



California Regional Water Quality Control Board

Los Angeles Region



Linda S. Adams
Cal/EPA Secretary

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Arnold Schwarzenegger
Governor

October 30, 2007

Mr. Joseph Kwan, Director, Environmental Remediation
Northrop Grumman Corp. – Hawthorne Site
1840 Century Park East, 128/CC
Los Angeles, CA 90067

VIA CERTIFIED MAIL
RETURN RECEIPT REQUESTED
No. 7002 2030 0002 1672 8301

Dear Mr. Kwan:

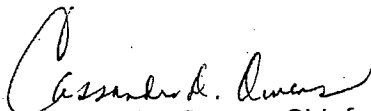
**WASTE DISCHARGE REQUIREMENTS ORDER NO. R4-2007-0029 – NORTHROP GRUMMAN
(FORMERLY TRW INC.), HAWTHORNE (NPDES NO. CA0063916, CI NO. 7698)**

Our letter dated June 14, 2007, transmitted Order R4-2007-0029 for the Northrop Grumman Hawthorne Facility. The order included did not include updates to the tentative requirements that were implemented in response to comments from the Discharger (revised-tentative Waste Discharge Requirements (WDR)). The revised-tentative WDR was considered and adopted by the Regional Board. Therefore, included herewith is the corrected copy of the adopted Order R4-2007-0029.

We are sending the final copy of the permit only to the Discharger. An electronic copy of the permit will be provided to all individuals on the interested parties list. For other individuals who would like access to a copy of the final permit, please go to the Regional Board's website at http://www.waterboards.ca.gov/losangeles/html/permits/general_permits.html.

If you have any question please contact Stephanie Turcios at (213) 576-6793 or Cassandra Owens at (213) 576-6750.

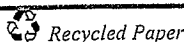
Sincerely,


Cassandra Owens, Chief
Industrial Permitting Unit

Enclosures: Waste Discharge Requirements
Fact Sheet
Monitoring and Reporting Program

cc: Environmental Protection Agency, Region 9, Permits Branch (WTR-5)
U.S. Army Corps of Engineers

California Environmental Protection Agency



Our mission is to preserve and enhance the quality of California's water resources for the benefit of present and future generations.

NOAA, National Marine Fisheries Service
Mailing List (continued)

Department of Interior, U.S. Fish and Wildlife Service
Mr. Phil Isorena, State Water Resources Control Board, Division of Water Quality
Mr. Michael Levy, State Water Resources Control Board, Office of Chief Counsel
Mr. William Paznokas, Department of Fish and Game, Region 5
Department of Health Services, Sanitary Engineering Section
California State Parks and Recreation
California Coastal Commission, South Coast Region
South Coast Air Quality Management District
Water Replenishment District of Southern California
Los Angeles County, Department of Public Works, Waste Management Division
Los Angeles County, Department of Health Services
Ms. Tracy Egoscue, Santa Monica BayKeeper
Dr. Mark Gold, Heal the Bay
Mr. Daniel Cooper, Lawyers for Clean Water
Mr. David Beckman, Natural Resources Defense Council
Mr. Mati Waiya, Ventura CoastKeeper
Ms. Amy B. Sullivan, Northrop Grumman
Mr. Matt Carfagnio, Orion Environmental
Mr. Jae Kim, TetraTech

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

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**ORDER NO. R4-2007-0029
NPDES NO. CA0063916**

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

Table 1. Discharger Information

Discharger	Northrop Grumman Space & Mission Systems Corp. (formerly TRW Inc.)
Name of Facility	Northrop Grumman – Hawthorne Site (Formerly TRW Inc)
Facility Address	14520 Aviation Boulevard
	Hawthorne, California 90250-6655
	Los Angeles County
The U.S. Environmental Protection Agency (USEPA) and the Regional Water Quality Control Board have classified this discharge as a minor discharge.	

The discharge by Northrop Grumman (Hawthorne Site) from the discharge point identified below is subject to waste discharge requirements as set forth in this Order:

Table 2. Discharge Location

Discharge Point	Effluent Description	Discharge Point Latitude	Discharge Point Longitude	Receiving Water
001	Treated ground water and non process wastewater	33 °, 54', 00"N	118 °, 22', 30"W	Dominguez Channel

Table 3. Administrative Information

This Order was adopted by the Regional Water Quality Control Board on:	June 7, 2007
This Order shall become effective on:	July 27, 2007
This Order shall expire on:	May 10, 2012
The Discharger shall file a Report of Waste Discharge in accordance with Title 23, California Code of Regulations, as application for issuance of new waste discharge requirements no later than:	180 days in advance of the Order expiration date

IT IS HEREBY ORDERED, that Order No. 01-177 is rescinded upon the effective date of this Order except for enforcement purposes, and, in order to meet the provisions contained in division 7 of the Water Code (commencing with section 13000) and regulations adopted thereunder, and the provisions of the federal Clean Water Act (CWA), and regulations and guidelines adopted thereunder, the Discharger shall comply with the requirements in this Order.

I, Deborah J. Smith, Interim Executive Officer, do hereby certify the following is a full, true, and correct copy of an Order adopted by the California Regional Water Quality Control Board, Los Angeles Region, on June 7, 2007.



 Deborah J. Smith, Interim Executive Officer

TABLE OF CONTENTS

I.	Facility Information.....	4
II.	Findings.....	4
III.	Discharge Prohibitions.....	9
IV.	Effluent Limitations and Discharge Specifications.....	9
	A. Effluent Limitations – Discharge Point 001.....	9
	B. Land Discharge Specifications.....	12
	C. Reclamation Specifications.....	12
V.	Receiving Water Limitations.....	13
	A. Surface Water Limitations.....	13
	B. Groundwater Limitations.....	14
VI.	Provisions.....	14
	A. Standard Provisions.....	14
	B. Monitoring and Reporting Program Requirements.....	16
	C. Special Provisions.....	16
	1. Reopener Provisions.....	16
	2. Special Studies, Technical Reports and Additional Monitoring Requirements.....	17
	3. Best Management Practices and Pollution Prevention.....	17
	4. Compliance Schedules.....	18
	5. Construction, Operation and Maintenance Specifications.....	18
	6. Special Provisions for Municipal Facilities (POTWs Only).....	19
	7. Other Special Provisions.....	19
VII.	Compliance Determination.....	19
	A. Single Constituent Effluent Limitation.....	19
	B. Effluent Limitations Expressed as a Sum of Several Constituents.....	19
	C. Effluent Limitations Expressed as a Median.....	19
	D. Mass-based Effluent Limitations.....	19
	E. Multiple Sample Data.....	19
	F. Average Monthly Effluent Limitation (AMEL).....	20
	G. Average Weekly Effluent Limitations (AWEL).....	20
	H. Maximum Daily Effluent Limitations (MDEL).....	21
	I. Instantaneous Minimum Effluent Limitation.....	21
	J. Instantaneous Maximum Effluent Limitation.....	21
	Attachment A – Definitions.....	A-1
	Attachment B – Topographic Map.....	B-1
	Attachment C – Flow Schematic.....	C-1
	Attachment D – Federal Standard Provisions.....	D-1
	Attachment E – Monitoring and Reporting Program (MRP).....	E-1
	Attachment F – Fact Sheet.....	F-1
	Attachment G – State Water Board Minimum Levels.....	G-1
	Attachment H – Priority Pollutants.....	H-1
	Attachment I – Summary of RPA and Effluent Limit Calculations.....	I-1
Tables		
	Table 1. Discharger Information.....	1
	Table 2. Discharge Location.....	1
	Table 3. Administrative Information.....	1
	Table 4. Facility Information.....	4
	Table 5. Basin Plan Beneficial Uses.....	6
	Table 6. Effluent Limitations.....	9
	Order.....	2

Table 7. Interim Effluent Limitations.....	12
Table E-3. Monitoring Station Locations	E-5
Table E-4. Effluent Monitoring	E-5
Table E-5. Receiving Water Monitoring Location RSW-001	E-12
Table E-6. Receiving Water Monitoring Location RSW-002	E-12
Table E-7. Monitoring Periods and Reporting Schedule.....	E-14
Table F-1 Facility Information	F-3
Table F-2. Summary of Effluent Limitations Order No. 01-177 and SMR Reporting	F-5
Table F-3. Summary of Compliance History	F-6
Table F-4. Basin Plan Beneficial Uses	F-7
Table F-5. Applicable Water Quality Criteria	F-12
Table F-6. Summary Reasonable Potential Analysis	F-13
Table F-7. Summary of Water Quality-based Effluent Limitations: Discharge Point 001	F-18
Table F-8. Summary of Final Effluent Limitations: Discharge Point 001	F-20
Table F-9. Interim Effluent Limitations	F-22

I. FACILITY INFORMATION

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

Table 4. Facility Information

Discharger	Northrop Grumman Space & Mission Systems Corp. (formerly TRW Inc.)
Name of Facility	Northrop Grumman – Hawthorne Site (Formerly TRW Inc.)
Facility Address	14520 Aviation Boulevard
	Hawthorne, California 90250-6655
	Los Angeles County
Facility Contact, Title, and Phone	Mr. Joseph Kwan, Director, Environmental Remediation (310) 556-4514
Mailing Address	1840 Century Park East, 128CC Los Angeles, CA 90067
Type of Facility	Groundwater extraction and treatment system for groundwater remediation.
Facility Design Flow	0.140 MGD

II. FINDINGS

The California Regional Water Quality Control Board, Los Angeles Region (hereinafter Regional Water Board), finds:

A. **Background.** Northrop Grumman (hereinafter Discharger) is currently discharging pursuant to Order No. 01-177 and National Pollutant Discharge Elimination System (NPDES) Permit No. CA0063916. The Discharger submitted a Report of Waste Discharge, dated November 3, 2006, and applied for an NPDES permit renewal to discharge treated wastewater from the Hawthorne Site, hereinafter Facility. The application was deemed complete December 13, 2006.

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

B. **Facility Description.** The Discharger owns and operates a groundwater extraction and treatment system. The treatment system consists of a batch mode operating system; groundwater is currently pumped from up to five wells to an equalization tank. Additional extraction wells may be added. The number of groundwater extraction wells operating at any one time may vary during the groundwater remediation program, but the total treatment system throughput will not exceed the permitted maximum. The equalization tank also receives non-process wastewater generated from the operation of an off-gas treatment system installed as part of the groundwater treatment system. When the tank is full then the water is pumped to a batch treatment system which includes four bag filters operating in parallel, air stripping, and carbon adsorption. The treated water is stored in a tank prior to discharge. Wastewater is discharged from Discharge Point 001 (see table on cover page) to a storm sewer which discharges into the Dominguez Channel, a water of the United States. Attachment B provides a topographic map of the area around the facility. Attachment C provides a flow schematic of the facility.

- C. **Legal Authorities.** This Order is issued pursuant to section 402 of the Federal Clean Water Act (CWA) and implementing regulations adopted by the U.S. Environmental Protection Agency (USEPA) and chapter 5.5, division 7 of the California Water Code (commencing with section 13370). It shall serve as an NPDES permit for point source discharges from this facility to surface waters. This Order also serves as Waste Discharge Requirements (WDRs) pursuant to article 4, chapter 4, division 7 of the Water Code (commencing with section 13260).
- D. **Background and Rationale for Requirements.** The Regional Water Board developed the requirements in this Order based on information submitted as part of the application, through monitoring and reporting programs, and through special studies. The Fact Sheet (Attachment F), which contains background information and rationale for Order requirements, is hereby incorporated into this Order and constitutes part of the Findings for this Order. Attachments A through E and G through I are also incorporated into this Order.
- E. **California Environmental Quality Act (CEQA).** Under Water Code section 13389, this action to adopt an NPDES permit is exempt from the provisions of the CEQA, Public Resources Code sections 21100 – 21177.
- F. **Technology-based Effluent Limitations.** Section 301(b) of the CWA and implementing USEPA permit regulations at section 122.44, title 40 of the Code of Federal Regulations¹ require that permits include conditions meeting applicable technology-based requirements at a minimum, and any more stringent effluent limitations necessary to meet applicable water quality standards. The discharge authorized by this Order must meet minimum federal technology-based requirements based on Best Professional Judgment (BPJ) in accordance with Part 125, section 125.3. A detailed discussion of the technology-based effluent limitations development is included in the Fact Sheet.
- G. **Water Quality-based Effluent Limitations.** Section 301 of the CWA and section 122.44(d) require that permits include limitations more stringent than applicable federal technology-based requirements where necessary to achieve applicable water quality standards.
- Section 122.44(d) mandates that permits include effluent limitations for all pollutants that are or may be discharged at levels that have the reasonable potential to cause or contribute to an exceedance of a water quality standard, including numeric and narrative objectives within a standard. Where reasonable potential has been established for a pollutant, but there is no numeric criterion or objective for the pollutant, water quality-based effluent limitations (WQBELs) must be established using: (1) USEPA criteria guidance under CWA section 304(a), supplemented where necessary by other relevant information; (2) an indicator parameter for the pollutant of concern; or (3) a calculated numeric water quality criterion, such as a proposed state criterion or policy interpreting the state's narrative criterion, supplemented with other relevant information, as provided in section 122.44(d)(1)(vi).
- H. **Water Quality Control Plans.** The Regional Water Board adopted a Water Quality Control Plan for the Los Angeles Region (hereinafter Basin Plan) on June 13, 1994 that designates beneficial uses, establishes water quality objectives, and contains implementation programs and policies to achieve those objectives for all waters addressed through the plan. In addition, the Basin Plan implements State Water Resources Control Board (State Water Board) Resolution No. 88-63, which established state policy that all waters, with certain exceptions, should be considered suitable or potentially suitable for municipal or domestic supply. Beneficial uses applicable to the Dominguez Channel, above the Dominguez Channel Estuary, are as follows:

¹ All further statutory references are to title 40 of the Code of Federal Regulations unless otherwise indicated.

Table 5. Basin Plan Beneficial Uses

Discharge Point	Receiving Water Name	Beneficial Use(s)
001	Dominguez Channel (to Estuary)	<p><u>Existing:</u> Non-contact water recreation (REC2) and Preservation of Rare and Endangered Species (RARE).</p> <p><u>Potential:</u> Municipal and Domestic Supply* (MUN), Water Contact Recreation (REC1), Warm Freshwater Habitat (WARM), and Wildlife Habitat (WILD).</p>

Potential Municipal and Domestic Supply (P* MUN). Consistent with Regional Board Resolution No. 89-03 and State Board Resolution No. 88-63, in 1994 the Regional Board conditionally designated all inland surface waters in Table 2-1 of the 1994 Basin Plan as existing, intermittent, or potential for Municipal and Domestic Supply (MUN). However, the conditional designation in the 1994 Basin Plan included the following implementation provision: "no new effluent limitations will be placed in Waste Discharge Requirements as a result of these [potential MUN designations made pursuant to the Source of Drinking Water (SODW) policy and the Regional Board's enabling resolution] until the Regional Board adopts [a special Basin Plan Amendment that incorporates a detailed review of the waters in the Region that should be exempted from the potential MUN designations arising from SODW policy and the Regional Board's enabling resolution]." On February 15, 2002, as a result of a legal challenge and federal court order, the USEPA clarified its partial approval (May 26, 2000) of the 1994 Basin Plan amendments and acknowledged that the conditional designations do not currently have a legal effect, do not reflect new water quality standards subject to USEPA review, and do not support new effluent limitations based on the conditional designations stemming from the SODW Policy until a subsequent review by the Regional Board finalizes the designations for these waters. This permit is designed to be consistent with the existing Basin Plan.

The State Water Board adopted a *Water Quality Control Plan for Control of Temperature in the Coastal and Interstate Water and Enclosed Bays and Estuaries of California* (Thermal Plan) on May 18, 1972, and amended this plan on September 18, 1975. This plan contains temperature objectives for inland and coastal surface waters.

Ammonia Basin Plan Amendment. The 1994 Basin Plan provided water quality objectives for ammonia to protect aquatic life, in Table 3-1 through Table 3-4. However, those ammonia objectives were revised on April 25, 2002, by the Regional Water Board with the adoption of Resolution No. 2002-011, *Amendment to the Water Quality Control Plan for the Los Angeles Region to Update the Ammonia Objectives for Inland Surface Waters (Including Enclosed Bays, Estuaries and Wetlands) with Beneficial Use Designations for Protection of Aquatic Life*. The amendment reflects the revised water quality criteria developed by USEPA in the "1999 Update of Ambient Water Quality Criteria for Ammonia," December 1999. The 1999 Update contains USEPA's most recent freshwater aquatic life criteria for ammonia and supersedes all previous freshwater aquatic life criteria for ammonia. The ammonia Basin Plan amendment was approved by the State Water Board, the Office of Administrative Law, and USEPA on April 30, 2003, June 5, 2003, and June 19, 2003, respectively. Although the revised ammonia water quality objectives may be less stringent than those contained in the 1994 Basin Plan, they are still protective of aquatic life and are consistent with USEPA's 1999 ammonia criteria update.

- I. **National Toxics Rule (NTR) and California Toxics Rule (CTR).** USEPA adopted the NTR on December 22, 1992, and later amended it on May 4, 1995 and November 9, 1999. About forty

criteria in the NTR applied in California. On May 18, 2000, USEPA adopted the CTR. The CTR promulgated new toxics criteria for California and, in addition, incorporated the previously adopted NTR criteria that were applicable in the state. The CTR was amended on February 13, 2001. These rules contain water quality criteria for priority pollutants.

- J. **State Implementation Policy.** On March 2, 2000, State Water Board adopted the *Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California* (State Implementation Policy or SIP). The SIP became effective on April 28, 2000, with respect to the priority pollutant criteria promulgated for California by the USEPA through the NTR and to the priority pollutant objectives established by the Regional Water Board in the Basin Plan. The SIP became effective on May 18, 2000 with respect to the priority pollutant criteria promulgated by the USEPA through the CTR. The State Water Board adopted amendments to the SIP on February 24, 2005 that became effective on July 13, 2005. The SIP establishes implementation provisions for priority pollutant criteria and objectives and provisions for chronic toxicity control. Requirements of this Order implement the SIP.
- K. **Compliance Schedules and Interim Requirements.** Section 2.1 of the SIP provides that, based on a discharger's request and demonstration that it is infeasible for an existing discharger to achieve immediate compliance with an effluent limitation derived from a CTR criterion, compliance schedules may be allowed in an NPDES permit. Unless an exception has been granted under section 5.3 of the SIP, a compliance schedule may not exceed 5 years from the date that the permit is issued or reissued, nor may it extend beyond ten years from the effective date of the SIP (or May 18, 2010) to establish and comply with CTR criterion-based effluent limitations. Where a compliance schedule for a final effluent limitation exceeds one year, the Order must include interim numeric limitations for that constituent or parameter. Where allowed by the Water Quality Control Plan for the Los Angeles Region, compliance schedules and interim effluent limitations or discharge specifications may also be granted to allow time to implement a new or revised water quality objective. This Order includes a compliance schedule and interim effluent limitations. A detailed discussion of the basis for the compliance schedule and interim effluent limitations is included in the Fact Sheet.
- L. **Alaska Rule.** On March 30, 2000, USEPA revised its regulation that specifies when new and revised state and tribal water quality standards (WQS) become effective for CWA purposes (40 C.F.R. § 131.21, 65 Fed. Reg. 24641 (April 27, 2000)). Under the revised regulation (also known as the Alaska rule), new and revised standards submitted to USEPA after May 30, 2000, must be approved by USEPA before being used for CWA purposes. The final rule also provides that standards already in effect and submitted to USEPA by May 30, 2000, may be used for CWA purposes, whether or not approved by USEPA.
- M. This Order contains both technology-based and water quality-based effluent limitations for individual pollutants. The technology-based effluent limitations consist of restrictions on biochemical oxygen demand (BOD), total suspended solids (TSS), oil and grease, phenols, sulfides, and turbidity. Restrictions on BOD, TSS, oil and grease, phenols, sulfides, and turbidity are discussed in section IV.B in the Fact Sheet. This Order's technology-based pollutant restrictions implement the minimum, applicable federal technology-based requirements. These limitations are not more stringent than required by the CWA.

Water quality-based effluent limitations have been scientifically derived to implement water quality objectives that protect beneficial uses. Both the beneficial uses and the water quality objectives have been approved pursuant to federal law and are the applicable federal water quality standards. To the extent that toxic pollutant water quality-based effluent limitations were derived from the CTR, the CTR is the applicable standard pursuant to section 131.38. The

scientific procedures for calculating the individual water quality-based effluent limitations for priority pollutants are based on the CTR-SIP, which was approved by USEPA on May 18, 2000. All beneficial uses and water quality objectives contained in the Basin Plan were approved under state law and submitted to and approved by USEPA prior to May 30, 2000. Any water quality objectives and beneficial uses submitted to USEPA prior to May 30, 2000, but not approved by USEPA before that date, are nonetheless "applicable water quality standards for purposes of the CWA" pursuant to section 131.21(c)(1). Collectively, this Order's restrictions on individual pollutants are no more stringent than required to implement the requirements of the CWA.

