

STATE OF CALIFORNIA  
CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD  
LOS ANGELES REGION

MONITORING AND REPORTING PROGRAM NO. CI-8524  
FOR

ATLANTIC RICHFIELD COMPANY  
(ARCO STATION #0194)

(GENERAL NPDES PERMIT NO. CAG834001, SERIES NO. 177)

Enrollment to Order No. R4-2007-0021 shall become effective	July 31, 2007
Monitoring and Reporting Program shall become effective	July 31, 2007

Ordered By:

  
\_\_\_\_\_  
Deborah J. Smith  
Interim Executive Officer

Date:

July 31, 2007

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## **Attachment E – Monitoring and Reporting Program (MRP)**

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

### **I. GENERAL MONITORING PROVISIONS**

- A. An effluent sampling station shall be established for Discharge Point 1 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. Effluent samples shall be taken downstream of any addition to treatment works and prior to mixing with the receiving waters.
- D. This Regional Water 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.
- E. Pollutants shall be analyzed using the analytical methods described in 40 CFR §§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 Water Board or the State Water Board.
- F. Laboratories analyzing effluent samples and receiving water samples shall be certified by the California Department of Health Services ELAP or approved by the Executive Officer and must include 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.
- G. For any analyses performed for which no procedure is specified in the USEPA guidelines or in the MRP, the constituent or parameter analyzed and the method or procedure used must be specified in the monitoring report.
- H. Each monitoring report must affirm in writing that "all analyses were conducted at a laboratory certified for such analyses by the Department of Health Services or approved by the Executive Officer and in accordance with current USEPA guideline procedures or as specified in this Monitoring and Reporting Program".
- I. The monitoring reports shall specify the analytical method used, the Method Detection Limit (MDL), and the State Board 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. "DNQ" if results are greater than or equal to the laboratory's MDL but less than the ML; or,
3. "ND" for sample results less than the laboratory's MDL with the MDL indicated for the analytical method used.

Analytical data reported as "less than" for the purpose of reporting compliance with permit limitations shall be the same or lower than the permit limit(s) established for the given parameter.

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

- J. 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 Water Board, in consultation with the State Water Board Quality Assurance Program, shall establish a ML that is not contained in Attachment G 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 G;
2. When the Discharger and Regional Water 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 G;
4. When the Discharger demonstrates that the calibration standard matrix is sufficiently different from that used to establish the ML in Attachment G, 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 Water Board, and the State Water Board shall agree on a lowest quantifiable limit and that limit will substitute for the ML for reporting and compliance determination purposes.

- K. Water/wastewater samples must be analyzed within allowable holding time limits as specified in 40 CFR §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 Water 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.
- L. 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.
- M. The Discharger shall calibrate and perform maintenance procedures on all monitoring instruments and to insure accuracy of measurements, or shall insure that both equipment activities will be conducted.
- N. The Discharger shall have, and implement, an acceptable written quality assurance (QA) plan for laboratory analyses. The annual monitoring report shall also summarize the QA activities for the previous year. Duplicate chemical analyses must be conducted on a minimum of ten percent (10%) of the samples, or at least one sample per sampling period, whichever is greater. A similar frequency shall be maintained for analyzing spiked samples.
- O. When requested by the Regional Water Board or USEPA, the Discharger will participate in the NPDES discharge monitoring report QA performance study. The Discharger must have a success rate equal to or greater than 80%.
- P. For parameters that both monthly average and daily maximum limitations 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 limitation, the Discharger shall collect four additional samples at approximately equal intervals during the month, until compliance with the monthly average limitation 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 limitation.

- Q. In the event wastes are transported to a different disposal site during the report period, the following shall be reported in the monitoring report:
1. Types of wastes and quantity of each type;
  2. Name and address for each hauler of wastes (or method of transport if other than by hauling); and
  3. Location of the final point(s) of disposal for each type of waste.
- If no wastes are transported off-site during the reporting period, a statement to that effect shall be submitted.
- R. Each monitoring report shall state whether or not there was any change in the discharge as described in the Order during the reporting period.
- S. All monitoring reports shall include the discharge limitations in the Order, tabulated analytical data, the chain of custody form, and the laboratory report (including but not limited to date and time of sampling, date of analyses, method of analysis and detection limits).
- T. Before commencing a new discharge, a representative sample of the effluent shall be collected and analyzed for toxicity and for all the constituents listed in Fact Sheet, and the test results must meet all applicable limitations of Order No. R4-2007-0021.
- U. In the event of presence of oil sheen, debris, and/or other objectionable materials or odors, discharge shall not commence until compliance with the requirements is demonstrated. All visual observations shall be included in the monitoring report.
- V. If monitoring result indicate an exceedance of a limit contained in Order R4-2007-0021, the discharge shall be terminated and shall only be resumed after remedial measures have been implemented and full compliance with the requirements has been ascertained.
- W. In addition, as applicable, following an effluent limit exceedance, the discharger shall implement the following accelerated monitoring program:
- a. Monthly monitoring shall be increased to weekly monitoring,
  - b. Quarterly monitoring shall be increased to monthly monitoring , and
  - c. Semi-annually monitoring shall be increased to quarterly.
  - d. Annually monitoring shall be increased to semi-annually.

