

**CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
LOS ANGELES REGION**

MONITORING AND REPORTING PROGRAM NO. 5427

for

**SHELL OIL PRODUCTS US
(LOS ANGELES REFINERY)
(CA0003778)**

I. Reporting Requirements

- A. Shell Oil Products US, Los Angeles Refinery (hereinafter LA Refinery or Discharger) shall implement this monitoring program on the effective date of this Order. All monitoring reports shall be submitted quarterly and must be received by the Regional Board by the dates in the following schedule. All monitoring reports should be addressed to the Regional Board, Attention: Information Technology Unit. The first monitoring report under this Program is due by January 15, 2006.

Reporting Period	Report Due
January-March	April 15
April-June	July 15
July-September	October 15
October-December	January 15
Annual Summary Report	March 1

If there is no discharge during any reporting period, the report shall so state.

- B. The Discharger shall submit an annual summary report containing a discussion of the previous year's effluent and receiving water monitoring data, as well as graphical and tabular summaries of the data. The data shall be submitted to the Regional Board on hard copy and on a 3 1/2" computer diskette. Submitted data must be IBM compatible, preferably using EXCEL software. This annual report is to be received by the Regional Board by March 1 of each year following the calendar year of data collection. The Regional Board and the State Water Resources Control Board (State Board) are developing a database compliance monitoring management system that may require the Discharger to submit the monitoring and annual summary reports electronically when it becomes fully operational.
- C. Each monitoring 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 with waste discharge requirements, as well as all excursions of effluent limitations.
- D. The Discharger shall inform the Regional Board well in advance of any proposed construction activity that could potentially affect compliance with applicable requirements.

II. Effluent Monitoring Requirements

- A. A sampling station shall be established for each point of discharge and shall be located where representative samples for discharges through NPDES Discharge Serial No. 001 (Latitude 33° 47' 35" North, Longitude 118° 13' 48" West) and Discharge Serial No. 003 (Latitude 33° 47' 8" North, Longitude 118° 14' 6" West) to Dominguez Channel can be obtained.
- B. This Regional Board shall be notified in writing of any change in the sampling stations once established or in the methods for determining the quantities of pollutants in the individual waste streams.
- C. Pollutants shall be analyzed using the analytical methods described in 40 CFR Sections 136.3, 136.4, and 136.5 (revised May 14, 1999); or, where no methods are specified for a given pollutant, by methods approved by this Regional Board or the State Board. Laboratories analyzing effluent samples and receiving water samples shall be certified by the California Department of Health Services Environmental Laboratory Accreditation Program (ELAP) or approved by the Executive Officer and must include quality assurance/quality control (QA/QC) data in their reports. A copy of the laboratory certification shall be provided each time a new certification and/or renewal of the certification is obtained from ELAP.

The monitoring reports shall specify the analytical method used, the Method Detection Limit (MDL), and the Minimum Level (ML) for each pollutant. For the purpose of reporting compliance with numerical limitations, performance goals, and receiving water limitations, analytical data shall be reported by one of the following methods, as appropriate:

1. An actual numerical value for sample results greater than or equal to the ML; or,
2. "Detected, but Not Quantified (DNQ)" if results are greater than or equal to the laboratory's MDL but less than the ML; or,
3. "Not-Detected (ND)" for sample results less than the laboratory's MDL with the MDL indicated for the analytical method used.

Current MLs (Attachment B) are those published by the State Water Resources Control Board in the *Policy for the Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California, March 2, 2000*.

- D. Where possible, the MLs employed for effluent analyses shall be lower than the permit limitations established for a given parameter. If the ML value is not below the effluent limitation, then the lowest ML value and its associated analytical method shall be selected for compliance purposes. At least once a year, the Discharger shall submit a list of the analytical methods employed for each test and associated laboratory QA/QC procedures.