- N. **Antidegradation Policy.** Section 131.12 requires that state water quality standards include an antidegradation policy consistent with the federal policy. The State Water Board established California's antidegradation policy in State Water Board Resolution No. 68-16. Resolution No. 68-16 incorporates the federal antidegradation policy where the federal policy applies under federal law. Resolution No. 68.16 requires that existing quality of water be maintained unless degradation is justified based on specific findings. The Regional Water Board's Basin Plan implements and incorporates by reference, both the state and federal antidegradation policies. As discussed in detail in the Fact Sheet the permitted discharge is consistent with the antidegradation provision of section 131.12 and State Water Board Resolution No. 68-16.
- O. **Anti-Backsliding Requirements.** Sections 402(o)(2) and 303(d)(4) of the CWA and federal regulations at title 40, Code of Regulations section 122.44(l) prohibit backsliding in NPDES permits. These anti-backsliding provisions require effluent limitations in a reissued permit to be as stringent as those in the previous permit, with some exceptions where limitations may be relaxed. All effluent limitations in this Order are at least as stringent as the effluent limitations in the previous Order.
- P. **Monitoring and Reporting.** Section 122.48 requires that all NPDES permits specify requirements for recording and reporting monitoring results. Water Code sections 13267 and 13383 authorize the Regional Water Boards to require technical and monitoring reports. The Monitoring and Reporting Program (MRP) establishes monitoring and reporting requirements to implement federal and State requirements. This MRP is provided in Attachment E.
- Q. **Standard and Special Provisions.** Standard Provisions, which apply to all NPDES permits in accordance with section 122.41, and additional conditions applicable to specified categories of permits in accordance with section 122.42, are provided in Attachment D. The Discharger must comply with all standard provisions and with those additional conditions that are applicable under section 122.42. The Regional Water Board has also included in this Order special provisions applicable to the Discharger. A rationale for the special provisions contained in this Order is provided in the attached Fact Sheet.
- R. **Provisions and Requirements of Implementing State Law.** The provisions and requirements in subsections IV.B, IV.C, V.B, and VI.C of this Order are included to implement state law only. These provisions/requirements are not required or authorized under the federal CWA; consequently, violations of these provisions/requirements are not subject to the enforcement remedies that are available for NPDES violations.
- S. **Notification of Interested Parties.** The Regional Water Board has notified the Discharger and interested agencies and persons of its intent to prescribe Waste Discharge Requirements for the discharge and has provided them with an opportunity to submit their written comments and recommendations. Details of notification are provided in the Fact Sheet of this Order.

T. **Consideration of Public Comment.** The Regional Water Board, in a public meeting, heard and considered all comments pertaining to the discharge. Details of the Public Hearing are provided in the Fact Sheet of this Order.

III. DISCHARGE PROHIBITIONS

- A. Wastes discharged shall be limited to a maximum of 0.140 MGD of treated groundwater as described in the findings. The discharge of wastes from accidental spills or other sources is prohibited.
- B. Discharges of water, materials, thermal wastes, elevated temperature wastes, toxic wastes, deleterious substances, or wastes other than those authorized by this Order, to a storm drain system, Dominguez Channel, or other waters of the State, are prohibited.
- C. Neither the treatment nor the discharge of pollutants shall create pollution, contamination, or nuisance as defined by Section 13050 of the Water Code.
- D. Wastes discharged shall not contain any substances in concentrations toxic to human, animal, plant, or aquatic life.
- E. The discharge shall not cause a violation of any applicable water quality standards for receiving waters adopted by the Regional Water Board or the State Water Resources Control Board as required by the Federal CWA and regulations adopted thereunder. If more stringent applicable water quality standards are promulgated or approved pursuant to section 303 of the Federal CWA, and amendments thereto, the Board will revise and modify this Order in accordance with such more stringent standards.
- F. The discharge of any radiological, chemical, or biological warfare agent or high level radiological waste is prohibited.
- G. Any discharge of wastes at any point(s) other than specifically described in this Order is prohibited, and constitutes a violation of the Order.

IV. EFFLUENT LIMITATIONS AND DISCHARGE SPECIFICATIONS

A. Effluent Limitations – Discharge Point 001

1. Final Effluent Limitations – Discharge Point 001

- a. The discharge of treated groundwater shall maintain compliance with the following effluent limitations at Discharge Point 001, with compliance measured at Monitoring Location EFF-001 as described in the attached MRP (Attachment E):

Table 6. Effluent Limitations

Parameter	Units	Effluent Limitations			
		Average Monthly	Maximum Daily	Instantaneous Minimum	Instantaneous Maximum
pH	s.u.	--	--	6.5	8.5
Temperature	Deg. F	--	--	--	86
Suspended Solids	mg/L	50	75	--	--
	lbs/day	58	88	--	--

Parameter	Units	Effluent Limitations			
		Average Monthly	Maximum Daily	Instantaneous Minimum	Instantaneous Maximum
BOD ₅ 20°C	mg/L	20	30	--	--
	lbs/day	23	35	--	--
Oil and Grease	mg/L	10	15	--	--
	lbs/day	12	18	--	--
Turbidity	NTU	50	75	--	--
Sulfides	mg/L	--	1.0	--	--
	lbs/day	--	1.2	--	--
Phenols	mg/L	--	1.0	--	--
	lbs/day	--	1.2	--	--
Phenolic Compounds (chlorinated)	µg/L	--	1.0	--	--
	lbs/day	--	0.001	--	--
Acetone	µg/L	--	700	--	--
	lbs/day	--	0.82	--	--
Arsenic, Total Recoverable	µg/L	--	50.0	--	--
	lbs/day	--	0.06	--	--
Cadmium, Total Recoverable	µg/L	1.81	3.63	--	--
	lbs/day	0.002	0.004	--	--
Chromium (VI), Total Recoverable	µg/L	8.06	16.2	--	--
	lbs/day	0.009	0.019	--	--
Copper, Total Recoverable	µg/L	6.7	13.4	--	--
	lbs/day	0.008	0.016	--	--
Lead, Total Recoverable	µg/L	2.59	5.19	--	--
	lbs/day	0.003	0.006	--	--
Mercury	µg/L	0.051	0.102	--	--
	lbs/day	0.00006	0.00012	--	--
Selenium, Total Recoverable	µg/L	4.1	8.2	--	--
	lbs/day	0.005	0.009	--	--
Silver, Total Recoverable	µg/L	1.99	3.99	--	--
	lbs/day	0.002	0.005	--	--
Zinc, Total Recoverable	µg/L	61.1	122.5	--	--
	lbs/day	0.07	0.14	--	--
Benzene	µg/L	--	1.0	--	--
	lbs/day	--	0.001	--	--
Carbon Tetrachloride	µg/L	--	0.50	--	--
	lbs/day	--	0.0006	--	--
1,1-dichloroethane	µg/L	--	5.0	--	--
	lbs/day	--	0.006	--	--
1,2-dichloroethane	µg/L	--	0.5	--	--
	lbs/day	--	0.0006	--	--
1,1-dichloroethylene	µg/L	0.057	0.11	--	--
	lbs/day	0.00007	0.00013	--	--
Ethylbenzene	µg/L	--	10.0	--	--
	lbs/day	--	0.01	--	--

Parameter	Units	Effluent Limitations			
		Average Monthly	Maximum Daily	Instantaneous Minimum	Instantaneous Maximum
Tetrachloroethylene	µg/L	--	5.0	--	--
	lbs/day	--	0.006	--	--
Toluene	µg/L	--	10.0	--	--
	lbs/day	--	0.01	--	--
1,1,1-trichloroethane	µg/L	--	200	--	--
	lbs/day	--	0.23	--	--
Trichloroethylene	µg/L	--	5.0	--	--
	lbs/day	--	0.006	--	--
Vinyl Chloride	µg/L	--	0.5	--	--
	lbs/day	--	0.0006	--	--
Xylene	µg/L	--	10.0	--	--
	lbs/day	--	0.01	--	--
Bis(2-Ethylhexyl)Phthalate	µg/L	5.9	11.8	--	--
	lbs/day	0.007	0.014	--	--
1,4-dichlorobenzene	µg/L	--	5.0	--	--
	lbs/day	--	0.006	--	--

b. Acute Toxicity Limitation and Requirements: There shall be no acute toxicity in the discharge. The acute toxicity of the effluent shall be such that:

1. The average survival in the undiluted effluent for any three (3) consecutive 96-hour static or continuous flow bioassay tests shall be at least 90%, and
2. No single test producing less than 70% survival. Compliance with the toxicity objectives will be determined by the method described in Section V of the MRP No. 7698 (Attachment E).

c. Chronic Toxicity Limitation and Requirements:

1. This Order includes a chronic testing toxicity trigger defined as an exceedance of 1.0 TU_c in a critical life stage test for 100% effluent. (The monthly median for chronic toxicity of 100% effluent shall not exceed 1.0 TU_c in a critical life stage test.)
2. If the chronic toxicity of the effluent exceeds 1.0 TU_c, the Discharger shall immediately implement an accelerated chronic toxicity testing according to MRP No. 7219, Section V.E. If the results of two of the six accelerated tests exceed 1.0 TU_c, the Discharger shall initiate a TIE and implement the Initial Investigation TRE Workplan. (see MRP No. 7698, Section V.G.).
3. The Discharger shall conduct chronic toxicity monitoring as specified in MRP No. 7698.
4. The chronic toxicity of the effluent shall be expressed and reported in toxic units, where:

$$TU_c = \frac{100}{NOEC}$$

The No Observable Effect Concentration (NOEC) is expressed as the maximum percent effluent concentration that causes no observable effect on test organisms, as determined by the results of a critical life stage toxicity test.

5. Preparation of an Initial Investigation TRE Workplan

The Discharger shall submit a detailed initial investigation Toxicity Reduction Evaluation (TRE) workplan to the Executive Officer of the Regional Board for approval within 90 days of the effective date of this permit. 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 provisions in Attachment C. This workplan shall describe the steps the Discharger intends to follow if toxicity is detected, and should include, at a minimum:

- i. A description of the investigation and evaluation techniques that would be used to identify potential causes and sources of toxicity, effluent variability, and treatment system efficiency;
- ii. A description of the facility's methods of maximizing in-house treatment efficiency and good housekeeping practices, and a list of all chemicals used in operation of the facility; and,

If a toxicity identification evaluation (TIE) is necessary, an indication of the person who would conduct the TIEs (i.e., an in-house expert or an outside contractor) (See MRP Section IV.G.2.c. for guidance manuals).

2. Interim Effluent Limitations

- a. During the period beginning July 27, 2007 and ending on May 17, 2010, the discharge of treated groundwater shall maintain compliance with the following limitations at Discharge Point 001, with compliance measured at Monitoring Location EFF-001, as described in the attached MRP. These interim effluent limitations shall apply in lieu of the corresponding final effluent limitations specified for the same parameters during the time period indicated in this provision.

Table 7. Interim Effluent Limitations

Parameter	Units	Effluent Limitations
		Maximum Daily
Bis(2-Ethylhexyl)Phthalate	µg/L	6.2
	lbs/day	0.007

B. Land Discharge Specifications

[Not Applicable]

C. Reclamation Specifications

[Not Applicable]

V. RECEIVING WATER LIMITATIONS

A. Surface Water Limitations

Receiving water limitations are based on water quality objectives contained in the Basin Plan and are a required part of this Order. The discharge shall not cause the following in the Dominguez Channel:

1. The normal ambient pH to fall below 6.5 nor exceed 8.5 units nor vary from normal ambient pH levels by more than 0.5 units.
2. Depress the concentration of dissolved oxygen to fall below 5.0 mg/L anytime, and the median dissolved oxygen concentration for any three consecutive months shall not be less than 80 percent of the dissolved oxygen content at saturation.
3. Surface water temperature to rise greater than 5°F above the natural temperature of the receiving waters at any time or place. At no time the temperature be raised above 80° F as a result of waste discharged.
4. Exceed total ammonia (as N) concentrations specified in the Regional Water Board Resolution No. 2002-011. Resolution No. 2002-011 revised the ammonia water quality objectives for inland surface waters characteristic of freshwater in the 1994 Basin Plan, to be consistent with the "1999 Update of Ambient Water Quality Criteria for Ammonia." Adopted on April 28, 2002, Resolution No. 2002-011 was approved by State Water Board, Office of Administrative Law (OAL) and USEPA on April 30, 2003, June 5, 2003, and June 19, 2003, respectively and is now in effect.
5. The presence of visible, floating, suspended or deposited macroscopic particulate matter or foam.
6. Oils, greases, waxes, or other materials in concentrations that result in a visible film or coating on the surface of the receiving water or on objects in the water.
7. Suspended or settleable materials, chemical substances or pesticides in amounts that cause nuisance or adversely affect any designated beneficial use.
8. Toxic or other deleterious substances in concentrations or quantities which cause deleterious effects on aquatic biota, wildlife, or waterfowl or render any of these unfit for human consumption either at levels created in the receiving waters or as a result of biological concentration.
9. Accumulation of bottom deposits or aquatic growths.
10. Biostimulatory substances at concentrations that promote aquatic growth to the extent that such growth causes nuisance or adversely affects beneficial uses.
11. The presence of substances that result in increases of BOD that adversely affect beneficial uses.

12. Taste or odor-producing substances in concentrations that alter the natural taste, odor, and/or color of fish, shellfish, or other edible aquatic resources; cause nuisance; or adversely affect beneficial uses.
13. Alteration of turbidity, or apparent color beyond present natural background levels.
14. Damage, discolor, nor cause formation of sludge deposits on flood control structures or facilities nor overload the design capacity.
15. Degrade surface water communities and populations including vertebrate, invertebrate, and plant species.
16. Problems associated with breeding of mosquitoes, gnats, black flies, midges, or other pests.
17. Create nuisance, or adversely effect beneficial uses of the receiving water.
18. Violation of any applicable water quality standards for receiving waters adopted by the Regional Water Board or State Water Board. If more stringent applicable water quality standards are promulgated or approved pursuant to section 303 of the CWA, or amendments thereto, the Regional Water Board will revise or modify this Order in accordance with such standards.

B. Groundwater Limitations

[Not Applicable]

VI. PROVISIONS

A. Standard Provisions

1. **Federal Standard Provisions.** The Discharger shall comply with all Standard Provisions included in Attachment D of this Order.
2. **Regional Water Board Standard Provisions.** The Discharger shall comply with the following provisions:
 - a. This Order may be modified, revoked, reissued, or terminated in accordance with the provisions of sections 122.44, 122.62, 122.63, 122.64, 125.62 and 125.64. Causes for taking such actions include, but are not limited to: failure to comply with any condition of this Order; endangerment to human health or the environment resulting from the permitted activity; or acquisition of newly-obtained information which would have justified the application of different conditions if known at the time of Order adoption. The filing of a request by the Discharger for an Order modification, revocation, and issuance or termination, or a notification of planned changes or anticipated noncompliance does not stay any condition of this Order.
 - b. The Discharger must comply with the lawful requirements of municipalities, counties, drainage districts, and other local agencies regarding discharges of storm water to storm drain systems or other water courses under their jurisdiction; including applicable requirements in municipal storm water management program developed to comply with NPDES permits issued by the Regional Water Board to local agencies.

- c. Discharge of wastes to any point other than specifically described in this Order and permit is prohibited and constitutes a violation thereof.
- d. The Discharger shall comply with all applicable effluent limitations, national standards of performance, toxic effluent standards, and all federal regulations established pursuant to sections 301, 302, 303(d), 304, 306, 307, 316, 318, 405, and 423 of the Federal CWA and amendments thereto.
- e. These requirements do not exempt the operator of the waste disposal facility from compliance with any other laws, regulations, or ordinances which may be applicable; they do not legalize this waste disposal facility, and they leave unaffected any further restraints on the disposal of wastes at this site which may be contained in other statutes or required by other agencies.
- f. Oil or oily material, chemicals, refuse, or other contaminating materials shall not be stored or deposited in areas where they may be picked up by rainfall and carried off of the property and/or discharged to surface waters. Any such spill of such materials shall be contained and removed immediately.
- g. A copy of these waste discharge specifications shall be maintained at the discharge facility so as to be available at all times to operating personnel.
- h. After notice and opportunity for a hearing, this Order may be terminated or modified for cause, including, but not limited to:
 - (1) Violation of any term or condition contained in this Order;
 - (2) Obtaining this Order by misrepresentation, or failure to disclose all relevant facts;
 - (3) A change in any condition that requires either a temporary or permanent reduction or elimination of the authorized discharge.
- i. If there is any storage of hazardous or toxic materials or hydrocarbons at this facility and if the facility is not manned at all times, a 24-hour emergency response telephone number shall be prominently posted where it can easily be read from the outside.
- j. The Discharger shall notify the Regional Water Board not later than 120 days in advance of implementation of any plans to alter production capacity of the product line of the manufacturing, producing or processing facility by more than ten percent. Such notification shall include estimates of proposed production rate, the type of process, and projected effects on effluent quality. Notification shall include submittal of a new report of waste discharge appropriate filing fee.
- k. The Discharger shall file with the Regional Water Board a report of waste discharge at least 120 days before making any material change or proposed change in the character, location or volume of the discharge.
- l. All existing manufacturing, commercial, mining, and silvicultural dischargers must notify the Regional Water Board as soon as they know or have reason to believe that they have begun or expect to begin to use or manufacture intermediate or final product or byproduct of any toxic pollutant that was not reported on their application.
- m. In the event of any change in name, ownership, or control of these waste disposal facilities, the discharger shall notify this Regional Water Board of such change and shall

notify the succeeding owner or operator of the existence of this Order by letter, copy of which shall be forwarded to the Regional Water Board.

- n. The Water Code provides that any person who violates a waste discharge requirement or a provision of the Water Code is subject to civil penalties of up to \$5,000 per day, \$10,000 per day, or \$25,000 per day of violation, or when the violation involves the discharge of pollutants, is subject to civil penalties of up to \$10 per gallon per day or \$25 per gallon per day of violation; or some combination thereof, depending on the violation, or upon the combination of violations.

Violation of any of the provisions of the NPDES program or of any of the provisions of this Order may subject the violator to any of the penalties described herein, or any combination thereof, at the discretion of the prosecuting authority; except that only one kind of penalty may be applied for each kind of violation.

- o. The discharge of any product registered under the Federal Insecticide, Fungicide, and Rodenticide Act to any waste stream which may ultimately be released to waters of the United States, is prohibited unless specifically authorized elsewhere in this permit or another NPDES permit. This requirement is not applicable to products used for lawn and agricultural purposes.
- p. The discharge of any waste resulting from the combustion of toxic or hazardous wastes to any waste stream that ultimately discharges to waters of the United States is prohibited, unless specifically authorized elsewhere in this permit.
- q. The Discharger shall notify the Executive Officer in writing no later than 6 months prior to planned discharge of any chemical, other than the products previously reported to the Executive Officer, which may be toxic to aquatic life. Such notification shall include:
- (1) Name and general composition of the chemical,
 - (2) Frequency of use,
 - (3) Quantities to be used,
 - (4) Proposed discharge concentrations, and
 - (5) USEPA registration number, if applicable.

B. Monitoring and Reporting Program Requirements

The Discharger shall comply with the MRP, and future revisions thereto, in Attachment E of this Order. If there is any conflict between provisions stated in the MRP and the Regional Water Board Standard Provisions, those provisions stated in the MRP shall prevail.

C. Special Provisions

1. Reopener Provisions

- a. If more stringent applicable water quality standards are promulgated or approved pursuant to Section 303 of the Federal CWA, and amendments thereto, the Regional Water Board will revise and modify this Order in accordance with such more stringent standards.
- b. This Order may be reopened to include effluent limitations for toxic constituents determined to be present in significant amounts in the discharge through a more

comprehensive monitoring program included as part of this Order and based on the results of the RPA.

- c. This Order may be reopened and modified, to incorporate in accordance with the provisions set forth in 40 CFR Parts 122 and 124, to include requirements for the implementation of the watershed management approach or to include new MLs.
- d. This Order may be reopened and modified to revise effluent limitations as a result of future Basin Plan Amendments, such as an update of an objective or the adoption of a TMDL for the Dominguez Channel.
- e. This Order may be reopened upon submission by the Discharger of adequate information, as determined by the Regional Water Board, to provide for dilution credits or a mixing zone, as may be appropriate.

