CALIFORNIA
Water Boards

EDMUND G. BROWN JR.
GOVERNOR

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SECRETARY FOR
ENVIRONMENTAL PROTECTION

Los Angeles Regional Water Quality Control Board

November 19, 2013

Mr. Joseph P. Kwan
Corporate Director, Environmental Remediation
Northrop Grumman Systems Corporation
2980 Fairview Park Drive
Falls Church, VA 22042-4511

Dear Mr. Kwan:

TRANSMITTAL OF THE WASTE DISCHARGE REQUIREMENTS (WDRs) AND NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) PERMIT FOR NORTHROP GRUMMAN SYSTEMS CORPORATION, NORTHROP GRUMMAN – HAWTHORNE SITE (FORMERLY TRW INC), HAWTHORNE, CA. (NPDES NO. CA0063916, CI NO. 7698)

Our letter dated October 22, 2013, transmitted the revised tentative waste discharge requirements for the renewal of your permit to discharge waste under the National Pollutant Discharge Elimination System (NPDES) Program. On October 28, 2013, we transmitted you a change letter for the inclusion of performance goals for lead in Table 6 of the Order and Table F-9 of the Fact Sheet with other minor changes.

Pursuant to Division 7 of the California Water Code, the California Regional Water Quality Control Board, Los Angeles Region (Regional Board) at a public hearing held on November 7, 2013, reviewed the revised tentative requirements with the October 22, 2013 changes, considered all factors in the case, and adopted Order No. R4-2013-0169.

Order No. R4-2013-0169 serves as an NPDES permit, and it expires on December 7, 2018. Section 13376 of the California Water Code requires that an application/Report of Waste Discharge for a new permit must be filed at least 180 days before the expiration date.

You are required to implement the attached Monitoring and Reporting Program (MRP) on the effective date (December 7, 2013) of Order No. R4-2013-0169. Your first monitoring report for the period of January 1 through March 31 2014 is due by May 1, 2014.

The Regional Board is implementing a paperless office system to reduce paper use, increase efficiency, and provide a more effective way for our staff, the public and interested parties to view water quality documents. Therefore, please convert all regulatory documents, submissions, data and correspondence that you would normally submit to us as hard copies to a searchable Portable Document Format (PDF). Documents that are less than 10 megabytes (MB) should be emailed to losangeles@waterboards.ca.gov. Documents that are 10 MB or larger should be transferred to a disk and mailed to the address listed above. If you need additional information regarding electronic submittal of documents please visit the Regional Board's website listed above and navigate to Paperless Office.

When submitting monitoring or technical reports to the Regional Board as required by your Monitoring and Reporting Program, please continue to send them ATTN: Information Technology Unit and include a reference to Compliance File CI-7698 and NPDES No. CA0063196. This will assure that the reports are directed to the appropriate electronic file and staff. Also please do not combine other reports with your monitoring reports. Submit each type of report as a separate document.

We are sending the hard copy of the Permit to the Discharger only. For those on the mailing list or other interested parties who would like access to a copy of the Order, please go to the Regional Board's website at:
http://www.waterboards.ca.gov/losangeles/board_decisions/adopted_orders/by_permits_tools.shtml.

If you have any further questions, please contact Thomas Siebels at (213) 576-6756.

Sincerely,

Cassandra Owens, Chief
Industrial Permitting Unit

Enclosures: Order No. R4-2013-0169
Attachment E – Monitoring and Reporting Program (MRP No. 7698)
Attachment F – Fact Sheet

MAILING LIST

Ms. Robyn Stuber, Environmental Protection Agency, Region 9, Permits Branch (WTR-5)
NPDES Wastewater Unit, State Water Resources Control Board, Division of Water Quality
Mr. Kenneth Wong, U.S. Army Corps of Engineers
Mr. Bryant Chesney, NOAA, National Marine Fisheries Service
Mr. Jeff Phillips, Department of Interior, U.S. Fish and Wildlife Service
Mr. William Paznokas, Department of Fish and Game, Region 5
Ms. Leah Walker, California Department of Public Health
Ms. Barbara Fosbrink, California State Parks and Recreation
Ms. Teresa Henry, California Coastal Commission, South Coast Region
Mr. Theodore Johnson, Water Replenishment District of Southern California
Mr. Tommy Smith, Los Angeles County, Department of Public Works
Mr. Angelo Bellomo, Los Angeles County, Department of Health Services
Ms. Kirsten James, Heal the Bay
Ms. Liz Crosson, Los Angeles WaterKeeper
Ms. Anna Kheyfets, Natural Resources Defense Council
Mr. Matthew Carfagno, Orion Environmental, Inc.
Mr. Jae Kim, TetraTech
Ms. Ann La Duca, TetraTech
Mr. Klaus Rowher, Equipoise Corp.
Mr. Chris Stoker, Equipoise Corp.

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD

LOS ANGELES REGION

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ORDER NO. R4-2013-0169
NPDES NO. CA0063916

WASTE DISCHARGE REQUIREMENTS FOR NORTHROP GRUMMAN SYSTEMS CORPORATION NORTHROP GRUMMAN - HAWTHORNE SITE (Formerly TRW, Inc)

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

Table 1. Discharger Information

Discharger	Northrop Grumman Systems Corporation
Name of Facility	Northrop Grumman – Hawthorne Site (Formerly TRW Inc)
Facility Address	14520 Aviation Boulevard
	Hawthorne, CA 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 the 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° 53' 54.14" N	118° 22' 30.31" W	Dominguez Channel

Table 3. Administrative Information

This Order was adopted by the Regional Water Quality Control Board on:	**November 7, 2013**
This Order shall become effective on:	**December 7, 2013**
This Order shall expire on:	**December 7, 2018**
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 prior to the Order expiration date**
The U.S. Environmental Protection Agency (U.S. EPA) and the California Regional Water Quality Control Board, Los Angeles Region have classified this discharge as follows:	**Minor discharge**

I, Samuel Unger, Executive Officer, do hereby certify that this Order with all attachments is a full, true, and correct copy of an Order adopted by the California Regional Water Quality Control Board, Los Angeles Region, on November 7, 2013.

Samuel Unger, P.E., Executive Officer

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I. FACILITY INFORMATION

Information describing the Northrop Grumman - Hawthorne Site (formerly TRW Inc) is summarized in Table 1 and in sections I and II of the Fact Sheet (Attachment F). Section I of the Fact Sheet also includes information regarding the Facility's permit application.

II. FINDINGS

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

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 (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).

B. 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 other available information. 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.

C. Provisions and Requirements Implementing State Law. The provisions/requirements in subsection V.B 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.

D. 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.

E. 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.

THEREFORE, IT IS HEREBY ORDERED, that this Order supersedes Order No. R4-2007-0029 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. This action in no way prevents the Regional Water Board from taking enforcement action for past violations of the previous Order.

III. DISCHARGE PROHIBITIONS

A. The discharge of wastewater at a location other than specifically described in this Order is prohibited, and constitutes a violation of the Order. Wastes discharged shall be limited to a maximum of 0.140 MGD of treated ground water and non-process water 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 a 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. Final Effluent Limitations – Discharge Point 001

1. The discharge of treated groundwater and non-process wastewater 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. Final Effluent Limitations for Discharge Point No. 001

Pollutant	Unit	Effluent Limitations [1]				Performance Goals[6]
		Average Monthly	Maximum Daily	Instantaneous Minimum	Instantaneous Maximum	Average Monthly/ Maximum Daily
Conventional Pollutants						
pH	standard units	---	---	6.5	8.5	
Biochemical Oxygen Demand $(BOD)_5$ @ 20°C	mg/L	20	30	---	---	
	lbs/day[2]	23	35	---	---	
Oil and Grease	mg/L	10	15	---	---	
	lbs/day[2]	12	18	---	---	
Total Suspended Solids (TSS)	mg/L	50	75	---	---	
	lbs/day[2]	58	88	---	---	
Priority Pollutants						
Copper, Total Recoverable	µg/L	4.2	9.7	---	---	
	lbs/day[2]	0.005	0.011	---	---	
Lead, Total Recoverable	µg/L	21.2	42.7	---	---	2.59/5.19
	lbs/day[2]	0.013	0.050	---	---	0.003/0.006
Selenium, Total Recoverable	µg/L	3.5	8.2	---	---	
	lbs/day[2]	0.0041	0.011	---	---	
Zinc, Total Recoverable	µg/L	25	70	---	---	
	lbs/day[2]	0.029	0.082	---	---	
Bis(2-Ethylhexyl)Phthalate	µg/L	5.9	11.8	---	---	
	lbs/day[2]	0.007	0.013	---	---	
1,1,1-Trichloroethane	µg/L	--	200	---	---	
	lbs/day[2]	--	0.23	---	---	
Non-Conventional Pollutants						
Acetone	µg/L	--	700	---	---	
	lbs/day[2]	--	0.82	---	---	
Phenolic Compounds (chlorinated)	µg/L	--	1.0	---	---	
	lbs/day[2]	--	0.001	---	---	
Sulfides	mg/L	--	1.0	---	---	
	lbs/day[2]	--	1.2	---	---	
Temperature	Deg. F	---	---	---	86	
Turbidity	NTU	50	75	---	---	
Xylene	µg/L	--	10	---	---	
	lbs/day[2]	--	0.012	---	---	
Acute Toxicity	%survival and Pass or Fail for TST approach	[3,5]				
Chronic Toxicity	TUc and Pass or Fail for TST approach	[4,5]				

[1] Mass-based effluent limitations are based on a maximum discharge flow rate of 0.140 MGD

[2] The mass emission (lbs/day) for the discharge shall be calculated and reported using the limitation concentration and the actual flow rate measured at the time of discharge, using the formula:
M = 8.34 x Ce x Q
Where: M = mass discharge for a pollutant, lbs/day
Ce = limitation concentration for a pollutant, mg/L
Q = actual discharge flow rate, MGD

[3] The acute toxicity of the effluent shall be such that:
a. the average survival in the undiluted effluent for any three (3) consecutive 96-hourstatic or continuous flow bioassay test shall be at least 90%, and
b. 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 (Attachment E).

[4] The monthly median limit for chronic toxicity of 100% effluent in a critical life stage test is 1.0 TUc and the maximum daily limit for chronic toxicity of 100% effluent in a critical life stage test is 1.6 TUc.

[5] The EPA Test of Significant Toxicity (TST) approach is used to demonstrate that the instream waste concentration is not toxic.

[6] Performance goals are intended to ensure that effluent concentrations and mass discharges do not exceed levels currently achieved by the permitted facility. These performance goals are not limitations or standards for the regulation of the facility. They act as triggers to determine when treatment technologies fail to produce effluent concentrations consistent with historical levels.

B. Land Discharge Specifications – Not Applicable

C. Reclamation Specifications – Not Applicable

V. RECEIVING WATER LIMITATIONS

A. Surface Water Limitation

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. Surface water temperature to rise greater than $5^{o}F$ above the natural temperature of the receiving waters at any time or place. At no time shall the temperature of these WARM-designated waters be raised above 80^{0} F as a result of waste discharged.

3. Water Contact Standards: In waters designated for Non-Water Contact Recreation (REC-2) and not designated for water contact recreation (REC-1), the fecal coliform concentration shall not exceed a log mean of 2000/100 ml (based on a minimum of not less than four samples for any 30 day period), nor shall more than 10 percent of samples collected during any 30-day period exceed 4000/100 ml.

4. 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.

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 affect 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

The discharge shall not cause the underlying groundwater to be degraded, to exceed water quality objectives, unreasonably affect beneficial uses, or cause a condition of pollution or nuisance.

