

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

**MONITORING AND REPORTING PROGRAM NO. 7697  
for  
TRW, INCORPORATED  
TRW SPACE PARK FACILITY  
(CA0063924)**

**I. Reporting Requirements**

- A. TRW, Incorporated (Discharger) shall implement this monitoring program on the effective date of this Order. Effluent monitoring reports shall be submitted by the dates in the following schedule:

<u>Reporting Period</u>	<u>Report Due</u>
January – March	April 15
April – June	July 15
July – September	October 15
October – December	January 15

The first monitoring report shall be received the Regional Board by April 15, 2002, covering January – March 2002.

- B. If there is not discharge during any reporting period, the report shall so state.
- C. By March 1 of each year, the Discharger shall submit an annual summary report to the Regional Board. The report shall contain a discussion, tabular, and graphical summaries of the monitoring data obtained during the previous calendar year. In addition, the Discharger shall discuss the compliance record and the corrective actions taken or planned, which may be needed to bring the discharge into full compliance with the waste discharge requirements. The data shall be submitted to the Regional Board on hard copy and on 3 ½" computer diskette. The submitted data must be IBM compatible, preferably using Microsoft Excel software.
- D. All monitoring and annual summary reports must be addressed to the Regional Board, Attention: Information Technology Unit. Reference the reports to Compliance File No. CI-7697 to facilitate routing to the appropriate staff and file.
- E. For every item where the requirements are not met, the Discharger shall submit a statement of the cause(s), and actions undertaken or proposed which will bring the discharge into full compliance with waste discharge requirements at the earliest possible time, including a timetable for implementation of these actions.

- F. Any mitigation/remedial activity including any pre-discharge treatment conducted at the site must be reported in the quarterly monitoring report.
- G. Database Management System – The Regional Board is developing a compliance monitoring database management system that may require the Discharger to submit the monitoring and annual reports electronically when it becomes fully operational.

## II. Effluent Monitoring Requirements

- A. Sampling station(s) shall be established for the point of discharge and shall be located where representative samples of that effluent can be obtained. Provisions shall be made to enable visual inspection before discharge. If oil sheen, debris, and/or other objectionable materials or odors are present, the discharge shall not be commenced until compliance with the requirements has been demonstrated. All visual observations shall be included in the monitoring report.
- 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 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, methods approved by Regional Board or State Board. Laboratories analyzing monitoring samples shall be certified by the California Department of Health Services and must include quality assurance/quality control (QA/QC) data with their report. For the purpose of monitoring pH, dissolved oxygen, residual chlorine, and temperature, tests may be conducted at the field sampling location provided that all requirements of the approved analytical methods for NPDES use in 40 CFR 136 are met.

The monitoring report shall specify the USEPA 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 MDL indicated for the analytical method used.

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

- D. Where possible, the MLs employed for effluent analyses shall be lower than the permit limits 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 (in the annual report), the Discharger shall submit a list of the analytical methods employed for each test and associated laboratory quality assurance/quality control (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 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 those specified in 40 CFR 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 a 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 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. Laboratory analyses – all chemical, bacteriological, and toxicity analyses shall be conducted at a laboratory certified for such analyses by the California Department of Health Services Environmental Laboratory Accreditation Program (ELAP). A copy of the laboratory certification shall be submitted with the Annual Report.
- F. Water/wastewater samples must be analyzed within allowable holding time limits as specified in 40 CFR Part 136.3. All QA/QC samples must be run on the same

dates the samples were actually analyzed, and the results must be reported in the Regional Board format if available, and submitted with the laboratory reports.

- G. 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.
- H. Quarterly effluent analyses shall be performed during the months of February, May, August and November. Annual effluent analyses shall be performed during the month of February.
- I. 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 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

The following shall constitute the effluent monitoring program for the final effluent at Discharge No. 001:

<b>Constituent</b>	<b>Units</b>	<b>Type of Sample</b>	<b>Minimum Frequency of Analysis</b>
Total waste flow	gal/day	----	daily
Temperature	°F	continuous	daily
pH	pH Units	grab	quarterly
Total suspended solids	mg/L	grab	quarterly
Settleable solids	ml/L	grab	quarterly
BOD <sub>5</sub> (20°C)	mg/L	grab	quarterly
Oil and grease	mg/L	grab	quarterly
Turbidity	NTU	grab	quarterly
Sulfides	mg/L	grab	quarterly
Phenols	mg/L	grab	quarterly
Phenolic compounds	µg/L	grab	quarterly
Benzene	µg/L	grab	quarterly
Toluene	µg/L	grab	quarterly
Xylenes	µg/L	grab	quarterly