2. Special Studies, Technical Reports and Additional Monitoring Requirements

- a. **Chronic Toxicity Trigger and Monitoring Requirements.** The Order contains a chronic toxicity trigger defined as an exceedance of 1.0 TU_c in a critical life stage test for 100% effluent (The monthly median for chronic toxicity of 100% effluent shall not exceed, 1 TU_c in a critical life stage test.). The Discharger shall monitor the effluent annually for chronic toxicity to determine the presence of chronic toxicity. If the chronic toxicity of the effluent exceeds 1.0 TU_c (defined in Section V.A of the MRP, Attachment E), the Discharger shall immediately implement accelerated chronic toxicity testing, as required in Section V of the MRP, Attachment E).
- b. **Initial Investigation Toxicity Reduction Evaluation (TRE) Workplan.** The Discharger shall submit to the Regional Water Board an Initial Investigation Toxicity Reduction Evaluation (TRE) workplan (1-2 pages) **within 90 days** of the effective date of this permit. This plan shall describe the steps the permittee intends to follow in the event that toxicity is detected, and should include at a minimum:
 - 1) A description of the investigation and evaluation techniques that will be used to identify potential causes/sources of toxicity, effluent variability, and treatment system efficiency;
 - 2) A description of the facility's method of maximizing in-house treatment efficiency and good housekeeping practices, and a list of all chemicals used in operation of the facility;
 - 3) If a toxicity identification evaluation (TIE) is necessary, an indication of the person who would conduct the TIEs (i.e., an in-house expert or an outside contractor) (Section V of the MRP, Attachment E) provides references for the guidance manuals that should be used for performing TIEs).

3. Best Management Practices and Pollution Prevention

[Not Applicable]

4. Compliance Schedules

a. Compliance Plan.

- 1) The interim limitations stipulated in section IV.A.2 of this Order for bis(2-ethylhexyl)phthalate shall be in effect for a period not to extend beyond May 17, 2010. Thereafter, the Discharger shall comply with the limitations specified for bis(2-ethylhexyl)phthalate in section IV.A.1 of this Order.
- 2) The Discharger shall develop and submit, within six months of the effective date of this Order, a compliance plan that will identify the measures that will be taken to reduce the concentrations of bis(2-ethylhexyl)phthalate in their discharge. This plan must evaluate options to achieve compliance with the final effluent limitations for bis(2-ethylhexyl)phthalate within the deadline specified above.
- 3) The Discharger shall submit annual reports to describe the progress of studies and or actions undertaken to reduce bis(2-ethylhexyl)phthalate in the effluent, and to achieve compliance with the limitations in this Order by the deadline specified above. The Regional Water Board shall receive the first annual progress report at the same time the annual summary report is due, as required in section X.D of the MRP (Attachment E).

b. Pollutant Minimization Plan (PMP).

- 1) The Discharger shall develop a PMP to maintain effluent concentrations of bis(2-ethylhexyl)phthalate at or below the effluent limitations specified in Final Effluent Limitations section IV.A.1.a of this Order. The PMP shall include the following:
 - a) Annual review and quarterly monitoring of the potential sources of bis(2-ethylhexyl)phthalate;
 - b) Submittal of a control strategy designed to proceed toward the goal of maintaining effluent concentrations at or below the effluent limitation;
 - c) Implementation of appropriate cost-effective control measures consistent with the control strategy;
 - d) An annual status report that shall be sent to the Regional Water Board at the same time the annual summary report is submitted in accordance with section X.D of the MRP (Attachment E), and include:
 - (i) All PMP monitoring results for the previous year;
 - (ii) A list of potential sources of bis(2-ethylhexyl)phthalate;
 - (iii) A summary of all actions undertaken pursuant to the control strategy;
 - (iv) A description of actions to be taken in the following year.

5. Construction, Operation and Maintenance Specifications

- a. The Discharger shall at all times properly operate and maintain all facilities and systems installed or used to achieve compliance with this Order.

6. Special Provisions for Municipal Facilities (POTWs Only)

[Not Applicable]

7. Other Special Provisions

[Not Applicable]

VII. COMPLIANCE DETERMINATION

Compliance with the effluent limitations contained in section IV of this Order will be determined as specified below:

A. Single Constituent Effluent Limitation.

If the concentration of the pollutant in the monitoring sample is greater than the effluent limitation and greater than or equal to the reported Minimum Level (see Reporting Requirement I.G. of the MRP), then the Discharger is out of compliance.

B. Effluent Limitations Expressed as a Sum of Several Constituents.

If the sum of the individual pollutant concentrations is greater than the effluent limitation, then the Discharger is out of compliance. In calculating the sum of the concentrations of a group of pollutants, consider constituents reported as ND or DNQ to have concentrations equal to zero, provided that the applicable ML is used.

C. Effluent Limitations Expressed as a Median.

In determining compliance with a median limitation, the analytical results in a set of data will be arranged in order of magnitude (either increasing or decreasing order); and

1. If the number of measurements (n) is odd, then the median will be calculated as $X_{(n+1)/2}$, or
2. If the number of measurements (n) is even, then the median will be calculated as $[X_{n/2} + X_{(n/2)+1}]$, i.e. the midpoint between the $n/2$ and $n/2+1$ data points.

D. Mass-based Effluent Limitations.

In calculating mass emission rates from the monthly average concentrations, use one half of the method detection limit for "Not Detected" (ND) and the estimated concentration for "Detected, but Not Quantified" (DNQ) for the calculation of the monthly average concentration. To be consistent with Limitations and Discharge Requirements, Section VII.B, if all pollutants belonging to the same group are reported as ND or DNQ, the sum of the individual pollutant concentrations should be considered as zero for the calculation of the monthly average concentration.

E. Multiple Sample Data.

When determining compliance with an AMEL, AWEL, or MDEL for priority pollutants and more than one sample result is available, the Discharger shall compute the arithmetic mean unless the data set contains one or more reported determinations of "Detected, but Not Quantified" (DNQ) or "Not Detected" (ND). In those cases, the Discharger shall compute the median in place of the arithmetic mean in accordance with the following procedure:

1. The data set shall be ranked from low to high, ranking the reported ND determinations lowest, DNQ determinations next, followed by quantified values (if any). The order of the individual ND or DNQ determinations is unimportant.
2. The median value of the data set shall be determined. If the data set has an odd number of data points, then the median is the middle value. If the data set has an even number of data points, then the median is the average of the two values around the middle unless one or both of the points are ND or DNQ, in which case the median value shall be the lower of the two data points where DNQ is lower than a value and ND is lower than DNQ.

F. Average Monthly Effluent Limitation (AMEL).

If the average (or when applicable, the median determined by subsection E above for multiple sample data) of daily discharges over a calendar month exceeds the AMEL for a given parameter, this will represent a single violation, though the Discharger will be considered out of compliance for each day of that month for that parameter (e.g., resulting in 31 days of non-compliance in a 31-day month). If only a single sample is taken during the calendar month and the analytical result for that sample exceeds the AMEL, the Discharger will be considered out of compliance for that calendar month. For any one calendar month during which no sample (daily discharge) is taken, no compliance determination can be made for that calendar month.

In determining compliance with the AMEL, the following provisions shall also apply to all constituents:

1. If the analytical result of a single sample, monitored monthly, quarterly, semiannually, or annually, does not exceed the AMEL for that constituent, the Discharger has demonstrated compliance with the AMEL for that month;
2. If the analytical result of a single sample, monitored monthly, quarterly, semiannually, or annually, exceeds the AMEL for any constituent, the Discharger shall collect four additional samples at approximately equal intervals during the month. 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.

When all sample results are greater than or equal to the reported Minimum Level (see Reporting Requirement I.G. of the MRP), the numerical average of the analytical results of these five samples will be used for compliance determination.

When one or more sample results are reported as "Not-Detected (ND)" or "Detected, but Not Quantified (DNQ)" (see Reporting Requirement I.G. of the MRP), the median value of these four samples shall be used for compliance determination. If one or both of the middle values is ND or DNQ, the median shall be the lower of the two middle values.

3. In the event of noncompliance with an AMEL, the sampling frequency for that constituent shall be increased to weekly and shall continue at this level until compliance with the AMEL has been demonstrated.
4. If only one sample was obtained for the month or more than a monthly period and the result exceeds the AMEL, then the Discharger is in violation of the AMEL.

G. Average Weekly Effluent Limitations (AWEL).

If the average (or when applicable, the median determined by subsection E above for multiple sample data) of daily discharges over a calendar week exceeds the AWEL for a given

parameter, this will represent a single violation, though the Discharger will be considered out of compliance for each day of that week for that parameter, resulting in 7 days of non-compliance.

If only a single sample is taken during the calendar week and the analytical result for that sample exceeds the AWEL, the Discharger will be considered out of compliance for that calendar week. The Discharger will only be considered out of compliance for days when the discharge occurs. For any one calendar week during which no sample (daily discharge) is taken, no compliance determination can be made for that calendar week.

H. Maximum Daily Effluent Limitations (MDEL).

If a daily discharge exceeds the MDEL for a given parameter, an alleged violation will be flagged and the discharger will be considered out of compliance for that parameter for that 1 day only within the reporting period. For any 1 day during which no sample is taken, no compliance determination can be made for that day.

I. Instantaneous Minimum Effluent Limitation.

If the analytical result of a single grab sample is lower than the instantaneous minimum effluent limitation for a parameter, a violation will be flagged and the discharger will be considered out of compliance for that parameter for that single sample. Non-compliance for each sample will be considered separately (e.g., the results of two grab samples taken within a calendar day that both are lower than the instantaneous minimum effluent limitation would result in two instances of non-compliance with the instantaneous minimum effluent limitation).

J. Instantaneous Maximum Effluent Limitation.

If the analytical result of a single grab sample is higher than the instantaneous maximum effluent limitation for a parameter, a violation will be flagged and the discharger will be considered out of compliance for that parameter for that single sample. Non-compliance for each sample will be considered separately (e.g., the results of two grab samples taken within a calendar day that both exceed the instantaneous maximum effluent limitation would result in two instances of non-compliance with the instantaneous maximum effluent limitation).

ATTACHMENT A – DEFINITIONS

DEFINITIONS

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

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

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

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

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

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

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

Maximum Daily Effluent Limitation (MDEL): the highest allowable daily discharge of a pollutant.

µg/L: micrograms per Liter

mg/L: milligrams per Liter

MGD: million gallons per day

Six-month Median Effluent Limitation: the highest allowable moving median of all daily discharges for any 180-day period.

ACRONYMS AND ABBREVIATIONS

AMEL	Average Monthly Effluent Limitation
B	Background Concentration
BAT	Best Available Technology Economically Achievable
Basin Plan	<i>Water Quality Control Plan for the Coastal Watersheds of Los Angeles and Ventura Counties</i>
BCT	Best Conventional Pollutant Control Technology
BMP	Best Management Practices
BMPPP	Best Management Practices Plan
BPJ	Best Professional Judgment
BOD	Biochemical Oxygen Demand 5-day @ 20 °C
BPT	Best Practicable Treatment Control Technology
C	Water Quality Objective
CCR	California Code of Regulations
CEQA	California Environmental Quality Act
CFR	Code of Federal Regulations
CTR	California Toxics Rule
CV	Coefficient of Variation
CWA	Clean Water Act
CWC	California Water Code
Discharger	Northrop Grumman
DMR	Discharge Monitoring Report
DNQ	Detected But Not Quantified
ELAP	California Department of Health Services Environmental Laboratory Accreditation Program
ELG	Effluent Limitations, Guidelines and Standards
Facility	Northrop Grumman, Hawthorne Site
gpd	gallons per day
IC	Inhibition Coefficient
IC ₁₅	Concentration at which the organism is 15% inhibited
IC ₂₅	Concentration at which the organism is 25% inhibited
IC ₄₀	Concentration at which the organism is 40% inhibited
IC ₅₀	Concentration at which the organism is 50% inhibited
LA	Load Allocations
LOEC	Lowest Observed Effect Concentration
µg/L	micrograms per Liter
mg/L	milligrams per Liter
MDEL	Maximum Daily Effluent Limitation
MEC	Maximum Effluent Concentration
MGD	Million Gallons Per Day
ML	Minimum Level
MRP	Monitoring and Reporting Program
ND	Not Detected
NOEC	No Observable Effect Concentration
NPDES	National Pollutant Discharge Elimination System
NSPS	New Source Performance Standards
NTR	National Toxics Rule
OAL	Office of Administrative Law
PMEL	Proposed Maximum Daily Effluent Limitation

PMP	Pollutant Minimization Plan
POTW	Publicly Owned Treatment Works
QA	Quality Assurance
QA/QC	Quality Assurance/Quality Control
Ocean Plan	<i>Water Quality Control Plan for Ocean Waters of California</i>
Regional Water Board	California Regional Water Quality Control Board, Los Angeles Region
RPA	Reasonable Potential Analysis
SCP	Spill Contingency Plan
SIP	State Implementation Policy (<i>Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California</i>)
SMR	Self Monitoring Reports
State Water Board	California State Water Resources Control Board
SWPPP	Storm Water Pollution Prevention Plan
TAC	Test Acceptability Criteria
Thermal Plan	<i>Water Quality Control Plan for Control of Temperature in the Coastal and Interstate Water and Enclosed Bays and Estuaries of California</i>
TIE	Toxicity Identification Evaluation
TMDL	Total Maximum Daily Load
TOC	Total Organic Carbon
TRE	Toxicity Reduction Evaluation
TSD	Technical Support Document
TSS	Total Suspended Solid
TU _c	Chronic Toxicity Unit
USEPA	United States Environmental Protection Agency
WDR	Waste Discharge Requirements
WET	Whole Effluent Toxicity
WLA	Waste Load Allocations
WQBELs	Water Quality-Based Effluent Limitations
WQS	Water Quality Standards
%	Percent

NORTHROP GRUMMAN SPACE & MISCELLANEOUS SYSTEMS CORP.
NORTHROP GRUMMAN - HAWTHORNE SITE (FORMERLY TRW INC.)
ORDER NO. R4-2007-0029
NPDES NO. CA0063916

ATTACHMENT B – TOPOGRAPHIC MAP

NORTHROP GRUMMAN SPACE & MISSILE SYSTEMS CORP.
NORTHROP GRUMMAN - HAWTHORNE SITE (FORMERLY TRW INC.)
ORDER NO. R4-2007-0029
NPDES NO. CA0063916

ATTACHMENT C – FLOW SCHEMATIC

ATTACHMENT D – FEDERAL STANDARD PROVISIONS

I. STANDARD PROVISIONS – PERMIT COMPLIANCE

A. Duty to Comply

1. The Discharger must comply with all of the conditions of this Order. Any noncompliance constitutes a violation of the CWA and the Water Code and is grounds for enforcement action, for permit termination, revocation and reissuance, or modification; or denial of a permit renewal application [*section 122.41(a)*].
2. The Discharger shall comply with effluent standards or prohibitions established under section 307(a) of the CWA for toxic pollutants and with standards for sewage sludge use or disposal established under section 405(d) of the CWA within the time provided in the regulations that establish these standards or prohibitions, even if this Order has not been modified to incorporate the requirement [*section 122.41(a)(1)*].

B. Need to Halt or Reduce Activity Not a Defense

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

C. Duty to Mitigate

The Discharger shall take all reasonable steps to minimize or prevent any discharge or sludge use or disposal in violation of this Order that has a reasonable likelihood of adversely affecting human health or the environment [*section 122.41(d)*].

D. Proper Operation and Maintenance

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

E. Property Rights

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

F. Inspection and Entry

The Discharger shall allow the Regional Water Board, State Water Board, USEPA, and/or their authorized representatives (including an authorized contractor acting as their representative), upon the presentation of credentials and other documents, as may be required by law, to [section 122.41(i)] [Water Code section 13383(c)]:

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

G. Bypass

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

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

H. Upset

Upset means an exceptional incident in which there is unintentional and temporary noncompliance with technology based permit effluent limitations because of factors beyond the reasonable control of the Discharger. An upset does not include noncompliance to the extent caused by operational error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventive maintenance, or careless or improper operation [section 122.41(n)(1)].

1. Effect of an upset. An upset constitutes an affirmative defense to an action brought for noncompliance with such technology based permit effluent limitations if the requirements of paragraph H.2 of this section are met. No determination made during administrative review of claims that noncompliance was caused by upset, and before an action for noncompliance, is final administrative action subject to judicial review [section 122.41(n)(2)].
2. Conditions necessary for a demonstration of upset. A Discharger who wishes to establish the affirmative defense of upset shall demonstrate, through properly signed, contemporaneous operating logs or other relevant evidence that [section 122.41(n)(3)]:
 - a. An upset occurred and that the Discharger can identify the cause(s) of the upset [section 122.41(n)(3)(i)];
 - b. The permitted facility was, at the time, being properly operated [section 122.41(n)(3)(ii)];
 - c. The Discharger submitted notice of the upset as required in Standard Provisions – Reporting V.E.2.b [section 122.41(n)(3)(iii)]; and
 - d. The Discharger complied with any remedial measures required under Standard Provisions – Permit Compliance I.C above [section 122.41(n)(3)(iv)].
3. Burden of proof. In any enforcement proceeding, the Discharger seeking to establish the occurrence of an upset has the burden of proof [section 122.41(n)(4)].

II. STANDARD PROVISIONS – PERMIT ACTION

A. General

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

B. Duty to Reapply

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

C. Transfers

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

III. STANDARD PROVISIONS – MONITORING

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

IV. STANDARD PROVISIONS – RECORDS

- A. Except for records of monitoring information required by this Order related to the Discharger's sewage sludge use and disposal activities, which shall be retained for a period of at least five years (or longer as required by Part 503), the Discharger shall retain records of all monitoring information, including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation, copies of all reports required by this Order, and records of all data used to complete the application for this Order, for a period of at least three (3) years from the date of the sample, measurement, report or application. This period may be extended by request of the Regional Water Board Executive Officer at any time [section 122.41(j)(2)].
- B. Records of monitoring information shall include:
 - 1. The date, exact place, and time of sampling or measurements [section 122.41(j)(3)(i)];
 - 2. The individual(s) who performed the sampling or measurements [section 122.41(j)(3)(ii)];
 - 3. The date(s) analyses were performed [section 122.41(j)(3)(iii)];
 - 4. The individual(s) who performed the analyses [section 122.41(j)(3)(iv)];

5. The analytical techniques or methods used [section 122.41(j)(3)(v)]; and
6. The results of such analyses [section 122.41(j)(3)(vi)].

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

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

V. STANDARD PROVISIONS – REPORTING

A. Duty to Provide Information

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

B. Signatory and Certification Requirements

1. All applications, reports, or information submitted to the Regional Water Board, State Water Board, and/or USEPA shall be signed and certified in accordance with Standard Provisions – Reporting V.B.2, V.B.3, V.B.4, and V.B.5 below [section 122.41(k)].
2. All permit applications shall be signed as follows:
 - a. For a corporation: By a responsible corporate officer. For the purpose of this section, a responsible corporate officer means: (i) A president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy- or decision-making functions for the corporation, or (ii) the manager of one or more manufacturing, production, or operating facilities, provided, the manager is authorized to make management decisions which govern the operation of the regulated facility including having the explicit or implicit duty of making major capital investment recommendations, and initiating and directing other comprehensive measures to assure long term environmental compliance with environmental laws and regulations; the manager can ensure that the necessary systems are established or actions taken to gather complete and accurate information for permit application requirements; and where authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures [section 122.22(a)(1)];
 - b. For a partnership or sole proprietorship: by a general partner or the proprietor, respectively [section 122.22(a)(2)]; or
 - c. For a municipality, State, federal, or other public agency: by either a principal executive officer or ranking elected official. For purposes of this provision, a principal executive officer of a federal agency includes: (i) the chief executive officer of the agency, or (ii) a senior executive officer having responsibility for the overall operations of a principal

geographic unit of the agency (e.g., Regional Administrators of USEPA) [section 122.22(a)(3)].

3. All reports required by this Order and other information requested by the Regional Water Board, State Water Board, or USEPA shall be signed by a person described in paragraph (b) of this provision, or by a duly authorized representative of that person. A person is a duly authorized representative only if:
 - a. The authorization is made in writing by a person described in paragraph (2.) of this provision [section 122.22(b)(1)];
 - b. The authorization specified either an individual or a position having responsibility for the overall operation of the regulated facility or activity such as the position of plant manager, operator of a well or a well field, superintendent, position of equivalent responsibility, or an individual or position having overall responsibility for environmental matters for the company (a duly authorized representative may thus be either a named individual or any individual occupying a named position) [section 122.22(b)(2)]; and
 - c. The written authorization is submitted to the Regional Water Board, State Water Board, or USEPA [section 122.22(b)(3)].
4. If an authorization under paragraph (3.) of this provision is no longer accurate because a different individual or position has responsibility for the overall operation of the facility, a new authorization satisfying the requirements of paragraph (3.) of this provision must be submitted to the Regional Water Board, State Water Board or USEPA prior to or together with any reports, information, or applications, to be signed by an authorized representative [section 122.22(c)].
5. Any person signing a document under paragraph (2.) or (3.) of this provision shall make the following certification:

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations" [section 122.22(d)].