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 40 CFR 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 stormwater to storm drain systems or other water courses under their jurisdiction; including applicable requirements in municipal stormwater 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 pollutionable 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:

i. Violation of any term or condition contained in this Order;

ii. Obtaining this Order by misrepresentation, or failure to disclose all relevant facts;

iii. 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 the groundwater treatment operation and treatment capacity by more than ten percent. Such notification shall include estimates of proposed treatment capacity, 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, a 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 the 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:

i. Name and general composition of the chemical,

ii. Frequency of use,

iii. Quantities to be used,

iv. Proposed discharge concentrations, and

v. USEPA registration number, if applicable.

r. Failure to comply with provisions or requirements of this Order, or violation of other applicable laws or regulations governing discharges from this facility, may subject the Discharger to administrative or civil liabilities, criminal penalties, and/or other enforcement remedies to ensure compliance. Additionally, certain violations may subject the Discharger to civil or criminal enforcement from appropriate local, state, or federal law enforcement entities.

s. In the event the Discharger does not comply or will be unable to comply for any reason, with any prohibition, Average Monthly Effluent Limitation (AMEL), Maximum Daily Effluent Limitation (MDEL), instantaneous maximum effluent limitation, or receiving water limitation of this Order, the Discharger shall notify the Regional Water Board by telephone (216)-576-6600 within 24 hours of having knowledge of such noncompliance, and shall confirm this notification in writing within five days, unless the Regional Water Board waives confirmation. The written notification shall state the nature, time, duration, and cause of noncompliance, and shall describe the measures being taken to remedy the current noncompliance and, prevent recurrence including, where applicable, a

schedule of implementation. Other noncompliance requires written notification as above at the time of the normal monitoring report.

t. Prior to making any change in the point of discharge, place of use, or purpose of use of treated wastewater that results in a decrease of flow in any portion of a watercourse, the Discharger must file a petition with the State Water Board, Division of Water Rights, and receive approval for such a change. (Water Code § 1211.)

B. Monitoring and Reporting Program (MRP) Requirements

The Discharger shall comply with the MRP, and future revisions thereto, in Attachment E of this Order.

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, in accordance with the provisions set forth in 40 C.F.R. parts 122 and 124, based on new information not available at the time of permit issuance, 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.

f. This Order may be reopened for modification, or revocation and reissuance, as a result of the detection of a reportable priority pollutant generated by special conditions included in this Order. These special conditions may be, but are not limited to, fish tissue sampling, whole effluent toxicity, monitoring requirements on internal waste stream(s), and monitoring for surrogate parameters. Additional requirements may be included in this Order as a result of the special condition monitoring data.

2. Special Studies, Technical Reports and Additional Monitoring Requirements

a. Chronic Toxicity Limit and Monitoring Requirements. The Order contains a chronic toxicity limit defined as an exceedance of 1.0 TUc in a critical life stage test for 100% effluent (The monthly median for chronic toxicity of 100% effluent shall not exceed 1 TUc 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 TUc monthly median (where TUc = 100/NOEC), the Discharger shall immediately implement accelerated chronic toxicity testing, as required in Section V.B of the Monitoring and Reporting Program (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. If the Executive Director does not disapprove of the workplan within 60 days, the workplan shall become effective. The Discharger shall use USEPA manual EPA/600/2-88/070 (industrial) as guidance. This plan shall describe the steps the permittee intends to follow in the event that toxicity is detected, and should include at a minimum:

i. 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;

ii. 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;

iii. 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. Harbor Toxics TMDL Water Column, Sediment, and Fish Tissue Monitoring for Dominguez Channel, Torrance Lateral, and Dominguez Channel Estuary Compliance Monitoring Program. As defined in the Harbor Toxics TMDL, the Discharger is a "responsible party" because it is an "Individual Industrial Permittee". As such, either individually or with a collaborating group, the Discharger shall develop a monitoring and reporting plan (Monitoring Plan) and quality assurance project plan (QAPP) for the water column, sediment, and fish tissue in Dominguez Channel, Torrance Lateral, and Dominguez Channel Estuary. These plans shall follow the "TMDL Element – Monitoring Plan" provisions in Attachment A to Resolution No. R11-008. The Monitoring Plan and QAPP shall be submitted 20 months after the effective date of the TMDL for public review and subsequent Executive Officer approval. The Discharger shall begin monitoring 6 months after the Monitoring Plan and QAPP are approved by the Executive Officer.

4. Best Management Practices Plan

The Discharger shall submit to the Regional Water Board, within 90 days of the effective date of this Order, an updated Best Management Practices Plan (BMPP). The BMPP shall include site specific plans and procedures implemented and/or to be implemented to prevent hazardous waste/material from being discharged to waters of the State. The BMPP shall be consistent with the general guidance contained in the USEPA Guidance Manual for Developing Best Management Practices (BMPs) (EPA 833-B-93-004) and any applicable advanced technologies.

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.

b. The Discharger shall develop and maintain a record of all spills from the facility. This record shall be made available to the Regional Water Board and USEPA upon request. The Discharger shall submit to the Regional Water Board and USEPA a report listing all spills, overflows or bypasses occurring during the previous quarter in the quarterly monitoring reports. The reports shall provide the date and time of each spill, the location of each spill, the estimated volume of each spill, including gross volume, amount recovered and amount not recovered; the cause of each spill, whether each spill, entered a receiving water and, if so, the name of the water body and whether it entered via storm drains or other man-made conveyances; mitigation measures implemented; corrective measures implemented or proposed to be implemented to prevent/minimize future occurrences; and beneficial uses impacted.

6. Special Provisions for Municipal Facilities (POTWs Only) – Not Applicable

7. Other Special Provisions – Not Applicable

8. Compliance Schedules – 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 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. 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.

H. 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).

I. 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

Arithmetic Mean (μ)
Also called the average, is the sum of measured values divided by the number of samples. For ambient water concentrations, the arithmetic mean is calculated as follows:

Arithmetic mean = $\mu = \Sigma x / n$ where: Σx is the sum of the measured ambient water concentrations, and n is the number of samples.

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.

Best Management Practices (BMPs)
BMPs are methods, measures, or practices designed and selected to reduce or eliminate the discharge of pollutants to surface waters from point and nonpoint source discharges including stormwater. BMPs include structural and non-structural control, and operation maintenance procedures, which can be applied before, during, and/or after pollution-producing activities.

Bioaccumulative
Those substances taken up by an organism from its surrounding medium through gill membranes, epithelial tissue, or from food and subsequently concentrated and retained in the body of the organism.

Carcinogenic
Pollutants are substances that are known to cause cancer in living organisms.

Coefficient of Variation (CV)
CV is a measure of the data variability and is calculated as the estimated standard deviation divided by the arithmetic mean of the observed values.

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.

Detected, but Not Quantified (DNQ)
DNQ are those sample results less than the RL, but greater than or equal to the laboratory's MDL.

Dilution Credit
Dilution Credit is the amount of dilution granted to a discharge in the calculation of a water quality-based effluent limitation, based on the allowance of a specified mixing zone. It is calculated from the dilution ratio or determined through conducting a mixing zone study or modeling of the discharge and receiving water.

Effluent Concentration Allowance (ECA)
ECA is a value derived from the water quality criterion/objective, dilution credit, and ambient background concentration that is used, in conjunction with the coefficient of variation for the effluent monitoring data, to calculate a long-term average (LTA) discharge concentration. The ECA has the same meaning as waste load allocation (WLA) as used in USEPA guidance (Technical Support Document For Water Quality-based Toxics Control, March 1991, second printing, EPA/505/2-90-001).

Enclosed Bays
Enclosed Bays means indentations along the coast that enclose an area of oceanic water within distinct headlands or harbor works. Enclosed bays include all bays where the narrowest distance between the headlands or outermost harbor works is less than 75 percent of the greatest dimension of the enclosed portion of the bay. Enclosed bays include, but are not limited to, Humboldt Bay, Bodega Harbor, Tomales Bay, Drake's Estero, San Francisco Bay, Morro Bay, San Pedro Bay (Los Angeles-Long Beach Harbors), Upper and Lower Newport Bay, Mission Bay, and San Diego Bay. Enclosed bays do not include inland surface waters or ocean waters.

Estimated Chemical Concentration
The estimated chemical concentration that results from the confirmed detection of the substance by the analytical method below the ML value.

Estuaries
Estuaries means waters, including coastal lagoons, located at the mouths of streams that serve as areas of mixing for fresh and ocean waters. Coastal lagoons and mouths of streams that are temporarily separated from the ocean by sandbars shall be considered estuaries. Estuarine waters shall be considered to extend from a bay or the open ocean to a point upstream where there is no significant mixing of fresh water and seawater. Estuarine waters include, but are not limited to, the appropriate areas of the Ventura River, Santa Clara River, Calleguas Creek, Ballona Creek, Dominguez Channel, Los Angeles River, and San Gabriel River. Estuaries do not include inland surface waters or ocean waters.

Existing Discharger
Any discharger that is not a new discharger. An existing discharger includes an "increasing discharger" (i.e., any existing facility with treatment systems in place for its current discharge that is or will be expanding, upgrading, or modifying its permitted discharge after the effective date of this Order).

Infeasible
Not capable of being accomplished in a successful manner within a reasonable period of time, taking into account economic, environmental, legal, social, and technological factors.

Inland Surface Waters
All surface waters of the State that do not include the ocean, enclosed bays, or estuaries.

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, over a calendar day (or 24-hour period). For pollutants with limitations expressed in units of mass, the daily discharge is calculated as the total mass of the pollutant discharged over the day. For pollutants with limitations expressed in other units of measurement, the daily discharge is calculated as the arithmetic mean measurement of the pollutant over the day.

Median
The middle measurement in a set of data. The median of a set of data is found by first arranging the measurements in order of magnitude (either increasing or decreasing order). If the number of measurements (n) is odd, then the median = $X_{(n+1)/2}$. If n is even, then the median = $(X_{n/2} + X_{(n/2)+1})/2$ (i.e., the midpoint between the $n/2$ and $n/2+1$).

Method Detection Limit (MDL)
MDL is the minimum concentration of a substance that can be measured and reported with 99 percent confidence that the analyte concentration is greater than zero, as defined in title 40 of the Code of Federal Regulations, Part 136, Attachment B, revised as of July 3, 1999.

Minimum Level (ML)
ML is the concentration at which the entire analytical system must give a recognizable signal and acceptable calibration point. The ML is the concentration in a sample that is equivalent to the concentration of the lowest calibration standard analyzed by a specific analytical procedure, assuming that all the method specified sample weights, volumes, and processing steps have been followed.

Mixing Zone
Mixing Zone is a limited volume of receiving water that is allocated for mixing with a wastewater discharge where water quality criteria can be exceeded without causing adverse effects to the overall water body.

Not Detected (ND)
Sample results which are less than the laboratory's MDL.

Ocean Waters
The territorial marine waters of the State as defined by California law to the extent these waters are outside of enclosed bays, estuaries, and coastal lagoons. Discharges to ocean waters are regulated in accordance with the State Water Board's California Ocean Plan.

Persistent Pollutants
Persistent pollutants are substances for which degradation or decomposition in the environment is nonexistent or very slow.

Pollutant Minimization Program (PMP)
PMP means waste minimization and pollution prevention actions that include, but are not limited to, product substitution, waste stream recycling, alternative waste management methods, and education of the public and businesses. The goal of the PMP shall be to reduce all potential sources of a priority pollutant(s) through pollutant minimization (control) strategies, including pollution prevention measures as appropriate, to maintain the effluent concentration at or below the water quality-based effluent limitation. Pollution prevention measures may be particularly appropriate for persistent bioaccumulative priority pollutants where there is evidence that beneficial uses are being impacted. The Regional Water Board may consider cost effectiveness when establishing the requirements of a PMP. The completion and implementation of a Pollution Prevention Plan, if required pursuant to Water Code section 13263.3(d), shall be considered to fulfill the PMP requirements.

Pollution Prevention
Pollution Prevention means any action that causes a net reduction in the use or generation of a hazardous substance or other pollutant that is discharged into water and includes, but is not limited to, input change, operational improvement, production process change, and product reformulation (as defined in Water Code section 13263.3). Pollution prevention does not include actions that merely shift a pollutant in wastewater from one environmental medium to another environmental medium, unless clear environmental benefits of such an approach are identified to the satisfaction of the State or Regional Water Board.

Reporting Level (RL)
RL is the ML (and its associated analytical method) chosen by the Discharger for reporting and compliance determination from the MLs included in this Order. The MLs included in this Order correspond to approved analytical methods for reporting a sample result that are selected by the Regional Water Board either from Appendix 4 of the SIP in accordance with section 2.4.2 of the SIP or established in accordance with section 2.4.3 of the SIP. The ML is based on the proper application of method-based analytical procedures for sample preparation and the absence of any matrix interferences. Other factors may be applied to the ML depending on the specific sample preparation steps employed. For example, the treatment typically applied in

cases where there are matrix-effects is to dilute the sample or sample aliquot by a factor of ten. In such cases, this additional factor must be applied to the ML in the computation of the RL.

Satellite Collection System
The portion, if any, of a sanitary sewer system owned or operated by a different public agency than the agency that owns and operates the wastewater treatment facility to which a sanitary sewer system is tributary.

