

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

**MONITORING AND REPORTING PROGRAM NO. 7873
for
VOPAK TERMINAL LONG BEACH, INCORPORATED
(CA0064165)**

I. Reporting Requirements

- A. Vopak Terminal Long Beach, Incorporated, (hereinafter Vopak 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 August 1, 2005.

Reporting Period	Report Due
January – March	May 1
April – June	August 1
July-September	November 1
October-December	February 1
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 (for both dry and wet weather discharges), 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 ½ " 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.
- 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, Discharge Serial No. 001 (Latitude 33° 45' 00" and Longitude 118° 14' 06"), and shall be located where representative samples of that effluent 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 T-A) 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 a ML that is not contained in Attachment T-A 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 T-A;
 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 a ML that is lower than that listed in Attachment T-A;
 4. When the Discharger demonstrates that the calibration standard matrix is sufficiently different from that used to establish the ML in Attachment T-A, 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 USEPA-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 that 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 Discharger shall collect four additional samples at approximately equal intervals during the month, until compliance with the monthly average limit has been demonstrated. All five analytical

results shall be reported in the monitoring report for that month, or 45 days after results for the additional samples were received, whichever is later. In the event of noncompliance with a monthly average effluent limitation, the sampling frequency for that constituent shall be increased to weekly and shall continue at this level until compliance with the monthly average effluent limitation 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. The effluent monitoring program for the discharge of commingled nonprocess wastewater (compressor condensate, fire system testing water, and groundwater seepage) and storm water through Discharge Serial No. 001 (Latitude 33° 45' 00" and Longitude 118° 14' 06") is described in the table below.

- B. In addition to monitoring to determine compliance with effluent limitations, the Discharger must monitor the effluent for priority pollutants to determine reasonable potential. 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 pollutants for which criteria or objectives apply and for which no effluent limitations have been established. Accordingly, the Regional Board is requiring that the Discharger receiving water monitoring of 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.

Constituent	Units	Type of Sample ³	Frequency of Sample
Total waste flow ¹	mgd	Metered	Once per discharge event ^b
pH	s.u.	Grab	Once per discharge event ^b
Temperature	deg. F	Grab	Once per discharge event ^b
Total suspended solids	mg/L	Grab	Once per discharge event ^b
Oil and grease	mg/L	Grab	Once per discharge event ^b
BOD ₅ 20°C	mg/L	Grab	Once per discharge event ^b
Settleable solids	ml/L	Grab	Once per discharge event ^b
Turbidity	NTU	Grab	Once per discharge event ^b
Phenolic compounds	mg/L	Grab	Once per discharge event ^b
Sulfides	mg/L	Grab	Once per discharge event ^b
Benzene	µg/L	Grab	Once per discharge event ^b
Carbon tetrachloride	µg/L	Grab	Once per discharge event ^b
Chloroform	µg/L	Grab	Once per discharge event ^b
1,2-Dichloroethane	µg/L	Grab	Once per discharge event ^b
1,1-Dichloroethylene	µg/L	Grab	Once per discharge event ^b
Dichloromethane	µg/L	Grab	Once per discharge event ^b
1,3-Dichloropropylene	µg/L	Grab	Once per discharge event ^b

Constituent	Units	Type of Sample ³	Frequency of Sample
Ethylbenzene	µg/L	Grab	Once per discharge event ⁵
1,1,2,2-Tetrachloroethylene	µg/L	Grab	Once per discharge event ⁵
Tetrachloroethylene	µg/L	Grab	Once per discharge event ⁵
Toluene	µg/L	Grab	Once per discharge event ⁵
1,1,1-Trichloroethane	µg/L	Grab	Once per discharge event ⁵
1,1,2-Trichloroethane	µg/L	Grab	Once per discharge event ⁵
Trichloroethylene	µg/L	Grab	Once per discharge event ⁵
Vinyl chloride	µg/L	Grab	Once per discharge event ⁵
Copper ²	µg/L	Grab	Once per discharge event ⁵
Nickel ²	µg/L	Grab	Once per discharge event ⁵
Selenium ²	µg/L	Grab	Once per discharge event ⁵
Thallium ²	µg/L	Grab	Once per discharge event ⁵
Zinc ²	µg/L	Grab	Once per discharge event ⁵
Cyanide	µg/L	Grab	Once per discharge event ⁵
Bis(2-ethylhexyl)phthalate	µg/L	Grab	Once per discharge event ⁵
Methyl tertiary butyl ether (MTBE)	µg/L	Grab	Once per discharge event ⁵
Xylene	µg/L	Grab	Once per discharge event ⁵
Ethylene dibromide	µg/L	Grab	Once per discharge event ⁵
Total petroleum hydrocarbons ⁴	µg/L	Grab	Once per discharge event ⁵
Naphthalene	µg/L	Grab	Once per discharge event ⁵
Remaining Priority Pollutants	µg/L	Grab	Annually
Acute Toxicity	% survival	Grab	Annually