C. Monitoring Reports

1. Monitoring results shall be reported at the intervals specified in the MRP in this Order [section 122.41(l)(4)].
2. Monitoring results must be reported on a Discharge Monitoring Report (DMR) form or forms provided or specified by the Regional Water Board or State Water Board for reporting results of monitoring of sludge use or disposal practices [section 122.41(l)(4)(i)].
3. If the Discharger monitors any pollutant more frequently than required by this Order using test procedures approved under Part 136 or, in the case of sludge use or disposal, approved under Part 136 unless otherwise specified in Part 503, or as specified in this Order, the

results of this monitoring shall be included in the calculation and reporting of the data submitted in the DMR or sludge reporting form specified by the Regional Water Board [section 122.41(l)(4)(ii)].

4. Calculations for all limitations, which require averaging of measurements, shall utilize an arithmetic mean unless otherwise specified in this Order [section 122.41(l)(4)(iii)].

D. Compliance Schedules

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

E. Twenty-Four Hour Reporting

1. The Discharger shall report any noncompliance that may endanger health or the environment. Any information shall be provided orally within 24 hours from the time the Discharger becomes aware of the circumstances. A written submission shall also be provided within five (5) days of the time the Discharger becomes aware of the circumstances. The written submission shall contain a description of the noncompliance and its cause; the period of noncompliance, including exact dates and times, and if the noncompliance has not been corrected, the anticipated time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance [section 122.41(l)(6)(i)].
2. The following shall be included as information that must be reported within 24 hours under this paragraph [section 122.41(l)(6)(ii)]:
 - a. Any unanticipated bypass that exceeds any effluent limitation in this Order [section 122.41(l)(6)(ii)(A)].
 - b. Any upset that exceeds any effluent limitation in this Order [section 122.41(l)(6)(ii)(B)].
 - c. Violation of a maximum daily discharge limitation for any of the pollutants listed in this Order to be reported within 24 hours [section 122.41(l)(6)(ii)(C)].
3. The Regional Water Board may waive the above-required written report under this provision on a case-by-case basis if an oral report has been received within 24 hours [section 122.41(l)(6)(iii)].

F. Planned Changes

The Discharger shall give notice to the Regional Water Board as soon as possible of any planned physical alterations or additions to the permitted facility. Notice is required under this provision only when [section 122.41(l)(1)]:

1. The alteration or addition to a permitted facility may meet one of the criteria for determining whether a facility is a new source in section 122.29(b) [section 122.41(l)(1)(i)]; or
2. The alteration or addition could significantly change the nature or increase the quantity of pollutants discharged. This notification applies to pollutants which are subject neither to

effluent limitations in this Order nor to notification requirements under section 122.42(a)(1) (see Additional Provisions—Notification Levels VII.A.1) [*section 122.41(l)(1)(ii)*].

3. The alteration or addition results in a significant change in the Discharger's sludge use or disposal practices, and such alteration, addition, or change may justify the application of permit conditions that are different from or absent in the existing permit, including notification of additional use or disposal sites not reported during the permit application process or not reported pursuant to an approved land application plan [*section 122.41(l)(1)(iii)*].

G. Anticipated Noncompliance

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

H. Other Noncompliance

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

I. Other Information

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

VI. STANDARD PROVISIONS – ENFORCEMENT

- A. The CWA provides that any person who violates section 301, 302, 306, 307, 308, 318 or 405 of the Act, or any permit condition or limitation implementing any such sections in a permit issued under section 402, or any requirement imposed in a pretreatment program approved under sections 402(a)(3) or 402(b)(8) of the Act, is subject to a civil penalty not to exceed \$25,000 per day for each violation. The CWA provides that any person who negligently violates sections 301, 302, 306, 307, 308, 318, or 405 of the Act, or any condition or limitation implementing any of such sections in a permit issued under section 402 of the Act, or any requirement imposed in a pretreatment program approved under section 402(a)(3) or 402(b)(8) of the Act, is subject to criminal penalties of \$2,500 to \$25,000 per day of violation, or imprisonment of not more than one (1) year, or both. In the case of a second or subsequent conviction for a negligent violation, a person shall be subject to criminal penalties of not more than \$50,000 per day of violation, or by imprisonment of not more than two (2) years, or both. Any person who knowingly violates such sections, or such conditions or limitations is subject to criminal penalties of \$5,000 to \$50,000 per day of violation, or imprisonment for not more than three (3) years, or both. In the case of a second or subsequent conviction for a knowing violation, a person shall be subject to criminal penalties of not more than \$100,000 per day of violation, or imprisonment of not more than six (6) years, or both. Any person who knowingly violates section 301, 302, 303, 306, 307, 308, 318 or 405 of the Act, or any permit condition or limitation implementing any of such sections in a permit issued under section 402 of the Act, and who knows at that time that he thereby places another person in imminent danger of death or serious bodily injury, shall, upon conviction, be subject to a fine of not more than \$250,000 or imprisonment of not more than 15

years, or both. In the case of a second or subsequent conviction for a knowing endangerment violation, a person shall be subject to a fine of not more than \$500,000 or by imprisonment of not more than 30 years, or both. An organization, as defined in section 309(c)(3)(B)(iii) of the CWA, shall, upon conviction of violating the imminent danger provision, be subject to a fine of not more than \$1,000,000 and can be fined up to \$2,000,000 for second or subsequent convictions [section 122.41(a)(2)] [Water Code sections 13385 and 13387].

- B. Any person may be assessed an administrative penalty by the Regional Water Board for violating section 301, 302, 306, 307, 308, 318 or 405 of this Act, or any permit condition or limitation implementing any of such sections in a permit issued under section 402 of this Act. Administrative penalties for Class I violations are not to exceed \$10,000 per violation, with the maximum amount of any Class I penalty assessed not to exceed \$25,000. Penalties for Class II violations are not to exceed \$10,000 per day for each day during which the violation continues, with the maximum amount of any Class II penalty not to exceed \$125,000 [section 122.41(a)(3)].
- C. The CWA provides that any person who falsifies, tampers with, or knowingly renders inaccurate any monitoring device or method required to be maintained under this permit shall, upon conviction, be punished by a fine of not more than \$10,000, or by imprisonment for not more than 2 years, or both. If a conviction of a person is for a violation committed after a first conviction of such person under this paragraph, punishment is a fine of not more than \$20,000 per day of violation, or by imprisonment of not more than 4 years, or both [section 122.41(j)(5)].
- D. The CWA provides that any person who knowingly makes any false statement, representation, or certification in any record or other document submitted or required to be maintained under this Order, including monitoring reports or reports of compliance or noncompliance shall, upon conviction, be punished by a fine of not more than \$10,000 per violation, or by imprisonment for not more than six months per violation, or by both [section 122.41(k)(2)].

VII. ADDITIONAL PROVISIONS – NOTIFICATION LEVELS

A. Non-Municipal Facilities

Existing manufacturing, commercial, mining, and silvicultural Dischargers shall notify the Regional Water Board as soon as they know or have reason to believe [section 122.42(a)]:

1. That any activity has occurred or will occur that would result in the discharge, on a routine or frequent basis, of any toxic pollutant that is not limited in this Order, if that discharge will exceed the highest of the following "notification levels" [section 122.42(a)(1)]:
 - a. 100 micrograms per liter ($\mu\text{g/L}$) [section 122.42(a)(1)(i)];
 - b. 200 $\mu\text{g/L}$ for acrolein and acrylonitrile; 500 $\mu\text{g/L}$ for 2,4-dinitrophenol and 2-methyl-4,6-dinitrophenol; and 1 milligram per liter (mg/L) for antimony [section 122.42(a)(1)(ii)];
 - c. Five (5) times the maximum concentration value reported for that pollutant in the Report of Waste Discharge [section 122.42(a)(1)(iii)]; or
 - d. The level established by the Regional Water Board in accordance with 40 CFR section 122.44(f) [section 122.42(a)(1)(iv)].

2. That any activity has occurred or will occur that would result in the discharge, on a non-routine or infrequent basis, of any toxic pollutant that is not limited in this Order, if that discharge will exceed the highest of the following "notification levels" [section 122.42(a)(2)]:
 - a. 500 micrograms per liter ($\mu\text{g/L}$) [section 122.42(a)(2)(i)];
 - b. 1 milligram per liter (mg/L) for antimony [section 122.42(a)(2)(ii)];
 - c. Ten (10) times the maximum concentration value reported for that pollutant in the Report of Waste Discharge [section 122.42(a)(2)(iii)]; or
 - d. The level established by the Regional Water Board in accordance with 40 CFR §122.44(f) [section 122.42(a)(2)(iv)].

B. Publicly-Owned Treatment Works (POTWs)

All POTWs shall provide adequate notice to the Regional Water Board of the following [section 122.42(b)]:

1. Any new introduction of pollutants into the POTW from an indirect discharger that would be subject to Sections 301 or 306 of the CWA if it were directly discharging those pollutants [section 122.42(b)(1)]; and
2. Any substantial change in the volume or character of pollutants being introduced into that POTW by a source introducing pollutants into the POTW at the time of adoption of the Order [section 122.42(b)(2)].

Adequate notice shall include information on the quality and quantity of effluent introduced into the POTW as well as any anticipated impact of the change on the quantity or quality of effluent to be discharged from the POTW [section 122.42(b)(3)].

Attachment E – Monitoring and Reporting Program – Table of Contents

Attachment E – Monitoring and Reporting Program (MRP) No. 7698	E-2
I. General Monitoring Provisions	E-2
II. Monitoring Locations	E-4
III. Influent Monitoring Requirements	E-5
IV. Effluent Monitoring Requirements	E-5
A. Monitoring Location EFF-001	E-5
V. Whole Effluent Toxicity Testing Requirements	E-6
A. Definition of Toxicity	E-6
B. Acute Toxicity Effluent Monitoring Program	E-7
C. Chronic Toxicity Effluent Monitoring Program	E-7
D. Quality Assurance	E-8
E. Accelerated Monitoring and Initial Investigation TRE Trigger	E-8
G. Steps in TRE and TIE Procedures	E-9
H. Reporting	E-11
VI. Land Discharge Monitoring Requirements	E-12
VII. Reclamation Monitoring Requirements	E-12
VIII. Receiving Water Monitoring Requirements – Surface Water and Groundwater	E-12
A. Surface Water	E-12
1. Receiving Water Monitoring Location RSW-001	E-12
2. Receiving Water Monitoring Location RSW-002	E-12
B. Groundwater	E-12
IX. Other Monitoring Requirements	E-13
X. Reporting Requirements	E-13
A. General Monitoring and Reporting Requirements	E-13
B. Self Monitoring Reports (SMRs)	E-13
C. Discharge Monitoring Reports (DMRs)	E-14
D. Other Reports	E-15

Tables

Table E-1. Monitoring Station Locations	E-5
Table E-2. Effluent Monitoring	E-5
Table E-3. Receiving Water Monitoring Location RSW-001	E-12
Table E-4. Receiving Water Monitoring Location RSW-002	E-12
Table E-5. Monitoring Periods and Reporting Schedule	E-14

Attachment E – Monitoring and Reporting Program (MRP) No. 7698

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 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 the point of discharge (Discharge Point 001 [Latitude 33°54'00"N, Longitude 118°22'30"W]) and shall be located where representative samples of that effluent can be obtained.
- B. Effluent samples shall be taken downstream of any addition to treatment works and prior to mixing with the receiving waters.
- C. The 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.
- D. Pollutants shall be analyzed using the analytical methods described in 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 Water Board or the State Water 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.
- E. 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.
- F. 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 MRP".
- G. 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.

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 Board in the Policy for the Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California, March 2, 2000.

- H. 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.
- I. Water/wastewater samples must be analyzed within allowable holding time limits as specified in 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 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.
- J. 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.

- K. 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.
- L. The Discharger shall have, and implement, an acceptable written quality assurance (QA) plan for laboratory analyses. The annual monitoring report required in Section X.D 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.
- M. 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%.
- N. For parameters that both average monthly 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 average monthly limit, the Discharger shall collect four additional samples at approximately equal intervals during the month, until compliance with the average monthly 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 an average monthly effluent limitation, the sampling frequency for that constituent shall be increased to weekly and shall continue at this level until compliance with the average monthly effluent limitation has been demonstrated. The Discharger shall provide for the approval of the Executive Officer a program to ensure future compliance with the average monthly limit.
- O. 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.
- P. Each monitoring report shall state whether or not there was any change in the discharge as described in the Order during the reporting period.

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 E-1. Monitoring Station Locations

Discharge Point Name	Monitoring Location Name	Monitoring Location Description (include Latitude and Longitude when available)
001	EFF-001	Effluent from the groundwater treatment system, to be monitored at 33 °, 54', 00"N; 118°, 22', 30"W
--	RSW-001	Within the Dominguez Channel, a minimum of 50 feet upstream of the discharge point.
--	RSW-002	Within the Dominguez Channel downstream of the discharge point, within 50 feet of the outfall.

III. INFLUENT MONITORING REQUIREMENTS

[Not Applicable]

IV. EFFLUENT MONITORING REQUIREMENTS

A. Monitoring Location EFF-001

1. The Discharger shall monitor treated groundwater at Monitoring Location EFF-001 as follows. If more than one analytical test method is listed for a given parameter, the Discharger must select from the listed methods and corresponding Minimum Level.

Table E-2. Effluent Monitoring

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
Total Flow	Gal/day	--	1/Quarter	1
Temperature	°F or °C	Grab	1/Quarter	1
pH	pH units	Grab	1/Quarter	1
Total Suspended Solids	mg/L	Grab	1/Quarter	1
BOD ₅ 20°C	mg/L	Grab	1/Quarter	1
Oil and Grease	mg/L	Grab	1/Quarter	1
Residual Chlorine	mg/L	Grab	1/Quarter	1
Turbidity	NTU	Grab	1/Quarter	1
Dissolved Oxygen	mg/L		1/Quarter	
Sulfides	mg/L	Grab	1/Quarter	1
Phenols	mg/L	Grab	1/Quarter	1
Phenolic Compounds (chlorinated)	µg/L	Grab	1/Quarter	1
Benzene	µg/L	Grab	1/Quarter	1
Toluene	µg/L	Grab	1/Quarter	1
Xylene	µg/L	Grab	1/Quarter	1
Ethylbenzene	µg/L	Grab	1/Quarter	1
Carbon tetrachloride	µg/L	Grab	1/Quarter	1
Tetrachloroethylene	µg/L	Grab	1/Month ³	1
Trichloroethylene	µg/L	Grab	1/Quarter	1
1,1,1-trichloroethane	µg/L	Grab	1/Quarter	1
1,4-dichlorobenzene	µg/L	Grab	1/Quarter	1

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
1,1-dichloroethane	µg/L	Grab	1/Quarter	1
1,2-dichloroethane	µg/L	Grab	1/Quarter	1
1,1-dichloroethylene	µg/L	Grab	1/Quarter	1
Vinyl Chloride	µg/L	Grab	1/Quarter	1
Bis(2-Ethylhexyl)Phthalate	µg/L	Grab	1/Month ³	1
Acetone	µg/L	Grab	1/Quarter	1
Chromium (VI) , Total Recoverable	µg/L	Grab	1/Quarter	1
Arsenic, Total Recoverable	µg/L	Grab	1/Quarter	1
Cadmium, Total Recoverable	µg/L	Grab	1/Quarter	1
Copper, Total Recoverable	µg/L	Grab	1/Quarter	1
Lead, Total Recoverable	µg/L	Grab	1/Quarter	1
Mercury	µg/L	Grab	1/Quarter	1
Silver, Total Recoverable	µg/L	Grab	1/Quarter	1
Selenium, Total Recoverable	µg/L	Grab	1/Quarter	1
Zinc, Total Recoverable	µg/L	Grab	1/Quarter	1
Toxicity – Acute	% survival	Grab	1/Year	1
Toxicity – Chronic	TUc	Grab	1/Year	1
Priority Pollutants ²	µg/L	Grab	1/Year	1

¹ 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, where no methods are specified for a given pollutant, by methods approved by this Regional Water Board or the State Water Board.

² Priority Pollutants as defined by the California Toxics Rule (CTR) defined in Finding II.I of the Limitations and Discharge Requirements of this Order, and included as Attachment H.

³ The monitoring frequency is once per month for the first four (4) months. If all of the samples demonstrate compliance the monitoring frequency may be decreased to once per quarter. If the effluent concentration of a subsequent sample exceeds the effluent limit, the monitoring frequency reverts to once per month until four consecutive monthly samples demonstrate compliance.

V. WHOLE EFFLUENT TOXICITY TESTING REQUIREMENTS

A. Definition of Toxicity

1. Acute Toxicity.

Acute toxicity is a measure of primarily lethal effects that occur over a 96-hour period. Acute toxicity shall be measured in percent survival measured in undiluted (100%) effluent.

(a) The average survival in the undiluted effluent for any three (3) consecutive 96-hour static or continuous flow bioassay tests shall be at least 90%, and

(b) No single test shall produce less than 70% survival.

2. Chronic Toxicity.

Chronic toxicity measures a sublethal effect (e.g., reduced growth, reproduction) to experimental test organisms exposed to an effluent or ambient waters compared to that of the control organisms. Chronic toxicity shall be measured in TU_c , where $TU_c = 100/NOEC$. The No Observable Effect Concentration (NOEC) is expressed as the maximum percent effluent concentration that causes no observable effect on test organisms, as determined by the results of a critical life stage toxicity test.

(a) This Order includes a chronic testing toxicity trigger defined as an exceedance of 1.0 TU_c in a critical life stage test for 100% effluent. (The monthly median for chronic toxicity of 100% effluent shall not exceed, 1 TU_c in a critical life stage test.)

B. Acute Toxicity Effluent Monitoring Program

1. Effluent samples shall be collected after all treatment processes and before discharge to the receiving water.
2. The Discharger shall conduct acute toxicity tests on effluent grab samples by methods specified in 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 to ensure compliance in 100 % effluent.
3. 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.
4. 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.

C. Chronic Toxicity Effluent Monitoring Program

1. Effluent samples shall be collected after all treatment processes and before discharge to the receiving water.
2. Test Species and Methods:
 - a. The Discharger shall conduct critical life stage chronic toxicity tests on 24-hour composite 100 percent effluent samples in accordance with USEPA's *Short Term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms*, Fourth Edition, October 2002 (EPA/21-R-02-013) or USEPA's *Short Term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Marine and Estuarine Organisms*, Third Edition, October 2002, (EPA/821/R-02-014), or a more recent edition.

- b. The Discharger shall conduct tests as follows: with a vertebrate, an invertebrate, and a plant for the first three suites of tests. After the screening period, monitoring shall be conducted using the most sensitive species.
- c. Re-screening is required every 24 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 then 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.
- d. In brackish waters, the presence of chronic toxicity may be estimated as specified using West Coast marine organisms according to USEPA'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), or a more recent edition.

D. 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-02-014), 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.

E. Accelerated Monitoring and Initial Investigation TRE Trigger

1. Special Provision VI.C.2.b of the Order requires the Discharger to develop and submit for approval an Initial Investigation TRE Workplan.
2. If the results of a toxicity test exceed the acute toxicity effluent limitations or chronic toxicity trigger (as defined below):

Acute Toxicity:

- (a) The average survival in the undiluted effluent for any three (3) consecutive 96-hour static or continuous flow bioassay tests shall be at least 90%, and
- (b) No single test shall produce less than 70% survival.

Chronic Toxicity:

- (a) This Order includes a chronic testing toxicity trigger defined as an exceedance of 1.0 TU_c in a critical life stage test for 100% effluent. (The monthly median for chronic toxicity of 100% effluent shall not exceed, 1 TU_c in a critical life stage test.)

then, the Discharger shall begin the investigation and evaluation as specified in the Dischargers' Initial Investigation TRE Workplan and begin accelerated monitoring by conducting six additional tests, approximately every 2 weeks, over a 12-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.

3. 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 Initial Investigation Toxicity Reduction Evaluation and resume routine testing frequency.
4. 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 Point 001 causes or contributes to the measured downstream chronic or acute toxicity. If this first step TRE testing shows that the Discharge Point 001 effluent does not cause or contribute to downstream chronic or acute toxicity, using USEPA's *Short Term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms*, Fourth Edition, October 2002 (EPA/821/R-02-013), or USEPA's *Short Term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Marine and Estuarine Organisms*, Third Edition, October 2002, (EPA/821/R-02-014) then a report on this testing shall be submitted to the Regional Water Board and the Initial Investigation TRE will be considered to be completed. Routine testing in accordance with the MRP shall be continued thereafter.