Source of Drinking Water
Any water designated as municipal or domestic supply (MUN) in a Regional Water Board Basin Plan.

Standard Deviation (σ)
Standard Deviation is a measure of variability that is calculated as follows:

$$\sigma = (\sum[(x - \mu)^2]/(n - 1))^{0.5}$$

where:
x is the observed value;
μ is the arithmetic mean of the observed values; and
n is the number of samples.

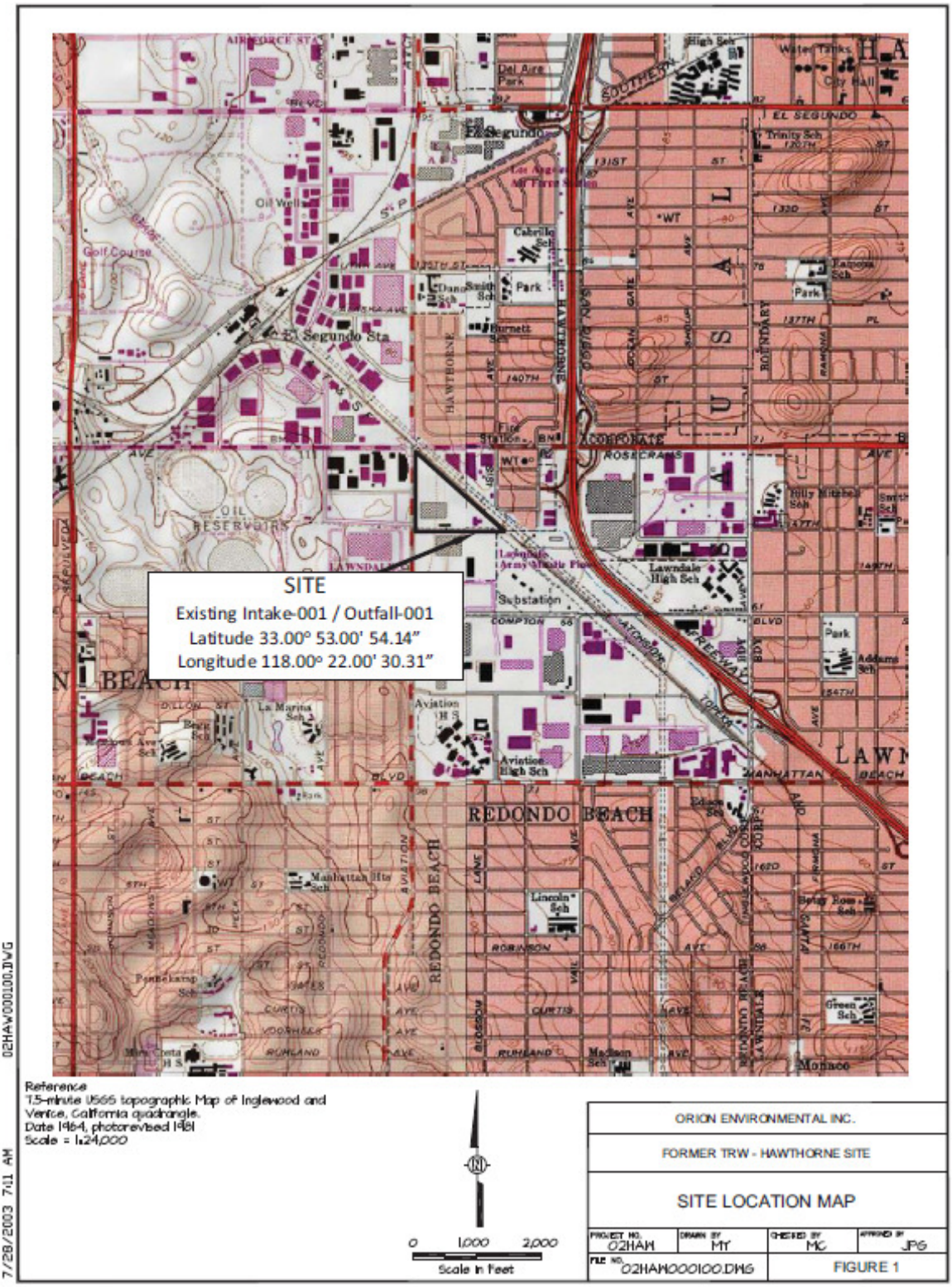
Toxicity Reduction Evaluation (TRE)
TRE is a study conducted in a step-wise process designed to identify the causative agents of effluent or ambient toxicity, isolate the sources of toxicity, evaluate the effectiveness of toxicity control options, and then confirm the reduction in toxicity. The first steps of the TRE consist of the collection of data relevant to the toxicity, including additional toxicity testing, and an evaluation of facility operations and maintenance practices, and best management practices. A Toxicity Identification Evaluation (TIE) may be required as part of the TRE, if appropriate. (A TIE is a set of procedures to identify the specific chemical(s) responsible for toxicity. These procedures are performed in three phases (characterization, identification, and confirmation) using aquatic organism toxicity tests.)

ACRONYMS AND ABBREVIATIONS

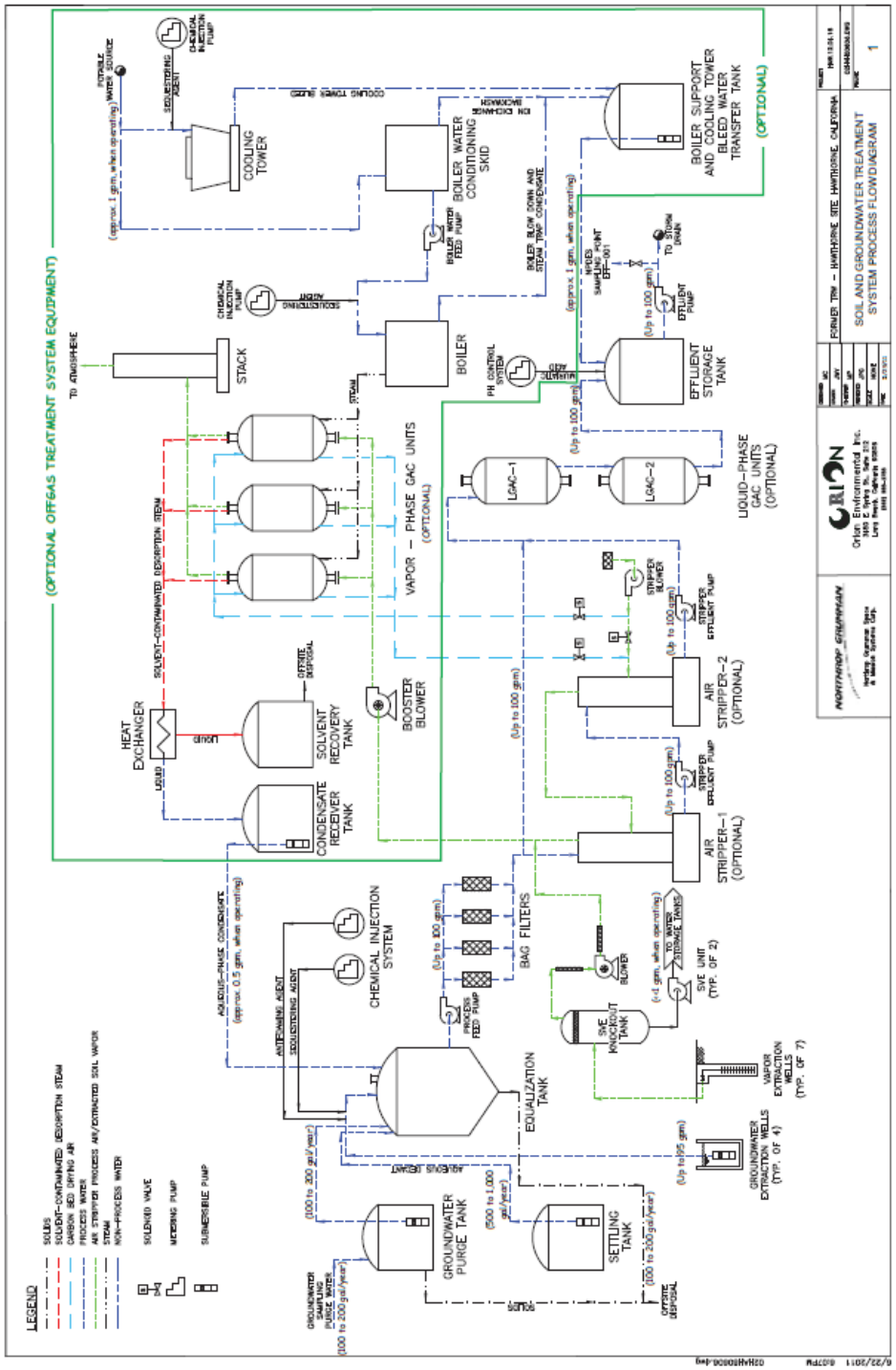
AMEL	Average Monthly Effluent Limitation
B	Background Concentration
BAT	Best Available Technology Economically Achievable
Basin Plan	*Water Quality Control Plan for the Coastal Watersheds of Los Angeles and Ventura Counties*
BCT	Best Conventional Pollutant Control Technology
BMP	Best Management Practices
BMPP	Best Management Practices Plan
BPJ	Best Professional Judgment
BOD	Biochemical Oxygen Demand 5-day @ 20 ℃
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 Systems Corporation
DMR	Discharge Monitoring Report
DNQ	Detected But Not Quantified
ELAP	California Department of Public Health Environmental Laboratory Accreditation Program
ELG	Effluent Limitations, Guidelines and Standards
Facility	Northrop Grumman- Hawthorne Site (formerly TRW, Inc)
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	*Water Quality Control Plan for Ocean Waters of California*
Regional Water Board	California Regional Water Quality Control Board, Los Angeles Region
RPA	Reasonable Potential Analysis
SCP	Spill Contingency Plan
SIP	State Implementation Policy (*Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California)*
SMR	Self Monitoring Reports
State Water Board	California State Water Resources Control Board
SWPPP	Stormwater Pollution Prevention Plan
TAC	Test Acceptability Criteria
Thermal Plan	*Water Quality Control Plan for Control of Temperature in the Coastal and Interstate Water and Enclosed Bays and Estuaries of California*
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

ATTACHMENT B – MAP



ATTACHMENT C – FLOW SCHEMATIC: GROUNDWATER TREATMENT SYSTEM



ATTACHMENT D – 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 Clean Water Act (CWA) and the California Water Code and is grounds for enforcement action, for permit termination, revocation and reissuance, or modification; or denial of a permit renewal application [40 C.F.R. § 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 yet been modified to incorporate the requirement [40 C.F.R. § 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 [40 C.F.R. § 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 [40 C.F.R. § 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 [40 C.F.R. § 122.41(e)].

E. Property Rights

1. This Order does not convey any property rights of any sort or any exclusive privileges [40 C.F.R. § 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 [40 C.F.R. § 122.5(c)].

F. Inspection and Entry

The Discharger shall allow the Regional Water Board, State Water Board, United States Environmental Protection Agency (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 [40 C.F.R. § 122.41(i)] [Water Code § 13383]:

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 [40 C.F.R. § 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 [40 C.F.R. § 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 [40 C.F.R. § 122.41(i)(3)]; and

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 [40 C.F.R. § 122.41(i)(4)].

G. Bypass

1. Definitions

a. “Bypass” means the intentional diversion of waste streams from any portion of a treatment facility [40 C.F.R. § 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 [40 C.F.R. § 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, I.G.4, and I.G.5 below [40 C.F.R. § 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 [40 C.F.R. § 122.41(m)(4)(i)]:

a. Bypass was unavoidable to prevent loss of life, personal injury, or severe property damage [40 C.F.R. § 122.41(m)(4)(i)(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 [40 C.F.R. § 122.41(m)(4)(i)(B)]; and

c. The Discharger submitted notice to the Regional Water Board as required under Standard Provisions – Permit Compliance I.G.5 below [40 C.F.R. § 122.41(m)(4)(i)(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 [40 C.F.R. § 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 [40 C.F.R. § 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 (24-hour notice) [40 C.F.R. § 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 [40 C.F.R. § 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 Standard Provisions – Permit Compliance I.H.2 below 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 [40 C.F.R. § 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 [40 C.F.R. § 122.41(n)(3)]:

a. An upset occurred and that the Discharger can identify the cause(s) of the upset [40 C.F.R. § 122.41(n)(3)(i)];

b. The permitted facility was, at the time, being properly operated [40 C.F.R. § 122.41(n)(3)(ii)];

c. The Discharger submitted notice of the upset as required in Standard Provisions – Reporting V.E.2.b below (24-hour notice) [40 C.F.R. § 122.41(n)(3)(iii)]; and

d. The Discharger complied with any remedial measures required under Standard Provisions – Permit Compliance I.C above [40 C.F.R. § 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 [40 C.F.R. § 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 [40 C.F.R. § 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 [40 C.F.R. § 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 Water Code [40 C.F.R. §§ 122.41(l)(3) and 122.61].