<b>Constituent</b>	<b>Units</b>	<b>Type of Sample</b>	<b>Minimum Frequency of Analysis</b>
Ethylbenzene	µg/L	grab	quarterly
Carbon tetrachloride	µg/L	grab	quarterly
Tetrachloroethylene	µg/L	grab	quarterly
Trichloroethylene	µg/L	grab	quarterly
1,1,1-Trichloroethane	µg/L	grab	quarterly
1,4-Dichlorobenzene	µg/L	grab	quarterly
1,1-Dichloroethane	µg/L	grab	quarterly
1,2-Dichloroethane	µg/L	grab	quarterly
1,1-Dichloroethylene	µg/L	grab	quarterly
Vinyl chloride	µg/L	grab	quarterly
Acetone	µg/L	grab	quarterly
Lead	µg/L	grab	quarterly
Arsenic	µg/L	grab	quarterly
Chromium	µg/L	grab	quarterly
Silver	µg/L	grab	quarterly
Cadmium	µg/L	grab	quarterly
Selenium	µg/L	grab	quarterly
Mercury	µg/L	grab	quarterly
Nickel	µg/L	grab	quarterly
Thallium	µg/L	grab	quarterly
Copper	µg/L	grab	quarterly
Zinc	µg/L	grab	quarterly
Priority pollutants	µg/L	grab	annually
Acute toxicity	% survival	grab	annually
Chronic toxicity	TU <sub>c</sub>	grab	annually

#### IV. Toxicity Monitoring Requirements

##### A. Acute Toxicity Monitoring Program

1. The Discharger shall conduct acute toxicity tests on effluent grab samples by methods specified in 40 CFR Part 136 which cites USEPA's *Methods for Measuring the Acute Toxicity of Effluents to Freshwater and Marine Organisms*, August, 1991 (EPA/600/4-90/027) 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 USEPA's *Short-term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to West Coast Marine*

*and Estuarine to Freshwater Organisms*, First Edition, August, 1995 (EPA/600/4-95/136).

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.

B. Chronic Toxicity Effluent Monitoring Program:

1. The Discharger shall conduct critical life stage chronic toxicity tests on effluent samples (24-hour composite) or receiving water samples in accordance with EPA's Short Term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms, Third Edition, July 1994 (EPA/600/4-91/002) or EPA's Short Term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Marine and Estuarine Organisms, August 1995, (EPA/600/R-95/136).
2. Effluent samples shall be collected after all treatment processes and before discharge to the receiving water.
3. Test Species and Methods:
  - a. The Discharger shall conduct tests as follows: with a vertebrate, an invertebrate, and an alga for the first three suites of tests. After the screening period, monitoring shall be conducted using the most sensitive species.
  - b. Re-screening is required every 15 months. The Discharger shall re-screen with the three species listed above and continue to monitor with the most sensitive species. If the first suite of re-screening tests demonstrates that the same species is the most sensitive than the re-screening does not need to include more than one suite of tests. If a different species is the most sensitive or if there is ambiguity then the Discharger shall proceed with suites of screening tests for a minimum of three, but not to exceed five suites.
  - c. The presence of chronic toxicity shall be estimated as specified using West Coast marine organisms according to EPA's Short-Term Methods for Estimating Chronic Toxicity of Effluent and Receiving Waters to West Coast Marine and Estuarine Organisms, August, 1995 (EPA/600/R-95/136).

C. 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, EPA/600/R-95/136, or EPA/600/4-90/027F), then the Discharger must re-sample and re-test within 14 days of notification by the laboratory of an invalid test.
3. Control and dilution water shall be receiving water or laboratory water 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.

D. Accelerated Monitoring

1. If toxicity exceeds the limitations (as defined in Order No. R4-2002-0020, Section I.B.4.a.1.), then the Discharger shall immediately implement accelerated testing, as specified at Section I.B.4.a.2. The discharger shall ensure that they receive results of a failing toxicity test within 24 hours of the completion of the test and the additional tests shall begin within 3 business days of receipt of the results. If the accelerated testing shows consistent toxicity, the discharger shall immediately implement the Initial Investigation of the 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 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 Outfall 001 causes or contributes to the measured downstream chronic toxicity. If this first step TRE testing shows that the Outfall 001 effluent does not cause or contribute to downstream chronic toxicity, using EPA's Short Term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Marine and Estuarine Organisms, August 1995,(EPA/600/R-95/136). 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. 7697 shall be continued thereafter.

E. Steps in Toxicity Reduction Evaluation (TRE) and Toxicity Identification Evaluation (TIE)

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 Toxicity Identification Evaluation (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<sub>c</sub>).

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.4.a.2 and Part I.B.4.b.2 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.

F. Reporting

- i. 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 in Toxicity Units (percent survival or TU<sub>c</sub>) with the discharge monitoring reports (DMR) for the month in which the test is conducted.

If an initial investigation indicates the source of toxicity and accelerated testing is unnecessary, pursuant to Section IV.D.1., those results shall also be submitted with the DMR for the period in which the Investigation occurred.

- ii. The full report shall be submitted on or before the end of the month in which the DMR is submitted.