¹ The Discharger shall measure flow using the flow meter on-site. The Discharger shall report the total daily flow (gallons/day).

² Shall be expressed as total recoverable.

³ The mass emission (in lb/day) for the discharge shall be calculated and reported using the limitation concentration and the actual flow rate measured at the time of discharge, using the formula:

$$m = 8.34 C_i Q$$

where: m = mass discharge for a pollutant, lb/day
C_i = limitation concentration for a pollutant, mg/L
Q = actual discharge flow rate, mgd

⁴ Total petroleum hydrocarbons includes all fuels, gasoline, diesel and jet fuel. Analysis should be completed using EPA 418.1 and EPA 8015 (modified) methods.

⁵ For storm water and nonprocess wastewater, samples shall be collected no more than once per week and no more than eighteen (18) storm water sample only samples are to be collected within one year.

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.E PA'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 (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/600/4-91/002 and EPA/821-R-02-012), 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. R4-2005-0007, Section I.B.3.a.i.), then the Discharger shall conduct six additional tests, approximately every 7 days, over a 6-week period. The samples shall be collected and the tests initiated no less than 7 days apart. 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 3 business days of the receipt of the result. If the accelerated testing shows consistent toxicity as defined in Section I.B.3.a.iii, 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 EPA's *Short Term Methods for Estimating the Acute Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms*, Fifth Edition, October 2002, (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. 7873 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. At a minimum, the Discharger shall use EPA manuals EPA/600/2-88/070 (industrial) or EPA/833B-99/002 (municipal) as guidance. 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 as defined in Section I.B.3.a.i. of Order No. R4-2005-0007.

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 Section 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 limit or trigger as described in Order NO. R4-2005-0007 sections I.B.4. and (4) printout of the ToxCalc or CETIS program results.
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. Mean percent mortality (\pm standard deviation) after 96 hours in 100% effluent (if applicable);
 - f. NOEC and LOEC values for reference toxicant test(s);
 - g. C_{25} value for reference toxicant test(s);
 - h. Any applicable charts; and
 - i. 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

A. Receiving Water Observations. The receiving water monitoring program shall consist of periodic surveys of receiving water and shall include studies of those physical-chemical characteristics of the receiving water that may be impacted by the discharge. General observations of the receiving water shall be made at each discharge point on a monthly basis and shall be reported in the quarterly monitoring report. If no discharge occurred during the observation period, this shall be reported. Observations shall be descriptive where applicable, such that colors, approximate amounts, or types of materials are apparent. The following observations shall be made:

1. Tidal stage, time, and date of monitoring
2. Weather conditions
3. Color of water
4. Appearance of oil films or grease, or floatable materials
5. Extent of visible turbidity or color patches
6. Direction of tidal flow
7. Description of odor, if any, of the receiving water
8. Presence and activity of California Least Tern and California Brown Pelican.

VII. Storm Water Monitoring

A. Rainfall Monitoring

The Discharger shall measure and record the rainfall on each day of the month. This information shall be included in the monitoring report for that month.

B. Visual Observation

The Discharger shall make visual observations of all storm water discharge locations on at least one storm event per month that produces a significant storm water discharge to observe the presence of floating and suspended materials, oil and grease, discoloration, turbidity, and odor. A "significant storm water discharge" is a continuous discharge of storm water for a minimum of one hour, or the intermittent discharge of storm water for a minimum of 3 hours in a 12-hour period.

Ordered by: _____
Jonathan S. Bishop
Executive Officer

Date: January 27, 2005