F. TRE/TIE Trigger

1. If the accelerated testing shows consistent toxicity as defined below:
 - a. Acute Toxicity:
 - 1) If the results of any two of the six accelerated tests are less than 90% survival, or
 - 2) If the initial test and any of the additional six acute toxicity bioassay tests result in less than 70% survival
 - b. Chronic Toxicity
 - 1) If the results of two of the six accelerated tests exceed 1.0 TU_c

then, the Discharger shall immediately implement the Toxicity Reduction Evaluation (TRE) as described below.

G. 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 USEPA 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. Step 3 – If Steps 1 and 2 are unsuccessful, Step 3 implements a Toxicity Identification Evaluation (TIE) by employing all reasonable efforts and using currently available TIE methodologies. The Discharger shall use the USEPA 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. The objective of the TIE is to identify the substance or combination of substances causing the observed toxicity;
 - d. Step 4 – 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 test results are less than or equal to 1.0 TU_c or six consecutive acute toxicity test results are greater than 90% survival).

3. If a TRE/TIE is initiated prior to completion of the accelerated testing schedule required by 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.
4. Toxicity tests conducted as part of a TRE/TIE may also be used for compliance determination, if appropriate.
5. The Regional Water 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 Regional Water Board will be based in part on the Discharger's actions and efforts to identify and control or reduce sources of consistent toxicity.

H. 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 and as TU_c for chronic toxicity test results with the self monitoring reports (SMR) 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 SMR 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 SMR 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 chronic toxicity limit or trigger 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 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_{15} , IC_{25} , IC_{40} and IC_{50} values in percent effluent;
 - g. TU_c 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_{25} 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 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.

VI. LAND DISCHARGE MONITORING REQUIREMENTS

[Not Applicable]

VII. RECLAMATION MONITORING REQUIREMENTS

[Not Applicable]

VIII. RECEIVING WATER MONITORING REQUIREMENTS – SURFACE WATER AND GROUNDWATER

A. Surface Water

1. Receiving Water Monitoring Location RSW-001

The Discharger shall monitor the Dominguez Channel at RSW-001 as follows:

Table E-3. Receiving Water Monitoring Location RSW-001

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
Temperature	°F	Grab	1/Quarter	1
pH	Standard Units	Grab	1/Quarter	1
Total Dissolved Solids	mg/L	Grab	1/Quarter	1
Salinity	mg/L	Grab	1/Quarter	
Priority Pollutants ²	µg/L	Grab	1/Year	1

¹ Pollutants shall be analyzed using the analytical methods described in 40 CFR 136.3, 136.4 and 136.5

² Priority Pollutants as defined by the California Toxics Rule (CTR) defined in Finding II.I of the Limitations and Discharge Requirements of this Order, and included as Attachment H.

2. Receiving Water Monitoring Location RSW-002

The Discharger shall monitor the Dominguez Channel at RSW-002 as follows:

Table E-4. Receiving Water Monitoring Location RSW-002

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
Temperature	°F	Grab	1/Quarter	1
pH	Standard Units	Grab	1/Quarter	1
Dissolved Oxygen	mg/L	Grab	1/Quarter	1
Ammonia	mg/L	Grab	1/Quarter	1

¹ Pollutants shall be analyzed using the analytical methods described in 40 CFR 136.3, 136.4 and 136.5

B. 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
5. The Discharger shall report the results of acute and chronic toxicity testing, TRE and TIE as required in the MRP, section V.F.

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 SMRs. Until such notification is given, the Discharger shall submit SMRs in accordance with the requirements described below.
2. The Discharger shall submit quarterly SMRs including the results of all required monitoring using USEPA-approved test methods or other test methods specified in this Order. Quarterly reports shall be due on May 1, August 1, November 1, and February 1 following each calendar quarter.
3. Monitoring periods and reporting for all required monitoring shall be completed according to the following schedule:

Table E-5. Monitoring Periods and Reporting Schedule

Sampling Frequency	Monitoring Period Begins On	Monitoring Period	SMR Due Date
1 / Month	1 st day of calendar month following permit effective date or on permit effective date if that date is 1 st day of the month	1 st day of calendar month through last day of calendar month	First day of second calendar month following month of sampling
1 / Quarter	Closest of January 1, April 1, July 1, or October 1 following (or on) permit effective date	January 1 through March 31 April 1 through June 30 July 1 through September 30 October 1 through December 31	May 1 August 1 November 1 February 1
1 / Year	January 1 following (or on) permit effective date	January 1 through December 31	February 1

4. The Discharger shall report with each sample result the applicable Minimum Level (ML) and the current Method Detection Limit (MDL), as determined by the procedure in Part 136.
5. 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. Where applicable, the Discharger shall include results of receiving water observations.
6. Each monitoring report shall state whether or not there was any change in the discharge as described in the Order during the reporting period.
7. 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.
8. 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:

California Regional Water Quality Control Board
 Los Angeles Region
 320 W. 4th Street, Suite 200
 Los Angeles, CA 90013

C. Discharge Monitoring Reports (DMRs)

1. As described in section X.B.1 of this MRP, at any time during the term of this permit, the State or Regional Water Board may notify the discharger to electronically submit SMRs. Until such notification is given, the Discharger shall submit DMRs in accordance with the requirements described below.
2. DMRs must be signed and certified as required by the standard provisions (Attachment D). The Discharger shall submit the original DMR and one copy of the DMR to the address listed below:

Standard Mail	FedEx/UPS/ Other Private Carriers
State Water Resources Control Board Division of Water Quality c/o DMR Processing Center PO Box 100 Sacramento, CA 95812-1000	State Water Resources Control Board Division of Water Quality c/o DMR Processing Center 1001 I Street, 15 th Floor Sacramento, CA 95814

3. All discharge monitoring results must be reported on the official USEPA pre-printed DMR forms (EPA Form 3320-1). Forms that are self-generated or modified cannot be accepted.

D. Other Reports

1. Within 90 days of the effective date of this permit, the Discharger is required to submit the following to the Regional Water Board:
 - a. Initial Investigation TRE workplan
2. By March 1 of each year, the Discharger shall submit an annual report to the Regional Water Board. The report shall contain the following:
 - a. Both tabular and graphical summaries of the monitoring data obtained during the previous year,
 - b. A discussion on the compliance record and the corrective actions taken or planned to bring the discharge into full compliance with the waste discharge requirements,
 - c. A report discussing the following: 1) operation/maintenance problems; 2) changes to the facility operations and activities; 3) potential discharge of the pollutants associated with the changes and how these changes are addressed in the BMPP; 3) calibration of flow meters or other equipment/device used to demonstrate compliance with effluent limitations of this Order.
3. This Regional Water Board requires the Discharger to file with the Regional Water Board, within 90 days after the effective date of this Order, a technical report on his preventive (failsafe) and contingency (cleanup) plans for controlling accidental discharges, and for minimizing the effect of such events. The technical report should:
 - a. Identify the possible sources of accidental loss, untreated waste bypass, and contaminated drainage. Loading and storage areas, power outage, waste treatment unit outage, and failure of process equipment, tanks and pipes should be considered.
 - b. Evaluate the effectiveness of present facilities and procedures and state when they become operational.
 - c. Describe facilities and procedures needed for effective preventive and contingency plans.
 - d. Predict the effectiveness of the proposed facilities and procedures and provide an implementation schedule contingent interim and final dates when they will be constructed, implemented, or operational.

This Regional Water Board, after review of the technical report, may establish conditions which it deems necessary to control accidental discharges and to minimize the effects of such events. Such conditions may be incorporated as part of this Order, upon notice to the Discharger.

Attachment F – Fact Sheet – Table of Contents

Attachment F – Fact Sheet	F-3
Attachment F – Fact Sheet	F-3
I. Permit Information.....	F-3
II. Facility Description.....	F-4
A. Description of Wastewater and Biosolids Treatment or Controls.....	F-4
B. Discharge Points and Receiving Waters	F-4
C. Summary of Existing Requirements and Self-Monitoring Report (SMR) Data	F-5
D. Compliance Summary	F-6
E. Planned Changes	F-6
[Not Applicable].....	F-6
III. Applicable Plans, Policies, and Regulations.....	F-6
A. Legal Authorities	F-6
B. California Environmental Quality Act (CEQA)	F-6
C. State and Federal Regulations, Policies, and Plans.....	F-6
D. Impaired Water Bodies on CWA 303(d) List.....	F-9
E. Other Plans, Polices and Regulations.....	F-9
IV. Rationale For Effluent Limitations and Discharge Specifications	F-9
A. Discharge Prohibitions.....	F-10
B. Technology-Based Effluent Limitations	F-10
1. Scope and Authority	F-10
2. Applicable Technology-Based Effluent Limitations	F-11
C. Water Quality-Based Effluent Limitations (WQBELs).....	F-11
1. Scope and Authority	F-11
2. Applicable Beneficial Uses and Water Quality Criteria and Objectives	F-11
3. Determining the Need for WQBELs	F-12
4. WQBEL Calculations.....	F-14
5. WQBELs based on Basin Plan Objectives.....	F-17
6. Final WQBELs.....	F-17
7. Whole Effluent Toxicity (WET).....	F-19
D. Final Effluent Limitations.....	F-19
E. Interim Effluent Limitations.....	F-22
F. Land Discharge Specifications.....	F-22
G. Reclamation Specifications.....	F-23
V. Rationale for Receiving Water Limitations.....	F-23
A. Surface Water.....	F-23
B. Groundwater.....	F-23
VI. rationale for Monitoring and Reporting Requirements	F-23
A. Influent Monitoring	F-23
[Not Applicable].....	F-23
B. Effluent Monitoring.....	F-23
C. Whole Effluent Toxicity Testing Requirements.....	F-23
D. Receiving Water Monitoring.....	F-24
1. Surface Water	F-24
2. Groundwater	F-24
E. Other Monitoring Requirements	F-24
[Not Applicable].....	F-24
VII. Rationale for Provisions	F-24
A. Standard Provisions.....	F-24
1. Federal Standard Provisions	F-24
2. Regional Water Board Standard Provisions.....	F-25
Attachment F – Fact Sheet	F-1

B.	Special Provisions	F-25
1.	Reopener Provisions	F-25
2.	Special Studies and Additional Monitoring Requirements	F-25
3.	Best Management Practices and Pollution Prevention	F-25
4.	Compliance Schedules	F-25
5.	Construction, Operation, and Maintenance Specifications	F-26
6.	Special Provisions for Municipal Facilities (POTWs Only)	F-26
7.	Other Special Provisions	F-26
VIII.	Public Participation	F-26
A.	Notification of Interested Parties	F-26
B.	Written Comments	F-26
C.	Public Hearing	F-26
D.	Waste Discharge Requirements Petitions	F-27
E.	Information and Copying	F-27
F.	Register of Interested Persons	F-27
G.	Additional Information	F-27

Tables

Table F-1	Facility Information	F-3
Table F-2.	Summary of Effluent Limitations Order No. 01-177 and SMR Reporting	F-5
Table F-3.	Summary of Compliance History	F-6
Table F-4.	Basin Plan Beneficial Uses	F-7
Table F-5.	Applicable Water Quality Criteria	F-12
Table F-6.	Summary Reasonable Potential Analysis	F-13
Table F-7.	Summary of Water Quality-based Effluent Limitations: Discharge Point 001	F-18
Table F-8.	Summary of Final Effluent Limitations: Discharge Point 001	F-20
Table F-9.	Interim Effluent Limitations	F-22

ATTACHMENT F – FACT SHEET

As described in section II of this Order, this Fact Sheet includes the legal requirements and technical rationale that serve as the basis for the requirements of this Order.

I. PERMIT INFORMATION

The following table summarizes administrative information related to the facility.

Table F-1 Facility Information

WDID	CA0063916
Discharger	Northrop Grumman Space & Mission Systems Corp. (formerly TRW, Inc.)
Name of Facility	Northrop Grumman – Hawthorne Site (Formerly TRW Inc.)
Facility Address	14520 Aviation Boulevard Hawthorne, California 90250 Los Angeles County
Facility Contact, Title and Phone	Joseph Kwan, Director Environmental Remediation, (310) 556-4514
Authorized Person to Sign and Submit Reports	SAME
Mailing Address	1840 Century Park East, 128CC Los Angeles, CA 90067
Billing Address	SAME
Type of Facility	Groundwater Remediation System
Major or Minor Facility	Minor
Threat to Water Quality	2
Complexity	B
Pretreatment Program	No
Reclamation Requirements	None
Facility Permitted Flow	0.140 MGD
Facility Design Flow	0.140 MGD
Watershed	Dominguez Watershed
Receiving Water	Dominguez Channel
Receiving Water Type	Inland Surface Water

A. Northrop Grumman (hereinafter Discharger) is the owner of the Hawthorne Site (hereinafter Facility), which includes a groundwater remediation system. Orion Environmental is the operator of the groundwater remediation system at the Northrop Grumman, Hawthorne Site.

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

B. The Facility discharges wastewater to the Dominguez Channel, a water of the United States and is currently regulated by Order No. 01-177 which was adopted on December 31, 2001 and expired on November 11, 2006. The terms and conditions of the current Order have been automatically continued and remain in effect until new Waste Discharge Requirements and NPDES permit are adopted pursuant to this Order.

- C. The Discharger filed a report of waste discharge and submitted an application for renewal of its Waste Discharge Requirements (WDRs) and National Pollutant Discharge Elimination System (NPDES) permit on November 3, 2006. Supplemental Information was requested on December 13, 2006, regarding the latitude and longitude of Discharge Point 001 and was received on that same day. On December 13, 2006, the Discharger was also requested to test the receiving water for hardness data, to be used to conduct the Reasonable Potential Analysis. This information was received on December 30, 2006. A site visit was conducted on October 25, 2006, to observe operations and collect additional data to develop permit limitations and conditions.

II. FACILITY DESCRIPTION

The site is located in Hawthorne, California. It was used primarily for manufacturing semiconductors from 1956 to 1988 and for designing, testing, and manufacturing electronics components until 1991. The manufacturing process included doping, etching, plating, and the use of solvents for cleaning electronic components. During the routine handling of these chemicals, accidental leaks and spills including mineral oil, fuel oil, and spent solvents occurred. In addition, spent solvents were stored in underground storage tanks at the site. The manufacturing facilities were removed from the site in 1994, and the site is currently occupied by several hotels, credit union facilities, and a self storage complex. A groundwater cleanup facility was installed at this site in 1998 to remediate the contamination. The site was previously owned by TRW Inc. and is now owned by Northrop Grumman. It is currently operated and managed by Orion Environmental Inc. under contract with Northrop Grumman.

Northrop Grumman was previously permitted to discharge up to 432,000 gallons per day (gpd), or 0.432 million gallons per day (MGD). However, during the site inspection, a facility representative stated that the maximum capacity of the extraction pumps is approximately 140,000 gallons per day. This Order regulates the discharge of up to 140,000 gpd (0.14 MGD), the demonstrated maximum capacity of the groundwater treatment system.

A. Description of Wastewater and Biosolids Treatment or Controls

Groundwater is currently pumped from up to five wells to an equalization tank. Additional extraction wells may be added. The number of groundwater extraction wells operating at any one time may vary during the groundwater remediation program, but the total treatment system throughput will not exceed the permitted maximum. The equalization tank also receives non-process wastewater generated from the operation of an off-gas treatment system installed as part of the groundwater treatment system. When the tank is full, stored water is pumped to a batch treatment system which includes 4 bag filters operating in parallel, air stripping, and carbon adsorption. The treated water is stored in a tank and then pumped to a storm sewer which discharges into the Dominguez Channel. At the time of the permit renewal application, the treatment system had been shut down since October 2005. Activities are underway to place the system back in operation. It is anticipated that the system will be fully operational by mid 2007.

B. Discharge Points and Receiving Waters

The combined waste flows into a storm drain located at Latitude 33° 54' 00" and Longitude 118° 22' 30" (Discharge Point 001). The wastewater flows through the storm drain system to Dominguez Channel, a water of the United States. A sanitary sewer line is located approximately 310 feet away from the groundwater treatment system. Access to the sewer is difficult, since it

would require traversing a property that does not belong to the discharger. Therefore, all wastewater generated is discharged to the storm drain.

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

Effluent Limitations contained in the existing Order for discharges from Discharge Point 001 (Monitoring Location EFF-001) and representative monitoring data from the term of the previous Order (No. 01-177) are summarized in Table F-2, below.

Table F-2. Summary of Effluent Limitations Order No. 01-177 and SMR Reporting Discharge Point 001

Parameter (units)	Effluent Limitation		Monitoring Data (1 st Quarter 2002 through 1 st Quarter 2006 ¹)
	Average Monthly	Maximum Daily	Range of Reported Concentrations
Suspended Solids (mg/L)	50	75	ND - 29
BOD ₅ 20°C (mg/L)	20	30	1.4 – 4.4
Oil and Grease (mg/L)	10	15	ND – 4.6
Turbidity (NTU)	50	75	ND – 5.3
Sulfides (mg/L)	--	1.0	All ND
Phenols (mg/L)	--	1.0	0.005 – 0.039
Phenolic Compounds (chlorinated) (µg/L)	--	1.0	All ND
Benzene (µg/L)	--	1.0	All ND
Toluene (µg/L)	--	10.0	All ND
Xylene (µg/L)	--	10.0	ND – 8.4
Ethylbenzene (µg/L)	--	10.0	All ND
Carbon Tetrachloride (µg/L)	--	0.50	All ND
Tetrachloroethylene (µg/L)	--	5.0	ND – 2.6
Trichloroethylene (µg/L)	--	5.0	0.66 – 7.8
1,1,1-trichloroethane (µg/L)	--	200	0.95 – 18.0
1,4-dichlorobenzene (µg/L)	--	5.0	All ND
1,1-dichloroethane (µg/L)	--	5.0	All ND
1,2-dichloroethane (µg/L)	--	0.5	All ND
1,1-dichloroethylene (µg/L)	0.057	0.11	ND – 0.67
Vinyl chloride (µg/L)	--	0.5	All ND
Acetone (µg/L)	--	700	All ND
Lead (µg/L)	2.59	5.19	All ND
Arsenic (µg/L)	--	50.0	All ND
Chromium(VI) (µg/L)	8.06	16.2	ND – 0.6
Silver (µg/L)	1.99	3.99	All ND
Cadmium (µg/L)	1.81	3.63	All ND
Selenium (µg/L)	4.1	8.2	All ND
Mercury (µg/L)	0.060	0.121	All ND
Copper (µg/L)	6.7	13.4	ND – 26.0
Zinc (µg/L)	61.1	122.5	ND – 30.0

¹ Although monitoring reports were submitted through 1st Quarter 2006; for 4th Quarter 2005 and 3rd Quarter 2006 all data were reported as "Not Sampled". (Note-The groundwater treatment system was shut down during this period and discharge monitoring reports were submitted with data reported as "Not Sampled").
 "ND" = Not detected

D. Compliance Summary

Data submitted to the Regional Water Board indicate that the Discharger has exceeded existing permit limitations as outlined in the table below:

Table F-3. Summary of Compliance History

Date	Monitoring Period	Violation Type	Pollutant	Reported Value	Permit Limitation	Units
N/A	2 nd Quarter, 2002	Maximum	1,1-Dichloroethylene	0.67	0.057	µg/L
N/A	2 nd Quarter, 2002	Maximum	Trichloroethylene	7.8	5.0	µg/L
2/24/2003	1 st Quarter, 2003	Maximum	Copper	26.0	13.4	µg/L

E. Planned Changes

[Not Applicable]

III. APPLICABLE PLANS, POLICIES, AND REGULATIONS

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

A. Legal Authorities

This Order is issued pursuant to section 402 of the federal Clean Water Act (CWA) and implementing regulations adopted by the U.S. Environmental Protection Agency and chapter 5.5, division 7 of the California Water Code (commencing with section 13370). It shall serve as an NPDES permit for point source discharges from this facility to surface waters. This Order also serves as Waste Discharge Requirements (WDRs) pursuant to article 4, chapter 4, division 7 of the Water Code (commencing with section 13260).

B. California Environmental Quality Act (CEQA)

Under Water Code section 13389, this action to adopt an NPDES permit is exempt from the provision of CEQA, Public Resources Code sections 21100 through 21177.

