingency Plan (ICP). The ICP includes all the necessary elements for controlling pollutants in storm water discharges and is used in place of a Storm Water Pollution Prevention Plan (SWPPP) for this facility.

4. Other Special Provisions (Not Applicable)

5. Compliance Schedules (Not Applicable)

VIII. PUBLIC PARTICIPATION

The Regional Water Board is considering the issuance of waste discharge requirements (WDRs) that will serve as a National Pollutant Discharge Elimination System (NPDES) permit for the OXY USA Inc., Huntington Beach Production Unit. As a step in the NPDES/WDR adoption process, the Regional Water Board staff has developed this tentative Order. The Regional Water Board encourages public participation in the process and has actively sought public comments from all known interested parties.

A. Notification of Interested Parties

The Regional Water Board has notified the Discharger and all known interested agencies and persons of its intent to prescribe waste discharge requirements for the discharge and has provided them with an opportunity to submit their written comments and recommendations. Notification was provided through the following by posting notices in the vicinity of the facility and in the locality that may be affected by the discharge.

B. Written Comments

The staff determinations are tentative. Interested persons are invited to submit written comments concerning these tentative requirements. Comments must be submitted either in person or by mail to the Executive Office at the Regional Water Board at the address above on the cover page of the Order.

To be fully responded to by staff and considered by the Regional Water Board, written comments must be received at the Regional Water Board offices by 5:00 p.m. on May 30, 2012.

C. Public Hearing

The Regional Water Board will hold a public hearing on the tentative Order during its regular Board meeting on the following date and time and at the following location:

Date: June 15, 2012
Time: 9:00 a.m.
Location: Irvine Ranch Water District
15600 Sand Canyon Avenue
Irvine, CA 92618

Interested persons are invited to attend. At the public hearing, the Regional Water Board will hear testimony, if any, pertinent to the discharge, and the tentative Order. Oral testimony will be heard; however, for accuracy of the record, important testimony should be in writing.

Please be aware that dates and venues may change. Our Web address is www.waterboards.ca.gov/santaana where you can access the current agenda for changes in dates and locations.

D. Waste Discharge Requirements Petitions

Any aggrieved person may petition the State Water Resources Control Board to review the decision of the Regional Water Board regarding the final WDRs. The petition must be submitted within 30 days of the Regional Water Board's action to the following address:

State Water Resources Control Board
Office of Chief Counsel
P.O. Box 100
Sacramento, CA 95812-0100

E. Information and Copying

The Report of Waste Discharge (ROWD), related documents, tentative Order, comments received, and other information are on file and may be inspected at the address above at any time between 8:30 a.m. and 4:45 p.m., Monday through Friday. Copying of documents may be arranged through the Regional Water Board by calling (951) 782-4130.

F. Register of Interested Persons

Any person interested in being placed on the electronic mailing list for information regarding the WDRs and NPDES permit may register at: http://www.waterboards.ca.gov/resources/email_subscriptions/reg8_subscribe.shtm.

G. Additional Information

Requests for additional information or questions regarding this order should be directed Mary Bartholomew at the Santa Ana Regional Water Board, Coastal Storm Water Unit, at (951) 321-4586 or mbartholomew@waterboards.ca.gov.

ATTACHMENT G – MINIMUM LEVELS in ppb (µg/L)

The Minimum Levels (MLs) in this appendix are for use in reporting and compliance determination purposes in accordance with section 2.4 of the State Implementation Policy. These MLs were derived from data for priority pollutants provided by State certified analytical laboratories in 1997 and 1998. These MLs shall be used until new values are adopted by the SWRCB and become effective. The following tables (Tables 2a-2d) present MLs for four major chemical groupings: volatile substances, semi-volatile substances, inorganics, and pesticides and PCBs.

Table 2a - VOLATILE SUBSTANCES*	GC	GCMS
1,1 Dichloroethane	0.5	1
1,1 Dichloroethylene	0.5	2
1,1,1 Trichloroethane	0.5	2
1,1,2 Trichloroethane	0.5	2
1,1,2,2 Tetrachloroethane	0.5	1
1,2 Dichlorobenzene (volatile)	0.5	2
1,2 Dichloroethane	0.5	2
1,2 Dichloropropane	0.5	1
1,3 Dichlorobenzene (volatile)	0.5	2
1,3 Dichloropropene (volatile)	0.5	2
1,4 Dichlorobenzene (volatile)	0.5	2
Acrolein	2.0	5
Acrylonitrile	2.0	2
Benzene	0.5	2
Bromoform	0.5	2
Methyl Bromide	1.0	2
Methyl Chloride	0.5	2
Carbon Tetrachloride	0.5	2
Chlorobenzene	0.5	2
Chlorodibromo-methane	0.5	2
Chloroethane	0.5	2
Chloroform	0.5	2
Dichlorobromo-methane	0.5	2
Dichloromethane	0.5	2
Ethylbenzene	0.5	2
Tetrachloroethylene	0.5	2
Toluene	0.5	2
Trans-1,2 Dichloroethylene	0.5	1
Trichloroethylene	0.5	2
Vinyl Chloride	0.5	2

*The normal method-specific factor for these substances is 1; therefore, the lowest standard concentration in the calibration curve is equal to the above ML value for each substance.

Table 2b - SEMI-VOLATILE SUBSTANCES*	GC	GCMS	LC	COLOR
Benzo (a) Anthracene	10	5		
1,2 Dichlorobenzene (semivolatile)	2	2		
1,2 Diphenylhydrazine		1		
1,2,4 Trichlorobenzene	1	5		
1,3 Dichlorobenzene (semivolatile)	2	1		
1,4 Dichlorobenzene (semivolatile)	2	1		
2 Chlorophenol	2	5		
2,4 Dichlorophenol	1	5		
2,4 Dimethylphenol	1	2		
2,4 Dinitrophenol	5	5		
2,4 Dinitrotoluene	10	5		
2,4,6 Trichlorophenol	10	10		
2,6 Dinitrotoluene		5		
2- Nitrophenol		10		
2-Chloroethyl vinyl ether	1	1		
2-Chloronaphthalene		10		
3,3' Dichlorobenzidine		5		
Benzo (b) Fluoranthene		10	10	
3-Methyl-Chlorophenol	5	1		
4,6 Dinitro-2-methylphenol	10	5		
4- Nitrophenol	5	10		
4-Bromophenyl phenyl ether	10	5		
4-Chlorophenyl phenyl ether		5		
Acenaphthene	1	1	0.5	
Acenaphthylene		10	0.2	
Anthracene		10	2	
Benzidine		5		
Benzo(a) pyrene		10	2	
Benzo(g,h,i)perylene		5	0.1	
Benzo(k)fluoranthene		10	2	
bis 2-(1-Chloroethoxyl) methane		5		
bis(2-chloroethyl) ether	10	1		
bis(2-Chloroisopropyl) ether	10	2		
bis(2-Ethylhexyl) phthalate	10	5		
Butyl benzyl phthalate	10	10		
Chrysene		10	5	
di-n-Butyl phthalate		10		
di-n-Octyl phthalate		10		
Dibenzo(a,h)-anthracene		10	0.1	
Diethyl phthalate	10	2		
Dimethyl phthalate	10	2		
Fluoranthene	10	1	0.05	
Fluorene		10	0.1	
Hexachloro-cyclopentadiene	5	5		
Hexachlorobenzene	5	1		
Hexachlorobutadiene	5	1		
Hexachloroethane	5	1		

Table 2b - SEMI-VOLATILE SUBSTANCES*	GC	GCMS	LC	COLOR
Indeno(1,2,3,cd)-pyrene		10	0.05	
Isophorone	10	1		
N-Nitroso diphenyl amine	10	1		
N-Nitroso-dimethyl amine	10	5		
N-Nitroso -di n-propyl amine	10	5		
Naphthalene	10	1	0.2	
Nitrobenzene	10	1		
Pentachlorophenol	1	5		
Phenanthrene		5	0.05	
Phenol **	1	1		50
Pyrene		10	0.05	

* With the exception of phenol by colorimetric technique, the normal method-specific factor for these substances is 1,000; therefore, the lowest standard concentration in the calibration curve is equal to the above ML value for each substance multiplied by 1,000.

** Phenol by colorimetric technique has a factor of 1.

Table 2c – INORGANICS*	FAA	GFAA	ICP	ICPMS	SPGFAA	HYDRIDE	CVAA	COLOR	DCP	Method 6200, X-ray Fluorescence
Antimony	10	5	50	0.5	5	0.5			1,000	
Arsenic		2	10	2	2	1		20	1,000	
Barium (total)			0.002							0.08
Beryllium	20	0.5	2	0.5	1				1,000	
Cadmium	10	0.5	10	0.25	0.5				1,000	
Chromium (total)	50	2	10	0.5	1				1,000	
Chromium VI	5							10		
Cobalt (total)			0.002							0.03
Copper	25	5	10	0.5	2				1,000	
Cyanide								5		
Lead	20	5	5	0.5	2				10,000	
Mercury				0.5			0.2			
Nickel	50	5	20	1	5				1,000	
Selenium		5	10	2	5	1			1,000	
Silver	10	1	10	0.25	2				1,000	
Thallium	10	2	10	1	5				1,000	
Tin (total)										0.3
Vanadium (total)										0.04
Zinc	20		20	1	10				1,000	

* The normal method-specific factor for these substances is 1; therefore, the lowest standard concentration in the calibration curve is equal to the above ML value for each substance.