III. STANDARD PROVISIONS – MONITORING

A. Samples and measurements taken for the purpose of monitoring shall be representative of the monitored activity [40 C.F.R. § 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 40 C.F.R. part 136 unless otherwise specified in 40 C.F.R. part 503 unless other test procedures have been specified in this Order [40 C.F.R. §§ 122.41(j)(4) and 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 40 C.F.R. 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 [40 C.F.R. § 122.41(j)(2)].

B. Records of monitoring information shall include:

1. The date, exact place, and time of sampling or measurements [40 C.F.R. § 122.41(j)(3)(i)];

2. The individual(s) who performed the sampling or measurements [40 C.F.R. § 122.41(j)(3)(ii)];

3. The date(s) analyses were performed [40 C.F.R. § 122.41(j)(3)(iii)];

4. The individual(s) who performed the analyses [40 C.F.R. § 122.41(j)(3)(iv)];

5. The analytical techniques or methods used [40 C.F.R. § 122.41(j)(3)(v)]; and

6. The results of such analyses [40 C.F.R. § 122.41(j)(3)(vi)].

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

1. The name and address of any permit applicant or Discharger [40 C.F.R. § 122.7(b)(1)]; and

2. Permit applications and attachments, permits and effluent data [40 C.F.R. § 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 [40 C.F.R. § 122.41(h)] [Water Code § 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 [40 C.F.R. § 122.41(k)].

2. All permit applications shall be signed 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. [40 C.F.R. § 122.22(a)(1)].

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 Standard Provisions – Reporting V.B.2 above, 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 Standard Provisions – Reporting V.B.2 above [40 C.F.R. § 122.22(b)(1)];

b. The authorization specifies 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.) [40 C.F.R. § 122.22(b)(2)]; and

c. The written authorization is submitted to the Regional Water Board and State Water Board [40 C.F.R. § 122.22(b)(3)].

4. If an authorization under Standard Provisions – Reporting V.B.3 above 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 Standard Provisions – Reporting V.B.3 above must be submitted to the Regional Water Board and State Water Board prior to or together with any reports, information, or applications, to be signed by an authorized representative [40 C.F.R. § 122.22(c)].

5. Any person signing a document under Standard Provisions – Reporting V.B.2 or V.B.3 above 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." [40 C.F.R. § 122.22(d)].

C. Monitoring Reports

1. Monitoring results shall be reported at the intervals specified in the Monitoring and Reporting Program (Attachment E) in this Order [40 C.F.R. § 122.22(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 [40 C.F.R. § 122.41(l)(4)(i)].

3. If the Discharger monitors any pollutant more frequently than required by this Order using test procedures approved under 40 C.F.R. part 136 or another method required for an industry-specific waste stream under 40 C.F.R. subchapters N or O, 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 [40 C.F.R. § 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 [40 C.F.R. § 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 [40 C.F.R. § 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 [40 C.F.R. § 122.41(l)(6)(i)].

2. The following shall be included as information that must be reported within 24 hours under this paragraph [40 C.F.R. § 122.41(l)(6)(ii)]:

a. Any unanticipated bypass that exceeds any effluent limitation in this Order [40 C.F.R. § 122.41(l)(6)(ii)(A)].

b. Any upset that exceeds any effluent limitation in this Order [40 C.F.R. § 122.41(l)(6)(ii)(B)].

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 [40 C.F.R. § 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 [40 C.F.R. § 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) [40 C.F.R. § 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 that 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) [40 C.F.R. § 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 [40 C.F.R. § 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 this Order's requirements [40 C.F.R. § 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 above [40 C.F.R. § 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 [40 C.F.R. § 122.41(l)(8)].

VI. STANDARD PROVISIONS – ENFORCEMENT

A. The Regional Water Board is authorized to enforce the terms of this permit under several provisions of the Water Code, including, but not limited to, sections 13385, 13386, and 13387.

B. 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 [40 C.F.R. § 122.41(a)(2)] [Water Code §§ 13385 and 13387].

C. 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 [40 C.F.R. § 122.41(a)(3)].

D. 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 [40 C.F.R. § 122.41(j)(5)].

E. 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 [40 C.F.R. § 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 [40 C.F.R. § 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" [40 C.F.R. § 122.42(a)(1)]:

a. 100 micrograms per liter (µg/L) [40 C.F.R. § 122.42(a)(1)(i)];

b. 200 µg/L for acrolein and acrylonitrile; 500 µg/L for 2,4-dinitrophenol and 2-methyl-4,6-dinitrophenol; and 1 milligram per liter (mg/L) for antimony [40 C.F.R. § 122.42(a)(1)(ii)];

c. Five (5) times the maximum concentration value reported for that pollutant in the Report of Waste Discharge [40 C.F.R. § 122.42(a)(1)(iii)]; or

d. The level established by the Regional Water Board in accordance with section 122.44(f) [40 C.F.R. § 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" [40 C.F.R. § 122.42(a)(2)]:

a. 500 micrograms per liter (µg/L) [40 C.F.R. § 122.42(a)(2)(i)];

b. 1 milligram per liter (mg/L) for antimony [40 C.F.R. § 122.42(a)(2)(ii)];

c. Ten (10) times the maximum concentration value reported for that pollutant in the Report of Waste Discharge [40 C.F.R. § 122.42(a)(2)(iii)]; or

d. The level established by the Regional Water Board in accordance with section 122.44(f) [40 C.F.R. § 122.42(a)(2)(iv)].

ATTACHMENT E – MONITORING AND REPORTING PROGRAM (MRP NO. 7698)

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ATTACHMENT E – MONITORING AND REPORTING PROGRAM (MRP) NO. 7698

The Code of Federal Regulations (40 C.F.R. § 122.48) requires that all NPDES permits specify monitoring and reporting requirements. Water Code sections 13267 and 13383 also authorize the California Regional Water Quality Control Board, Los Angeles Region (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 at the end of the treatment train at the treatment site. This location, Monitoring Location EFF-001, is representative of the discharge for Discharge Point No. 001 (Latitude 33° 53' 54.14" and Longitude 118° 22' 30.31"). All sampling stations 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 18, 2012); 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 Public Health 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 Public Health 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 H) 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, February 24, 2005.

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 H 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 H;

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 C.F.R. part 136 (revised May 18, 2012);

3. When the Discharger agrees to use an ML that is lower than that listed in Attachment H;

4. When the Discharger demonstrates that the calibration standard matrix is sufficiently different from that used to establish the ML in Attachment H, 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. Unless otherwise specified in the analytical method, duplicate samples must be analyzed at a frequency of 5% (1 in 20 samples) with at least one if there is fewer than 20 samples in a batch. A batch is defined as a single analytical run encompassing no more than 24 hours from start to finish. 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.

Q. Laboratories analyzing monitoring samples shall be certified by the Department of Public Health, in accordance with the provision of Water Code section 13176, and must include quality assurance/quality control data with their reports.

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
001	EFF-001	The effluent sampling station shall be located where representative samples of Discharge Point 001 (Latitude33 º 53' 54.14'', Longitude 118° 22' 30.31'') can be obtained.
---	RSW-001	A receiving water sampling station shall be located midstream in Dominguez Channel at a point within 50 feet upstream of the discharge point into the Dominguez Channel.
---	RSW-002	A receiving water sampling station shall be located midstream in Dominguez Channel at a point within 50 feet downstream of the discharge point into the Dominguez Channel.

III. INFLUENT MONITORING REQUIREMENTS – NOT APPLICABLE

IV. EFFLUENT MONITORING REQUIREMENTS

A. Monitoring Location EFF-001

1. The Discharger shall monitor discharges of treated groundwater and non-process wastewater prior to discharge through Discharge Point 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 Location EFF-001

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
Flow, Total	gallons/day	Grab	1/Quarter	[1]
Biochemical Oxygen Demand 5-day @ 20°C (BOD_5)	mg/L	Grab	1/Quarter[2]	[1]
Oil and Grease	mg/L	Grab	1/Quarter[2]	[1]
pH	standard units	Grab	1/Quarter	[1]
Total Suspended Solids (TSS)	mg/L	Grab	1/Quarter[2]	[1]
Copper, Total Recoverable	µg/L	Grab	1/Quarter[2]	[1]
Selenium, Total Recoverable	µg/L	Grab	1/Quarter[2]	[1]
Lead, Total Recoverable	µg/L	Grab	1/Quarter[2]	[1]
Zinc, Total Recoverable	µg/L	Grab	1/Quarter[2]	[1]
Bis (2-Ethylhexyl)phthalate	µg/L	Grab	1/Quarter[2]	[1]
Acetone	µg/L	Grab	1/Quarter[2]	[1]
1,1,1-trichloroethane	µg/L	Grab	1/Quarter[2]	[1]
Dissolved Oxygen	mg/L	Grab	1/Quarter	[1]
Phenolic Compounds (chlorinated)	µg/L	Grab	1/Quarter[2]	[1]
Residual Chlorine	mg/L	Grab	1/Quarter	[1]
Sulfides	mg/L	Grab	1/Quarter[2]	[1]
Temperature	°F or °C	Grab	1/Quarter	[1]
Turbidity	NTU	Grab	1/Quarter	[1]
Xylene	µg/L	Grab	1/Quarter[2]	[1]
Toxicity – Acute[3]	% survival and Pass or Fail for TST approach	Grab	1/Year	[1,8]
Toxicity - Chronic[3]	TUc and Pass or Fail for TST approach	Grab	1/Year	[1,8]
E.coli	MPN/ 100mL or CFU/100ml	Grab	1/Year[7]	[1]
Remaining Priority Pollutants[4]	µg/L	Grab	1/Year	[1]
TCDD Equivalents[5]	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 MLs specified in Attachment 4 of the SIP and included as Attachment H. If no methods are specified for a given pollutant, use methods approved by this Regional Water Board or the State Water Board.

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

$M = 8.34 \times Ce \times Q$

where: M = mass discharge for a pollutant, lbs/day

Ce = limitation concentration for a pollutant, mg/L

Q = actual discharge flow rate, MGD

[3] Refer to Section V, Whole Effluent Toxicity Testing Requirements.

[4] Priority Pollutants as defined by the CTR defined in Finding II.I of this Order and included as Attachment H.

[5] TCDD equivalents shall be calculated using the following formula, where the Minimum Levels (ML), and toxicity equivalency factors (TEFs) are as listed in the Table below. The Discharger shall report all measured values of individual congeners, including data qualifiers. When calculating TCDD equivalents, the Discharger shall set congener concentrations below the minimum levels to zero. USEPA method 1613 may be used to analyze dioxin and furan congeners.

$$\text{Dioxin-TEQ (TCDD equivalents)} = \Sigma(C_x \times TEF_x)$$

where:

C_X = concentration of dioxin or furan congener x

TEF_X = TEF for congener x

Toxicity Equivalency Factors (TEFs)

Congeners	Minimum Level (pg/L)	Toxicity Equivalence Factor (TEF)
2,3,7,8 - tetra CDD	10	1.0
1,2,3,7,8 - penta CDD	50	1.0
1,2,3,4,7,8 - hexa CDD	50	0.1
1,2,3,6,7,8 - hexa CDD	50	0.1
1,2,3,7,8,9 - hexa CDD	50	0.1
1,2,3,4,6,7,8 - hepta CDD	50	0.01
Octa CDD	100	0.0001
2,3,7,8 - tetra CDF	10	0.1
1,2,3,7,8 - penta CDF	50	0.05
2,3,4,7,8 - penta CDF	50	0.5
1,2,3,4,7,8 - hexa CDF	50	0.1
1,2,3,6,7,8 - hexa CDF	50	0.1
1,2,3,7,8,9 - hexa CDF	50	0.1
2,3,4,6,7,8 - hexa CDF	50	0.1
1,2,3,4,6,7,8 - hepta CDFs	50	0.01
1,2,3,4,7,8,9 - hepta CDFs	50	0.01
Octa CDF	100	0.0001

[6] The grab sample shall consist of not less than 5 samples equally spaced over a 30-day period. If any of the single sample limits are exceeded, the Regional Board may require repeat sampling on a daily basis until the sample falls below the single sample limit in order to determine the persistence of the exceedance. When repeat sampling is required because of an exceedance of any one single sample limit, values from all samples collected during that 30-day period shall be used to calculate the geometric mean

[7] Refer to section V., Whole Effluent Toxicity Testing Requirements.