The Regional Board, in consultation with the State Board Quality Assurance Program, shall establish an ML that is not contained in Attachment B to be included in the Discharger's permit in any of the following situations:

1. When the pollutant under consideration is not included in Attachment B;
 2. When the Discharger and Regional Board agree to include in the permit a test method that is more sensitive than that specified in 40 CFR Part 136 (revised May 14, 1999);
 3. When the Discharger agrees to use an ML that is lower than that listed in Attachment B;
 4. When the Discharger demonstrates that the calibration standard matrix is sufficiently different from that used to establish the ML in Attachment B, and proposes an appropriate ML for their matrix; or,
 5. When the Discharger uses a method whose quantification practices are not consistent with the definition of an ML. Examples of such methods are the U.S. EPA-approved method 1613 for dioxins and furans, method 1624 for volatile organic substances, and method 1625 for semi-volatile organic substances. In such cases, the Discharger, the Regional Board, and the State Board shall agree on a lowest quantifiable limit and that limit will substitute for the ML for reporting and compliance determination purposes.
- E. Water/wastewater samples must be analyzed within allowable holding time limits as specified in 40 CFR section 136.3. All QA/QC items must be run on the same dates the samples were actually analyzed, and the results shall be reported in the Regional Board format, when it becomes available, and submitted with the laboratory reports. Proper chain of custody procedures must be followed, and a copy of the chain of custody shall be submitted with the report.
- F. All analyses shall be accompanied by the chain of custody, including but not limited to data and time of sampling, sample identification, and name of person who performed sampling, date of analysis, name of person who performed analysis, QA/QC data, method detection limits, analytical methods, copy of laboratory certification, and a

perjury statement executed by the person responsible for the laboratory.

- G. For parameters for which both monthly average and daily maximum limits are specified and the monitoring frequency is less than four times a month, the following shall apply. If an analytical result is greater than the monthly average limit, the sampling frequency shall be increased (within one week of receiving the test results) to a minimum of once weekly at equal intervals, until at least four consecutive weekly samples have been obtained, and compliance with the monthly average limit has been demonstrated. The Discharger shall provide for the approval of the Executive Officer a program to ensure future compliance with the monthly average limit.

III. Effluent Monitoring Program

- A. This Order requires that sampling for effluent monitoring for Discharge Serial Nos. 001 and 003 shall be conducted at the point of discharge to Dominguez Channel. Monitoring is required to determine compliance with effluent limitations and characterize the discharge. The table below shall constitute the effluent monitoring program for discharge of storm water through Discharge Serial No. 001 (Latitude 33° 47' 35" North, Longitude 118° 13' 48" West) and discharge of storm water mixed with boiler blowdown and cooling tower blowdown through Discharge Serial No. 003 (Latitude 33° 47' 8" North, Longitude 118° 14' 6" West) for discharge of storm water to Dominguez Channel.
- B. The Discharger is also required to monitor the effluent for the California Toxics Rule (CTR) priority pollutants, to determine reasonable potential. The monitoring requirements for CTR priority pollutants are discussed in Section VI. Details of the toxicity tests are provided in Section V.

Pollutant	Units	Type of Sample	Sampling Frequency
Total waste flow	gallons per day	---	Once per discharge event ¹
pH	standard units	Grab	Once per discharge event
Temperature	° F	Grab	Once per discharge event
Chlorine residual	mg/L	Grab	Once per discharge event
Oil and grease	mg/L	Grab	Once per discharge event
Settleable solids	ml/L	Grab	Once per discharge event
Total suspended solids (TSS)	mg/L	Grab	Once per discharge event
Biochemical oxygen demand (BOD) ²	mg/L	Grab	Once per discharge event
Chemical oxygen demand (COD)	mg/L	Grab	Once per discharge event
Ammonia (un-ionized)	mg/L	Grab	Once per discharge event