Table 2d – PESTICIDES – PCBs*	GC
4,4'-DDD	0.05
4,4'-DDE	0.05
4,4'-DDT	0.01
a-Endosulfan	0.02
alpha-BHC	0.01
Aldrin	0.005
b-Endosulfan	0.01
Beta-BHC	0.005
Chlordane	0.1
Delta-BHC	0.005
Dieldrin	0.01
Endosulfan Sulfate	0.05
Endrin	0.01
Endrin Aldehyde	0.01
Heptachlor	0.01
Heptachlor Epoxide	0.01
Gamma-BHC (Lindane)	0.02
PCB 1016	0.5
PCB 1221	0.5
PCB 1232	0.5
PCB 1242	0.5
PCB 1248	0.5
PCB 1254	0.5
PCB 1260	0.5
Toxaphene	0.5

* The normal method-specific factor for these substances is 100; therefore, the lowest standard concentration in the calibration curve is equal to the above ML value for each substance multiplied by 100.

Techniques:

- GC - Gas Chromatography
- GCMS - Gas Chromatography/Mass Spectrometry
- LC - High Pressure Liquid Chromatography
- COLOR - Colorimetric
- FAA - Flame Atomic Absorption
- GFAA - Graphite Furnace Atomic Absorption
- ICP - Inductively Coupled Plasma
- ICPMS - Inductively Coupled Plasma/Mass Spectrometry
- SPGFAA - Stabilized Platform Graphite Furnace Atomic Absorption (EPA 200.9)
- HYDRIDE - Gaseous Hydride Atomic Absorption
- CVAA - Cold Vapor Atomic Absorption
- DCP - Direct Current Plasma

ATTACHMENT H – ANALYTICAL METHODS

# Compound	Pollutant_ID	Toxic Pollutants	EPA Analytical Method ¹
		Metals & Miscellaneous	
1	1097	Antimony (Sb)	200.7, 200.8, 204.1, 204.2, 6010B, 6020, 7040, 7041
2	1000	Arsenic (As)	200.7, 200.8, 200.9, 206.2, 206.3, 206.4, 206.5, 6010B, 6020, 7060A, 7061A
3	1012	Beryllium (Be)	200.7, 200.8, 200.9, 210.1, 210.2, 6010B, 6020, 7090, 7091
4	1027	Cadmium (Cd)	200.7, 200.8, 200.9, 213.1, 213.2, 6010B, 6020, 7130, 7131A
5a	1032	Chromium (Total)	200.7, 200.8, 200.9, 218.1, 218.2, 218.3, 6010B, 6020, 7190, 7191
5b	1033	Chromium-(Cr-VI)	218.4, 7196A, 218.6, 719.9
6	1119	Copper (Cu)	200.7, 200.8, 200.9, 220.1, 220.2, 6010B, 6020, 7210, 7211
	720	Cyanide (CN)	335.2, 335.3, 9010B, 9012A
8	1051	Lead (Pb)	200.8, 200.9, 239.1, 239.2, 6010B, 6020, 7420, 7421
9	71900	Mercury (Hg)	245.1, 245.2, 200.8, 7470A, 7471A
10	1067	Nickel (Ni)	200.7, 200.8, 200.9, 249.1, 249.2, 6010B, 6020, 7520, 7521
11	1147	Selenium (Se)	200.7, 200.8, 200.9, 270.2, 6010B, 6020, 7740, 7741A
12	1077	Silver (Ag)	200.7, 200.8, 200.9, 272.1, 272.2, 6010B, 6020, 7760A, 7761
13	1059	Thallium (Tl)	200.7, 200.8, 200.9, 279.1, 279.2, 6010B, 6020, 7840, 7841
14	1092	Zinc (Zn)	200.7, 200.8, 289.1, 289.2, 6010B, 6020, 7950, 7951
15	948	Asbestos	100.1, 100.2
16 ²	82698	TCDD Equivalent	8280A, 8290
		Toxicity Equivalent Factors (TEFs) for 2,3,7,8-TCDD Equivalents	
		Congener	TEF
		2,3,7,8-TetraCDD	1
		1,2,3,7,8-PentaCDD	1.0
		1,2,3,4,7,8-HexaCDD	0.1
		1,2,3,6,7,8-HexaCDD	0.1
		1,2,3,7,8,9-HexaCDD	0.1
		1,2,3,4,6,7,8-HeptaCDD	0.01
		OctaCDD	0.0001

¹ Analytical Method selected must be capable of achieving an ML that is lower than the lowest criterion for the pollutant.

² You shall report for each congener the analytical results of the effluent monitoring, including the quantifiable limit and the MDL, and the measured or estimated concentration. In addition you shall multiply each measured or estimated congener concentration by its respective TEF value above and report the sum of these values.

# Compound	Pollutant_ID	Toxic Pollutants		EPA Analytical Method ¹
		2,3,7,8-TetraCDF	0.1	
		1,2,3,7,8-PentaCDF	0.05	
		2,3,4,7,8-PentaCDF	0.5	
		1,2,3,4,7,8-HexaCDF	0.1	
		1,2,3,6,7,8-HexaCDF	0.1	
		1,2,3,7,8,9-HexaCDF	0.1	
		2,3,4,6,7,8-HexaCDF	0.1	
		1,2,3,4,6,7,8-HeptaCDF	0.01	
		1,2,3,4,7,8,9-HeptaCDF	0.01	
		OctaCDF	0.0001	
		Volatile Pollutants		
17	34210	Acrolein		603, 8030A, 8260B
18	34215	Acrylonitrile		603, 8031, 8260B
19	34030	Benzene		602, 624, 8021B, 8260B
20	32104	Bromoform		601, 624, 8021B, 8260B
21	32102	Carbon Tetrachloride		601, 624, 8021B, 8260B
22	34301	Chlorobenzene		601, 602, 624, 8021B, 8260B
23	34306	Chlorodibromomethane		601, 624, 8021B, 8260B
24	85811	Chloroethane		601, 624, 8021B, 8260B
25	34576	2-Chloroethylvinyl Ether		601, 624, 8021B, 8260B
26	32106	Chloroform		601, 624, 8021B, 8260B
27	32101	Dichlorobromomethane		601, 624, 8021B, 8260B
28	34496	1,1-Dichloroethane		601, 624, 8021B, 8260B
29	32103	1,2-Dichloroethane		601, 624, 8021B, 8260B
30	34501	1,1-Dichloroethylene		601, 624, 8021B, 8260B
31	34541	1,2-Dichloropropane		601, 624, 8021B, 8260B
32	34561	1,3-Dichloropropylene		601, 624, 8021B, 8260B
33	78113	Ethylbenzene		602, 624, 8021B, 8260B
34	34413	Methyl Bromide		601, 624, 8021B, 8260B
35	3	Methyl Chloride		601, 624, 8021B, 8260B
36	34418	Methylene Chloride		601, 624, 8021B, 8260B
37	34516	1,1,2,2-Tetrachloroethane		601, 624, 8021B, 8260B
38	34475	Tetrachloroethylene		601, 624, 8021B, 8260B
39	34010	Toluene		602, 624, 8021B, 8260B
40	34549	1,2-Trans-Dichloroethylene		601, 624, 8021B, 8260B
41	34506	1,1,1-Trichloroethane		601, 624, 8021B, 8260B
42	34511	1,1,2-Trichloroethane		601, 624, 8021B, 8260B
43	39180	Trichloroethylene		601, 624, 8021B, 8260B
44	39175	Vinyl Chloride		601, 624, 8021B, 8260B
		Semi-Volatile Pollutants		
45	34586	2-Chlorophenol		604, 625, 8041, 8270C

# Compound	Pollutant ID	Toxic Pollutants	EPA Analytical Method ¹
46	34601	2,4-Dichlorophenol	604, 625, 8041, 8270C
47	34606	2,4-Dimethylphenol	604, 625, 8041, 8270C
48	34452	2-Methyl-4,6-Dinitrophenol	604, 625, 8041, 8270C
49	34616	2,4-Dinitrophenol	604, 625, 8041, 8270C
50	34591	2-Nitrophenol	604, 625, 8041, 8270C
51	34646	4-Nitrophenol	604, 625, 8041, 8270C
52		3-Methyl-4-Chlorophenol	604, 625, 8041, 8270C
53	39032	Pentachlorophenol	604, 625, 8041, 8270C
54	34694	Phenol	604, 625, 8041, 8270C
55	34624	2,4,6-Trichlorophenol	604, 625, 8041, 8270C
56	34205	Acenaphthene	610, 625, 8100, 8270C
57	34200	Acenaphthylene	610, 625, 8100, 8270C
58	34220	Anthracene	610, 625, 8100, 8270C
59	39120	Benzdine	625, 8270C
60	34526	Benzo (a) Anthracene	610, 625, 8100, 8270C
61	34247	Benzo (a) Pyrene	610, 625, 8100, 8270C
62	34230	Benzo (b) Fluoranthene	610, 625, 8100, 8270C
63	34521	Benzo (g,h,i) Perylene	610, 625, 8100, 8270C
64	34242	Benzo (k) Fluoranthene	610, 625, 8100, 8270C
65	34278	Bis (2-Chloroethoxy) Methane	611, 625, 8270C
66	34283	Bis (2-Chloroisopropyl) Ether	611, 625, 8111, 8270C
67	34273	Bis (2-Chloroethyl) Ether	611, 625, 8111, 8270C
68	39100	Bis (2-Ethylhexyl) Phthalate	606, 625, 8061A, 8270C
69	34636	4-Bromophenyl Phenyl Ether	611, 625, 8111, 8270C
70	34292	Butylbenzyl Phthalate	606, 625, 8061A, 8270C
71	34581	2-Chloronaphthalene	612, 625, 8100, 8270C
72	34641	4-Chlorophenyl Phenyl Ether	611, 625, 8111, 8270C
73	34320	Chrysene	610, 625, 8100, 8270C
74	34556	Dibenzo (a,h) Anthracene	610, 625, 8100, 8270C
75	34536	1,2-Dichlorobenzene	601, 602, 612, 624, 625, 8021B, 8270C
76	34566	1,3-Dichlorobenzene	601, 602, 612, 624, 625, 8021B, 8270C
77	34571	1,4-Dichlorobenzene	601, 602, 612, 624, 625, 8021B, 8270C
78	34631	3,3-Dichlorobenzidine	625, 8270C
79	34336	Diethyl Phthalate	606, 625, 8061A, 8270C
80	34341	Dimethyl Phthalate	606, 625, 8061A, 8270C
81	34596	Di-n-Octyl Phthalate	606, 625, 8061A, 8270C
82	34611	2,4-Dinitrotoluene	609, 625, 8091, 8270C
83	34626	2,6-Dinitrotoluene	609, 625, 8091, 8270C
84	39110	Di-n-Butyl Phthalate	606, 625, 8061A, 8270C
85	34346	1,2-Diphenylhydrazine	625, 8270C
86	34376	Fluoranthene	610, 625, 8100, 8270C