- iii. The full report shall consist of (1) the results; (2) the dates of sample collection, initiation, and completion of each toxicity tests; (3) the acute toxicity limit or chronic toxicity limit or trigger as described in 4.A.1 and 4.B.1.
4. 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:
  5. sample date(s);
  6. test initiation date;
  7. test species;
  8. end point values for each dilution (e.g., number of young, growth rate, percent survival);
  9. NOEC value(s) in percent effluent;
  10. IC<sub>15</sub>, IC<sub>25</sub>, IC<sub>40</sub> and IC<sub>50</sub> values in percent effluent;
  11. TU<sub>c</sub> values  $\left( TU_c = \frac{100}{NOEC} \right)$ ;
  12. Mean percent mortality ( $\pm$ standard deviation) after 96 hours in 100% effluent (if applicable);
  13. NOEC and LOEC values for reference toxicant test(s);
  14. IC<sub>25</sub> value for reference toxicant test(s);
  15. Any applicable control charts; and
  16. Available water quality measurements for each test (e.g., pH, D.O., temperature, conductivity, hardness, salinity, ammonia).
  17. The Discharger shall provide a compliance summary, which includes a summary table of toxicity data from at least eleven of the most recent samples.

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 will pursue. The written report shall describe actions 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.

#### **IV. Interim Monitoring And Reporting**

Pursuant to California Water Code Section 13267 and in accordance with the SIP, TRW, Incorporated is hereby directed to conduct seven quarters (**from July 2001 to March 2003**) of effluent and receiving water sampling/monitoring for all the constituents listed in Attachment A. To the extent there is any conflict between the requirements contained in this Provision IV and a previous directive issued by the Regional Board on July 27, 2001, the requirements of this provision IV control. The Discharger may use any data previously collected and analyses previously performed in response to the aforementioned directive to comply with the requirements of this Provision IV.

##### **A. Interim Monitoring Requirements**

1. The data collected for all the constituents listed in Attachment A must be compiled to perform a Reasonable Potential Analysis (RPA), and if necessary to develop effluent limits.
2. The effluent shall be collected at the end of the discharge pipe for your facility.
3. The Discharger must monitor the effluent and receiving water for the presence of the 17 congeners of 2,3,7,8-TCDD listed in Attachment A, once during the dry weather and once during the wet weather (a total of two samples) during this period. You must report for each congener the analytical results of the effluent monitoring, including the quantifiable limit and the Method Detection Limit (MDL), and the measured or estimated concentration. The Discharger must multiply each measured or estimated congener concentration by its respective Toxicity Equivalent Factors (TEFs) and report the sum of these values.
4. The receiving water samples shall be collected upstream of the effluent discharge point in the receiving water outside the influence of the discharge. Where feasible receiving water sample should be collected 50 feet upstream of the effluent discharge point.

**B. Interim Monitoring Report**

1. You may conduct the quarterly/semi-annually sampling during the periods prescribed in the monitoring and reporting section of your current permit, but the data must be submitted according to the Monitoring and Reporting Schedule which follows. However, if quarterly/semi-annually sampling is not required in your current permit, you must sample your effluent and the receiving water, and submit a report according to the Monitoring and Reporting Schedule below. Please note that the report for this required monitoring must be submitted separately from the self-monitoring reports.

<b>Monitoring and Reporting Schedule</b>	
<b>Monitoring Period</b>	<b>Report Due Date</b>
January – March	April 15
April – June	July 15
July – September	October 15
October – December	January 15
Semi-annual sampling (to be conducted during October to March, and during April to September)	April 15 & October 15, respectively

Semi-annual sampling results shall be reported in the quarterly reports submitted on the 15<sup>th</sup> day of April and October respectively.

2. SWRCB-approved laboratory methods and the corresponding minimum levels (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. We recommend that you select the analytical method from Attachment A 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.
3. 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.
4. In conformance with a prior directive the first monitoring data under this program was due **October 15, 2001** and the last report is due pursuant to this MRP on **April 15, 2003**, to this Regional Board. The last monitoring data shall include all the analytical data from the previous sampling events under this program. You must provide these analytical results in both

**electronic format** (available as a **Microsoft Excel Spreadsheet** on our Web site [http://www.swrcb.ca.gov/~rwqcb4/html/programs/watershed\\_reg.html](http://www.swrcb.ca.gov/~rwqcb4/html/programs/watershed_reg.html)) and **in paper format**.

5. Please forward all interim monitoring data/report to The Regional Board, Attn: Industrial Permitting Unit, and please include a reference to "Compliance File No. CI-7697 and NPDES No. CA0063924".

**V. Storm Water Monitoring And Reporting**

The Discharger shall implement the Monitoring and Reporting Requirements for individual discharges contained in the general permit for *Dischargers of Storm Water Associated with Industrial Activities* (State Board Order No. 97-030-DWQ) adopted on April 17, 1997. The monitoring reports shall be received at the Regional Board by July 1 of each year. Indicate in the report the Compliance File CI-7697.

Ordered by: \_\_\_\_\_

Dennis A. Dickerson  
Executive Officer

Date: January 24, 2002

/CDO