Pollutant	Units	Type of Sample	Sampling Frequency
Ammonia, total	mg/L	Grab	Once per discharge event
Sulfides	mg/L	Grab	Once per discharge event
Phenolic compounds ³	mg/L	Grab	Once per discharge event
Total chromium ⁴	µg/L	Grab	Once per discharge event
Hexavalent chromium ⁵	µg/L	Grab	Once per discharge event
Arsenic ⁵	µg/L	Grab	Once per discharge event
Barium	µg/L	Grab	Once per discharge event
Cadmium ⁵	µg/L	Grab	Once per discharge event
Cobalt	µg/L	Grab	Once per discharge event
Copper ⁵	µg/L	Grab	Once per discharge event
Lead ⁵	µg/L	Grab	Once per discharge event
Mercury	µg/L	Grab	Once per discharge event
Nickel ⁵	µg/L	Grab	Once per discharge event
Selenium	µg/L	Grab	Once per discharge event
Silver ⁵	µg/L	Grab	Once per discharge event
Thallium	µg/L	Grab	Once per discharge event
Zinc ⁵	µg/L	Grab	Once per discharge event
Cyanide	µg/L	Grab	Once per discharge event
Anthracene	µg/L	Grab	Once per discharge event
1,2-Benzanthracene	µg/L	Grab	Once per discharge event
3,4-Benzofluoranthene	µg/L	Grab	Once per discharge event
Benzo(k)fluoranthene	µg/L	Grab	Once per discharge event
Benzo(a)pyrene	µg/L	Grab	Once per discharge event
Chrysene	µg/L	Grab	Once per discharge event
Dibenzo(a)anthracene	µg/L	Grab	Once per discharge event
Indeno(1,2,3-cd)pyrene	µg/L	Grab	Once per discharge event
Fluorene	µg/L	Grab	Once per discharge event
Pyrene	µg/L	Grab	Once per discharge event
Tertiary butyl alcohol (TBA)	µg/L	Grab	Once per discharge event
Di-isopropyl ether (DIPE)	µg/L	Grab	Once per discharge event
Tertiary amyl methyl ether (TAME)	µg/L	Grab	Once per discharge event
Ethyl tertiary butyl ether (ETBE)	µg/L	Grab	Once per discharge event
Total Petroleum Hydrocarbons (TPH) ⁶	µg/L	Grab	Once per discharge event
Methyl tertiary butyl ether (MTBE)	µg/L	Grab	Once per discharge event
Acute toxicity ⁷	% survival	Grab	Once per discharge event
Remaining priority pollutants ⁸	µg/L	Grab	Once per discharge event
Radioactivity ⁹	pCi/L	Grab	Annually

- Each separate period of storm water shall be sampled, but no more than 1 sample

per month is required. For acute toxicity, no more than 1 sample per quarter is required.

2. 5-day BOD at 20 °C
3. Phenolic compounds include chlorinated and non-chlorinated compounds.
4. Sum of hexavalent chromium and other chromium valences.
5. These pollutants shall be measured and reported as total recoverable.
6. TPH measured by U.S. EPA Methods 418.1 or 8015 for both the gas and diesel ranges.
7. See Section IV.
8. See Section VI.
9. Radioactivity determinations of gross and net beta activity, in picocuries per liter, shall be made within 48 hours following sample collection. The overall efficiency of the counting system, size of sample, and counting time shall be such that radioactivity can be determined to a sensitivity of ten picocuries per liter with a 95% confidence limit not to exceed 50 picocuries per liter.

IV. Toxicity Monitoring Requirements

A. Acute Toxicity Effluent Monitoring Program

1. The Discharger shall conduct acute toxicity tests on effluent grab samples by methods specified in 40 CFR Part 136 which cites U.S. EPA's *Methods for Measuring the Acute Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms*, Fifth Edition, October 2002, U.S. EPA, Office of Water, Washington D.C. (EPA/821-R-02-012) or a more recent edition to ensure compliance in 100 % effluent.
2. The fathead minnow, *Pimephales promelas*, shall be used as the test species for fresh water discharges and the topsmelt, *Atherinops affinis*, shall be used as the test species for brackish effluent. The method for topsmelt is found in U.S. EPA's *Short-term Method for Estimating the Chronic Toxicity of Effluents and Receiving Waters to West Coast Marine and Estuarine Organisms*, Third Edition, October 2002 (EPA/821-R-02-014).

3. In lieu of conducting the standard acute toxicity testing with the fathead minnow, the Discharger may elect to report the results or endpoint from the first 48 hours of the chronic toxicity test as the results of the acute toxicity test.
4. Effluent samples shall be collected after all treatment processes and before discharge to the receiving water.