# Compound	Pollutant ID	Toxic Pollutants	EPA Analytical Method ¹
87	34381	Fluorene	610, 625, 8100, 8270C
88	39700	Hexachlorobenzene	612, 625, 8120A, 8270C
89	39702	Hexachlorobutadiene	612, 625, 8120A, 8270C
90	34386	Hexachlorocyclopentadiene	612, 8120A, 8270C
91	34396	Hexachloroethane	616, 625, 8120A, 8270C
92	34403	Indeno (1,2,3-cd) Pyrene	610, 625, 8100, 8270C
93	34408	Isophorone	609, 625, 8270C
94	34696	Napthalene	610, 625, 8100, 8270C
95	34447	Nitrobenzene	609, 625, 8091, 8270C
96	34438	N-Nitrosodimethylamine	607, 625, 8070A, 8270C
97	34428	N-Nitrosodi-n-Propylamine	607, 625, 8070A, 8270C
98	34433	N-Nitrosodiphenylamine	607, 8070A, 8270C
99	34461	Phenanthrene	610, 625, 8100, 8270C
100	34469	Pyrene	610, 625, 8100, 8270C
101	34551	1,2,4-Trichlorobenzene	612, 625, 8120A, 8270C
		Pesticides	
102	39330	Aldrin	608, 8081A
103	39336	Alpha-BHC	608, 8081A
104	39338	beta-BHC	608, 8081A
105	39340	Gamma-BHC	608, 8081A
106	34198	delta-BHC	608, 8081A
107	39350	Chlordane	608, 8081A
108	39300	4,4'-DDT	608, 8081A
109	39320	4,4'-DDE	608, 8081A
110	39310	4,4'-DDD	608, 8081A
111	39380	Dieldrin	608, 8081A
112	78428	Alpha-Endosulfan	608, 8081A
113	34356	beta-Endosulfan	608, 8081A
114	34351	Endosulfan Sulfate	608, 8081A
115	39390	Endrin	608, 8081A
116	34366	Endrin Aldehyde	608, 8081A
117	39410	Heptachlor	608, 8081A
118	39420	Heptachlor Epoxide	608, 8081A
119-125	4166	PCBs)	608, 8082
126	39400	Toxaphene	608, 8081A
		Miscellaneous receiving water Monitoring parameters	
	4	pH of receiving water	
	2	Hardness (mg/L as CaCO3)	
		Salinity of receiving water (mg/L)	
		Receiving water flow rate (cfs)	

ATTACHMENT I – STORM WATER POLLUTION PREVENTION PLAN (SWPPP)

A. Objectives of the SWPPP:

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

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

B. SWPPP Requirements

1. Availability

The SWPPP must be retained on-site and must be made immediately available to Regional Board personnel when requested. A copy of the SWPPP must be mailed within two (2) weeks of receiving a request or, for discharges to a storm sewer system, to the municipal operator of the storm sewer system. Upon receiving a request from the public for a copy of the SWPPP the permittee:

- a. Shall provide a copy of the SWPPP, as requested, within a reasonable timeframe,
- b. May contact the requester to determine if the entire SWPPP is needed or if specific portions satisfy the requestor's needs,
- c. May notify the requestor of the location at or near the permitted facility and times within normal business hours that the SWPPP can be viewed; and
- d. May notify Regional Board and the requestor of claims to confidential business information and/or security concerns with releasing the SWPPP to the public. The permittee shall identify the general sections of concern. Regional Board shall then coordinate with the permittee and requestor to provide such information as needed to satisfy the requestor's needs.

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

<p>PLANNING AND ORGANIZATION</p> <p>Form pollution prevention team Review other plans</p>
<p>ASSESSMENT PHASE</p> <p>Description of facility operation Develop a site map Inventory of materials and chemicals Identify potential pollutant sources Identify areas associated with industrial activity List significant leaks and spills List potential spill and leak areas Test for illicit non-storm water discharges Evaluate monitoring data</p>
<p>BMP IDENTIFICATION PHASE</p> <p>Minimum BMPs Facility Specific BMPs</p>
<p>IMPLEMENTATION PHASE</p> <p>Implement BMPs Collect and Review Records Train employees</p>
<p>EVALUATION / MONITORING</p> <p>Conduct annual facility evaluation Visual inspections Maintain/update proper records Review, revise, implement SWPPP</p>

2. Planning and Organization

a. Pollution Prevention Team

A responsible facility official or duly authorized representative must sign the SWPPP, its significant updates, monitoring results, and all certifications required by the permit. The responsible facility official can be a vice president or higher, a general partner, or an owner of the company or facility. To delegate to a duly authorized representative, the responsible facility official must submit to Regional Board the name of the individual or a position (plant manager, superintendent, or equivalent) as the duly authorized representative having overall responsibility for environmental matters. The company official responsible for preparing, updating, and implementing the SWPPP and for compliance with the permit should be thoroughly familiar with the permit requirements.

The SWPPP will identify specific individuals (a pollution prevention team) by name or by title within the facility organization that are responsible for developing the SWPPP and assisting the plant manager in its implementation, maintenance, and modification. The activities and responsibilities of the pollution prevention team should address all aspects of the facility's SWPPP.

Other environmental management plans/permits for the facility should also be reviewed to determine their impact on storm water pollutants. Examples include any of the following plans: Federal Spill Control and Countermeasures, Hazardous Waste Reduction, Dangerous Waste and Toxics Reduction, Occupational Safety and Health Plans, and Air Pollution Control Plans.

b. Review Other Requirements and Existing Facility Plans

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

3. Assessment Phase

a. Description of the Facility Operation

Describe the facility activities conducted at the site and provide a general layout. Include buildings, storage of raw materials, and the movement of horses and flow of goods and materials through the facility. A process flow diagram would be helpful. Include any variations that could impact storm water including seasonal and climate-related changes in activities, particularly if the changes affect contact with storm

water.

b. Site Map

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

The following information shall be included on the site map:

- i. The facility boundaries; the outline of all storm water drainage areas within the facility boundaries; portions of the drainage area impacted by run-on from surrounding areas; and direction of flow of each drainage area, on-site surface water bodies, and areas of soil erosion. The map shall also identify nearby water bodies (such as rivers, lakes, and ponds) and municipal storm drain inlets where the facility's storm water discharges and authorized non-storm water discharges may be received.
- ii. The location of the storm water collection and conveyance system, associated points of discharge, and direction of flow. Include any structural control measures that affect storm water discharges, authorized non-storm water discharges, and run-on. Examples of structural control measures are catch basins, berms, detention ponds, secondary containment, oil/water separators, diversion barriers, etc.
- iii. An outline of all impervious areas of the facility, including paved areas, buildings, covered storage areas, or other roofed structures.
- iv. Locations where materials are directly exposed to precipitation and the locations where significant spills or leaks may have occurred.
- v. Areas of facility activity. This shall include the locations of all storage areas and storage tanks, shipping and receiving areas, fueling areas, vehicle and equipment storage/maintenance areas, material handling and processing areas, waste treatment and disposal areas, dust or particulate generating areas, cleaning and rinsing areas, and other areas of facility activity which are potential pollutant sources.

c. Materials Inventory

List materials with a narrative that describes materials handling practices including the following:

- i. List of significant materials handled, treated, stored, or disposed of that can be exposed to storm water and result in storm water pollution of a significant amount. Include the location of each material that is exposed to storm water and a measure of its quantity, by volume or weight. Also include the significant materials handled during past activities.
- ii. Materials handled indoors that could be tracked outdoors by equipment or

vehicles.

- iii. Explanations of how significant materials are handled, treated, stored, and disposed of to prevent pollution of storm water and how each material has or can contaminate storm water, including past activities.
- iv. A list of the pollutants that may be present in your storm water discharges.
- v. Method(s) and location(s) of on-site storage and disposal and a list of significant past spills and leaks of toxic or hazardous pollutants.

Note: The category of significant materials includes, but is not limited to, manure, process water, fuels; materials such as solvents, detergents, plastic pellets; hazardous substances designated under Section 101 (14) CERCLA; any chemical the facility is required to report pursuant to Section 313 of Title III of SARA; fertilizer; pesticide; and waste products such as ashes, slag, and sludge that have the potential to be released with storm water discharges.

d. Identifying Areas Associated with Facility Activity

List pollutant generating activities and areas and describe their potential to be a pollutant source in a significant amount. Pollutant generating activities and areas can include:

- i. Location of the presence and movement of horses and birds
- ii. On-site solid waste or residual treatment, storage, or disposal; material handling sites; refuse sites; and sites used for the application or disposal of process wastewaters.
- iii. Vehicle and equipment maintenance, fueling, and washing/cleaning.
- iv. Outdoor storage area(s) of materials or products, stockpile area(s), tank farms, etc.
- v. Petroleum transfer area.
- vi. Roofs or other surfaces composed of materials that may be mobilized (eluted) by storm water, (e.g., galvanized or copper roofs).
- vii. Plant yards, immediate access roads and rail lines, manufacturing buildings, and areas where facility activity has taken place in the past and significant materials remain and are exposed to storm water.