If three consecutive accelerated monitoring events demonstrate full compliance with effluent limits, the discharger may return to the regular monitoring frequency, with the approval of the Executive Officer of the Regional Board.

## 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 Location**

Discharge Point Name	Monitoring Location Name	Monitoring Location Description
Discharge Point 1	M-001	Treated effluent, after treatment and before contact with the receiving water and/or dilution by any other water or waste.

## III. INFLUENT MONITORING REQUIREMENTS

The Discharger shall monitor the influent to the treatment system once annually for all the parameters listed in Table 2, except for toxicity.

## IV. EFFLUENT MONITORING REQUIREMENTS

The Discharger shall monitor the effluent at Discharge Point 1 as follows.

**Table 2. Effluent Monitoring Schedule**

Parameter	Units	Sample Type	Minimum Frequency of Analysis	Required Analytical Test Method
Flow	gal/day	totalizer	continuously <sup>1</sup>	Approved test methods described in the Federal Code of Regulations 40 CFR 136 <sup>2</sup>
pH	pH units	grab	monthly	
Temperature	°F	grab	monthly	
Total Suspended Solids	mg/L	grab	monthly	
Turbidity	NTU	grab	monthly	
BOD <sub>5</sub> 20°C	mg/L	grab	monthly	
Settleable Solids	ml/L	grab	monthly	
Sulfides	mg/L	grab	monthly	
Total petroleum hydrocarbons	µg/L	grab	monthly	
Benzene	µg/L	grab	monthly	

<sup>1</sup> Record the monthly total flow and report the calculated daily average flow and monthly flow in the quarterly report, as appropriate.

<sup>2</sup> Pollutants shall be analyzed using the analytical methods described in 40 CFR Part 136; for priority pollutants the methods must meet the lowest minimum levels (MLs) specified in Attachment 4 of the SIP (State Implementation Policy), where no methods are specified for a given pollutant, by methods approved by this Regional Water Board or the State Water Board.

<i>Parameter</i>	<i>Units</i>	<i>Sample Type</i>	<i>Minimum Frequency of Analysis</i>	<i>Required Analytical Test Method</i>
Toluene	µg/L	grab	monthly	
Ethylbenzene	µg/L	grab	monthly	
Xylenes	µg/L	grab	monthly	
Ethylene dibromide	µg/L	grab	monthly	
Lead	µg/L	grab	monthly	
Methyl tertiary butyl ether (MTBE)	µg/L	grab	monthly	
Tertiary butyl alcohol (TBA)	µg/L	grab	monthly	
Naphthalene	µg/L	grab	annually	
Di-isopropyl ether (DIPE)	µg/L	grab	annually	
Acute Toxicity	% survival	grab	annually	

**V. WHOLE EFFLUENT TOXICITY TESTING REQUIREMENTS**

**A. Definition of Toxicity**

**Acute Toxicity**

The MRP requires an annual test for acute toxicity which measures primarily lethal effects that occur over a 96-hour period. Acute toxicity shall be measured in percent survival measured in undiluted (100%) effluent.

**B. Acute Toxicity Effluent Monitoring Program**

1. The Discharger shall conduct acute toxicity tests on 100% of the effluent grab sample by methods specified in 40 CFR Part 136 which cites USEPA's *Methods for Measuring the Acute Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms*, Fifth Edition, October 2002, USEPA, Office of Water, Washington D.C. (EPA/821-R-02-012) or a more recent edition.
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 USEPA's *Short-term Method for Estimating the Chronic Toxicity of Effluents and Receiving Waters to West Coast Marine and Estuarine Organisms*, First Edition, August 1995. (EPA/600/R-95/136), or a more recent edition.



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.

### C. 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 for acute toxicity test results with the self monitoring reports (SMR) for the month in which the test is conducted.
2. Test results for toxicity tests shall be reported according to the appropriate manual chapter on Report Preparation and shall be attached to the SMR. 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. IC<sub>15</sub>, IC<sub>25</sub>, IC<sub>40</sub> and IC<sub>50</sub> values in percent effluent;
  - g. TU<sub>c</sub> values  $\left(TU_c = \frac{100}{NOEC}\right)$ ;
  - h. Mean percent mortality (+standard deviation) after 96 hours in 100% effluent (if applicable);
  - i. NOEC and LOEC values for reference toxicant test(s);
  - j. IC<sub>25</sub> 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).
3. The Discharger shall provide a compliance summary, which includes a summary table of toxicity data from all samples collected during that year.
4. The Discharger shall notify by telephone or electronically, this Regional Water 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.

5. When exceedance of the whole effluent acute toxicity occurs, the frequency of Acute Toxicity analyses shall increase to monthly until at least three test results have been obtained and full compliance with effluent limitations has been demonstrated, after which the frequency of analyses shall revert to annually. Results of toxicity tests shall be included in the first monitoring report following sampling.