B. Quality Assurance

1. Concurrent testing with a reference toxicant shall be conducted. Reference toxicant tests shall be conducted using the same test conditions as the effluent toxicity tests (e.g., same test duration, etc).
2. If either the reference toxicant test or effluent test does not meet all test acceptability criteria (TAC) as specified in the test methods manuals (EPA/821-R-02-013 and EPA/821-R-02-014), then the Discharger must re-sample and re-test at the earliest time possible.
3. Control and dilution water should be receiving water or laboratory water, as appropriate, as described in the manual. If the dilution water used is different from the culture water, a second control using culture water shall be used.

C. Accelerated Monitoring

1. If toxicity exceeds the limitations (as defined in Order No. R4-2005-0059, Sections I.B.3.a.i.), then the Discharger shall immediately implement accelerated testing as specified in Sections I.B.3.a.ii. The Discharger shall ensure that they receive results of a failing acute toxicity test within 24 hours of the close of the test and the additional tests shall begin within three business days of the receipt of the result. If the accelerated testing shows consistent toxicity, the Discharger shall immediately implement the Initial Investigation of the Toxicity Reduction Evaluation (TRE) Workplan.
2. If implementation of the initial investigation TRE Workplan indicates the source of toxicity (e.g., a temporary plant upset, etc.), then the Discharger may discontinue the Toxicity Identification Evaluation (TIE).
3. The first step in the initial Investigation TRE Workplan for downstream receiving water toxicity can be a toxicity test protocol designed to determine if the effluent from Discharge Serial No. 001 causes or contributes to the measured downstream acute toxicity. If this first step TRE testing shows that the Discharge Serial No. 001 effluent does not cause or contribute to downstream acute toxicity, using U.S. EPA's *Methods for Measuring the Acute Toxicity of Effluents and Receiving Waters to Freshwater and Marine*

Organisms, Fifth Edition, October 2002, U.S. EPA, Office of Water, Washington D.C. (EPA/821-R-02-012), then a report on this testing shall be submitted to the Board and the TRE will be considered to be completed. Routine testing in accordance with MRP No.6010 shall be continued thereafter.

D. Steps in TRE and TIE procedures:

1. Following a TRE trigger, the Discharger shall initiate a TRE in accordance with the facility's initial investigation TRE workplan. The Discharger shall use EPA manuals EPA/600/2-88/070 (industrial) or EPA/833B-99/002 (municipal) as guidance or current versions. At a minimum, the TRE workplan must contain the provision in Attachment C. The Discharger shall expeditiously develop a more detailed TRE workplan for submittal to the Executive Officer within 30 days of the trigger, which will include, but not be limited to:
 - a. Further actions to investigate and identify the cause of toxicity;
 - b. Actions the Discharger will take to mitigate the impact of the discharge and prevent the recurrence of toxicity;
 - c. Standards the Discharger will apply to consider the TRE complete and to return to normal sampling frequency; and,
 - d. A schedule for these actions.
2. The following is a stepwise approach in conducting the TRE:
 - a. Step 1 - Basic data collection. Data collected for the accelerated monitoring requirements may be used to conduct the TRE;
 - b. Step 2 - Evaluates optimization of the treatment system operation, facility housekeeping, and the selection and use of in-plant process chemicals;
 - c. If Steps 1 and 2 are unsuccessful, Step 3 implements a TIE and employment of all reasonable efforts and using currently available TIE methodologies. The objective of the TIE is to identify the substance or combination of substances causing the observed toxicity;
 - d. Assuming successful identification or characterization of the toxicant(s), Step 4 evaluates final effluent treatment options;
 - e. Step 5 evaluates in-plant treatment options; and,
 - f. Step 6 consists of confirmation once a toxicity control method has been

implemented.

Many recommended TRE elements parallel source control, pollution prevention, and storm water control program Best Management Practices (BMPs). To prevent duplication of efforts, evidence of implementation of these control measures may be sufficient to comply with TRE requirements. By requiring the first steps of a TRE to be accelerated testing and review of the facility's TRE workplan, a TRE may be ended in its early stages. All reasonable steps shall be taken to reduce toxicity to the required level. The TRE may be ended at any stage if monitoring indicates there is no longer toxicity (or six consecutive chronic toxicity results are less than or equal to 1.0 TU_c).