Also check storage tanks, pipes, or pumping areas and note any leaks, spills, or staining. Is the loading and unloading of materials exposed to storm water? Do the dumpsters have a lid, or are they stored in a covered area? Verify whether the dumpsters or other disposal units have "unsealed" bottoms. Also pay attention to material handling equipment, including everything from vehicles to pallets, where raw and waste materials from industrial activities are exposed to storm water.

Note: Areas separate from the facility activity are excluded from permit coverage.

Examples of excluded areas are office buildings and parking lots used solely for employee parking, if the drainage does not mix with storm water runoff/rom areas with facility activity.

e. Identify Past Spills and leaks

Update in the SWPPP the significant spills and leaks of oils and toxic or hazardous pollutants that have occurred during the three years prior to the effective date of this Permit. This list will provide additional information on the potential sources of storm water contamination. One way of identifying whether small spills and leaks are taking place is by noting areas with "residues" of a material that may pollute the storm water.

f. Non-Storm Water Discharges

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

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

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

Regional Board anticipates covering certain non-storm water discharges including discharges from fire fighting activities; fire protection system flushing, testing, and maintenance; discharges of potable water, including water line flushing provided that water line flushing water is dechlorinated; uncontaminated air conditioning or compressor condensate; irrigation drainage; uncontaminated ground water or spring water; and discharges associated with dewatering of foundations, footing drains, or utility vaults where flows are not contaminated with process materials such as solvents. The following information on these conditionally approved non-storm water discharges, except for discharges from fire fighting activities and of uncontaminated ground or spring water, must be included in the SWPPP:

- i. Identification and location of the discharge to the storm water collection system of each non-storm water discharge.
- ii. Characterization of the non-storm water source, including estimated flows or flow volume, and likely pollutants, which may be present.

- iii. Evaluation of non-storm water discharges for any chemical contamination, including cooling tower mist.
 - iv. Evaluation, design, and implementation of available and reasonable best management practices to reduce or eliminate pollutants and/or flow volumes in non-storm water discharges.
- g. Include a Monitoring (sampling and visual inspection) Plan

Identify who is responsible for monitoring and thoroughly describe monitoring procedures to meet permit requirements including sampling points, frequencies, methods, parameters, completing the discharge monitoring report, etc. At a minimum the monitoring plan must include:

- i. Who conducts the sampling and visual inspections
- ii. Descriptions of all points of discharge to storm drains or to surface water and where samples will be taken and why sampling points were or were not selected at all multiple discharges.
- iii. An explanation how volumes/rates of each discharge will be/are estimated considering storm duration, intensity and quantity; tributary area and slope; and permeability of pervious and impervious areas.
- iv. A record of the differences in exposure to pollutants, e.g., periodic vs. continuous; and pollutant concentrations likely in the discharge(s).
- v. A list of the pollutant parameters (constituents) for analysis.
- vi. Procedures for sample collection and handling, sending samples to the lab, and submitting the results to Regional Board.

4. BMP identification Phase

OXY USA shall identify, describe and implement appropriate facility-specific BMPs that will reduce or prevent pollutants in storm water discharges to achieve compliance with the BAT/BCT standard, compliance with water quality standards, and meet the reduction goals of the pollutants of concern. These BMPs must include all of the minimum BMPs and additional facility specific BMPs as specified in the permit.

The Permit requires the implementation of best management practices to comply with state water quality standards; all known, available, and reasonable methods of prevention, control, and treatment (AKART); and federal technology-based treatment requirements.

The technical basis for the selection of all storm water BMPs must be documented in the SWPPP including how storm water BMPs were selected; the pollutant removal performance expected from the BMP being selected; the technical bases which support the performance claims for the BMPs being selected; and an assessment of how the selected BMPs will achieve compliance with state water quality standards, the AKART basis, and the federal technology-based treatment requirements under 40 CFR part 125.3.

Regional Board expects the demonstration documentation to be based on good science and sound engineering judgment.

a. Minimum BMPs

Discharger shall implement the minimum BMPs described in the permit throughout their facilities unless clearly inapplicable to the facility. If any of the minimum BMPs are not applicable to the facility, dischargers shall include a written explanation of inapplicability in their SWPPP. The Discharger has the burden to prove inapplicability. Dischargers may use alternative BMPs instead of the minimum BMPs only if the dischargers provide specific justification in their SWPPP explaining why the minimum BMPs can not be implemented, and what alternative BMPs shall be implemented that will reduce or prevent pollutants in storm water discharges at least to the same degree. Dischargers have the burden to show that its alternative BMPs are at least as effective as the minimum BMPs.

b. Facility-Specific BMPs

Dischargers, based upon the potential pollutant source assessment required in the permit shall identify and implement additional facility specific BMPs necessary to reduce or prevent pollutants in storm water discharges to achieve compliance with the BAT/BCT standard and reduction goals of the pollutant of concern.

5. Implementation Phase

Discharger shall include in the SWPPP a narrative description of each BMP implemented at the facility that includes:

- a. The type of pollutants the BMP is designed to reduce or prevent;
- b. The frequency, time(s) of day, or conditions when the BMP is scheduled for implementation;
- c. The locations within each area of industrial activity or industrial pollutant source where the BMP shall be implemented;
- d. Identification of the individual and/or position responsible for implementing the BMP;
- e. The procedures (including maintenance procedures) and/or instructions to implement the BMP; and
- f. The equipment and tools necessary to implement the BMP.

Include a schedule in the SWPPP for implementing additional or enhanced BMPs, which are either ordered by Regional Board or are necessary due to facility changes or a self-inspection, within 30 days of self-determination or a Regional Board order. Modification of BMPs to reduce pollutants may also be necessary for a change in design, construction, or operation and maintenance (O&M) of any BMP, and/or if a BMP is observed to be insufficiently effective during a visual inspection. Non-capital BMPs must be completed within two (2) weeks and capital BMPs within six (6) months after completing the

implementation plan for addition or modification of BMPs.

Describe any capital improvements (e.g., detention pond, oil removal, filter, cover (roof) for exposed materials, paving, construction of outside storage buildings, overhangs, containment areas, covered fuel island with Portland cement pavement, etc.) Provide the date (s) of completion of the capital and non-capital improvements.

6. Annual Comprehensive Site Compliance Evaluation

OXY USA shall conduct comprehensive site compliance evaluation (evaluation) annually (December of each year). The SWPPP shall be revised, as appropriate, and the revisions implemented within 90 days of the evaluation. Evaluations shall include the following:

- a. A review of all visual observation records, inspection records, and sampling and analysis results.
- b. A visual inspection of all potential pollutant sources for evidence of, or the potential for, pollutants entering the drainage system.
- c. A review and evaluation of all BMPs (both structural and non-structural) to determine whether the BMPs are adequate, properly implemented and maintained, or whether additional BMPs are needed. A visual inspection of equipment needed to implement the SWPPP, such as spill response equipment, shall be included.
- d. An evaluation report that includes, (i) identification of personnel performing the evaluation, (ii) the date(s) of the evaluation, (iii) necessary SWPPP revisions, (iv) schedule, for implementing SWPPP revisions, and (v) any incidents of non-compliance and the corrective actions taken, If the above certification cannot be provided, explain in the evaluation report why the facility operator is not in compliance with this General Permit. The evaluation report shall be submitted as part of the annual report.

ATTACHMENT J – REQUIRED MINIMUM AND OTHER SOURCE-SPECIFIC OPERATIONAL BEST MANAGEMENT PRACTICES (BMPs)

I. Minimum Operational BMPs for All Locations

- A.** To comply with the permit, all applicable operational BMPs listed in this section must be included in the Storm Water Pollution Prevention Plan (SWPPP).
- B. Formation of a Pollution Prevention Team.** The responsible company official must organize a pollution prevention team and assign responsibilities to one or more individuals by name and title to comply with the Permit. At minimum, the responsibilities include:
1. Developing, updating and ensuring implementation of the SWPPP;
 2. Holding regular meetings to review the overall effectiveness of the selected BMPs;
 3. Monitoring effluent (i.e. sampling), performing inspections, maintaining BMPs, and directing staff in the event of an emergency; and,
 4. Arranging the training of all team members to operate, maintain, and inspect of BMPs.
- C. Good Housekeeping.** Good housekeeping is an ongoing approach to improve and maintain a clean and orderly work environment and includes the following BMPs:
1. Promptly contain and clean up solid and liquid pollutant leaks and spills including oils, solvents, fuels, and dust from manufacturing operations on any soil, vegetation, or paved area exposed to storm water;
 2. Sweep paved material handling and storage areas regularly as needed to collect and dispose of dust and debris that could contaminate storm water. Do not hose down pollutants from any area to the ground, storm drain, conveyance ditch, or receiving water unless necessary for dust control purposes to meet air quality regulations and unless the pollutants are collected or conveyed to a treatment system approved by the local jurisdiction;
 3. Clean oils, debris, sludge, etc. from all BMP systems regularly, including catch basins, sedimentation basins, oil/water separators, boomed areas, and conveyance systems, to prevent the contamination of storm water;
 4. Promptly repair or replace all substantially cracked or otherwise damaged paved secondary containment, high-intensity parking, and any other drainage areas, which are subjected to pollutant material leaks or spills;
 5. Promptly repair or replace all leaking connections, pipes, hoses, valves, etc., which can contaminate storm water; and,
 6. Use solid absorbents, e.g., clay and peat absorbents and rags for cleanup of liquid spills/leaks, where practicable.