V. WHOLE EFFLUENT TOXICITY TESTING REQUIREMENTS

A. Acute Toxicity

1. Definition of 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. Acute Toxicity Effluent Monitoring Program.

a. Method. The Discharger shall conduct acute toxicity tests on 24-hour composite 100% effluent samples, generally by methods specified in 40 C.F.R. 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-RSW-02-012) or a more recent edition to ensure compliance. Effluent samples shall be collected after all treatment processes and before discharge to the receiving water.

b. Test Species. The fathead minnow, *Pimephales promelas* (Acute Toxicity Test Method 2000.0), shall be used as the test species for fresh water discharges.

c. Acute Toxicity Accelerated Monitoring. If either of the above requirements (sections 1.a and 1.b) is not met, the Discharger shall conduct six additional tests, approximately every two weeks, over a 12-week period. The Discharger shall ensure that they receive results of a failing toxicity test within 24 hours of the close of the test and the additional tests shall begin within 5 business days of the receipt of the result. If the additional tests indicate compliance with the toxicity limitation, the Discharger may resume regular testing.

d. For this monitoring program to evaluate compliance with the acute toxicity WQBEL based on the acute toxicity objective defined in Item 1 above, the critical acute instream waste concentration (IWC) is set to 100% effluent. A 100% effluent sample and a control shall be tested. Acute toxicity test biological endpoint data shall be analyzed directly to report % survival in the 100% effluent sample.

e. Toxicity Identification Evaluation (TIE).

i. If the results of any two of the six accelerated tests are less than 90% survival, then the Discharger shall immediately begin a Toxicity Identification Evaluation (TIE) and implement the Initial Investigation Toxicity Reduction

Evaluation (TRE) workplan. The TIE shall include all reasonable steps to identify the sources of toxicity. Once the sources are identified, the Discharger shall take all reasonable steps to reduce toxicity to meet the objective.

ii. If the initial test and any of the additional six acute toxicity bioassay test results are less than 70% survival, the Discharger shall immediately begin a TIE and implement the Initial Investigation TRE workplan. Once the sources are identified, the Discharger shall take all reasonable steps to reduce toxicity to meet the requirements.

B. Chronic Toxicity

1. Definition of 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.

This Order includes a chronic testing toxicity limit 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.)

2. Chronic Toxicity Effluent Monitoring Program

a. Test Species and Methods.

i. The Discharger shall conduct critical life stage chronic toxicity tests on 24-hour composite 100% effluent samples. For freshwater discharge, the Discharger shall conduct the chronic toxicity test 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/821/R-02/013) or a more recent edition.

ii. 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.

iii. The Discharger shall conduct the first chronic toxicity test screening for three consecutive months in the first required chronic toxicity testing. Re-screening is required every 3 years. 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.

iv. After the screening period, monitoring shall be conducted quarterly using the most sensitive species.

v. Effluent samples shall be collected after all treatment processes and before discharge to the receiving water.

vi. For this monitoring program to evaluate compliance with the chronic toxicity WQBEL based on the chronic toxicity WLA in the Harbor Toxics TMDL, the critical chronic instream waste concentration (IWC) is set at 100% effluent. A 100%, 75%, 50%, 25% and 12.5% effluent sample and a control shall be tested. Chronic toxicity test biological endpoint data shall be statistically analyzed using appropriate hypothesis testing approaches, specified in *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, 2002:Table 1A, 40CFR Part 136) or a more recent edition, to report TUc = 100/NOEC.

b. Chronic Toxicity Accelerated Monitoring.

If the chronic toxicity of the effluent exceeds the monthly median limit of 1.0 TU_c, the Discharger shall conduct six additional tests, approximately every two weeks, over a 12-week period. The Discharger shall ensure that they receive results of a failing chronic toxicity test within 24 hours of the completion of the test and the additional tests shall begin within 5 business days of the receipt of the result.

i. If any three out of the initial test and the six additional tests results exceed 1.0 TU_c, the Discharger shall immediately implement the Initial Investigation TRE workplan.

ii. If implementation of the Initial Investigation TRE workplan indicates the source of toxicity (e.g., a temporary plant upset, etc.), then the Discharger shall return to the normal sampling frequency required in Table E-2 in this MRP.

iii. If all of the six additional tests required above do not exceed 1 TU_c, then the Discharger may return to the normal sampling frequency.

iv. If a TRE/TIE is initiated prior to completion of the accelerated testing schedule required, then the accelerated testing schedule may be terminated, or used as necessary in performing the TRE/TIE, as determined by the Executive Officer.

C. Quality Assurance

1. Concurrent testing with a reference toxicant shall be conducted. Reference toxicant tests shall be conducted using the same test conditions as the effluent toxicity tests (e.g., same test duration, etc).

2. If either the reference toxicant test or effluent test does not meet all test acceptability criteria (TAC) as specified in the test methods manuals (EPA/600/4-91/002 and EPA/821-RSW-02-014), then the Discharger must resample and retest at the earliest time possible.

3. Control and dilution water should be receiving water (if non-toxic) or laboratory water, as appropriate, as described in the manual. If the dilution water used is different from the water the test species are grown in (culture water), a second control using culture water shall be used.

D. Preparation of an Initial Investigation TRE Workplan

The Discharger shall prepare an submit a copy of the Discharger's Initial Investigation TRE workplan to the Executive Officer of the Regional Water Board for approval **within 90 days** of the effective date of this permit. If the Executive Officer does not disapprove the workplan within 60 days, the workplan shall become effective. The Discharger shall use USEPA manuals EPA/600/2-88/070 (industrial) or EPA/833B-99/002 (municipal) as guidance. This workplan shall describe the steps the Discharger intends to follow if 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 and sources of toxicity, effluent variability, and treatment system efficiency.

2. 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 the operation of the Facility; and.

3. If a 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 V.E.3., for guidance manuals.

E. Additional Toxicity Monitoring and Toxicity Identification Evaluation (TIE) for the Test of Significant Toxicity t-Test Approach (TST approach)

1. If acute and/or chronic toxicity is detected (i.e., reported as "Fail" for the TST hypothesis test) at an effluent monitoring station during a discharge event, then the Permittee shall continue toxicity testing during discharge events at the monitoring station-but not more frequently than weekly-until the nature and cause(s) of the toxicity is defined and/or eliminated. A toxicity test sample is immediately subject to TIE procedures to **identify** the toxic chemical(s), if:

a. The acute toxicity test shows a Percent Effect value ≥40% at the IWC. A TIE shall be performed to identify the causes of acute toxicity using the same species and test method and, as guidance, U.S.EPA manuals: *Methods for Aquatic Toxicity Identification Evaluations: Phase I Toxicity Characterization Procedures* (EPA/600/6-91/003, 1991); *Methods for Aquatic Toxicity Identification Evaluations, Phase II Toxicity Identification procedures for Samples Exhibiting Acute and Chronic Toxicity* (EPA/600/R-92/081, 1993) and *Marine Toxicity Identification Evaluation (TIE): Phase I Guidance Document* (EPA/600/R-96-054, 1996).

b. The chronic toxicity test shows a Percent Effect value ≥50% at the IWC. A TIE shall be performed to identify the causes of chronic toxicity using the same species and test method and, as guidance, U.S.EPA manuals: *Toxicity Identification Evaluation: Characterization of Chronically Toxic Effects, Phase I* (EPA/600/6-91/005F, 1992); *Methods for Aquatic Toxicity Identification Evaluations, Phase II Toxicity Identification Procedures for Samples Exhibiting Acute and Chronic Toxicity* (EPA/600/R-92/080, 1993); *Methods for Aquatic Toxicity Identification Evaluations, Phase III Toxicity Confirmation Procedures for Samples Exhibiting Acute and Chronic Toxicity* (EPA/600/R-92/081, 1993) and *Marine Toxicity Identification Evaluation (TIE): Phase I Guidance Document* (EPA/600/R-96-054

2. The TIE should be conducted on the test species demonstrating the most sensitive toxicity response at a sampling station. A TIE may be conducted on a different test species demonstrating a toxicity response with a caveat that once the toxicant(s) is identified, the most sensitive test species triggering the TIE shall be further tested to verify that the toxicant has been identified and addressed.

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

1. If the results of the implementation of the Facility's Initial Investigation TRE workplan indicate the need to continue the TRE/TIE, the Discharger shall expeditiously develop a more detailed TRE workplan for submittal to the Executive Officer within 30 days of completion of the Initial Investigation TRE. The detailed workplan shall 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; and

c. A schedule for these actions.

2. The following section summarizes the stepwise approach used in conducting the TRE:

a. Step 1 includes basic data collection. Data collected for the accelerated monitoring requirements may be used to conduct the TRE;

b. Step 2 – Evaluates optimization of the treatment system operation, facility housekeeping, and the selection and use of in-plant process chemicals;

c. If Steps 1 and 2 are unsuccessful, Step 3 implements a TIE and employment of all reasonable efforts using currently available TIE methodologies. The objective of the TIE shall be to identify the substance or combination of substances causing the observed toxicity;

d. Assuming successful identification or characterization of the toxicant(s), Step 4 evaluates final effluent treatment options;

e. Step 5 evaluates in-plant treatment options; and

f. Step 6 consists of confirmation once a toxicity control method has been implemented.

Many recommended TRE elements parallel source control, pollution prevention, and stormwater control program best management practices (BMPs). To prevent duplication of efforts, evidence of compliance with those requirements 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. The Discharger shall initiate a TIE as part of the TRE process to identify the cause(s) of toxicity. The Discharger shall use the USEPA acute manual, chronic manual, EPA/600/6-91/005F (Phase I)/EPA/600/R-96-054 (for marine), EPA/600/R-92/080 (Phase II), and EPA/600/R-92/081 (Phase III) as guidance.

4. If a TRE/TIE is initiated prior to completion of the accelerated testing schedule required by V.A.2.d and V.B.2.b of this MRP, then the accelerated testing schedule may be terminated, or used as necessary in performing the TRE/TIE, as determined by the Executive Officer.

5. Toxicity tests conducted as part of a TRE/TIE may also be used for compliance determination, if appropriate.

6. 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 Board will be based, in part, on the Discharger's actions and efforts to identify and control or reduce sources of consistent toxicity.

G. Ammonia Removal

1. Except with prior approval from the Executive Officer of the Regional Water Board, ammonia shall not be removed from bioassay samples. The Discharger must demonstrate the effluent toxicity is caused by ammonia *because of* increasing test

pH when conducting the toxicity test. It is important to distinguish the potential toxic effects of ammonia from other pH-sensitive chemicals, such as certain heavy metals, sulfide, and cyanide. The following may be steps to demonstrate that the toxicity is caused by ammonia and not other toxicants before the Executive Officer would allow for control of pH in the test.

a. There is consistent toxicity in the effluent and the maximum pH in the toxicity test is in the range to cause toxicity due to increased pH.

b. Chronic ammonia concentrations in the effluent are greater than 4 mg/L total ammonia.

c. Conduct graduated pH tests as specified in the TIE methods. For example, mortality should be higher at pH 8 and lower at pH 6.

d. Treat the effluent with a zeolite column to remove ammonia. Mortality in the zeolite-treated effluent should be lower than the non-zeolite-treated effluent. Then add ammonia back to the zeolite-treated samples to confirm toxicity due to ammonia.

2. When it has been demonstrated that toxicity is due to ammonia because of increasing test pH, pH may be controlled using appropriate procedures which do not significantly alter the nature of the effluent, after submitting a written request to the Regional Water Board, and receiving written permission expressing approval from the Executive Officer of the Regional Water Board.

H. Reporting

1. Toxicity monitoring results submitted to the Regional Water Board shall be consistent with the requirements identified in Section X of the MRP. The Regional Water Board shall be notified no later than 30 days from completion of each aspect of the analysis for TIEs/TREs.