3. The Discharger may initiate a TIE as part of the TRE process to identify the cause(s) of toxicity. The Discharger shall use the EPA acute and chronic manuals, EPA/600/6-91/005F (Phase I)/EPA/600/R-96-054 (for marine), EPA/600/R-92/080 (Phase II), and EPA-600/R-92/081 (Phase III) as guidance.
4. If a TRE/TIE is initiated prior to completion of the accelerated testing schedule required by Part I.B.3.a.ii of this permit, then the accelerated testing schedule may be terminated, or used as necessary in performing the TRE/TIE, as determined by the Executive Officer.
5. Toxicity tests conducted as part of a TRE/TIE may also be used for compliance, if appropriate.
6. The Board recognizes that toxicity may be episodic and identification of causes of and reduction of sources of toxicity may not be successful in all cases. Consideration of enforcement action by the Board will be based in part on the Discharger's actions and efforts to identify and control or reduce sources of consistent toxicity.

E. Reporting

1. The Discharger shall submit a full report of the toxicity test results, including any accelerated testing conducted during the month as required by this permit. Test results shall be reported as % survival with the discharge monitoring reports (DMR) for the month in which the test is conducted.
2. If an initial investigation indicates the source of toxicity and accelerated testing is unnecessary, then those results also shall be submitted with the DMR for the period in which the investigation occurred.
 - a. The full report shall be submitted on or before the end of the month in

which the DMR is submitted.

- b. The full report shall consist of (1) the results; (2) the dates of sample collection and initiation of each toxicity test; (3) the acute toxicity average limit or chronic toxicity limit or trigger.
3. Test results for toxicity tests also shall be reported according to the appropriate manual chapter on Report Preparation and shall be attached to the DMR. Routine reporting shall include, at a minimum, as applicable, for each test:
 - a. Sample date(s);
 - b. Test initiation date;
 - c. Test species;
 - d. End point values for each dilution (e.g., number of young, growth rate, percent survival);
 - e. NOEC value(s) in percent effluent;
 - f. IC₁₅, IC₂₅, IC₄₀ and IC₅₀ values in percent effluent;
 - g. TU_c values $\left(TU_c = \frac{100}{NOEC}\right)$;
 - h. Mean percent mortality (\pm standard deviation) after 96 hours in 100% effluent (if applicable);
 - i. NOEC and LOEC values for reference toxicant test(s);
 - j. C₂₅ value for reference toxicant test(s);
 - k. Any applicable charts; and
 - l. Available water quality measurements for each test (e.g., pH, D.O., temperature, conductivity, hardness, salinity, ammonia).
 4. The Discharger shall provide a compliance summary, which includes a summary table of toxicity data from all samples collected during that year.

The Discharger shall notify by telephone or electronically, this Regional Board of any toxicity exceedance of the limit or trigger within 24 hours of receipt of the results followed by a written report within 14 calendar days of receipt of the results. The verbal or electronic notification shall include the exceedance and the plan the Discharger has taken or will take to investigate and correct the cause(s) of toxicity. It may also include a status report on any actions required by the permit, with a schedule for actions not yet completed. If no actions have been taken, the reasons shall be given.

V. Receiving Water Monitoring Program

Pursuant to the California Water Code, section 13267, the Discharger is required to submit data sufficient for: (1) determining if WQBELs for priority pollutants are required, and (2) to calculate effluent limitations, if required. The *Policy for the Implementation of Toxics*

Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California (March 2, 2000) requires that the Regional Boards require periodic monitoring for which criteria or objectives apply and for which no effluent limitations have been established. Accordingly the Regional Board is requiring that the Discharger conduct annual receiving water monitoring for the first two years only after adoption of the permit for the priority pollutants listed in section VI. The results of monitoring for reasonable potential determination shall be submitted in accordance with section I.A of this Monitoring and Reporting Program. Receiving water sampling shall be conducted at the same time as the effluent monitoring. The receiving water monitoring location shall be within 50 feet upstream of the uppermost discharge point (storm drain) into the receiving water (Dominguez Channel).