D. Preventive Maintenance. A preventive maintenance program includes inspection and maintenance of storm water management devices (BMPs) and drainage systems, and routine inspections of industrial facility operations including vehicle maintenance. Equipment such as tanks, containers (drums), and outside piping, pumps, and process equipment should be checked regularly for signs of deterioration. The following are additional preventive BMPs applicable at industrial sites:

1. Prevent the discharge of unpermitted liquid or solid wastes, process wastewater, and sewage to ground or surface water or to storm drains which discharge to surface water or to the ground. Floor drains in potential pollutant source areas shall not be connected to storm drains, surface water, or to the ground. Eliminate illicit non-storm water discharges within 30 days of discovery;
2. Conduct all oily parts cleaning, steam cleaning, or pressure washing of equipment or containers inside a building and/or on an impervious contained area such as a concrete pad. Direct contaminated storm water from such an area to a sanitary sewer where allowed by local sewer authority;
3. Do not pave over contaminated soil unless it has been determined that groundwater has not been and will not be contaminated by the soil;
4. Construct impervious areas that are compatible with the materials handled. Portland cement concrete, asphalt, or equivalent material may be considered;
5. Use drip pans to collect leaks and spills from equipment such as cranes at repair facilities, log stackers, industrial parts, trucks, and other vehicles that are stored outside. Empty drip pans immediately after a spill or leak is collected in an uncovered area;
6. Drain oil from fuel filters before disposal. Discard empty oil and fuel filters, oily rags, and other oily solid waste into appropriately closed and properly labeled containers and in compliance with the Uniform Fire Code (UFC);
7. For the storage of liquids use containers, such as steel and plastic drums, that are rigid and durable, corrosion resistant to the weather and fluid content, nonabsorbent, water tight, rodent-proof, and equipped with a close fitting cover;
8. For the temporary storage of solid wastes contaminated with liquids or other potential pollutant materials use dumpsters, garbage cans, drums and comparable containers that are durable, corrosion resistant, non-absorbent, non-leaking, and equipped with either a solid cover or screen cover to prevent littering. If covered with a screen, the container must be stored under a lean-to or equivalent structure; and,
9. Where exposed to storm water, use containers, piping, tubing, pumps, fittings, and valves that are appropriate for their intended use and for the contained liquid.
10. *Note: Evidence of storm water contamination can include the presence of floatables, visible sheen, color, or turbidity in the runoff or existing or historical operational problems at the facility. Use pH paper or meter to test for storm water contamination in areas subject to acid or alkaline contamination.*

E. Spill Prevention and Reporting and Emergency Cleanup. Identify area(s) of the facility where oil, hazardous material, or other pollutant spill(s) is/are likely to occur and their drainage points. Ensure that employees are aware of response procedures, including material handling and storage requirements. Access to appropriate spill cleanup equipment is essential. The SWPPP may include excerpts from other spill plans for the facility, e.g., Federal Spill Prevention Control and Countermeasure (SPCC) plans under Section 311 of the Clean Water Act. The following are required spill control and reporting BMPs:

1. Stop, contain, and clean up all spills immediately upon discovery. Do not flush absorbent materials or other spill cleanup materials to a storm drain or to surface water. Collect the contaminated absorbent material as a solid and place in appropriate disposal containers;
2. If any spill has reached, or may reach, a sanitary or a storm sewer, groundwater, or surface water, notify Regional Board and the local sewer authority immediately (not to exceed one hour). Take reasonable steps to minimize any adverse impacts to waters of the state and to correct the problem. Follow up with written documentation covering the event within thirty (30) days. Compliance with the preceding requirements does not relieve the permittee from responsibility to maintain continuous compliance with all permit conditions or the resulting liability for failure to comply; and,
3. Place and maintain emergency spill containment and cleanup kits at outside areas where there is a potential for fluid spills. These kits should be appropriate for the materials being handled and the size of the potential spill, and readily accessible to personnel responsible for spill response.
4. Oil includes the following: oil, gasoline, or diesel fuel that causes a violation of the state of California's Water Quality Standards, or, that causes a film or sheen upon or discoloration of the waters of the state or adjoining shorelines or causes a sludge or emulsion to be deposited beneath the surface of the water or upon adjoining shorelines.
5. *Note: Regional Board recommends that the kit(s) include salvage drums or containers, such as high density polyethylene, polypropylene or polyethylene sheet-lined steel; polyethylene or equivalent disposal bags; an emergency response guidebook; safety gloves/clothes/ equipment; shovels or other soil removal equipment; and oil containment booms and absorbent pads-all stored in an impervious container.*

II. BMPs for Dust Control

- A. Description of Pollutant Sources.** Material handling activities can generate dust that is typically removed using exhaust systems. This can generate air emissions that can contaminate storm water. Dusts can be generated wherever powdered materials are handled. The objective of this BMP is to reduce the storm water pollutants caused by dust generation and control.
- B. Pollutant Control Approach.** Prevent dust generation and emissions where practicable, regularly clean-up dust that can contaminate storm water, and convey dust contaminated storm water to proper treatment.
- C. Operational BMPs**

1. Clean, as needed, powder material handling equipment and vehicles that can be sources of storm water pollutants to remove accumulated dust and residue.
 2. Regularly sweep dust accumulation areas that can contaminate storm water. Sweeping should be conducted using vacuum filter equipment to minimize dust generation and to ensure optimal dust removal.
 3. Consider using dust filtration/collection systems such as bag house filters, cyclone separators, etc., to control vented dust emissions that could contaminate storm water.
 4. Use water spray to flush dust accumulations to sanitary sewers where allowed by the local sewer authority or to other appropriate treatment system.
 5. Use approved dust suppressants. Application of some products may not be appropriate in close proximity to receiving waters or conveyances close to receiving waters.
- D.** Treatment Control BMPs, if required. For removal of Total Suspended Solids (TSS) in storm water, use sedimentation basins, wet ponds, wet vaults, catch basin filters, vegetated filter strips, or equivalent sediment removal BMPs.

III. BMPs for Fueling at Dedicated Stations

- A.** Description of Pollutant Sources. Typically, storm water contamination at fueling stations is caused by leaks/spills of fuels, lube oils, radiator coolants, and vehicle washwater.
- B.** Pollutant Control Approach. Cover with roof or canopy and conduct the fueling in an impervious containment area.
- C.** Operational BMPs
1. Prepare an emergency spill response and cleanup plan (see applicable spill control BMPs) and have designated trained person(s) available either on site or on call at all times to promptly and properly implement that plan and immediately cleanup all spills. Keep suitable cleanup materials, such as dry adsorbent materials, on site to allow prompt cleanup of a spill.
 2. Train employees on the proper use of fuel dispensers. Post signs in accordance with the Uniform Fire Code (UFC). Post "No Topping Off" signs (topping off gas tanks causes spillage and vents gas fumes to the air). Make sure that the automatic shutoff on the fuel nozzle is functioning properly.
 3. The person conducting the fuel transfer must be present at the fueling pump during fuel transfer, particularly at unattended or self-serve stations.
 4. Keep drained oil filters in a suitable container or drum.
- D.** Structural Source Control BMPs
1. Design the fueling island to control spills (dead-end sump or spill control separator in compliance with the UFC) and to treat collected storm water and/or wastewater to required levels. Slope the concrete containment pad around the fueling island toward drains-either

trench drains, catch basins, and/or a dead-end sump. The slope of the drains shall not be less than 1 percent (Section 7901.8 of the UFC). Drains to treatment shall have a shutoff valve, which must be closed in the event of a spill. The spill control sump must be sized in compliance with Section 7901.8 of the UFC; or Design the spill containment pad of the fueling island with a sill or berm raised to a minimum of four inches (Section 7901.8 of the UFC) to prevent the runoff of spilled liquids and to prevent run-on of storm water from the surrounding area. Raised sills are not required at the open-grate trenches that connect to an approved drainage-control system.

2. The fueling pad must be paved with Portland cement concrete, or equivalent. Asphalt is not considered an equivalent material.
3. The fueling island must have a roof or canopy to prevent the direct entry of precipitation onto the spill containment pad. The roof or canopy should, at a minimum, cover the spill containment pad (within the grade break or fuel dispensing area) and preferably extend several additional feet to reduce the introduction of windblown rain. Convey all roof drains to storm drains outside the fueling containment area.

E. Treatment Control BMPs

1. If treatment of the runoff is required storm water collected on the fuel island containment pad must be conveyed to a sanitary sewer system, if approved by the sanitary authority; or to an appropriate treatment system such as an oil/water separator, media filter, biofilter, or equivalent treatment. Discharges from treatment systems to storm drains or surface water or to the ground must not display ongoing or recurring visible sheen and must not contain concentration values greater than the Basin Plan limits for oil and grease.
2. Alternatively, storm water collected on the fuel island containment pad may be collected and held for proper off-site disposal.
3. Conveyance of any fuel-contaminated storm water to a sanitary sewer must be approved by the local sewer authority and must comply with pretreatment regulations. These regulations prohibit discharges that could cause fire or explosion. An explosive or flammable mixture is defined under state and federal pretreatment regulations, based on a flash point determination of the mixture. If contaminated storm water is determined not to be explosive, then it could be conveyed to a sanitary sewer system.
4. Transfer the fuel from the delivery tank trucks to the fuel storage tank in impervious contained areas and ensure that appropriate overflow protection is used. Alternatively, cover nearby storm drains during the filling process and use drip pans under all hose connections.
5. Additional BMPs for vehicles ten feet in height or greater. A roof or canopy may not be practicable at fueling stations that regularly fuel vehicles that are ten feet in height or greater. At those types of fueling facilities, the following BMPs apply, as well as the applicable BMPs and fire prevention (UFC requirements) of this BMP for fueling stations. If a roof or canopy is impractical the concrete fueling pad must be equipped with emergency spill control, which includes a shutoff valve for the drainage from the fueling area. The valve must be closed in the event of a spill. An electronically actuated valve is preferred to minimize the time lapse between spill and containment. Spills must be cleaned up and disposed off site in accordance with BMPs for Spills of Oil and Hazardous Substances.