2. The SMR required by Section V of the MRP shall include:

a. A full laboratory report for each toxicity test prepared according to the appropriate test methods manual chapter on Report Preparation, including:

i. The acute toxicity test results reported as the “Percent Effect”, and “Pass” or “Fail” for the TST hypothesis t-test.

ii. The chronic toxicity test results reported as the “Percent Effect”, and “Pass” or “Fail” for the TST hypothesis t-test.

iii. The dates of sample collection and initiation of each toxicity test.

iv. Test species with biological endpoint values for each concentration tested.

v. Reference toxicant test results.

vi. Water quality measurements for each toxicity test (e.g., pH, dissolved oxygen, temperature, conductivity, hardness, salinity, chlorine, ammonia).

vii. TRE/TIE testing results.

viii. A printout of CETIS (Comprehensive Environmental Toxicity Information System) program results.

b. All results for effluent and receiving water parameters monitored concurrently with the toxicity test.

c. TIEs (Phases I, II, and III) that have been completed or are being conducted, by monitoring station.

d. The development, implementation, and results for each TRE Corrective Action Plan, beginning quarterly following the identification of each pollutant or pollutant class causing toxicity.

3. The Discharger shall provide a compliance summary, which includes a summary table of toxicity data from all samples collected during that year.

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

VI. LAND DISCHARGE MONITORING REQUIREMENTS – NOT APPLICABLE

VII. RECLAMATION MONITORING REQUIREMENTS – NOT APPLICABLE

VIII. RECEIVING WATER MONITORING REQUIREMENTS – SURFACE WATER

A. Monitoring Location RSW-001

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

Table E-3. Receiving Water Monitoring Requirements – RSW-001

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
pH	standard units	Grab	1/Quarter	[1]
Total Dissolved Solids (TDS)	mg/l	Grab	1/ Quarter	[1]
Salinity	mg/L	Grab	1/Quarter	[1]
Temperature	°F	Grab	1/Quarter	[1]
Hardness ($CaCO_3$)	mg/L	Grab	1/Quarter	[1]
Priority Pollutants[2]	µg/L	Grab	1/Year	[1]

[1] Pollutants shall be analyzed using the analytical methods described in 40 C.F.R. §§ 136.3, 136.4 and 136.5; for priority pollutants the methods must meet the lowest 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. 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

[2] Priority Pollutants as defined by the CTR, defined in Finding II.I of the Limitations and Discharge Requirements of this Order, and included as Attachment H.

B. Monitoring Location RSW-002

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

Table E-4. Receiving Water Monitoring Requirements – RSW-002

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
pH	standard units	Grab	1/Quarter	[1]
Dissolved Oxygen	mg/L	Grab	1/Quarter	[1]
Ammonia	mg/L	Grab	1/Quarter	[1]
Temperature	°F	Grab	1/Quarter	[1]
Hardness (CaCO3)	mg/L	Grab	1/Quarter	[1]

[1] Pollutants shall be analyzed using the analytical methods described in 40 C.F.R. §§ 136.3, 136.4 and 136.5; for priority pollutants the methods must meet the lowest 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. 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.

IX. HARBOR TOXICS TMDL MONITORING

A. Dominguez Channel Water Column Sampling

Water column and total suspended solids samples shall be collected during two wet weather events and one dry weather event each year. Both media shall, at a minimum, be analyzed for the chemical suite (lead, zinc, copper, DDT, PCBs, Benzo[a]anthracene, Benzo[a]pyrene, Chrysene, Phenanthrene, and pyrene), temperature, dissolved oxygen, pH, electrical conductivity, and a flow measurement. Sufficient volumes of suspended solids are required to allow analysis of the pollutants in the bulk sediment.

B. Sediment Monitoring

Sediment chemistry samples shall be collected every five years. The analysis shall include the chemical suite, two toxicity tests and four benthic indices as specified in the SQO Part 1.

C. Fish Tissue Monitoring

Fish tissue samples shall be collected every two years from the Dominguez Channel Estuary and analyzed for chlordane, dieldrin, toxaphene, DDT and PCBs. The target species shall be selected based on residency, local abundance and fish size at the time of field collection. Tissues analyzed shall be based on the most common preparation for the selected fish species.

X. OTHER MONITORING REQUIREMENTS

A. Best Management Practices Plan (BMPP) Effectiveness Report and Spill Contingency Plan (SCP) – Not Applicable

XI. 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 Attachment E, Monitoring and Reporting, 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 Self-Monitoring Reports (SMRs) using the State Water Board's California Integrated Water Quality System (CIWQS) Program Web site (http://www.waterboards.ca.gov/ciwqs/index.html). Until such notification is given, the Discharger shall submit SMRs as searchable PDF documents. SMR documents that are less than 10 megabytes (MB) should be emailed to losangeles@waterboards.ca.gov. Documents that are 10 MB or larger should be transferred to a disk and mailed to the address listed in section XI.B.8.c of this MRP.

   The CIWQS Web site will provide additional directions for SMR submittal in the event there will be service interruption for electronic submittal.

2. The Discharger shall report in the SMR the results for all monitoring specified in this MRP under sections III through X. The Discharger shall submit quarterly and annual SMRs including the results of all required monitoring using USEPA-approved test methods or other test methods specified in this Order. If the Discharger monitors any pollutant more frequently than required by this Order, the results of this monitoring shall be included in the calculations and reporting of the data submitted in the SMR.

3. Monitoring periods and reporting for all required monitoring shall be completed according to the following schedule:

Table E-6. Monitoring Periods and Reporting Schedule

Sampling Frequency	Monitoring Period Begins On…	Monitoring Period	SMR Due Date
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. Reporting Protocols. The Discharger shall report with each sample result the applicable reported Minimum Level (ML) and the current Method Detection Limit (MDL), as determined by the procedure in 40 C.F.R. part 136.

5. The Discharger shall report the results of analytical determinations for the presence of chemical constituents in a sample using the following reporting protocols:

a. Sample results greater than or equal to the reported RL shall be reported as measured by the laboratory (i.e., the measured chemical concentration in the sample).

b. Sample results less than the RL, but greater than or equal to the laboratory's MDL, shall be reported as "Detected, but Not Quantified," or DNQ. The estimated chemical concentration of the sample shall also be reported.

For the purposes of data collection, the laboratory shall write the estimated chemical concentration next to DNQ as well as the words "Estimated Concentration" (may be shortened to "Est. Conc."). The laboratory may, if such information is available, include numerical estimates of the data quality for the reported result. Numerical estimates of data quality may be percent accuracy (+ a percentage of the reported value), numerical ranges (low to high), or any other means considered appropriate by the laboratory.

c. Sample results less than the laboratory's MDL shall be reported as "Not Detected," or ND.

d. Dischargers are to instruct laboratories to establish calibration standards so that the ML value (or its equivalent if there is differential treatment of samples relative to calibration standards) is the lowest calibration standard. At no time is the Discharger to use analytical data derived from extrapolation beyond the lowest point of the calibration curve.

6. Compliance Determination. Compliance with effluent limitations for priority pollutants shall be determined using sample reporting protocols defined above and Attachment A of this Order. For purposes of reporting and administrative enforcement by the Regional and State Water Boards, the Discharger shall be deemed out of compliance with effluent limitations if the concentration of the priority pollutant in the monitoring sample is greater than the effluent limitation and greater than or equal to the reporting level (RL).

7. Multiple Sample Data. When determining compliance with an AMEL 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:

a. 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.

b. 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.

8. The Discharger shall submit SMRs in accordance with the following requirements:

a. The Discharger shall arrange all reported data in a tabular format. The data shall be summarized to clearly illustrate whether the facility is operating in compliance with interim and/or final effluent limitations. The Discharger is not required to duplicate the submittal of data that is entered in a tabular format within CIWQS. When electronic submittal of data is required and CIWQS does not provide for entry into a tabular format within the system, the Discharger shall electronically submit the data in a tabular format as an attachment.

b. The Discharger shall attach a cover letter to the SMR. The information contained in the cover letter shall clearly identify violations of the WDRs; discuss corrective actions taken or planned; and the proposed time schedule for corrective actions. Identified violations must include a description of the requirement that was violated and a description of the violation.

c. SMRs must be submitted to the Regional Water Board electronically as specified in finding XI.B.1. above, signed and certified as required by the Standard Provisions (Attachment D). If the size of the submittal necessitates the submittal of a disk, please mail it 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) – Not Applicable

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

b. Updated BMPP

2. Within **20 months** of the effective date of the Harbor Toxics TMDL (by November 23, 2013) **and annually thereafter,** the Discharger or the Responsible Parties shall submit annual implementation reports to the Regional Water Board. The reports shall describe the measures implemented and the progress achieved toward meeting the assigned WLAs and LAs.

ATTACHMENT F – FACT SHEET

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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.

This Order has been prepared under a standardized format to accommodate a broad range of discharge requirements for Dischargers in California. Only those sections or subsections of this Order that are specifically identified as "not applicable" have been determined not to apply to this Discharger. Sections or subsections of this Order not specifically identified as "not applicable" are fully applicable to this Discharger.

I. PERMIT INFORMATION

The following table summarizes administrative information related to the Facility:

Table F-1. Facility Information

WDID	4B192557002
Discharger	Northrop Grumman Systems Corporation
Name of Facility	Northrop Grumman – Hawthorne Site (Former TRW Inc)
Facility Address	14520 Aviation Boulevard
	Hawthorne, CA 90250
	Los Angeles County
Facility Contact, Title and Phone	Joseph P. Kwan, Corporate Director, Environmental Remediation (703) 280–4035
Authorized Person to Sign and Submit Reports	Same as above
Mailing Address	2980 Fairview Park Drive Falls Church, Virginia 22042-4511
Billing Address	Same as above
Type of Facility	Groundwater Remediation System
Major or Minor Facility	Minor
Threat to Water Quality	2
Complexity	B
Pretreatment Program	Not Applicable (N/A)
Reclamation Requirements	N/A
Facility Permitted Flow	0.140 million gallons per day (MGD)
Facility Design Flow	0.140 (MGD)
Watershed	Dominguez Channel Watershed
Receiving Water	Dominguez Channel
Receiving Water Type	Channel, Inland Surface Water

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

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. The Facility discharges wastewater to the Dominguez Channel, a water of the United States, and is currently regulated by Order No. R4-2007-0029 which was adopted on June 7, 2007. The Order expired on May 10, 2012. The terms and conditions of the current Order 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 dated December 6, 2011. A site visit was conducted on December 14, 2011, to observe operations and collect additional data to develop permit limitations and conditions.

II. FACILITY DESCRIPTION

The Facility is located in Hawthorne, California. It was used primarily for manufacturing semi-conductors 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. Historically, 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.

Each groundwater extraction well can operate between 20 and 30 gpm and all four groundwater extraction wells can operate up to a maximum capacity of approximately 100 gpm (144,000 gpd). The current Order regulates the discharge of up to 140,000 gpd (0.140 MGD), the demonstrated maximum capacity of the groundwater treatment system.

A. Description of Wastewater Treatment or Controls

The groundwater extraction and treatment system is located inside a self-storage complex. Groundwater is pumped from four wells to an equalization tank. 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. Water generated from the occasional operation of the off-gas treatment system is treated by the groundwater treatment system before discharge. The off-gas treatment system is used when either the optional air stripping towers or the optional soil vapor extraction system is operated. When the equalization tank is full, stored water is pumped to a batch treatment system which includes 4 bag filters operating in parallel, an air stripping system, and two granular activated carbon (GAC) beds. The treated

water is stored in an effluent tank and then pumped to a storm sewer which discharges into the Dominguez Channel.

The treatment system was shut down in October 2005 because of equipment failure, but restarted operations during the fourth Quarter, 2006. Treatment data demonstrates that the Facility has been fully operational since the 1st Quarter of 2007. The two GAC beds, in series, were added to the original treatment process during the first Quarter, 2008 to address an excursion with volatile organic compounds (VOCs).

B. Discharge Points and Receiving Waters

The combined waste flows into a storm drain located at Latitude 33° 53' 54.14" and Longitude 118° 22' 30.31" (Discharge Point 001). The Discharger proposes to discharge up to 0.140 MGD of treated ground water and non-process wastewater through the storm drain system to Dominguez Channel, a water of the United States.

Attachment B depicts a topographic map of the area around the Facility. Attachment C depicts a schematic diagram of the wastewater flow.