C. State and Federal Regulations, Policies, and Plans

1. Water Quality Control Plans. The Regional Water Board adopted a Water Quality Control Plan for the Los Angeles Region (hereinafter Basin Plan) on June 13, 1994 that designates beneficial uses, establishes water quality objectives, and contains implementation programs and policies to achieve those objectives for all waters addressed through the plan. In addition, the Basin Plan implements State Water Resources Control Board Resolution No. 88-63 which established state policy that all waters, with certain exceptions, should be considered suitable or potentially suitable for municipal or domestic supply. Beneficial uses applicable to the Dominguez Channel, above the Dominguez Channel Estuary, are as follows:

Table F-4. Basin Plan Beneficial Uses

Discharge Point	Receiving Water Name	Beneficial Use(s)
001	Dominguez Channel	<p><u>Existing:</u> Non-contact water recreation (REC2) and Preservation of Rare and Endangered Species (RARE).</p> <p><u>Potential:</u> Municipal and Domestic Supply * (MUN), Water Contact Recreation (REC1), Warm Freshwater Habitat (WARM), and Wildlife Habitat (WILD).</p>

Potential Municipal and Domestic Supply (P* MUN). Consistent with Regional Board Resolution No. 89-03 and State Board Resolution No. 88-63, in 1994 the Regional Board conditionally designated all inland surface waters in Table 2-1 of the 1994 Basin Plan as existing, intermittent, or potential for Municipal and Domestic Supply (MUN). However, the conditional designation in the 1994 Basin Plan included the following implementation provision: "no new effluent limitations will be placed in Waste Discharge Requirements as a result of these [potential MUN designations made pursuant to the Source of Drinking Water (SODW) policy and the Regional Board's enabling resolution] until the Regional Board adopts [a special Basin Plan Amendment that incorporates a detailed review of the waters in the Region that should be exempted from the potential MUN designations arising from SODW policy and the Regional Board's enabling resolution]." On February 15, 2002, as a result of a legal challenge and federal court order, the USEPA clarified its partial approval (May 26, 2000) of the 1994 Basin Plan amendments and acknowledged that the conditional designations do not currently have a legal effect, do not reflect new water quality standards subject to USEPA review, and do not support new effluent limitations based on the conditional designations stemming from the SODW Policy until a subsequent review by the Regional Board finalizes the designations for these waters. This permit is designed to be consistent with the existing Basin Plan.

2. Ammonia Basin Plan Amendment. The 1994 Basin Plan provided water quality objectives for ammonia to protect aquatic life, in Table 3-1 through Table 3-4. However, those ammonia objectives were revised on April 25, 2002, by the Regional Water Board with the adoption of Resolution No. 2002-011, *Amendment to the Water Quality Plan for the Los Angeles Region to Update the Ammonia Objectives for Inland Surface Waters (Including Enclosed Bays, Estuaries and Wetlands) with Beneficial Use Designations for Protection of Aquatic Life*. The amendment reflects the revised water quality criteria developed by USEPA in the "1999 Update of Ambient Water Quality Criteria for Ammonia," December 1999. The 1999 Update contains USEPA's most recent freshwater aquatic life criteria for ammonia and supersedes all previous freshwater aquatic life criteria for ammonia. The ammonia Basin Plan amendment was approved by the State Water Board, the Office of Administrative Law, and USEPA on April 30, 2003, June 5, 2003, and June 19, 2003, respectively. Although the revised ammonia water quality objectives may be less stringent than those contained in the 1994 Basin Plan, they are still protective of aquatic life and are consistent with USEPA's 1999 ammonia criteria update.

3. Thermal Plan. The State Water Board adopted a *Water Quality Control Plan for Control of Temperature in the Coastal and Interstate Water and Enclosed Bays and Estuaries of*

California (Thermal Plan) on May 18, 1972, and amended this plan on September 18, 1975. This plan contains temperature objectives for inland and coastal surface waters. Requirements of the Order implement the Thermal Plan.

4. **National Toxics Rule (NTR) and California Toxics Rule (CTR).** USEPA adopted the NTR on December 22, 1992, and later amended it on May 4, 1995 and November 9, 1999. About forty criteria in the NTR applied in California. On May 8, 2000, USEPA adopted the CTR. The CTR promulgated new toxics criteria for California and, in addition, incorporated the previously adopted NTR criteria that were applicable in the state. The CTR was amended on February 13, 2001. These rules include water quality criteria for priority pollutants and are applicable to this discharge.
3. **State Implementation Policy.** On March 2, 2000, State Water Board adopted the *Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California* (State Implementation Policy or SIP). The SIP became effective on April 28, 2000, with respect to the priority pollutant criteria promulgated for California by the USEPA through the NTR and to the priority pollutant objectives established by the Regional Water Boards in the Basin Plan. The SIP became effective on May 18, 2000 with respect to the priority pollutant criteria promulgated by the USEPA through the CTR. The State Water Board adopted amendments to the SIP on February 24, 2005 that became effective on July 13, 2005. The SIP establishes implementation provisions for priority pollutant criteria and objectives and provisions for chronic toxicity control. Requirements of this Order implement the SIP.
4. **Alaska Rule.** On March 30, 2000, USEPA revised its regulation that specifies when new and revised state and tribal water quality standards (WQS) become effective for CWA purposes (40 C.F.R. § 131.21, 65 Fed. Reg. 24641 (April 27, 2000)). Under the revised regulation (also known as the Alaska rule), new and revised standards submitted to USEPA after May 30, 2000, must be approved before being used for CWA purposes. The final rule also provides that standards already in effect and submitted to USEPA by May 30, 2000, may be used for CWA purposes, whether or not approved by USEPA.
5. **Antidegradation Policy.** Section 131.12 requires that state water quality standards include an antidegradation policy consistent with the federal policy. The State Water Board established California's antidegradation policy in State Water Board Resolution No. 68-16. Resolution No. 68-16 incorporates the federal antidegradation policy where the federal policy applies under federal law. Resolution No. 68-16 requires that existing water quality be maintained unless degradation is justified based on specific findings. The Regional Water Board's Basin Plan implements, and incorporates by reference, both the State and federal antidegradation policies. The permitted discharge must be consistent with the antidegradation provision of section 131.12 and State Water Board Resolution No. 68-16.
6. **Anti-Backsliding Requirements.** Sections 402(o)(2) and 303(d)(4) of the CWA and federal regulations at title 40, Code of Federal Regulations¹ section 122.44(l) prohibit backsliding in NPDES permits. These anti-backsliding provisions require that effluent limitations in a reissued permit must be as stringent as those in the previous permit, with some exceptions in which limitations may be relaxed. All effluent limitations in this Order are at least as stringent as the effluent limitations in the previous Order.

¹ All further statutory references are to title 40 of the Code of Federal Regulations unless otherwise indicated.

D. Impaired Water Bodies on CWA 303(d) List

Section 303(d) of the CWA requires states to identify specific water bodies where water quality standards are not expected to be met after implementation of technology-based effluent limitations on point sources. For all 303(d)-listed water bodies and pollutants, the Regional Water Board plans to develop and adopt TMDLs that will specify WLAs for point sources and load allocations (LAs) for non-point sources, as appropriate.

The USEPA approved the State's 2002 303(d) list of impaired water bodies on July 25, 2003. Certain receiving waters in the Los Angeles and Ventura County watersheds do not fully support beneficial uses and therefore have been classified as impaired on the 2002 303(d) list and have been scheduled for TMDL development.

The 2002 State Water Board's California 303(d) List classifies the Dominguez Channel (Estuary to Vermont) as impaired. The pollutants of concern include Aldrin (tissue), Ammonia, Benthic Community Effects, Chema (tissue), Chlordane (tissue), Chromium (sediment), Coliform, DDT (tissue & sediment), Dieldrin (tissue), Lead (tissue), PAHs (sediment), Zinc (sediment). To date no TMDLs have been developed; therefore, no conditions in the proposed Order are based on TMDLs.

E. Other Plans, Policies and Regulations

[Not Applicable]

IV. RATIONALE FOR EFFLUENT LIMITATIONS AND DISCHARGE SPECIFICATIONS

The CWA requires point source discharges to control the amount of conventional, non-conventional, and toxic pollutants that are discharged into the waters of the United States. The control of pollutants discharged is established through effluent limitations; and other requirements in NPDES permits. There are two principal bases for effluent limitations: section 122.44(a) requires that permits include applicable technology-based limitations and standards; and section 122.44(d) requires that permits include WQBELs to attain and maintain applicable numeric and narrative water quality criteria to protect the beneficial uses of the receiving water

Effluent limitations for Discharge Point 001 in the previous Order were established for suspended solids, oil and grease, and BOD₅ because they are parameters typically used to characterize wastewater; thus effluent limitations for these parameters have been established in this Order. Sulfide and constituents contributing to turbidity are commonly present in groundwater; thus effluent limitations for these parameters were established in the previous Order, and will be established in this permit.

The existing permit established effluent limitations for a number of pollutants believed to be present in the discharge of treated groundwater, but was not specific in the basis for this determination. The storage tanks that previously existed at the site and used as part of the industrial manufacturing processes contained VOCs. The existing regulated pollutants are still considered pollutants of concern in this Order due to the nature of current groundwater remediation activities.

Generally, mass-based effluent limitations ensure that proper treatment, and not dilution, is employed to comply with the final effluent concentration limitations. Section 122.45(f)(1) requires that all permit limitations, standards or prohibitions be expressed in terms of mass units except under the following conditions: (1) for pH, temperature, radiation or other pollutants that cannot appropriately be expressed by mass limitations; (2) when applicable standards or limitations are expressed in terms of other units of measure; or (3) if in establishing technology-based permit limitation on a case-by-case basis limitation based on mass are infeasible because the mass or pollutant cannot be related to a measure of production. The limitations, however, must ensure that dilution will not be used as a substitute for treatment.

A. Discharge Prohibitions

The discharge prohibitions are based on the requirements of the Basin Plan, State Water Board's plans and policies, the Water Code, and previous permit provisions. They are also consistent with the requirements for other discharges to the Dominguez Channel.

B. Technology-Based Effluent Limitations

1. Scope and Authority

The CWA requires that technology-based effluent limitations be established based on several levels of controls:

- a. Best practicable treatment control technology (BPT) represents the average of the best performance by plants within an industrial category or subcategory. BPT standards apply to toxic, conventional, and nonconventional pollutants.
- b. Best available technology economically achievable (BAT) represents the best existing performance of treatment technologies that are economically achievable within an industrial point source category. BAT standards apply to toxic and nonconventional pollutants.
- c. Best conventional pollutant control technology (BCT) represents the control from existing industrial point sources of conventional pollutants including BOD, TSS, fecal coliform, pH, and oil and grease. The BCT standard is established after considering the "cost reasonableness" of the relationship between the cost of attaining a reduction in effluent discharge and the benefits that would result, and also the cost effectiveness of additional industrial treatment beyond BPT.
- d. New source performance standards (NSPS) represent the best available demonstrated control technology standards. The intent of NSPS guidelines is to set limitations that represent state-of-the-art treatment technology for new sources.

The CWA requires USEPA to develop effluent limitations, guidelines and standards (ELGs) representing application of BPT, BAT, BCT, and NSPS. Section 402(a)(1) of the CWA and section 125.3 of the Code of Federal Regulations authorize the use of best professional judgment (BPJ) to derive technology-based effluent limitations on a case-by-case basis where ELGs are not available for certain industrial categories and/or pollutants of concern. Where BPJ is used, the permit writer must consider specific factors outlined in section 125.3.

2. Applicable Technology-Based Effluent Limitations

There are no national ELGs applicable to the discharge from the Facility. The existing Order (No. 01-177) established effluent limitations for suspended solids, biochemical oxygen demand, oil and grease, and turbidity that appear to be based on BPJ. This Order carries over those effluent limitations.

C. Water Quality-Based Effluent Limitations (WQBELs)

1. Scope and Authority

Section 301(b) of the CWA and section 122.44(d) require that permits include limitations more stringent than applicable federal technology-based requirements where necessary to achieve applicable water quality standards.

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

The process for determining reasonable potential and calculating WQBELs when necessary is intended to protect the designated uses of the receiving water as specified in the Basin Plan, and achieve applicable water quality objectives and criteria that are contained in other state plans and policies, or any applicable water quality criteria contained in the CTR and NTR.

2. Applicable Beneficial Uses and Water Quality Criteria and Objectives

As noted in Section II of the Limitations and Discharge Requirements, the Regional Water Board adopted a Basin Plan that designates beneficial uses, establishes water quality objectives, and contains implementation programs and policies to achieve those objectives for all waters addressed through the Basin Plan. The beneficial uses applicable to the Dominguez Channel are summarized in Section III.C.1 of this Fact Sheet. The Basin Plan includes both narrative and numeric water quality objectives applicable to the receiving water.

Priority pollutant water quality criteria in the CTR are applicable to the Dominguez Channel. The CTR contains both saltwater and freshwater criteria. Because a distinct separation generally does not exist between freshwater and saltwater aquatic communities, the following apply, in accordance with section 131.38(c)(3), freshwater criteria apply at salinities of 1 part per thousand (ppt) and below at locations where this occurs 95 percent or more of the time. The CTR criteria for freshwater or human health for consumption of organisms, whichever is more stringent, are used to prescribe the effluent limitations in this Order to protect the beneficial uses of the Dominguez Channel, a water of the United States in the vicinity of the discharge.

Some water quality criteria are hardness dependent. The Discharger provided hardness data for the receiving water Dominguez Channel as part of their required CTR monitoring. The hardness value reported for the Dominguez Channel is 150 mg/L CaCO₃. The Discharger provided a single hardness value; therefore, that value (150 mg/L) was used for evaluation of reasonable potential.

Table F-5 summarizes the applicable water quality criteria/objective for priority pollutants reported in detectable concentrations in the effluent or receiving water. These criteria were used in conducting the reasonable potential analysis (RPA) for this Order.

Table F-5. Applicable Water Quality Criteria

CTR No.	Constituent	Selected Criteria µg/L	CTR/NTR Water Quality Criteria					
			Freshwater		Saltwater		Human Health for Consumption of:	
			Acute µg/L	Chronic µg/L	Acute µg/L	Chronic µg/L	Water & Organisms µg/L	Organisms only µg/L
5a	Chromium (III)	288.50	2420.45	288.50	N/A	N/A	N/A	Narrative
5b	Chromium (VI)	11.43	16.29	11.43	N/A	N/A	N/A	--
6	Copper	13.19	20.51	13.19	N/A	N/A	N/A	--
9	Nickel	73.51	661.16	73.51	N/A	N/A	N/A	4,600
13	Zinc	168.93	168.93	168.93	N/A	N/A	N/A	--
30	1,1-Dichloroethylene	3.2	--	--	N/A	N/A	N/A	3.2
38	Tetrachloroethylene	8.85	--	--	N/A	N/A	N/A	8.85
41	1,1,1-Trichloroethane	No Criteria	--	--	N/A	N/A	N/A	--
43	Trichloroethylene	81	--	--	N/A	N/A	N/A	81.0
47	2,4-Dimethylphenol	2,300	--	--	N/A	N/A	N/A	2,300
68	Bis(2-Ethylhexyl)Phthalate	5.9	--	--	N/A	N/A	N/A	5.9
75	1,2-Dichlorobenzene	17,000	--	--	N/A	N/A	N/A	17,000

"N/A" indicates the receiving water is not characterized as saltwater, nor are the water quality criteria for the protection of human health for the consumption of water and organisms applicable.

3. Determining the Need for WQBELs

In accordance with Section 1.3 of the SIP, the Regional Water Board conducts a reasonable potential analysis (RPA) for each priority pollutant with an applicable criterion or objective to determine if a WQBEL is required in the permit. The Regional Water Board analyzes effluent and receiving water data and identifies the maximum observed effluent concentration (MEC) and maximum background concentration (B) in the receiving water for each constituent. To determine reasonable potential, the MEC and the B are then compared with the applicable water quality objectives (C) outlined in the CTR, NTR, as well as the Basin Plan. For all pollutants that have a reasonable potential to cause or contribute to an excursion above an applicable water quality standard, numeric WQBELs are required. The RPA considers water quality criteria from the CTR and NTR, and when applicable, water quality objectives specified in the Basin Plan. To conduct the RPA, the

Regional Water Board identifies the MEC and maximum background concentration in the receiving water for each constituent, based on data provided by the Discharger.

Section 1.3 of the SIP provides the procedures for determining reasonable potential to exceed applicable water quality criteria and objectives. The SIP specifies three triggers to complete a RPA:

- 1) Trigger 1 – If the MEC \geq C, a limit is needed.
- 2) Trigger 2 – If the background concentration (B) > C and the pollutant is detected in the effluent, a limit is needed.
- 3) Trigger 3 – If other related information such as CWA 303(d) listing for a pollutant, discharge type, compliance history, etc. indicates that a WQBEL is required.

Sufficient effluent and receiving water data are needed to conduct a complete RPA. If data are not sufficient, the Discharger will be required to gather the appropriate data for the Regional Water Board to conduct the RPA. Upon review of the data, and if the Regional Water Board determines that WQBELs are needed to protect the beneficial uses, the permit will be reopened for appropriate modification.

The RPA was performed for the priority pollutants regulated in the CTR for which data are available. Eleven² sets of discharge data are available for Discharge Point 001. No receiving water data were available. Based on the RPA, copper and bis(2-ethylhexyl)phthalate demonstrated statistical reasonable potential. However, WQBELs based on water quality criteria contained in the CTR were calculated for all pollutants previously regulated by Order No. 01-177, to evaluate stringency with existing effluent limitations. Refer to Attachment I for a summary of the RPA and associated effluent limitation calculations.

Table F-6. Summary Reasonable Potential Analysis

CTR No.	Constituent	Applicable Water Quality Criteria (C)	Max Effluent Conc. (MEC)	Maximum Detected Receiving Water Conc. ¹ (B)	RPA Result - Need Limit?	Reason
		µg/L	µg/L	µg/L		
5a	Chromium (III)	288.50	1.7	--	No	MEC < C and no B
5b	Chromium (VI)	11.43	0.6	--	No	MEC, C and no B
6	Copper	13.19	26.0	--	Yes	MEC > C
9	Nickel	73.51	12	--	No	MEC < C and no B
13	Zinc	168.93	30.0	--	No	MEC < C and no B
30	1,1-Dichloroethylene	3.2	0.67	--	No	MEC < C and no B
38	Tetrachloroethylene	8.85	2.6	--	No	MEC < C and no B

² 13 sets of discharge data were submitted. The reports indicate that for 4th Quarter 2005 and 3rd Quarter 2006 no sampling was conducted because the treatment system shut down in October 2005. (Note – The groundwater treatment system was down 4th Quarter 2005 through 3rd Quarter 2006; no sampling was conducted.)

CTR No.	Constituent	Applicable Water Quality Criteria (C)	Max Effluent Conc. (MEC)	Maximum Detected Receiving Water Conc. ¹ (B)	RPA Result - Need Limit?	Reason
		µg/L	µg/L	µg/L		
41	1,1,1-Trichloroethane	No Criteria	18.0	--	Yes	No Criteria
43	Trichloroethylene	81	7.8	--	No	MEC < C and no B
47	2,4-Dimethylphenol	2,300	0.54	--	No	MEC < C and no B
68	Bis(2-Ethylhexyl)Phthalate	5.9	6.2	--	Yes	MEC > C
75	1,2-Dichlorobenzene	17,000	17.0	--	No	MEC < C and no B

¹ No receiving water data were submitted by the Discharger.

4. WQBEL Calculations

- a. If a reasonable potential exists to exceed applicable water quality criteria or objectives, then a WQBEL must be established in accordance with one or more of the three procedures contained in Section 1.4 of the SIP. These procedures include:
 - (1) If applicable and available, use of the wasteload allocation (WLA) established as part of a total maximum daily load (TMDL).
 - (2) Use of a steady-state model to derive maximum daily effluent limitations (MDELs) and average monthly effluent limitations (AMELs).
 - (3) Where sufficient effluent and receiving water data exist, use of a dynamic model, which has been approved by the Regional Water Board.
- b. Water quality-based effluent limits (final) for mercury, and bis(2-ethylhexyl)phthalate are based on monitoring results and following the procedure based on the steady-state model, available in Section 1.4 of the SIP.
- c. Since many of the streams in the Region have minimal upstream flows, mixing zones and dilution credits are usually not appropriate. Therefore, in this Order, no dilution credit is being allowed. However, in accordance with the reopener provision in Section VI.C.1.e in the Order, this Order may be reopened upon the submission by the Discharger of adequate information to establish appropriate dilution credits or a mixing zone, as determined by the Regional Water Board.
- d. WQBELs Calculation Example

Using Copper as an example, the following demonstrates how WQBELs were established for this Order. The tables in Attachment I summarize the development and calculation of all WQBELs for this Order using the process described below.

Concentration-Based Effluent Limitations

A set of AMEL and MDEL values are calculated separately, one set for the protection of aquatic life and the other for the protection of human health. The AMEL and MDEL limitations for aquatic life and human health are compared, and the most restrictive

AMEL and the most restrictive MDEL are selected as the WQBEL.