6. If treatment is required the valve may be opened to convey contaminated storm water to a sanitary sewer, if approved by the sewer authority, or to oil/water separator, media filter, biofilter, or equivalent treatment. Discharges from treatment systems to storm drains or surface water or to the ground must not display ongoing or recurring visible sheen and must not contain values greater than the Basin Plan requirement for oil and grease.

IV. BMPs for Non-storm water Illicit Connections to Storm Drains

- A. Description of Pollutant Sources. Illicit connections are unpermitted sanitary or process wastewater discharges to a storm drain or to a surface water, rather than to a sanitary sewer, industrial process wastewater or other appropriate treatment. Examples of non-storm water discharges include any wastewater coming from CAFO production area (process water), non-contact cooling water, vehicle wash water, and sanitary wastewater.
- B. Pollutant Control Approach. Identify and eliminate unpermitted discharges within 30 days.
- C. Operational BMPs
 1. Identify and eliminate unpermitted non-storm water discharges to storm drains, ground water, or surface water; and, convey unpermitted discharges to a sanitary sewer if allowed by the local sewer authority, or to other approved treatment, and, obtain appropriate permits for these discharges. Conduct a survey of sanitary and industrial wastewater, condensate, cooling water, and any other contaminant discharge connections to storm drains and to surface water as follows:
 2. Conduct a field survey of buildings, particularly older buildings, and other facility areas to locate storm drains from buildings and paved surfaces. Note where these join the public storm drain(s).
 3. If useful, prepare a map of each area as it is to be surveyed. Show on the map the known location of storm drains, sanitary sewers, and permitted and unpermitted discharges. Aerial photos may be useful. Check records such as piping schematics to identify known side sewer connections and show these on the map. Consider using smoke, dye, or chemical analysis tests to detect connections between two conveyance systems (e.g., process water and storm water). If desirable, conduct TV inspections of the storm drains and record the footage on videotape. Compare the observed locations of connections with the information on the map and revise the map accordingly. Note suspect connections that are inconsistent with the field survey. Several of the common dry weather inspection methods are described below.
- D. Common Dry Weather Methods for Locating Non-Storm Water Discharges
 1. Review a sewer map or plant schematic (a map of pipes and drainage systems used to carry process wastewater, non-contact cooling water, air conditioner condensate, and sanitary wastes (bathrooms, sinks, etc.)). It is not uncommon to find that accurate and current information is not available. If you have an accurate and current map, simply examine the pathways of the different water circuits cited above. Determine where interior floor drains discharge. The drain(s) may be connected to the storm water drainage system. If so, they *must* be disconnected and redirected to the sanitary sewer. Contact your local sewage utility before redirecting flow to the sanitary sewer.

2. Observe all discharge points during dry weather for odors, discolorations, and abnormal flows or conditions. As a rule, the discharge point should be dry during a period of extended dry weather since a storm water collection system should only collect storm water.
3. Smoke testing of wastewater and storm water collection and conveyance is used to detect connections between the two systems. During dry weather, the storm water collection system is filled with smoke and then traced to sources. The appearance of smoke at the base of a toilet, sink, floor drain, wastewater conveyance, etc., indicates that there may be a connection with the storm water system. If so, they must be disconnected and redirected to the sanitary sewer. Contact your local sewage utility before redirecting flow to the sanitary sewer.
4. A dye test can be performed by simply releasing a dye into floor drains, sinks, basins, or other potential contaminant sources that may discharge to a surface water or storm sewer system. Examine discharge points in the storm water collection system or surface water for discoloration.

V. BMPs for Pesticide Management

- A. Description of Pollutant Sources. Runoff from pesticide application areas can cause contamination of storm water. Pesticide applications at access roads and yard areas include sapstain and insect control on lumber and logs, rooftop moss removal, and killing nuisance rodents and vectors. Leaching and dripping from treated parts, container leaks, product misuse, and outside storage of pesticide contaminated materials and equipment can cause storm water contamination.
- B. Pollutant Control Approach. Develop and implement an Integrated Pest Management (IPM) plan and use pesticides only as a last resort. If pesticides/herbicides are used they must be carefully applied in accordance with label instructions on U.S. Environmental Protection Agency (EPA) registered materials.
- C. Operational BMPs
 1. Develop and implement an IPM plan and use pesticides only as a last resort program may consist of the following steps:
 - a. Step 1. Correctly identify problem pests and understand their life cycle.
 - b. Step 2. Establish tolerance thresholds for pests.
 - c. Step 3. Monitor to detect and prevent pest problems.
 - d. Step 4. Modify the maintenance program to promote healthy plants and discourage pests.
 - e. Step 5. Use cultural, physical, mechanical, or biological controls first if pests exceed the tolerance thresholds.
 - f. Step 6. Evaluate and record the effectiveness of the control and modify maintenance practices to support lawn or landscape recovery and prevent recurrence.

2. Implement a pesticide-use plan and include at a minimum: a list of selected pesticides and their specific uses; brands, formulations, application methods and quantities to be used; equipment use and maintenance procedures; safety, storage, and disposal methods; and monitoring, record keeping, and public notice procedures.
3. Choose the least toxic pesticide available that is capable of reducing the infestation to acceptable levels. The pesticide should readily degrade in the environment and/or have properties that strongly bind it to the soil. Any pest control used should be conducted at the life stage when the pest is most vulnerable. Any method used should be site-specific and not used wholesale over a wide area.
4. Apply the pesticide according to label directions. Under no conditions shall pesticides be applied in quantities that exceed manufacturer's instructions.
5. Mix the pesticides and clean the application equipment in an area where accidental spills will not enter surface or ground waters and will not contaminate the soil.
6. Store pesticides in enclosed areas or in covered impervious containment. Ensure that pesticide contaminated storm water or spills/leaks of pesticides are not discharged to storm drains. Do not hose down the paved areas to a storm drain or conveyance ditch. Store and maintain appropriate spill cleanup materials in a location known to all near the storage area.
7. Clean up any spilled pesticides and ensure that the pesticide contaminated waste materials are kept in designated covered and contained areas.
8. Include immediate shutoff of the pesticide application equipment in the event of an emergency.
9. Do not spray pesticides within 100 feet of open waters including wetlands, ponds, and streams, sloughs and any drainage ditch or channel that leads to open water except when approved by Regional Board or the local jurisdiction. All sensitive areas including wells, creeks, and wetlands must be flagged prior to spraying.
10. As required by the local government or by California Department of Food and Agriculture, complete public posting of the area to be sprayed prior to the application.
11. Spray applications should be conducted only during weather conditions as specified in the label direction and applicable local and state regulations. Do not apply during rain or immediately before expected rain.
12. Consider alternatives to the use of pesticides such as covering or harvesting weeds, substituting vegetative growth, and manually controlling weeds and removing moss.
13. Rinseate from equipment cleaning and/or triple rinsing of pesticide containers should be used as product or recycled into product.
14. Once a pesticide is applied, its effectiveness should be evaluated for possible improvement. Records should be kept showing the applicability and inapplicability of the pesticides considered. An annual evaluation procedure should be developed including a

review of the effectiveness of pesticide applications, impact on buffers and sensitive areas (including potable wells), public concerns, and recent toxicological information on pesticides used/proposed for use.

15. If individual or public potable wells are located in the proximity of commercial pesticide applications, contact the state Department of Health or Department of Food and Agriculture hydrogeologist to determine if additional pesticide application control measures are necessary.
16. Consider the use of soil amendments, such as compost, that are known to control some common diseases in plants such as Pythium root rot, ashy stem blight, and parasitic nematodes. The following are three possible mechanisms for disease control by compost addition (USEP A Publication 530-F-9-044):
 - a. Successful competition for nutrients by antibiotic production;
 - b. Successful predation against pathogens by beneficial microorganism; and,
 - c. Activation of disease-resistant genes in plants by composts.
17. *Note: Installing an amended soil/landscape system can preserve both the plant system and the soil system more effectively. This type of approach provides a soil/landscape system with adequate depth, permeability, and organic matter to sustain itself and continue working as an effective storm water infiltration system and a sustainable nutrient cycle.*
18. *EPA Publication 20T-1002, entitled "Suspended, Canceled and Restricted Pesticides," which lists all restricted pesticides and the specific uses that area allowed, is available for download at the EPA's National Service Center for Environmental Publications website, nepis.epa.gov.*

VI. BMPs for Loading and Unloading Areas for Liquid or Solid Material

- A. Description of Pollutant Sources.** Loading and unloading of liquid and solid materials are typically conducted at shipping and receiving, outside storage, fueling areas, etc. Materials transferred can include products, raw materials, intermediate products, waste materials, fuels, and scrap metals. Leaks and spills of fuels, oils, powders, organics, heavy metals, salts, acids, alkalis, etc., during transfer are potential causes of storm water contamination. Spills from hydraulic line breaks are a common problem at loading docks.
- B. Pollutant Control Approach.** Cover and contain the loading/unloading area where necessary to prevent run-on of storm water and run-off of contaminated storm water.
- C. Operational BMPs**
 1. A significant amount of debris can accumulate at outside, uncovered loading/unloading areas. Sweep these surfaces frequently to remove material that could otherwise be washed off by storm water. Sweep outside areas that are covered for a period of time by containers, logs, or other material after the areas are cleared.
 2. Place drip pans, or other appropriate temporary containment device, at locations where leaks or spills may occur such as hose connections, hose reels, and filler nozzles. Drip

pans shall always be used when making and breaking connections. Check loading and unloading equipment such as valves, pumps, flanges, and connections regularly for leaks and repair as needed.