The required monitoring frequency and type of sample for pH, hardness, salinity, and toxic pollutants are listed in section VI of this Monitoring and Reporting Program.

VI, Effluent and Receiving Water Monitoring for Reasonable Potential Determination

- A. As described in Sections IV.B and VI.C.4 of this Monitoring and Reporting Program, the Discharger is required to monitor both the effluent and receiving water for priority pollutants listed in the table below to determine reasonable potential. Receiving water sampling shall be conducted at the same time as the effluent sampling. Further, the Discharger must analyze pH and salinity of the receiving water at the same time as priority pollutants in the receiving water.
- B. This monitoring shall occur at the following locations:
- Effluent discharge point: Discharge Serial No. 001 (Latitude 33° 47' 35" North, Longitude 118° 13' 48" West), and Discharge Serial No. 003 (Latitude 33° 47' 8" North, Longitude 118° 14' 6" West) prior to entry into the receiving water (Dominguez Channel). If there is no discharge to storm drain/receiving water from Discharge Serial Nos. 001 and 003, then the discharges to POTW shall be sampled annually for Outfall 001 only. Representative samples shall be collected from Pond No. 9 effluent prior to introduction to Low Chemical Demand (LCOD) Treatment System. No action shall be taken by the Regional Board for any exceedances. Discharger will highlight in bold that the monitoring results are of POTW discharge (from Discharge Serial Nos. 001) and the results are being submitted for conduction of Reasonable Potential Analysis (RPA).
 - Receiving water (Dominguez Channel): The monitoring station shall be within 50 feet upstream of the uppermost of the two storm drain discharge points in the Dominguez Channel.

The required monitoring frequency and type of sample for pH, hardness, salinity,

and toxic pollutants are listed below. The Discharger shall perform annual monitoring of the effluent and receiving water irrespective of any discharge through Discharge Serial Nos. 001 and 003.

Pollutant	Units	Type of Sample	Monitoring Frequency
pH	Standard units	Grab	Annually ¹
Hardness	mg/L	Grab	Annually ¹
Salinity	g/L	Grab	Annually ¹
Antimony	µg/L	Grab	Annually
Arsenic ²	µg/L	Grab	Annually
Beryllium	µg/L	Grab	Annually
Cadmium ²	µg/L	Grab	Annually
Chromium (III) ²	µg/L	Grab	Annually
Chromium (VI) ²	µg/L	Grab	Annually
Copper ²	µg/L	Grab	Annually
Lead ²	µg/L	Grab	Annually
Mercury	µg/L	Grab	Annually
Nickel ²	µg/L	Grab	Annually
Selenium	µg/L	Grab	Annually
Silver ²	µg/L	Grab	Annually
Thallium	µg/L	Grab	Annually
Zinc ²	µg/L	Grab	Annually
Cyanide	µg/L	Grab	Annually
Asbestos	Fibers/L	Grab	Annually
Acrolein	µg/L	Grab	Annually
Acrylonitrile	µg/L	Grab	Annually
Benzene	µg/L	Grab	Annually
Bromoform	µg/L	Grab	Annually
Carbon tetrachloride	µg/L	Grab	Annually
Chlorobenzene	µg/L	Grab	Annually
Chlorodibromomethane	µg/L	Grab	Annually
Chloroethane	µg/L	Grab	Annually
2-Chloroethylvinyl ether	µg/L	Grab	Annually
Chloroform	µg/L	Grab	Annually
Dichlorobromomethane	µg/L	Grab	Annually
1,1-Dichloroethane	µg/L	Grab	Annually
1,2-Dichloroethane	µg/L	Grab	Annually
1,1-Dichloroethylene	µg/L	Grab	Annually
1,2-Dichloropropane	µg/L	Grab	Annually
1,3-Dichloropropylene	µg/L	Grab	Annually