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

The existing Order contains the following effluent limitations and representative monitoring data from the term of the previous Order:

Table F-2. Summary of Previous Permit Term Effluent Limitations and Monitoring Data – Treated Groundwater and Non-Process Wastewater

Parameter	Units	Effluent Limitations				Monitoring Data [2] (2007 – 2010)
		Average Monthly	Maximum Daily	Instantaneous Minimum	Instantaneous Maximum	
Flow	mgd	--	0.140	--	--	0.029 – 0.086
Biochemical Oxygen Demand 5-day @ 20°C (BOD_5)	mg/L	20	30	--	--	0.8 – 1.8
	lbs/day[1]	23	35	--	--	0.08 – 1.28
Oil and Grease	mg/L	10	15	--	--	2.4 – 13
	lbs/day[1]	12	18	--	--	0.95 – 11.1
pH	Standard units	--	--	6.5	8.5	6.6 – 8.3
Temperature	ºF	--	--	--	86	65.2 – 84.3
Residual Chlorine	mg/L	--	--	--	--	0.1 – 0.5
Dissolved Oxygen	mg/L	--	--	--	--	2.0 – 7.7
Total Suspended Solids (TSS)	mg/L	50	75	--	--	1.0 – 13
	lbs/day[1]	58	88	--	--	0.2 – 5.6
Turbidity	NTU	50	75	--	--	0.1 – 6.0
Sulfides	mg/L	--	1.0	--	--	0.049 – 0.074
	lbs/day[1]	--	1.2	--	--	0.00001 – 0.053

Parameter	Units	Effluent Limitations				Monitoring Data [2] (2007 – 2010)
		Average Monthly	Maximum Daily	Instantaneous Minimum	Instantaneous Maximum	
Acetone	µg/L	--	700	--	--	11 – 63
	lbs/day[1]	--	0.82	--	--	0.003 – 0.009
Phenols	mg/L	--	1.0	--	--	ND - 0.0065
	lbs/day[1]	--	1.2	--	--	0.002
Phenolic Compounds (chlorinated)	µg/L	--	1.0	--	--	ND – 0.081
	lbs/day[1]	--	0.001	--	--	NR
Arsenic, Total Recoverable	µg/L	--	50.0	--	--	0.94 – 4.5
	lbs/day[1]	--	0.06	--	--	0.0002 – 0.0011
Cadmium, Total Recoverable	µg/L	1.81	3.63	--	--	0.16 – 0.54
	lbs/day[1]	0.002	0.004	--	--	0.00004 – 0.0002
Chromium VI, Total Recoverable	µg/L	8.06	16.2	--	--	0.14 – 2.1
	lbs/day[1]	0.009	0.019	--	--	0.00003 – 0.0015
Copper, Total Recoverable	µg/L	6.7	13.4	--	--	1.3 – 15
	lbs/day[1]	0.008	0.016	--	--	0.0002 – 0.0013
Lead, Total Recoverable	µg/L	2.59	5.19	--	--	ND – 0.28
	lbs/day[1]	0.003	0.006	--	--	NR
Mercury	µg/L	0.051	0.102	--	--	All are ND
	lbs/day[1]	0.00006	0.00012	--	--	All are ND
Selenium, Total Recoverable	µg/L	4.1	8.2	--	--	0.68 – 14
	lbs/day[1]	0.005	0.009	--	--	0.00009 – 0.002
Silver, Total Recoverable	µg/L	1.99	3.99	--	--	ND – 1.4
	lbs/day[1]	0.002	0.005	--	--	0.0003
Zinc, Total Recoverable	µg/L	61.1	122.5	--	--	3.4 – 77
	lbs/day[1]	0.07	0.14	--	--	0.0008 – 0.018
Benzene	µg/L	--	1.0	--	--	All are ND
	lbs/day[1]	--	0.001	--	--	All are ND
Carbon Tetrachloride	µg/L	--	0.50	--	--	All are ND
	lbs/day[1]	--	0.0006	--	--	All are ND
1,1-Dichloroethane	µg/L	--	5.0	--	--	All are ND
	lbs/day[1]	--	0.006	--	--	All are ND
1,2-Dichloroethane	µg/L	--	0.5	--	--	All are ND
	lbs/day[1]	--	0.0006	--	--	All are ND
1,1-Dichloroethylene	µg/L	0.057	0.11	--	--	ND – 1.1
	lbs/day[1]	0.00007	0.00013	--	--	0.0004
Ethylbenzene	µg/L	--	10.0	--	--	All are ND
	lbs/day[1]	--	0.01	--	--	All are ND
Tetrachloroethylene	µg/L	--	5.0	--	--	All are ND
	lbs/day[1]	--	0.006	--	--	All are ND

Parameter	Units	Effluent Limitations				Monitoring Data [2] (2007 – 2010)
		Average Monthly	Maximum Daily	Instantaneous Minimum	Instantaneous Maximum	
Toluene	µg/L	--	10.0	--	--	All are ND
	lbs/day[1]	--	0.01	--	--	All are ND
1,1,1-Trichloroethane	µg/L	--	200	--	--	0.3 – 0.42 [3]
	lbs/day[1]	--	0.23	--	--	0.0001 – 0.08
Trichloroethylene	µg/L	--	5.0	--	--	All are ND
	lbs/day[1]	--	0.006	--	--	All are ND
Vinyl Chloride	µg/L	--	0.5	--	--	All are ND
	lbs/day[1]	--	0.0006	--	--	All are ND
Bis(2-Ethylhexyl)Phthalate	µg/L	5.9	11.8	--	--	1.8 – 5.4
	lbs/day[1]	0.007	0.014	--	--	0.0005 – 0.0025
1,4-Dichlorobenzene	µg/L	--	5.0	--	--	All are ND
	lbs/day[1]	--	0.006	--	--	All are ND
Xylene	µg/L	--	10.0	--	--	All are ND
	lbs/day[1]		0.01	--	--	All are ND
Acute Toxicity	% survival	[4]				100
Chronic Toxicity	TUc	[5]				>1.0

1 Mass-based effluent limitations are based on a maximum discharge flow rate of 0.140 MGD.
2 Minimum data range values show lowest detected concentrations (may exclude non-detect values or values less than the method detection limit).
3 Max concentration (0.42 µg/L) was detected but not quantified.
4 The acute toxicity of the effluent shall be such that (i) 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 percent; and (iii) no single test producing less than 70 percent survival.
5 Previous permit had no effluent limit for chronic toxicity; however, annual monitoring data showed concentration >1.0 TUc.

D. Compliance Summary

According to the available records, the Water Board did not issue Mandatory Minimum Penalties for effluent limitation violations for the period from 2007 through 2010. However, excursions from effluent limitations for the previous permit term are summarized below. Additionally, some reporting deficiencies were noted during the previous permit term.

Monitoring Period	Violation Type	Pollutant	Reported Value	Permit Limitation	Units
4Q 2007	Average Monthly	Zinc	77	61.1	µg/L
1Q 2008	Average Monthly and Maximum Daily	1,1-Dichloroethylene	1.1	0.057 and 0.11	µg/L
2Q 2009	Average Monthly and Maximum Daily	Copper	15	6.7 and 13.4	µg/L
3Q 2009	Average Monthly and Maximum Daily	Selenium	14	4.1 and 8.2	µg/L
1Q 2010	Average Monthly	Oil & Grease (hexane extractable material)	13	10	mg/L

2008

In response to the exceedance for 1,1-dichloroethylene in the first quarter of 2008, the Discharger installed a 2,000-pound granular activated carbon (GAC) vessel to polish the treated groundwater as a precaution against future excursions. Re-sampling results, both upstream and downstream of the installed GAC polisher, were below the laboratory reporting limit (RL) for each of the VOCs analyzed, including 1,1-dichloroethylene.

2009

In 2009, the State Water Board issued Settlement Offer No. SWB-2008-4-0088 to address a violation for copper occurring in the first quarter of 2003. In response to Settlement Offer No. SWB-2008-4-0088, the Discharger accepted the State Water Board's offer to participate in the Expedited Payment Program and waived their right to a hearing on March 26, 2009. The fine, in the amount of $3,000, was paid on November 16, 2009.

2010

In the first quarter of 2010, oil and grease was detected at 13 mg/L, which exceeded the permitted limit of 10 mg/L. Re-sampling was conducted for oil and grease on May 3, 2010 with results reported as below the laboratory reporting limit (RL) of 4.9 mg/L for hexane extractable material. The RL was below both the average monthly and daily maximum limits for oil and grease. Based on re-sampling in the third and fourth quarters of 2010, and the long site history without elevated hexane extractable materials in the effluent, the Discharger indicated that the hexane material detected was atypical of normal treatment system operations.

In 2010, the Regional Water Board issued Settlement Offer No. R4-2010-0155-M to address violations that occurred from the third quarter of 2002 to the first quarter of 2010. Effluent limit violations consisted of 1,1-dichloroethylene, trichloroethylene, zinc, selenium, copper, and oil and grease. In response to Settlement Offer No. R4-2010-0155-M, the Discharger accepted the Regional Water Board's offer to participate in the Expedited Payment Program and waived their right to a hearing on October 15, 2010. The fine, in the amount of $24,000, was paid on December 9, 2010.

2011

On December 14, 2011, a compliance evaluation inspection (CEI) was conducted at the Facility by USEPA and the Regional Water Board. There were no major findings during the inspection.

E. Planned Changes

There were no planned changes identified in the permit renewal application dated December 6, 2011. This was confirmed during the site inspection on December 14, 2011.

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 CWA and implementing regulations adopted by the 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).

B. California Environmental Quality Act (CEQA)

Under Water Code section 13389, this action to adopt an NPDES permit is exempt from the provisions 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 Quality Control Board (Regional Water Board) adopted a *Water Quality Control Plan Los Angeles Region Basin Plan for the Coastal Watersheds of Los Angeles and Ventura Counties* (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 are as follows:

Table F-3. Basin Plan Beneficial Uses

Discharge Points	Receiving Water Name	Beneficial Use(s)
001	Dominguez Channel (Freshwater)	**Dominguez Channel:** Existing: Non-contact water recreation (REC-2); and Preservation of rare and endangered species (RARE). Potential: Municipal and Domestic Supply* (MUN); Water Contact Recreation (REC1); Warm Freshwater Habitat (WARM); and Wildlife Habitat (WILD).

2. **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 January 7, 1971, and amended this plan

on September 18, 1975. This plan contains temperature objectives for surface waters. Requirements of this Order implement the Thermal Plan. Additionally, 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*, evaluated the optimum temperatures for steelhead, topsmelt, ghost shrimp, brown rock crab, jackknife clam, and blue mussel. A maximum effluent temperature limitation of 86°F was determined to be appropriate for protection of aquatic life and is included in this Order.

3. **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.

4. **State Implementation Policy.** On March 2, 2000, the 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.

5. **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 10 years from the effective date of the SIP (or May 18, 2010) to establish and comply with CTR criterion-based effluent limitations. Since the May 18, 2010 date has expired, the SIP no longer authorizes compliance schedules for CTR criteria-based limits in NPDES permits. State Water Resources Control Board Resolution No. 2008-0025, *Policy for Compliance Schedules in National Pollutant Discharge Elimination System Permits*, was adopted by the State Water Board on April 15, 2008, and approved by OAL and USEPA on June 26, 2008 and August 27, 2008, respectively. This Policy authorizes a Regional Water Board to include compliance schedules in NPDES permits under certain circumstances; however, it does not authorize compliance schedules for permit limitations implementing either criteria

promulgated in the CTR (40 CFR 131.38, revised as of July 1, 2005), or water quality objectives identical to CTR criteria that are adopted after promulgation of the CTR.

6. **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.

7. **Antidegradation Policy.** Federal regulation 40 CFR section 131.12 requires that the 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 is deemed to incorporate 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 40 CFR section 131.12 and State Water Board Resolution No. 68-16.

8. **Anti-Backsliding Requirements.** Sections 402(o) and 303(d)(4) of the CWA and federal regulations at 40 CFR section 122.44(l) restrict 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.

9. **Endangered Species Act Requirements.** This Order does not authorize any act that results in the taking of a threatened or endangered species or any act that is now prohibited, or becomes prohibited in the future, under either the California Endangered Species Act (Fish and Game Code, §§ 2050 to 2097) or the Federal Endangered Species Act (16 U.S.C. §§ 1531 to 1544). This Order requires compliance with effluent limits, receiving water limits, and other requirements to protect the beneficial uses of waters of the state, including protecting rare, threatened, or endangered species. The discharger is responsible for meeting all requirements of the applicable Endangered Species Act.