3. At tanker truck and rail transfer areas to above/below-ground storage tanks:
 - a. To minimize the risk of accidental spillage, prepare an operations plan that describes procedures for loading/unloading. Train the employees, especially fork lift operators, in its execution and post it or otherwise have it readily available to employees.
 - b. Prepare and implement an emergency spill cleanup plan for the facility that includes the following BMPs:
 - i. Ensure the cleanup of liquid/solid spills in the loading/unloading area immediately, if a significant spill occurs, and, upon completion of the loading/unloading activity, or, at the end of the working day;
 - ii. Retain and maintain an appropriate oil spill cleanup kit on-site for rapid cleanup of material spills.
 - iii. Ensure that an employee trained in spill containment and cleanup is present during loading/unloading.
 - iv. Report spills as required in BMP on spills
4. At rail transfer areas to above/below-ground storage tanks, install a drip pan system within the rails to collect spills/leaks from tank cars and hose connections, hose reels, and filler nozzles.

D. Structural Source Control BMPs

1. At all loading and unloading areas:
 - a. Consistent with UFC requirements and to the extent practicable, conduct unloading or loading of solids and liquids in the facility building, under a roof, lean-to, or other appropriate cover.
 - b. Berm, dike, and/or slope the loading/unloading area to prevent run-on of storm water and to prevent the run-off or loss of any spilled material from the area.
 - c. Large loading areas frequently are not curbed along the shoreline. As a result, storm water passes directly off the paved surface into surface water. Place curbs along the edge or slope the edge such that the storm water can flow to an internal storm drain system that leads to an approved treatment BMP.
 - d. Pave and slope loading/unloading areas to prevent the pooling of water. The use of catch basins and drain lines within the interior of the paved area must be minimized as they will frequently be covered by material, or they should be placed in designated "alleyways" that are not covered by material, containers, or equipment.

- e. For the transfer of pollutant liquids in areas that cannot contain a catastrophic spill, consider installing an automatic shutoff system in case of unanticipated off-loading interruption (e.g., coupling break, hose rupture, overflow, etc.).
2. At loading and unloading docks:
 - a. Install and maintain overhangs or door skirts that enclose the trailer end to prevent contact with rainwater.
 - b. Design the loading/unloading area with berms, sloping, etc., to prevent the run-on of storm water.
 - c. Retain on-site the necessary materials for rapid cleanup of spills.
 3. At tanker truck transfer areas to above/below-ground storage tanks:
 - a. Pave the area on which the transfer takes place. If any transferred liquid, such as gasoline, is reactive with asphalt, pave the area with Portland cement concrete.
 - b. Slope, berm, or dike the transfer area to a dead-end sump, spill containment sump, a spill control (SC) oil/water separator, or other spill control device. The minimum spill retention time should be 15 minutes at the greater flow rate of the highest fuel dispenser nozzle through-put rate, or the peak flow rate of the 6-month, 24-hour storm event over the surface of the containment pad, whichever is greater. The volume of the spill containment sump should be a minimum of 50 gallons with an adequate grit sedimentation volume.

VII. BMPs for Maintenance and Repair of Vehicles and Equipment

- A. Description of Pollutant Sources.** Pollutant sources include parts/vehicle cleaning, spills/leaks of fuel and other liquids, replacement of liquids, outdoor storage of batteries/liquids/parts, and vehicle parking.
- B. Pollutant Control Approach.** Control of leaks and spills of fluids using good housekeeping and cover and containment BMPs.
- C. Operational BMPs**
 1. Inspect for leaks all incoming vehicles, parts, and equipment stored temporarily outside.
 2. Use drip pans or containers under parts or vehicles that drip or are likely to drip liquids, such as during dismantling of liquid containing parts or removal or transfer of liquids.
 3. Remove batteries and liquids from vehicles and equipment in designated areas designed to prevent storm water contamination. Store cracked batteries in a covered non-leaking secondary containment system.
 4. Empty oil and fuel filters before disposal. Provide for proper disposal of waste oil and fuel.

5. Do not pour/convey wash water, liquid waste, or other pollutant into storm drains or to surface water.
6. Do not hose down work areas to storm drains. Use dry methods for cleaning leaked fluids. Check with the local sanitary sewer authority for approval to convey to a sanitary sewer.
7. Do not connect maintenance and repair shop floor drains to storm drains or to surface water.
8. Consider storing damaged vehicles inside a building or other covered containment until all liquids are removed. Remove liquids from vehicles retired for scrap.
9. Consider cleaning parts with aqueous detergent based solutions or non-chlorinated solvents such as kerosene or high flash mineral spirits, and/or use wire brushing or sand blasting whenever practicable.
10. Avoid using toxic liquid cleaners such as methylene chloride, 1,1,1trichloroethane, trichloroethylene, or similar chlorinated solvents. Choose cleaning agents that can be recycled.
11. Inspect all BMPs regularly, particularly after a significant storm. Identify and correct deficiencies to ensure that the BMPs are functioning as intended.

D. Structural Source Control BMPs

1. Conduct all maintenance and repair of vehicles and equipment in a building, or other covered impervious containment area that is sloped to prevent run-on of uncontaminated storm water and run-off of contaminated storm water.
2. Park large mobile equipment, such as log stackers, in a designated contained area.

E. Treatment Control BMPs, if required.

1. Contaminated storm water run-off from vehicle staging and maintenance areas may be conveyed to a sanitary sewer, if allowed by the local sewer authority, or to an API or CP oil and water separator followed by a basic treatment BMP, media filtration systems, or other equivalent oil treatment system.

VIII. BMPs for Maintenance of Storm Water Drainage and Treatment Systems

- A. Description of Pollutant Sources.** Facilities include roadside catch basins, conveyance systems, detention facilities such as ponds and vaults, oil and water separators, biofilters, settling basins, infiltration systems, and all other types of storm water treatment systems. Oil and grease, hydrocarbons, debris, heavy metals, sediments, and contaminated water are found in catch basins, oil and water separators, settling basins, etc.
- B. Pollutant Control Approach.** Provide maintenance and cleaning of debris, sediments, and oil from storm water collection, conveyance, and treatment systems to obtain proper operation.
- C. Operational BMPs.**

1. Maintain storm water treatment facilities according to the following BMPs:
 - a. Inspect and clean treatment BMPs, conveyance systems, and catch basins as needed, and determine whether improvements in operations and maintenance (O&M) are needed.
 - b. Promptly repair any deterioration threatening the structural integrity of the facilities. These include replacement of clean-out gates, catch basin lids, and rock in emergency spillways.
 - c. Ensure that storm sewer capacities are not exceeded and that heavy sediment discharges to the sewer system are prevented.
 - d. Regularly remove debris and sludge from BMPs used for peak-rate control, treatment, etc., and discharge to a sanitary sewer if approved by the sewer authority or truck to a local or state government approved disposal site.
 - e. Post warning signs; "Dump No Waste - Drains to Ocean," "Streams," "Lakes," or emboss on or adjacent to all storm drain inlets *where practical*.

IX. BMPs for Mobile Fueling of Vehicles and Heavy Equipment

- A. Pollutant Control Approach.** Proper training of the fueling operator and the use of spill/drip control and reliable fuel transfer equipment with backup shutoff valving are typically needed.

Note that some local fire departments may have restrictions on mobile fueling practices.

B. Operational BMPs

1. Ensure that all mobile fueling operations are approved by the local fire department and comply with local and California State fire codes.
2. In fueling locations that are in close proximity to sensitive aquifers, designated wetlands, wetland buffers, or other waters of the state, approval by local jurisdictions is necessary to ensure compliance with additional local requirements.
3. Ensure the compliance with all 49 CFR 178 requirements for DOT 406 cargo tanker. Documentation from a Department of Transportation (DOT) Registered Inspector shall be proof of compliance.
4. Ensure the presence and the constant observation/monitoring of the driver/operator at the fuel transfer location at all times during fuel transfer and ensure that the following procedures are implemented at the fuel transfer locations:
 - a. Locating the point of fueling at least 25 feet from the nearest storm drain or inside an impervious containment with a volumetric holding capacity equal to or greater than 110 percent of the fueling tank volume, or covering the storm drain to ensure no inflow of spilled or leaked fuel. Storm drains that convey the inflow to a spill control separator approved by the local jurisdiction and the fire department need not be covered. Potential spill/leak conveyance surfaces must be impervious and in good repair;

- b. Placing a drip pan or an absorbent pad under each fueling location prior to and during all dispensing operations. The pan (must be liquid tight) and the absorbent pad must have a capacity of 5 gallons. Spills retained in the drip pan or the pad need not be reported;
 - c. The handling and operation of fuel transfer hoses and nozzle, drip panes), and absorbent pads as needed to prevent spills/leaks of fuel from reaching the ground, storm drains, and receiving waters;
 - d. Not extending the fueling hoses across a traffic lane without fluorescent traffic cones, or equivalent devices, conspicuously placed so that all traffic is blocked from crossing the fuel hose;
 - e. Removing the fill nozzle and cessation of filling when the automatic shut-off valve engages. Do not allow automatic shutoff fueling nozzles to be locked in the open position; and,
 - f. Not "topping off" the fuel receiving equipment.
5. Provide the driver/operator of the fueling vehicle with:
 - a. Adequate flashlights or other mobile lighting to view fill openings with poor accessibility. Consult with local fire department for additional lighting requirements; and,
 - b. Two-way communication with his/her home base.
 6. Train the driver/operator annually in spill prevention, cleanup measures and emergency procedures.
 7. Make all employees aware of the significant liability associated with fuel spills.
 8. The fueling operating procedures should be properly signed and dated by the responsible manager, distributed to the operators, retained in the organization files, and made available in the event an authorized government agency requests a review.
 9. Ensure that the local fire department (911) and the Regional Board are immediately notified in the event of any spill entering the surface or ground waters. Establish a "call down list" to ensure the rapid and proper notification of management and government officials should any significant amount of product be lost offsite. Keep the list in a protected but readily accessible location in the mobile fueling truck. The "call down list" should also pre-identify spill response contractors available in the area to ensure the rapid removal of significant product spillage into the environment.
 10. Maintain in all fueling vehicles a minimum of the following spill cleanup materials that are readily available for use:
 - a. Non-water absorbents capable of absorbing 15 gallons of diesel fuel;
 - b. A storm drain plug or cover kit;

- c. A non-water absorbent containment boom of a minimum 10 feet in length with a 12 gallon absorbent capacity;
 - d. A non-metallic shovel; and,
 - e. Two, five-gallon buckets with lids.
11. Maintain and replace equipment on fueling vehicles, particularly hoses and nozzles, at established intervals to prevent failures.