Pollutant	Units	Type of Sample	Monitoring Frequency
Ethylbenzene	µg/L	Grab	Annually
Methyl bromide	µg/L	Grab	Annually
Methyl chloride	µg/L	Grab	Annually
Methylene chloride	µg/L	Grab	Annually
1,1,2,2-Tetrachloroethane	µg/L	Grab	Annually
Tetrachloroethylene	µg/L	Grab	Annually
Toluene	µg/L	Grab	Annually
1,2-Trans-dichloroethylene	µg/L	Grab	Annually
1,1,1-Trichloroethane	µg/L	Grab	Annually
1,1,2-Trichloroethane	µg/L	Grab	Annually
Trichloroethylene	µg/L	Grab	Annually
Vinyl chloride	µg/L	Grab	Annually
2-Chlorophenol	µg/L	Grab	Annually
2,4-Dichlorophenol	µg/L	Grab	Annually
2,4-Dimethylphenol	µg/L	Grab	Annually
2-Methyl-4,6-dinitrophenol	µg/L	Grab	Annually
2,4-Dinitrophenol	µg/L	Grab	Annually
2-Nitrophenol	µg/L	Grab	Annually
4-Nitrophenol	µg/L	Grab	Annually
3-Methyl-4-chlorophenol	µg/L	Grab	Annually
Pentachlorophenol	µg/L	Grab	Annually
Phenol	µg/L	Grab	Annually
2,4,6-Trichlorophenol	µg/L	Grab	Annually
Acenaphthene	µg/L	Grab	Annually
Acenaphthylene	µg/L	Grab	Annually
Anthracene	µg/L	Grab	Annually
Benzidine	µg/L	Grab	Annually
Benzo(a)anthracene	µg/L	Grab	Annually
Benzo(a)pyrene	µg/L	Grab	Annually
Benzo(b)fluoranthene	µg/L	Grab	Annually
Benzo(g,h,i)perylene	µg/L	Grab	Annually
Benzo(k)fluoranthene	µg/L	Grab	Annually
Bis (2-chloroethoxy)methane	µg/L	Grab	Annually
Bis(2-chloroethyl)ether	µg/L	Grab	Annually
Bis (2-chloroisopropyl)ether	µg/L	Grab	Annually
Bis (2-ethylhexyl)phthalate	µg/L	Grab	Annually
4-Bromophenyl phenyl ether	µg/L	Grab	Annually
Butylbenzyl phthalate	µg/L	Grab	Annually
2-Chloronaphthalene	µg/L	Grab	Annually
4-Chlorophenyl phenyl ether	µg/L	Grab	Annually

Pollutant	Units	Type of Sample	Monitoring Frequency
Chrysene	µg/L	Grab	Annually
Dibenzo(a,h)anthracene	µg/L	Grab	Annually
1,2-Dichlorobenzene	µg/L	Grab	Annually
1,3-Dichlorobenzene	µg/L	Grab	Annually
1,4-Dichlorobenzene	µg/L	Grab	Annually
3,3'-Dichlorobenzidine	µg/L	Grab	Annually
Diethyl phthalate	µg/L	Grab	Annually
Dimethyl phthalate	µg/L	Grab	Annually
Di-n-Butyl phthalate	µg/L	Grab	Annually
2,4-Dinitrotoluene	µg/L	Grab	Annually
2,6-Dinitrotoluene	µg/L	Grab	Annually
Di-n-octyl phthalate	µg/L	Grab	Annually
1,2-Diphenylhydrazine	µg/L	Grab	Annually
Fluoranthene	µg/L	Grab	Annually
Fluorene	µg/L	Grab	Annually
Hexachlorobenzene	µg/L	Grab	Annually
Hexachlorobutadiene	µg/L	Grab	Annually
Hexachlorocyclopentadiene	µg/L	Grab	Annually
Hexachloroethane	µg/L	Grab	Annually
Indeno(1,2,3-cd)pyrene	µg/L	Grab	Annually
Isophorone	µg/L	Grab	Annually
Naphthalene	µg/L	Grab	Annually
Nitrobenzene	µg/L	Grab	Annually
N-Nitrosodimethylamine	µg/L	Grab	Annually
N-Nitrosodi-n-propylamine	µg/L	Grab	Annually
N-Nitrosodiphenylamine	µg/L	Grab	Annually
Phenanthrene	µg/L	Grab	Annually
Pyrene	µg/L	Grab	Annually
1,2,4-Trichlorobenzene	µg/L	Grab	Annually
Aldrin	µg/L	Grab	Annually
alpha-BHC	µg/L	Grab	Annually
beta-BHC	µg/L	Grab	Annually
Gamma-BHC	µg/L	Grab	Annually
delta-BHC	µg/L	Grab	Annually
Chlordane	µg/L	Grab	Annually
4,4'-DDT	µg/L	Grab	Annually
4,4'-DDE	µg/L	Grab	Annually
4,4'-DDD	µg/L	Grab	Annually
Dieldrin	µg/L	Grab	Annually
alpha-Endosulfan	µg/L	Grab	Annually