Calculation of aquatic life AMEL and MDEL:

Step 1: For each constituent requiring an effluent limit, identify the applicable water quality criteria or objective. For each criterion determine the effluent concentration allowance (ECA) using the following steady state equation:

$$\begin{aligned} \text{ECA} &= C + D(C-B) && \text{when } C > B, \text{ and} \\ \text{ECA} &= C && \text{when } C \leq B, \end{aligned}$$

- Where
- C = The priority pollutant criterion/objective, adjusted if necessary for hardness, pH and translators. In this Order a hardness value of 150 mg/L (as CaCO₃) was used for development of hardness-dependant criteria, and a pH of 7.81 was used for pH-dependant criteria.
 - D = The dilution credit, and
 - B = The ambient background concentration

As discussed above, for this Order, dilution was not allowed; therefore:

$$\text{ECA} = C$$

For copper the applicable water quality criteria are (reference Table F-5):

$$\begin{aligned} \text{ECA}_{\text{acute}} &= 20.51 \text{ } \mu\text{g/L} \\ \text{ECA}_{\text{chronic}} &= 13.19 \text{ } \mu\text{g/L} \end{aligned}$$

Step 2: For each ECA based on aquatic life criterion/objective, determine the long-term average discharge condition (LTA) by multiplying the ECA by a factor (multiplier). The multiplier is a statistically based factor that adjusts the ECA to account for effluent variability. The value of the multiplier varies depending on the coefficient of variation (CV) of the data set and whether it is an acute or chronic criterion/objective. Table 1 of the SIP provides pre-calculated values for the multipliers based on the value of the CV. Equations to develop the multipliers in place of using values in the tables are provided in Section 1.4, Step 3 of the SIP and will not be repeated here.

$$\text{LTA}_{\text{acute}} = \text{ECA}_{\text{acute}} \times \text{Multiplier}_{\text{acute } 99}$$

$$\text{LTA}_{\text{chronic}} = \text{ECA}_{\text{chronic}} \times \text{Multiplier}_{\text{chronic } 99}$$

The CV for the data set must be determined before the multipliers can be selected and will vary depending on the number of samples and the standard deviation of a data set. If the data set is less than 10 samples, or at least 80% of the samples in the data set are reported as non-detect, the CV shall be set equal to 0.6.

For copper, the following data were used to develop the acute and chronic LTA using equations provided in Section 1.4, Step 3 of the SIP (Table 1 of the SIP also provides this data up to three decimals):

No. of Samples	CV	ECA Multiplier _{acute 99}	ECA Multiplier _{chronic 99}
11	0.6	0.32	0.53

$$LTA_{acute} = 20.51 \mu\text{g/L} \times 0.32 = 6.59 \mu\text{g/L}$$

$$LTA_{chronic} = 13.19 \mu\text{g/L} \times 0.53 = 6.96 \mu\text{g/L}$$

Step 3: Select the most limiting (lowest) of the LTA.

$$LTA = \text{most limiting of } LTA_{acute} \text{ or } LTA_{chronic}$$

For Copper, the most limiting LTA was the $LTA_{chronic}$

$$LTA = 6.59 \mu\text{g/L}$$

Step 4: Calculate the WQBELs by multiplying the LTA by a factor (multiplier). WQBELs are expressed as Average Monthly Effluent Limitations (AMEL) and Maximum Daily Effluent Limitation (MDEL). The multiplier is a statistically based factor that adjusts the LTA for the averaging periods and exceedance frequencies of the criteria/objectives and the effluent limitations. The value of the multiplier varies depending on the probability basis, the coefficient of variation (CV) of the data set, the number of samples (for AMEL) and whether it is a monthly or daily limit. Table 2 of the SIP provides pre-calculated values for the multipliers based on the value of the CV and the number of samples. Equations to develop the multipliers in place of using values in the tables are provided in Section 1.4, Step 5 of the SIP and will not be repeated here.

$$AMEL_{aquatic\ life} = LTA \times AMEL_{multiplier\ 95}$$

$$MDEL_{aquatic\ life} = LTA \times MDEL_{multiplier\ 99}$$

AMEL multipliers are based on a 95th percentile occurrence probability, and the MDEL multipliers are based on the 99th percentile occurrence probability. If the number of samples is less than four (4), the default number of samples to be used is four (4).

For copper, the following data were used to develop the AMEL and MDEL for aquatic life using equations provided in Section 1.4, Step 5 of the SIP (Table 2 of the SIP also provides this data up to two decimals):

No. of Samples Per Month	CV	Multiplier _{MDEL 99}	Multiplier _{AMEL 95}
4	0.6	3.11	1.55

$$AMEL_{aquatic\ life} = 6.59 \times 1.55 = 10.22 \mu\text{g/L}$$

$$MDEL_{aquatic\ life} = 6.59 \times 3.11 = 20.51 \mu\text{g/L}$$

Calculation of human health AMEL and MDEL:

Step 5: For the ECA based on human health, set the AMEL equal to the $ECA_{human\ health}$

However, for copper, there $ECA_{human\ health} = \text{Not Available}$. The CTR does not contain a numeric copper criterion protective of human health; therefore, it was not possible to develop a copper AMEL based on human health criteria.

Step 6: Calculate the MDEL for human health by multiplying the AMEL by the ratio of the Multiplier_{MDEL} to the Multiplier_{AMEL}. Table 2 of the SIP provides pre-calculated ratios to be used in this calculation based on the CV and the number of samples.

A copper MDEL_{human health} could not be calculated because a copper AMEL_{human health} was not available. There are no criteria protective of human health for copper; therefore, none of the limitations for copper are based on human health criteria.

Step 7: Select the lower of the AMEL and MDEL based on aquatic life and human health as the WQBEL for the Order.

For copper:

AMEL _{aquatic life}	MDEL _{aquatic life}	AMEL _{human health}	MDEL _{human health}
10.22 µg/L	20.51 µg/L	Not Applicable	Not Applicable

The lowest (most restrictive) effluent limits are based on aquatic toxicity and were incorporated into this Order. For copper, there are no human health criteria; therefore, the AMEL and MDEL based on aquatic life criteria are considered for WQBELs. For bis(2-ethylhexyl)phthalate there are no aquatic life criteria; therefore, the AMEL and MDEL based on the human health criteria are considered for WQBELs.

5. WQBELs based on Basin Plan Objectives

The Basin Plan states that the pH of inland surface waters shall not be depressed below 6.5 or raised above 8.5 as a result of waste discharge. Based on the requirements of the Basin Plan an instantaneous minimum limitation of 6.5 and an instantaneous maximum limitation of 8.5 for pH are included in the proposed permit. The Basin Plan lists temperature requirements for the receiving waters and references the Thermal Plan. Based on the requirements of the Thermal Plan and a white paper developed by Regional Water Board staff entitled *Temperature and Dissolved Oxygen Impacts on Biota in Tidal Estuaries and Enclosed Bays in the Los Angeles Region*, a maximum effluent temperature limitation of 86 °F is included in the Order. The white paper evaluated the optimum temperatures for steelhead, topsmelt, ghost shrimp, brown rock crab, jackknife clam, and blue mussel. The new temperature effluent limit is reflective of new information available that indicates that the 100°F temperature is not protective of aquatic organisms. A survey was completed for several kinds of fish and the 86°F temperature was found to be protective.

Limits are also set in the Basin Plan for the following parameters: arsenic; benzene; carbon tetrachloride; 1,1-dichloroethane; 1,2-dichloroethane; tetrachloroethylene; 1,1,1-trichloroethane; trichloroethylene; vinyl chloride; and 1,4-dichlorobenzene. These limits can be found in Table 3-7., entitled, "The Maximum Contaminant Levels: Organic Chemical (for MUN beneficial use) specified in Table 64444-A of Section 64444 of Title 22 of the California Code of Regulations as of 9/8/94."

6. Final WQBELs

A summary of the WQBELs are described in Table F-7.

Table F-7. Summary of Water Quality-based Effluent Limitations: Discharge Point 001

Parameter	Units	Effluent Limitations		
		Average Monthly	Average Weekly	Maximum Daily
Arsenic, Total Recoverable	µg/L	122.82	N/A	246.40
	lbs/day	0.143	N/A	0.288
Cadmium, Total Recoverable	µg/L	2.77	N/A	5.55
	lbs/day	0.003	N/A	0.006
Chromium (VI), Total Recoverable	µg/L	8.11	N/A	16.29
	lbs/day	0.009	N/A	0.019
Copper, Total Recoverable	µg/L	10.22	N/A	20.51
	lbs/day	0.012	N/A	0.024
Lead, Total Recoverable	µg/L	4.36	N/A	8.76
	lbs/day	0.005	N/A	0.010
Mercury	µg/L	0.051	N/A	0.102
	lbs/day	0.00006	N/A	0.00012
Selenium, Total Recoverable	µg/L	4.1	N/A	8.2
	lbs/day	0.0048	N/A	0.0096
Silver, Total Recoverable	µg/L	4.06	N/A	8.15
	lbs/day	0.0047	N/A	0.0095
Zinc, Total Recoverable	µg/L	84.2	N/A	168.9
	lbs/day	0.098	N/A	0.197
Benzene	µg/L	71	N/A	2.4
	lbs/day		N/A	
Carbon Tetrachloride	µg/L	4.4	N/A	8.83
	lbs/day		N/A	
1,1-Dichloroethane ¹	µg/L	N/A	N/A	N/A
	lbs/day	N/A	N/A	N/A
1,2-Dichloroethane	µg/L	99	N/A	198.6
	lbs/day		N/A	
1,1-Dichloroethylene	µg/L	3.2	N/A	6.4
	lbs/day		N/A	
Ethylbenzene	µg/L	29,000	N/A	58,179
	lbs/day		N/A	
Tetrachloroethylene	µg/L	8.9	N/A	17.8
	lbs/day		N/A	
Toluene	µg/L	200,000	N/A	401,238
	lbs/day		N/A	
1,1,1-Trichloroethane ¹	µg/L	N/A	N/A	N/A
	lbs/day	N/A	N/A	N/A
Trichloroethylene	µg/L	81	N/A	163
	lbs/day		N/A	
Vinyl Chloride	µg/L	525	N/A	1,053
	lbs/day		N/A	

Parameter	Units	Effluent Limitations		
		Average Monthly	Average Weekly	Maximum Daily
Xylene	µg/L		N/A	10
	lbs/day		N/A	0.01
Bis(2-Ethylhexyl)Phthalate	µg/L	5.9	N/A	11.8
	lbs/day		N/A	
1,4-Dichlorobenzene	µg/L	2,600	N/A	5,216
	lbs/day		N/A	

¹ No CTR water quality criteria available.

7. Whole Effluent Toxicity (WET)

Whole effluent toxicity (WET) protects the receiving water quality from the aggregate toxic effect of a mixture of pollutants in the effluent. WET tests measure the degree of response of exposed aquatic test organisms to an effluent. The WET approach allows for protection of the narrative “no toxics in toxic amounts” criterion while implementing numeric criteria for toxicity. There are two types of WET tests: acute and chronic. An acute toxicity test is conducted over a short time period and measures mortality. A chronic toxicity test is conducted over a longer period of time and may measure mortality, reproduction, and growth.

The Basin Plan specifies a narrative objective for toxicity, requiring that all waters be maintained free of toxic substances in concentrations that are lethal to or produce other detrimental responses by aquatic organisms. Detrimental response includes but is not limited to decreased growth rate, decreased reproductive success of resident or indicator species, and/or significant alterations in population, community ecology, or receiving water biota. The existing Order contains acute toxicity limitations and monitoring requirements in accordance with the Basin Plan, in which the acute toxicity objective for discharges dictates that the average survival in undiluted effluent for any three consecutive 96-hour static or continuous flow bioassay tests shall be at least 90%, with no single test having less than 70% survival. Annual acute toxicity data for the years 2002 through 1st Quarter 2006 (with year 2004 and 2006 data unavailable) submitted by the Discharger indicated 100% survival rates. Consistent with Basin Plan requirements, this Order carries over the acute toxicity limitations and monitoring requirements from the previous Order.

In addition to the Basin Plan requirements, Section 4 of the SIP states that a chronic toxicity effluent limitation is required in permits for all discharges that will cause, have the reasonable potential to cause, or contribute to chronic toxicity in receiving waters.

The discharges from Discharge Point 001 could contribute to long-term toxic effects within the receiving water. Annual chronic toxicity data for the years 2002 through 1st Quarter 2006 (with year 2004 and 2006 data unavailable) submitted by the Discharger indicated a chronic toxicity of 1 TU_c. Consistent with SIP requirements, this Order includes a chronic toxicity trigger and monitoring requirements from the previous Order.

D. Final Effluent Limitations

Section 402(o) of the CWA and section 122.44(l) require that effluent limitations or conditions in reissued Orders be at least as stringent as those in the existing Orders based on the submitted sampling data. Effluent limitations for suspended solids, temperature, BOD₅, oil and grease, turbidity, sulfides, phenols, phenolic compounds (chlorinated), acute toxicity, chronic toxicity, acetone, and xylene, are being carried over from the previous Order (Order No. 01-177). Removal of these numeric limitations would constitute backsliding under CWA section 402(o). The Regional Water Board has determined that these numeric effluent limitations continue to be applicable to the Facility.

For those pollutants for which Order No. 01-177 established effluent limitations, a comparison between existing permit limitations and CTR-based WQBELs was made and the most stringent limitation included in the Order. For arsenic, cadmium, chromium (VI), copper, lead, selenium, silver, zinc, benzene, carbon tetrachloride, 1,1-dichloroethane, 1,2-dichloroethane, 1,1-dichloroethylene, ethylbenzene, toluene, 1,1,1-trichloroethane, trichloroethylene, vinyl chloride, and 1,4-dichlorobenzene, the existing permit limitations are more stringent than the CTR-based WQBELs; therefore, the effluent limitations from Order No. 01-177 will be included in this permit. The effluent limitations for mercury are based on CTR water quality-criteria because the existing effluent limitations are less stringent than the CTR-based WQBELs. In addition, CTR-based WQBELs are established for bis(2-ethylhexyl)phthalate because the pollutant demonstrated reasonable potential to exceed state water quality standards.

1. Mass-based Effluent Limitations

Mass-based effluent limitations are established using the following formula:

$$\text{Mass (lbs/day)} = \text{flow rate (MGD)} \times 8.34 \times \text{effluent limitation (mg/L)}$$

where:

- Mass = mass limitation for a pollutant (lbs/day)
- Effluent limitation = concentration limit for a pollutant (mg/L)
- Flow rate = discharge flow rate (MGD)

Table F-8. Summary of Final Effluent Limitations: Discharge Point 001

Parameter	Units	Effluent Limitations					Basis
		Average Monthly	Average Weekly	Maximum Daily	Instantaneous Minimum	Instantaneous Maximum	
pH	s.u.	--	--	--	6.5	8.5	Existing Order
Temperature	deg. F	--	--	--	--	86	Existing Order
Suspended Solids	mg/L	50	--	75	--	--	Existing Order
	lbs/day	58	--	88	--	--	
BOD ₅ 20°C	mg/L	20	--	30	--	--	Existing Order
	lbs/day	23	--	35	--	--	
Oil and Grease	mg/L	10	--	15	--	--	Existing Order
	lbs/day	12	--	18	--	--	
Turbidity	NTU	50	--	75	--	--	Existing Order
Sulfides	mg/L	--	--	1.0	--	--	Existing Order
	lbs/day	--	--	1.2	--	--	
Phenols	mg/L	--	--	1.0	--	--	Existing Order
	lbs/day	--	--	1.2	--	--	

Parameter	Units	Effluent Limitations					Basis
		Average Monthly	Average Weekly	Maximum Daily	Instantaneous Minimum	Instantaneous Maximum	
Phenolic Compounds (chlorinated)	µg/L	--	--	1.0	--	--	Existing Order
	lbs/day	--	--	0.001	--	--	
Acetone	µg/L	--	--	700.0	--	--	Existing Order
	lbs/day	--	--	0.82	--	--	
Arsenic, Total Recoverable	µg/L	--	--	50.0	--	--	Existing Order
	lbs/day	--	--	0.06	--	--	
Cadmium, Total Recoverable	µg/L	1.81	--	3.63	--	--	Existing Order
	lbs/day	0.002	--	0.004	--	--	
Chromium(VI), Total Recoverable	µg/L	8.06	--	16.2	--	--	Existing Order
	lbs/day	0.009	--	0.019	--	--	
Copper, Total Recoverable	µg/L	6.7	--	13.4	--	--	Existing Order
	lbs/day	0.008	--	0.016	--	--	
Lead, Total Recoverable	µg/L	2.59	--	5.19	--	--	Existing Order
	lbs/day	0.003	--	0.006	--	--	
Mercury	µg/L	0.051	--	0.102	--	--	CTR/SIP
	lbs/day	0.00006	--	0.00012	--	--	
Selenium, Total Recoverable	µg/L	4.1	--	8.2	--	--	Existing Order
	lbs/day	0.005	--	0.009	--	--	
Silver, Total Recoverable	µg/L	1.99	--	3.99	--	--	Existing Order
	lbs/day	0.002	--	0.005	--	--	
Zinc, Total Recoverable	µg/L	61.1	--	122.5	--	--	Existing Order
	lbs/day	0.07	--	0.14	--	--	
Benzene	µg/L	--	--	1.0	--	--	Existing Order
	lbs/day	--	--	0.001	--	--	
Carbon Tetrachloride	µg/L	--	--	0.50	--	--	Existing Order
	lbs/day	--	--	0.0006	--	--	
1,1-Dichloroethane	µg/L	--	--	5.0	--	--	Existing Order
	lbs/day	--	--	0.006	--	--	
1,2-Dichloroethane	µg/L	--	--	0.5	--	--	Existing Order
	lbs/day	--	--	0.0006	--	--	
1,1-Dichloroethylene	µg/L	0.057	--	0.11	--	--	Existing Order
	lbs/day	0.00007	--	0.00013	--	--	
Ethylbenzene	µg/L	--	--	10.0	--	--	Existing Order
	lbs/day	--	--	0.01	--	--	
Tetrachloroethylene	µg/L	--	--	5.0	--	--	Existing Order
	lbs/day	--	--	0.006	--	--	
Toluene	µg/L	--	--	10.0	--	--	Existing Order
	lbs/day	--	--	0.01	--	--	
1,1,1-Trichloroethane	µg/L	--	--	200	--	--	Existing Order
	lbs/day	--	--	0.23	--	--	
Trichloroethylene	µg/L	--	--	5.0	--	--	Existing Order

Parameter	Units	Effluent Limitations					Basis
		Average Monthly	Average Weekly	Maximum Daily	Instantaneous Minimum	Instantaneous Maximum	
Vinyl Chloride	lbs/day	--	--	0.006	--	--	Existing Order
	µg/L	--	--	0.5	--	--	
	lbs/day	--	--	0.0006	--	--	
Xylene	µg/L	--	--	10	--	--	Existing Order
	lbs/day	--	--	0.01	--	--	
Bis(2-Ethylhexyl) Phthalate	µg/L	5.9	--	11.8	--	--	CTR/SIP
	lbs/day	0.007	--	0.014	--	--	
1,4-Dichlorobenzene	µg/L	--	--	5.0	--	--	Existing Order
	lbs/day	--	--	0.006	--	--	

E. Interim Effluent Limitations

Section 131.38(e) provides conditions under which interim effluent limitations and compliance schedules may be issued. The SIP allows inclusion of an interim limitation with a specific compliance schedule included in an NPDES permit for priority pollutants if the limitation for the priority pollutant is based on CTR criteria and the Discharger demonstrates that it is infeasible to achieve immediate compliance with the effluent limitations. Because based on existing data, it appears that it is infeasible for the Discharger to immediately comply with the CTR-based effluent limitations for bis(2-ethylhexyl)phthalate, an interim effluent limitation and compliance schedule is included in this Order.

Pursuant to the SIP (Section 2.2.1, Interim Requirements under a Compliance Schedule), when compliance schedules are established in an Order, interim limitations must be included based on current treatment facility performance or existing permit limitations, whichever is more stringent to maintain existing water quality. There are insufficient data to perform a meaningful statistical analysis to develop interim limitations. Order No. 01-177 does not contain effluent limitations for bis(2-ethylhexyl)phthalate; therefore, the MEC serves as the basis for the interim effluent limitation. It should be noted that the Regional Water Board might take appropriate enforcement actions if interim limitations and requirements are not met.

The SIP requires that the Regional Water Board establish other interim requirements such as requiring the discharger to develop a pollutant minimization plan and/or source control measures and participate in the activities necessary to achieve the final effluent limitations. These interim limitations shall be effective until May 17, 2010, after which the Discharger shall demonstrate compliance with the final effluent limitations.