C. Structural Source Control BMP. Automatic fuel transfer shut-off nozzles and an adequate lighting system at the filling point.

X. BMPs for Painting/Finishing/Coating of Vehicles/Buildings/ Equipment

A. Description of Pollutant Sources. Surface preparation and the application of paints, finishes and/or coatings to vehicles, buildings, and/or equipment outdoors can be sources of pollutants. Potential pollutants include organic compounds, oils and greases, heavy metals, and suspended solids.

B. Pollutant Control Approach. Cover and contain painting and sanding operations and apply good housekeeping and preventive maintenance practices to prevent the contamination of storm water with painting oversprays and grit from sanding.

C. Operational BMPs

1. Train employees in the careful application of paints, finishes, and coatings to reduce misuse and overspray. Use ground or drop cloths underneath outdoor painting, scraping, and sandblasting work, and properly clean and temporarily store collected debris daily.
2. Do not conduct spraying, blasting, or sanding activities over open water or where wind may blow paint into water.
3. Wipe up spills with rags and other absorbent materials immediately. On dock areas sweep rather than hose down debris. If hosing is conducted, collect any hose water generated and convey to appropriate treatment and disposal. Do not hose down the area to a storm drain or receiving water or conveyance ditch to receiving water.
4. Use a storm drain cover, filter fabric, or similarly effective run-off control device if dust, grit, wash water, or other pollutants may escape the work area and enter a catch basin. The containment device(s) must be in place at the beginning of the workday. Collect contaminated run-off and solids and properly dispose of such wastes before removing the containment device(s) at the end of the workday.
5. Use a ground cloth, pail, drum, drip pan, tarpaulin, or other protective device for activities such as paint mixing and tool cleaning outside or where spills can contaminate storm water.
6. Properly dispose of all wastes and prevent all uncontrolled releases to the air, ground, or water.

7. Clean brushes and tools covered with non-water-based paints, finishes, or other materials in a manner that allows collection of used solvents (e.g., paint thinner, turpentine, xylol) for recycling or proper disposal.
 8. Store toxic materials under cover (tarp, etc.) during precipitation events and when not in use to prevent contact with storm water.
- D.** Structural Source Control BMPs. Enclose and/or contain all work while using a spray gun or conducting sand blasting and in compliance with applicable air pollution control and OSHA requirements. Do not conduct outside spraying, grit blasting, or sanding activities during windy conditions which render containment ineffective.

XI. BMPs for Storage of Liquid, Food Waste, or Dangerous Wastes in Containers

- A.** Description of Pollutant Sources. Steel and plastic drums with volumetric capacities of 55 gallons or less are typically used at industrial facilities for container storage of liquids and powders. The BMPs specified below apply to container(s) located outside a building used for temporary storage of accumulated food wastes, vegetable or animal grease, used oil, liquid feedstock or cleaning chemical, or hazardous wastes (liquid or solid) unless the business is permitted by Regional Board to store the wastes. Leaks and spills of pollutant materials during handling and storage are the primary sources of pollutants. Oil and grease, acid/alkali pH, BOD, COD are potential pollutant constituents.
- B.** Pollutant Control Approach. Store containers in impervious containment under a roof or other appropriate cover, or in a building. For roll-containers (for example, dumpsters) that are picked up directly by the collection truck, a filet can be placed on both sides of the curb to facilitate moving the dumpster. If a storage area is to be used on site for less than 30 days, a portable temporary secondary system can be used in lieu of a permanent system as described above.
- C.** Operational BMPs
1. Place tight-fitting lids on all containers.
 2. Place drip pans beneath all mounted container taps and at all potential drip and spill locations during filling and unloading of containers.
 3. Inspect container storage areas regularly for corrosion, structural failure, spills, leaks, overfills, and failure of piping systems. Check containers daily for leaks/spills. Replace containers and replace and tighten bungs in drums as needed.
 4. Businesses accumulating dangerous wastes that do not contain free liquids need only to store these wastes in a sloped designated area with the containers elevated or otherwise protected from storm water run-on.
 5. Drums stored in an area where unauthorized persons may gain access must be secured in a manner that prevents accidental spillage, pilferage, or any unauthorized use.
 6. If the material is a dangerous waste, the business owner must comply with any additional State Board requirements.

7. Storage of reactive, ignitable, or flammable liquids must comply with the UFC.
8. Cover dumpsters, or keep them under cover such as a lean-to, to prevent the entry of storm water. Replace or repair leaking garbage dumpsters.
9. Drain dumpsters and/or dumpster pads to sanitary sewer. Keep dumpster lids closed. Install water proof liners.

D. Structural Source Control BMPs

1. Keep containers with dangerous waste, food waste, or other potential pollutant liquids inside a building unless this is impracticable due to site constraints or UFC.
2. Store containers in a designated area, which is covered, bermed or diked, paved and impervious in order to contain leaks and spills. The secondary containment shall be sloped to drain into a dead-end sump for the collection of leaks and small spills.
3. For liquid wastes, surround the containers with a dike. The dike must be of sufficient height to provide a volume of either 10 percent of the total enclosed container volume or 110 percent of the volume contained in the largest container, whichever is greater, or, if a single container, 110 percent of the volume of that container.
4. Place containers mounted for direct removal of a liquid chemical for use by employees inside a containment area as described above. Use a drip pan during liquid transfer.

E. Treatment Control BMP, if required

1. For contaminated storm water in the containment area, connect the sump outlet to a sanitary sewer, if approved by the local Sewer Authority, or to appropriate treatment such as an API or CP oil/water separator, catch basin filter, or other appropriate system. Equip the sump outlet with a normally closed valve to prevent the release of spilled or leaked liquids, especially flammables (compliance with fire codes), and dangerous liquids. This valve may be opened only for the conveyance of contaminated storm water to treatment.
2. Another option for discharge of contaminated storm water is to pump it from a dead-end sump or catchment to a tank truck or other appropriate vehicle for off-site treatment and/or disposal.

XII. BMPs for Washing and Steam Cleaning Vehicles/Equipment Building Structures

- A. Description of Pollutant Sources.** Wash water from cleaning activities can contain oil and grease, suspended solids, heavy metals, soluble organics, soaps, and detergents that can contaminate storm water.
- B. Pollutant Control Approach.** The preferred approach to separate the uncontaminated storm water from the pollutant sources is to cover and/or contain the cleaning activity, or conduct the activity inside a building. Wash water must be conveyed to industrial treatment or a sanitary sewer after approval by the local sewer authority; temporarily stored before proper disposal; or recycled, with no discharge to the ground, to a storm drain, or to surface water.

C. Structural Source Control BMPs

1. Conduct vehicle equipment washing in a building or under a roof, with washwater draining to industrial treatment facility or a sanitary sewer, if approved by the local sewer authority,
2. Conduct outside washing operation in a designated wash area as follows:
 - a. Conduct washing on a paved spill containment pad to prevent the run-on of storm water from adjacent areas. Slope the spill containment area so that wash water is collected in a containment pad drain system with perimeter drains, trench drains or catchment drains. Size the containment pad to extend out a minimum of four feet on all sides of the vehicles and/or equipment being washed.
 - b. Convey the washwater to a sump (like a grit separator) and then to a sanitary sewer (if allowed by the local Sewer Authority), or industrial wastewater treatment, or recycle system. An NPDES permit would be required for any wash water discharge to a storm drain or receiving water after treatment. Contact the Regional Board regional office for NPDES Permit requirements.
 - c. For discharge to a sanitary sewer, the containment sump must have a positive control outlet valve for spill control with live containment volume and oil/water separation. Size the minimum live storage volume to contain the maximum expected daily wash water flow plus the sludge storage volume below the outlet pipe. The outlet valve will be shut during the washing cycle to collect the wash water in the sump. The valve should remain shut for at least two hours following the washing operation to allow the oil and solids to separate before discharge to a sanitary sewer. (See Regional Board Publication WQ-95-056) The inlet valve could be closed when washing is not occurring, thereby preventing the entry of uncontaminated storm water into the pretreatment/ treatment system. The storm water can then drain into the conveyance discharge system outside of the wash pad (essentially bypassing the wash water treatment/conveyance system). Post signs to inform operating personnel of the operation and purpose of the valve. Clean the concrete pad thoroughly until there is no foam or visible sheen in the wash water prior to closing the inlet valve and allowing uncontaminated storm water to bypass (overflow and drain off) the pad.
 - d. For uncovered wash pads, the positive control outlet valve may be manually operated, but an automatic pneumatic or electric valve system is preferable. The valve may be on a timer circuit to be opened on completion of a wash cycle. The timer would then close the valve after the sump or separator is drained
 - e. Because soluble/emulsifiable detergents can be used in the wash medium, the selection of soaps and detergents and treatment BMPs should be considered carefully. *Oil/water separators are ineffective in removing emulsified or water soluble detergents*