Pollutant	Units	Type of Sample	Monitoring Frequency
beta-Endosulfan	µg/L	Grab	Annually
Endosulfan sulfate	µg/L	Grab	Annually
Endrin	µg/L	Grab	Annually
Endrin aldehyde	µg/L	Grab	Annually
Heptachlor	µg/L	Grab	Annually
Heptachlor epoxide	µg/L	Grab	Annually
PCBs – sum ³	µg/L	Grab	Annually
Toxaphene	µg/L	Grab	Annually

- 1 Monitoring for pH and salinity is required for receiving water only.
- 2 These pollutants shall be measured and reported as total recoverable.
- 3 PCBs sum refers to sum of PCB Aroclors 1016, 1221, 1232, 1242, 1248, 1254, and 1260.

C. The Discharger is also required to conduct effluent and receiving water monitoring for the presence of the 2,3,7,8-tetrachlorodibenzo-p-dioxin (TCDD or Dioxin) congeners. The effluent monitoring and the receiving water monitoring shall be a grab sample twice during the permit term (once during the 2nd year of the permit and once during the 4th year), if there an effluent discharge to storm drain. The Discharger is required to calculate Toxic Equivalence (TEQ) for each congener by multiplying its analytical concentration by the appropriate Toxicity Equivalence Factors (TEF) provided below.

Congeners	TEF
2,3,7,8-tetra CDD	1.0
1,2,3,7,8-penta CDD	1.0
1,2,3,4,7,8-hexa CDD	0.1
1,2,3,6,7,8-hexa CDD	0.1
1,2,3,7,8,9-hexa CDD	0.1
1,2,3,4,6,7,8-hepta CDD	0.01
Octa CDD	0.0001
2,3,7,8-tetra CDF	0.1
1,2,3,7,8-penta CDF	0.05
2,3,4,7,8-penta CDF	0.5
1,2,3,4,7,8-hexa CDF	0.1
1,2,3,6,7,8-hexa CDF	0.1
1,2,3,7,8,9-hexa CDF	0.1
2,3,4,6,7,8-hexa CDF	0.1
1,2,3,4,6,7,8-hepta CDF	0.01
1,2,3,4,7,8,9-hepta CDF	0.01
Octa CDF	0.0001

- D. The reports for this required monitoring must be submitted separately from the self-monitoring reports, but in accordance with the quarterly reporting schedule provided in Section I.A. The reports shall reference “Monitoring Results for CTR Priority Pollutants Reasonable Potential Determination, NPDES Permit No. CA0003778, CI-5427”.
- E. SWRCB-approved laboratory methods and the corresponding MLs for the examination of each priority pollutant are listed in Attachment B. Reporting requirements for the data to be submitted are listed in Attachment C. The Regional Board recommends that an analytical method be selected from Attachment A which is capable of achieving the lowest ML for each pollutant as listed on Attachment B. ML is necessary for determining compliance for a priority pollutant when an effluent limit is below the MDL.
- F. The laboratory analytical data shall include applicable MLs, MDL, quality assurance/quality control data, and shall comply with the reporting requirements contained in the Attachments B & C.
- G. Forward all interim monitoring data/reports to The Regional Board, Attn: Industrial Permitting Unit, and please include a reference to “Compliance File No. 5427, NPDES No. CA0003778.”

Ordered by: _____
Jonathan S. Bishop
Executive Officer

Date: September 1, 2005