Table F-9. Interim Effluent Limitations

Parameter	Unit	Maximum Daily Effluent Limit
Bis(2-Ethylhexyl)Phthalate	µg/L	6.2

F. Land Discharge Specifications

[Not Applicable]

G. Reclamation Specifications

[Not Applicable]

V. RATIONALE FOR RECEIVING WATER LIMITATIONS

A. Surface Water

The Basin Plan contains numeric and narrative water quality objectives applicable to all surface waters within the Los Angeles Region. Water quality objectives include an objective to maintain the high quality waters pursuant to federal regulations (section 131.12) and State Water Board Resolution No. 68-16. Receiving water limitations in this Order are included to ensure protection of beneficial uses of the receiving water and are based on the water quality objectives contained in the Basin Plan.

B. Groundwater

[Not Applicable]

VI. RATIONALE FOR MONITORING AND REPORTING REQUIREMENTS

Section 122.48 requires that all NPDES permits to specify recording and reporting of monitoring results. Water Code sections 13267 and 13383 authorizes the Regional Water Board to require technical and monitoring reports. The Monitoring and Reporting Program (MRP), Attachment E of this Order, establishes monitoring and reporting requirements to implement federal and state requirements. The following provides the rationale for the monitoring and reporting requirements contained in the MRP for this facility.

A. Influent Monitoring

[Not Applicable]

B. Effluent Monitoring

Monitoring for those pollutants expected to be present in the effluent discharged through Discharge Point 001 (at Monitoring Location EFF-001), will be required as shown on the MRP (Attachment E). To determine compliance with effluent limitations, the proposed monitoring plan carries forward monitoring requirements from Order No. 01-177. Monthly monitoring was established for bis(2-ethylhexyl)phthalate to determine compliance with the newly established effluent limitations. Annual monitoring is required to characterize the discharge for future analysis.

According to the SIP, the Discharger is required to monitor the effluent for the CTR priority pollutants, to determine reasonable potential. Accordingly, the Regional Water Board is requiring that the Discharger conduct effluent monitoring of the CTR priority pollutants.

C. Whole Effluent Toxicity Testing Requirements

Whole effluent toxicity (WET) protects the receiving water quality from the aggregate toxic effect of a mixture of pollutants in the effluent. An acute toxicity test is conducted over a short

time period and measures mortality. A chronic toxicity test is conducted over a longer period of time and may measure mortality, reproduction, and growth.

Section 4 of the SIP states that a chronic toxicity effluent limitation is required in permits for all discharges that will cause, have the reasonable potential to cause, or contribute to chronic toxicity in receiving waters. Therefore, in accordance with the SIP, the Discharger will be required to conduct chronic toxicity testing in order to determine reasonable potential and establish WQBELs as necessary. This Order includes limitations for acute toxicity, and therefore, monitoring requirements are included in the MRP (Attachment E) to determine compliance with the effluent limitations established in Limitations and Discharge Requirements, Effluent Limitations, Section IV.A.1.a.

D. Receiving Water Monitoring

1. Surface Water

According to the SIP, the Discharger is required to monitor the upstream receiving water for the CTR priority pollutants, to determine reasonable potential. Accordingly, the Regional Water Board is requiring that the Discharger conduct upstream receiving water monitoring of the CTR priority pollutants at Monitoring Location RSW-001 above the point of discharge to the Dominguez Channel on an annual basis. The Discharger must analyze temperature, pH, hardness, and salinity of the upstream receiving water at the same time the samples are collected for priority pollutants analysis.

This Order also includes receiving water limitations and therefore, monitoring requirements are included in the MRP (Attachment E) to determine compliance with the receiving water limitations established in Limitations and Discharge Requirements, Receiving Water Limitations, Section V.A. Monitoring for temperature, pH, and dissolved oxygen in the downstream receiving water at Monitoring Location RSW-002 is included in the proposed permit.

2. Groundwater

[Not Applicable]

E. Other Monitoring Requirements

[Not Applicable]

VII. RATIONALE FOR PROVISIONS

A. Standard Provisions

1. Federal Standard Provisions

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

Section 122.41(a)(1) and (b) through (n) establish conditions that apply to all State-issued NPDES permits. These conditions must be incorporated into the permits either expressly or by reference. If incorporated by reference, a specific citation to the regulations must be included in the Order. Section 123.25(a)(12) allows the state to omit or modify conditions to impose more stringent requirements. In accordance with section 123.25, this Order omits federal conditions that address enforcement authority specified in sections 122.41(j)(5) and (k)(2) because the enforcement authority under the Water Code is more stringent. In lieu of these conditions, this Order incorporates by reference Water Code section 13387(e).

2. Regional Water Board Standard Provisions

Regional Water Board Standard Provisions are based on the CWA, USEPA regulations, and the Water Code.

B. Special Provisions

1. Reopener Provisions

These provisions are based on section 123 and the previous Order. The Regional Water Board may reopen the permit to modify permit conditions and requirements. Causes for modifications include the promulgation of new federal regulations, modification in toxicity requirements, or adoption of new regulations by the State Water Board or Regional Water Board, including revisions to the Basin Plan.

2. Special Studies and Additional Monitoring Requirements

- a. Chronic Toxicity Trigger. This provision is based on section 4 of the SIP, Toxicity Control Provisions.
- b. Initial Investigation Toxicity Reduction Evaluation Workplan. This provision is based on section 4 of the SIP, Toxicity Control Provisions.

3. Best Management Practices and Pollution Prevention

[Not applicable]

4. Compliance Schedules

This provision is based on the SIP, Section 2.1, Compliance Schedules. CTR's Compliance Schedule provisions sunset on May 18, 2005. After this date, the provisions of the SIP allow for Compliance Schedules not to exceed 5 years from issuance or past May 18, 2010, whichever is sooner. The Discharger is required to develop and submit a Compliance Plan.

According to the SIP, pollution prevention measures may be particularly appropriate for priority pollutants where there is evidence that beneficial uses are being impacted. This permit also requires that the Discharger develop a Pollution Minimization Plan for priority pollutants for which effluent limitations exist. Pursuant to section 2.4.5.1 of the SIP, pollution minimization includes: monitoring for potential sources of the pollutants, periodic monitoring, control strategy, control measure implementation, and an annual status report sent to the Regional Water Board.

5. Construction, Operation, and Maintenance Specifications

This provision is based on the requirements of section 122.41(e) and the previous Order.

6. Special Provisions for Municipal Facilities (POTWs Only)

[Not applicable]

7. Other Special Provisions

[Not applicable]

VIII. PUBLIC PARTICIPATION

The California Regional Water Quality Board, Los Angeles Region (Regional Water Board) is considering the issuance of waste discharge requirements (WDRs) that will serve as a National Pollution Discharge Elimination System (NPDES) permit for Northrop Grumman (formerly the TRW, Inc. Hawthorn Site). As a step in the WDR adoption process, the Regional Water Board staff has developed tentative WDRs. The Regional Water Board encourages public participation in the WDR adoption process.

A. Notification of Interested Parties

The Regional Water Board has notified the Discharger and interested agencies and persons of its intent to prescribe waste discharge requirements for the discharge and has provided them with an opportunity to submit their written comments and recommendations. Notification was provided through a local newspaper.

B. Written Comments

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

To be fully responded to by staff and considered by the Regional Water Board, written comments should be received at the Regional Water Board offices by 5:00 p.m. on May 4, 2007. If possible, please submit written comments in Word format electronically to covens@waterboards.ca.gov.

C. Public Hearing

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

Date: **June 7, 2007**
Time: **9:00 A.M.**
Location: **Metropolitan Water District of Southern California, Board Room
700 North Alameda Street
Los Angeles, CA**

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

Please be aware that dates and venues may change. Our web address is <http://www.waterboards.ca.gov/losangeles> where you can access the current agenda for changes in dates and locations.

D. Waste Discharge Requirements Petitions

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

State Water Resources Control Board
Office of Chief Counsel
P.O. Box 100, 1001 I Street
Sacramento, CA 95812-0100

E. Information and Copying

The Report of Waste Discharge (RWD), related documents, tentative effluent limitations and special provisions, comments received, and other information are on file and may be inspected at the address below at any time between 8:30 a.m. and 4:45 p.m., Monday through Friday. Copying of documents may be arranged through the Regional Water Board by calling (213) 576-6600.

California Regional Water Quality Control Board
Los Angeles Region
320 West 4th Street, Suite 200
Los Angeles, CA 90013

F. Register of Interested Persons

Any person interested in being placed on the mailing list for information regarding the WDRs and NPDES permit should contact the Regional Water Board, reference this facility, and provide a name, address, and phone number.

G. Additional Information

Requests for additional information or questions regarding this order should be directed to Cassandra Owens at (213) 576-6750.

ATTACHMENT G – STATE WATER BOARD MINIMUM LEVELS (ML)

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

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

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

Table 2b - SEMI-VOLATILE SUBSTANCES*	GC	GCMS	LC	COLOR
Benzo (a) Anthracene	10	5		
1,2 Dichlorobenzene (semivolatile)	2	2		
1,2 Diphenylhydrazine		1		
1,2,4 Trichlorobenzene	1	5		
1,3 Dichlorobenzene (semivolatile)	2	1		
1,4 Dichlorobenzene (semivolatile)	2	1		
2 Chlorophenol	2	5		
2,4 Dichlorophenol	1	5		

Table 2b - SEMI-VOLATILE SUBSTANCES*	GC	GCMS	LC	COLOR
2,4 Dimethylphenol	1	2		
2,4 Dinitrophenol	5	5		
2,4 Dinitrotoluene	10	5		
2,4,6 Trichlorophenol	10	10		
2,6 Dinitrotoluene		5		
2- Nitrophenol		10		
2-Chloroethyl vinyl ether	1	1		
2-Chloronaphthalene		10		
3,3' Dichlorobenzidine		5		
Benzo (b) Fluoranthene		10	10	
3-Methyl-Chlorophenol	5	1		
4,6 Dinitro-2-methylphenol	10	5		
4- Nitrophenol	5	10		
4-Bromophenyl phenyl ether	10	5		
4-Chlorophenyl phenyl ether		5		
Acenaphthene	1	1	0.5	
Acenaphthylene		10	0.2	
Anthracene		10	2	
Benzidine		5		
Benzo(a) pyrene		10	2	
Benzo(g,h,i)perylene		5	0.1	
Benzo(k)fluoranthene		10	2	
bis 2-(1-Chloroethoxy) methane		5		
bis(2-chloroethyl) ether	10	1		
bis(2-Chloroisopropyl) ether	10	2		
bis(2-Ethylhexyl) phthalate	10	5		
Butyl benzyl phthalate	10	10		
Chrysene		10	5	
di-n-Butyl phthalate		10		
di-n-Octyl phthalate		10		
Dibenzo(a,h)-anthracene		10	0.1	
Diethyl phthalate	10	2		
Dimethyl phthalate	10	2		
Fluoranthene	10	1	0.05	
Fluorene		10	0.1	
Hexachloro-cyclopentadiene	5	5		
Hexachlorobenzene	5	1		
Hexachlorobutadiene	5	1		
Hexachloroethane	5	1		
Indeno(1,2,3,cd)-pyrene		10	0.05	
Isophorone	10	1		
N-Nitroso diphenyl amine	10	1		
N-Nitroso-dimethyl amine	10	5		
N-Nitroso -di n-propyl amine	10	5		
Naphthalene	10	1	0.2	
Nitrobenzene	10	1		
Pentachlorophenol	1	5		
Phenanthrene		5	0.05	
Phenol **	1	1		50
Pyrene		10	0.05	

* With the exception of phenol by colorimetric technique, the normal method-specific factor for these

substances is 1,000; therefore, the lowest standard concentration in the calibration curve is equal to the above ML value for each substance multiplied by 1,000.

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

Table 2c – INORGANICS*	FAA	GFAA	ICP	ICPMS	SPGFAA	HYDRIDE	CVAA	COLOR	DCP
Antimony	10	5	50	0.5	5	0.5			1,000
Arsenic		2	10	2	2	1		20	1,000
Beryllium	20	0.5	2	0.5	1				1,000
Cadmium	10	0.5	10	0.25	0.5				1,000
Chromium (total)	50	2	10	0.5	1				1,000
Chromium VI	5							10	
Copper	25	5	10	0.5	2				1,000
Cyanide								5	
Lead	20	5	5	0.5	2				10,000
Mercury				0.5			0.2		
Nickel	50	5	20	1	5				1,000
Selenium		5	10	2	5	1			1,000
Silver	10	1	10	0.25	2				1,000
Thallium	10	2	10	1	5				1,000
Zinc	20		20	1	10				1,000

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

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

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

Techniques:

GC - Gas Chromatography

GCMS - Gas Chromatography/Mass Spectrometry

HRGCMS - High Resolution Gas Chromatography/Mass Spectrometry (i.e., EPA 1613, 1624, or 1625)

LC - High Pressure Liquid Chromatography

FAA - Flame Atomic Absorption

GFAA - Graphite Furnace Atomic Absorption

HYDRIDE - Gaseous Hydride Atomic Absorption

CVAA - Cold Vapor Atomic Absorption

ICP - Inductively Coupled Plasma

ICPMS - Inductively Coupled Plasma/Mass Spectrometry

SPGFAA - Stabilized Platform Graphite Furnace Atomic Absorption (i.e., EPA 200.9)

DCP - Direct Current Plasma

COLOR - Colorimetric

ATTACHMENT H – PRIORITY POLLUTANTS

CTR Number	Parameter	CAS Number	Suggested Analytical Methods
1	Antimony	7440360	EPA 6020/200.8
2	Arsenic	7440382	EPA 1632
3	Beryllium	7440417	EPA 6020/200.8
4	Cadmium	7440439	EPA 1638/200.8
5a	Chromium (III)	16065831	EPA 6020/200.8
5a	Chromium (VI)	18540299	EPA 7199/1636
6	Copper	7440508	EPA 6020/200.8
7	Lead	7439921	EPA 1638
8	Mercury	7439976	EPA 1669/1631
9	Nickel	7440020	EPA 6020/200.8
10	Selenium	7782492	EPA 6020/200.8
11	Silver	7440224	EPA 6020/200.8
12	Thallium	7440280	EPA 6020/200.8
13	Zinc	7440666	EPA 6020/200.8
14	Cyanide	57125	EPA 9012A
15	Asbestos	1332214	EPA/600/R-93/116(PCM)
16	2,3,7,8-TCDD	1746016	EPA 8290 (HRGC) MS
17	Acrolein	107028	EPA 8260B
18	Acrylonitrile	107131	EPA 8260B
19	Benzene	71432	EPA 8260B
20	Bromoform	75252	EPA 8260B
21	Carbon Tetrachloride	56235	EPA 8260B
22	Chlorobenzene	108907	EPA 8260B
23	Chlorodibromomethane	124481	EPA 8260B
24	Chloroethane	75003	EPA 8260B
25	2-Chloroethylvinyl Ether	110758	EPA 8260B
26	Chloroform	67663	EPA 8260B
27	Dichlorobromomethane	75274	EPA 8260B
28	1,1-Dichloroethane	75343	EPA 8260B
29	1,2-Dichloroethane	107062	EPA 8260B
30	1,1-Dichloroethylene	75354	EPA 8260B
31	1,2-Dichloropropane	78875	EPA 8260B
32	1,3-Dichloropropylene	542756	EPA 8260B
33	Ethylbenzene	100414	EPA 8260B
34	Methyl Bromide	74839	EPA 8260B
35	Methyl Chloride	74873	EPA 8260B
36	Methylene Chloride	75092	EPA 8260B
37	1,1,2,2-Tetrachloroethane	79345	EPA 8260B
38	Tetrachloroethylene	127184	EPA 8260B
39	Toluene	108883	EPA 8260B
40	1,2-Trans-Dichloroethylene	156605	EPA 8260B
41	1,1,1-Trichloroethane	71556	EPA 8260B
42	1,1,2-Trichloroethane	79005	EPA 8260B
43	Trichloroethylene	79016	EPA 8260B
44	Vinyl Chloride	75014	EPA 8260B
45	2-Chlorophenol	95578	EPA 8270C
46	2,4-Dichlorophenol	120832	EPA 8270C

CTR Number	Parameter	CAS Number	Suggested Analytical Methods
47	2,4-Dimethylphenol	105679	EPA 8270C
48	2-Methyl-4,6-Dinitrophenol	534521	EPA 8270C
49	2,4-Dinitrophenol	51285	EPA 8270C
50	2-Nitrophenol	88755	EPA 8270C
51	4-Nitrophenol	100027	EPA 8270C
52	3-Methyl-4-Chlorophenol	59507	EPA 8270C
53	Pentachlorophenol	87865	EPA 8270C
54	Phenol	108952	EPA 8270C
55	2,4,6-Trichlorophenol	88062	EPA 8270C
56	Acenaphthene	83329	EPA 8270C
57	Acenaphthylene	208968	EPA 8270C
58	Anthracene	120127	EPA 8270C
59	Benzidine	92875	EPA 8270C
60	Benzo(a)Anthracene	56553	EPA 8270C
61	Benzo(a)Pyrene	50328	EPA 8270C
62	Benzo(b)Fluoranthene	205992	EPA 8270C
63	Benzo(ghi)Perylene	191242	EPA 8270C
64	Benzo(k)Fluoranthene	207089	EPA 8270C
65	Bis(2-Chloroethoxy)Methane	111911	EPA 8270C
66	Bis(2-Chloroethyl)Ether	111444	EPA 8270C
67	Bis(2-Chloroisopropyl)Ether	108601	EPA 8270C
68	Bis(2-Ethylhexyl)Phthalate	117817	EPA 8270C
69	4-Bromophenyl Phenyl Ether	101553	EPA 8270C
70	Butylbenzyl Phthalate	85687	EPA 8270C
71	2-Chloronaphthalene	91587	EPA 8270C
72	4-Chlorophenyl Phenyl Ether	7005723	EPA 8270C
73	Chrysene	218019	EPA 8270C
74	Dibenzo(a,h)Anthracene	53703	EPA 8270C
75	1,2-Dichlorobenzene	95501	EPA 8260B
76	1,3-Dichlorobenzene	541731	EPA 8260B
77	1,4-Dichlorobenzene	106467	EPA 8260B
78	3,3'-Dichlorobenzidine	91941	EPA 8270C
79	Diethyl Phthalate	84662	EPA 8270C
80	Dimethyl Phthalate	131113	EPA 8270C
81	Di-n-Butyl Phthalate	84742	EPA 8270C
82	2,4-Dinitrotoluene	121142	EPA 8270C
83	2,6-Dinitrotoluene	606202	EPA 8270C
84	Di-n-Octyl Phthalate	117840	EPA 8270C
85	1,2-Diphenylhydrazine	122667	EPA 8270C
86	Fluoranthene	206440	EPA 8270C
87	Fluorene	86737	EPA 8270C
88	Hexachlorobenzene	118741	EPA 8260B
89	Hexachlorobutadiene	87863	EPA 8260B
90	Hexachlorocyclopentadiene	77474	EPA 8270C
91	Hexachloroethane	67721	EPA 8260B
92	Indeno(1,2,3-cd)Pyrene	193395	EPA 8270C
93	Isophorone	78591	EPA 8270C
94	Naphthalene	91203	EPA 8260B
95	Nitrobenzene	98953	EPA 8270C
96	N-Nitrosodimethylamine	62759	EPA 8270C
97	N-Nitrosodi-n-Propylamine	621647	EPA 8270C
98	N-Nitrosodiphenylamine	86306	EPA 8270C
99	Phenanthrene	85018	EPA 8270C

CTR Number	Parameter	CAS Number	Suggested Analytical Methods
100	Pyrene	129000	EPA 8270C
101	1,2,4-Trichlorobenzene	120821	EPA 8260B
102	Aldrin	309002	EPA 8081A
103	alpha-BHC	319846	EPA 8081A
104	beta-BHC	319857	EPA 8081A
105	gamma-BHC	58899	EPA 8081A
106	delta-BHC	319868	EPA 8081A
107	Chlordane	57749	EPA 8081A
108	4,4'-DDT	50293	EPA 8081A
109	4,4'-DDE	72559	EPA 8081A
110	4,4'-DDD	72548	EPA 8081A
111	Dieldrin	60571	EPA 8081A
112	alpha-Endosulfan	959988	EPA 8081A
113	beta-Endosulfan	33213659	EPA 8081A
114	Endosulfan Sulfate	1031078	EPA 8081A
115	Endrin	72208	EPA 8081A
116	Endrin Aldehyde	7421934	EPA 8081A
117	Heptachlor	76448	EPA 8081A
118	Heptachlor Epoxide	1024573	EPA 8081A
119	PCB-1016	12674112	EPA 8082
120	PCB-1221	11104282	EPA 8082
121	PCB-1232	11141165	EPA 8082
122	PCB-1242	53469219	EPA 8082
123	PCB-1248	12672296	EPA 8082
124	PCB-1254	11097691	EPA 8082
125	PCB-1260	11096825	EPA 8082
126	Toxaphene	8001352	EPA 8081A