**VI. LAND DISCHARGE MONITORING REQUIREMENTS**

Not Applicable.

**VII. RECLAMATION MONITORING REQUIREMENTS**

Not Applicable.

**VIII. RECEIVING WATER MONITORING REQUIREMENTS – SURFACE WATER AND GROUNDWATER**

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. If there is no discharge during any reporting period, the report shall so state.
3. 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.
4. The Discharger shall inform the Regional Water Board well in advance of any proposed construction activity that could potentially affect compliance with applicable requirements.

**B. Self Monitoring Reports (SMRs)**

1. At any time during the term of this permit, the State or Regional Water Board may notify the Discharger to electronically submit Self-Monitoring Reports (SMRs) using the State Water Board's California Integrated

Water Quality System (CIWQS) Program Web site (<http://www.waterboards.ca.gov/ciwqs/index.html>). Until such notification is given, the Discharger shall submit hard copy SMRs. The CIWQS Web site will provide additional directions for SMR submittal in the event there will be service interruption for electronic submittal.

2. The Discharger shall report in the SMR the results for all monitoring specified in this MRP. The Discharger shall submit SMRs including the results of all required monitoring using USEPA-approved test methods or other test methods specified in this Order. If the Discharger monitors any pollutant more frequently than required by this Order, the results of this monitoring shall be included in the calculations and reporting of the data submitted in the SMR.
3. Monitoring periods and reporting for all required monitoring shall be completed according to the following schedule:

**Table 3. Monitoring Periods and Reporting Schedule**

Sampling Frequency	Monitoring Period Begins On	Monitoring Period	SMR Due Date
Continuous	Permit effective date	All	Submit with quarterly SMR
Hourly	Permit effective date	Hourly	Submit with quarterly SMR
Daily	Permit effective date	(Midnight through 11:59 PM) or any 24-hour period that reasonably represents a calendar day for purposes of sampling.	Submit with quarterly SMR
Weekly	Sunday following permit effective date or on permit effective date if on a Sunday	Sunday through Saturday	Submit with quarterly SMR
Monthly	First day of calendar month following permit effective date or on permit effective date if that date is first day of the month	1 <sup>st</sup> day of calendar month through last day of calendar month	Submit with quarterly SMR
Quarterly	Closest of January 1, April 1, July 1, or October 1 following April 5, 2007	January 1 through March 31. April 1 through June 30. July 1 through September 30. October 1 through December 31	45 days from the end of the monitoring period
Semiannually	Closest of January 1 or July 1 following permit effective date	January 1 through June 30 July 1 through December 31	45 days from the end of the monitoring period
Annually	January 1 following permit effective date	January 1 through December 31	45 days from the end of the monitoring period

4. Reporting Protocols. The Discharger shall report with each sample result the applicable Reporting Level (RL) and the current Method Detection Limit (MDL), as determined by the procedure in Part 136.

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 RL shall be reported as measured by the laboratory (i.e., the measured chemical concentration in the sample).
- b. Sample results less than the 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.

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 ( $\pm$  a percentage of the reported value), numerical ranges (low to high), or any other means considered appropriate by the laboratory.

- c. Sample results less than the laboratory's MDL shall be reported as "Not Detected," or ND.
  - d. Dischargers are to instruct laboratories to establish calibration standards so that the ML 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.
5. 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 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. At any time during the term of this permit, the State or Regional Water Board may notify the Discharger to electronically submit SMRs that will satisfy federal requirements for submittal of Discharge Monitoring Reports (DMRs). Until such notification is given, the Discharger shall submit SMRs in accordance with the requirements described below.
- d. SMRs must be submitted to the Regional Water Board, signed and certified as required by the Standard Provisions (Attachment D), to the address listed below:

**CRWQCB – Los Angeles Region**  
**320 West 4<sup>th</sup> Street, Suite 200**  
**Los Angeles, CA 90013**  
**Attn: Information & Technology Unit**

#### **C. NOTIFICATION**

1. The Discharger shall notify the Executive Officer in writing prior to discharge of any chemical that may be toxic to aquatic life. Such notification shall include:
  - a. Name and general composition of the chemical,
  - b. Frequency of use,
  - c. Quantities to be used,
  - d. Proposed discharge concentrations, and
  - e. EPA registration number, if applicable.

No discharge of such chemical shall be made prior to obtaining the Executive Officer's approval.

2. The Discharger shall notify the Regional Board via telephone and/or fax within 24 hours of noticing an exceedance above the effluent limits in Order No. R4-2007-0021. The Discharger shall provide to the Regional Board within 14 days of observing the exceedance a detailed statement of the actions undertaken or proposed that will bring the discharge into full compliance with the requirements and submit a timetable for correction.

#### **D. MONITORING FREQUENCIES ADJUSTMENT**

Monitoring frequencies may be adjusted by the Executive Officer to a less frequent basis if the Discharger requests same and the request is backed by statistical trends of monitoring data submitted.