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

wasteload allocations (WLAs) for point sources and load allocations (LAs) for non-point sources, as appropriate.

The USEPA approved the State's 2010 303(d) list of impaired water bodies on November 12, 2010. 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 2010 303(d) list and have been scheduled for TMDL development.

The Facility discharges into the Dominguez Channel. The 2010 State Water Board's California 303(d) List classifies the Dominguez Channel as impaired. The pollutants/stressors of concern in the Dominguez Channel are: ammonia, copper, diazinon, indicator bacteria, lead, toxicity, and zinc.

Harbor Toxics TMDL. The Regional Water Board adopted Resolution No. R11-008 on May 5, 2011, that amended the Basin Plan to incorporate the *TMDL for Toxic Pollutants in Dominguez Channel and Greater Los Angeles and Long Beach Harbor Waters* (Harbor Toxics TMDL). The Harbor Toxics TMDL was approved by the State Water Board on February 7, 2012, the OAL on March 21, 2012, and the USEPA on March 23, 2012. The Harbor Toxics TMDL contains requirements applicable to this discharge. Therefore, this Order contains effluent limitations and monitoring requirements based on the TMDL.

For the freshwater portion of the Dominguez Channel (above Vermont Avenue) the Harbor Toxics TMDL included:

a. Final Freshwater Toxicity Allocation in wet weather of 1 TUc (Attachment A to Resolution No. R11-008, p. 11).

b. Final Freshwater Metals Allocations in wet weather for copper, lead, and zinc (Attachment A to Resolution No. R11-008, p. 12).

c. Provisions for monitoring discharges and/or receiving waters during the TMDL's 20 year implementation schedule to determine attainment with waste load and load allocations as appropriate (Attachment A to Resolution No. R11-008, pp. 22-23).

The provisions included here are consistent with the assumptions and requirements of the WLAs established in the Harbor Toxics TMDL.

Implementation of the Harbor Toxics TMDL

The Harbor Toxics TMDL includes final freshwater metals allocations in wet weather for Dominguez Channel. The concentration-based allocations for NPDES dischargers (in µg/L based on hardness = 50 mg/L) are 9.7 for copper, 42.7 for lead, and 69.7 for zinc (Attachment A to Resolution No. R11-008, p. 12). This Order establishes WQBELs that are statistically calculated based on the TMDL final freshwater concentration-based allocations for copper, lead, and zinc.

The Harbor Toxics TMDL also includes freshwater metals interim allocations for Dominguez Channel (wet weather only) for copper, lead and zinc (Attachment A to Resolution No. R11-008, p. 10). The interim limits, however, are greater than the limits established in the previous permit and are greater than the levels observed during effluent monitoring. Because the interim limits do not allow any decrease in current facility performance, and to satisfy anti-backsliding and anti-degradation requirements, the TMDL interim limits are not applicable to the discharge from this facility.

The Harbor Toxics TMDL also includes both final and interim freshwater toxicity allocations for Dominguez Channel in wet weather. The final allocation is 1 TUc, or its equivalent based on any Statewide Toxicity Policy (Attachment A to Resolution No. R11-008, p. 11). On January 15, 2007, an effluent sample was collected at Discharge Point 001 that indicated selenastrum toxicity. On February 7, 2007, a chemical sequestering agent was added to the wastewater during the groundwater treatment process. Since that time, all effluent chronic toxicity sampling results have achieved the final TMDL allocation of 1 TUc. Because the TMDL interim limits do not allow any decrease in current facility performance, the final TMDL allocation is applicable to the discharge from this facility and a limit of 1 TUc is established in this Order.

Performance Goals for Lead

The concentration-based waste load allocation for lead (42.7 µg/L) in the Harbor Toxics TMDL is less stringent than the limitations in the existing Order (2.59 µg/L average monthly and 5.19 µg/L maximum daily) and when used to calculate the effluent limits it results in less stringent effluent limitations. The Discharger has historically been in compliance with the limitations in the existing Order (sample ranges from non-detect (ND) to 0.28 µg/L). This Order therefore establishes the effluent limitations for lead based on the Harbor Toxics TMDL waste load allocations but also includes performance goals based on the effluent limitations in Order R4-2007-0029. The performance goals for lead are intended to ensure that effluent concentrations and mass discharges do not exceed levels that can be attained by performance of the Facility's treatment technologies existing at the time of permit issuance, reissuance, or modification. These performance goals are not enforceable effluent limitations. They act as triggers to determine when treatment technologies fail to produce effluent concentrations consistent with historical levels.

Harbor Toxics TMDL Water Column, Sediment, and Fish Tissue Monitoring for Dominguez Channel, Torrance Lateral, and Dominguez Channel Estuary Compliance Monitoring Program

The TMDL's implementation schedule allows up to 20 years after the TMDL effective date to attain WLAs and load allocations for those dischargers who justify the need for additional time in a compliance plan. During this period, the discharger is required, either individually or with a collaborating group, to develop a monitoring and reporting plan (Monitoring Plan) and quality assurance project plan (QAPP) for the water column, sediment, and fish tissue in the Dominguez Channel Estuary. These plans shall follow the "TMDL Element – Monitoring Plan" provisions in Attachment A to Resolution No.

R11-008. The Monitoring Plan and QAPP shall be submitted 20 months after the effective date of the TMDL for public review and subsequent Executive Officer approval. The Discharger shall begin monitoring 6 months after the Monitoring Plan and QAPP are approved by the Executive Officer, unless otherwise directed by the Executive Officer.

E. Other Plans, Policies and Regulations – Not Applicable

IV. RATIONALE FOR EFFLUENT LIMITATIONS AND DISCHARGE SPECIFICATIONS

The CWA requires point source dischargers 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 in the Code of Federal Regulations: 40 C.F.R. section 122.44(a) requires that permits include applicable technology-based limitations and standards; and 40 C.F.R. section 122.44(d) requires that permits include water quality-based effluent limitations 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 TSS, oil and grease, and BOD_5 because they are parameters typically used to characterize wastewater. Sulfides and constituents contributing to turbidity are commonly present in groundwater. In addition, acetone, phenolic compounds (chlorinated) and xylene may be found in discharges of treated groundwater. Therefore, all of these constituents are constituents of concern for which effluent limitations were evaluated and included in this Order.

The existing permit established effluent limitations for a number of pollutants believed to be present in the discharge of treated groundwater, but provided limited information about the basis for this determination. The storage tanks that were previously kept at the site and used as part of the industrial manufacturing processes contained volatile organic compounds (VOCs). Based on the consideration of new information, the new RPA determines that there is no reasonable potential for certain metals, such as arsenic, cadmium, chromium (VI), mercury, and silver, and no reasonable potential for VOCs such as phenols, benzene, carbon tetrachloride, 1,1-dichloroethane, 1,2-dichloroethane, 1,2-dichloroethylene, ethylbenzene, tetrachloroethylene, toluene, trichloroethylene, vinyl chloride and 1,4-dichlorobenzene. Effluent limits for these pollutants are not included in this Order.

Current operations at the Facility also include discharges of water generated from the occasional operation of the off-gas treatment system. The off-gas treatment system is used when either the optional air stripping towers or the optional soil vapor extraction system is operated. Two GAC beds, in series, were added to the treatment process in the first quarter of 2008 to address an excursion of VOCs, which may have been associated with the off-gas treatment system. Historical data shows some detections for 1,1,1-

trichloroethane. Therefore, 1,1,1-trichloroethane is a constituent of concern based on staff's Best Professional Judgment (BPJ), and a limit is included in this Order to ensure the effectiveness of the GAC treatment units and VOC removal.

In addition, reasonable potential to exceed water quality standards was determined using monitoring data from the current permit term for copper, selenium, and bis(2-ethylhexyl)phthalate. Effluent limitations for these pollutants have been included in this Order.

Generally, mass-based effluent limitations ensure that proper treatment, and not dilution, is employed to comply with the final effluent concentration limitations. 40 C.F.R. section 122.45(f)(1) requires that all limitations, standards or prohibitions in the Order 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 limitations in an Order on a case-by-case basis limitations 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.

The Report of Waste Discharge submitted by the Discharger indicates that the average discharge rate of process wastewater through Discharge Point 001 is 0.133 MGD; and the maximum discharge flow rate is 0.140 MGD, as limited by the previous Order. Therefore, the proposed technology-based mass limitations for select parameters for treated wastewater discharged through Discharge Point 001 continue to be based on the design flow of 0.140 MGD.

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, and are consistent with the requirements set for other discharges to the Dominguez Channel that are regulated by an NPDES permit.

B. Technology-Based Effluent Limitations

1. Scope and Authority

Section 301(b) of the CWA and implementing USEPA permit regulations at 40 C.F.R. section 122.44, 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 40 C.F.R. section 122.23 (NPDES Permit Regulations) and 40 C.F.R. 125.3 (Best Professional Judgment (BPJ)).

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 non-conventional 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 non-conventional pollutants.

c. Best conventional pollutant control technology (BCT) represents the control from existing industrial point sources of conventional pollutants including BOD, TSS, 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 ELGs representing application of BPT, BAT, BCT, and NSPS. Section 402(a)(1) of the CWA and 40 C.F.R. section 125.3 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 40 C.F.R. section 125.3.

Technology-based effluent limits are intended to achieve a minimum level of treatment of pollutants for point source discharges.

2. Applicable Technology-Based Effluent Limitations

As the discharge from this Facility is limited to treated groundwater and non-process wastewater, there are no applicable national Effluent Limitation Guidelines (ELGs). Where USEPA has not yet developed technology-based standards for a particular industry or a particular pollutant, CWA section 402(a)(1) and C,F.R. section 125.3 authorize the use of BPJ to derive technology-based effluent limitations on a case-by-case basis. When BPJ is used, the permit must reflect specific factors outlined at 40 C.F.R. section 125.3. The previous Order No. R4-2007-0029 established technology-based effluent limitations for BOD, oil and grease, TSS, turbidity, acetone, sulfides, phenolic compounds (chlorinated) and xylene. This Order retains the effluent limitations from the previous order for these pollutants.

The technology-based effluent limitations for BOD, TSS, and oil and grease are based on BPT and BAT. In setting these limitations, the Regional Water Board considered the factors listed in 40 C.F.R. section 125.3(d)(1) and 125.3(d)(3), respectively. The technology-based effluent limitations for turbidity, acetone,

phenolic compounds, sulfides, and xylene are based on BPT and BCT. In setting these limitations, the Regional Water Board considered the factors listed in 40 C.F.R. section 125.3(d)(1) and 125.3(d)(2), respectively.

All of the technology-based effluent limitations are consistent with industry standards for groundwater treatment systems. The treatment system at this facility includes four bag filters operating in parallel, an air stripping system, and two granular activated carbon (GAC) beds. These technology methods are commonly used in NPDES-permitted groundwater treatment facilities. The Discharger's treatment system was installed 1998. The Discharger has not identified any concerns related to the ability to treat due to the age of the equipment.

The Discharger's past performance demonstrates the ability to consistently meet these effluent limitations. As the current technology used by the Discharger is capable of meeting the limitations, no changes to equipment, facilities, process, or controls are necessary, thereby incurring no additional costs or non-water quality environmental impacts.

A summary of the technology-based effluent limitations for Discharge Point 001 is shown in Table F-5.

Table F-5. Summary of Technology-based Effluent Limitations – Treated Ground Water and Non-Process Wastewater at Discharge Point 001

Parameter	Units	Effluent Limitations			
		Average Monthly	Maximum Daily	Instantaneous Minimum	Instantaneous Maximum
Biochemical Oxygen Demand 5-day @ 20°C (BOD_5)	mg/L	20	30	---	---
	lbs/day[1]	23	35	---	---
Total Suspended Solids (TSS)	mg/L	50	75	---	---
	lbs/day[1]	58	88	---	---
Oil and Grease	mg/L	10	15	---	---
	lbs/day[1]	12	18	---	---
Turbidity	NTU	50	75	---	---
Acetone	µg/L	---	700	---	---
	lbs/day[1]	---	0.82	---	---
Phenolic Compounds (chlorinated)	µg/L	---	1.0	---	---
	lbs/day[1]	---	0.001	---	---
Sulfides	µg/L	---	1.0	---	---
	lbs/day[1]	---	1.2	---	---

Parameter	Units	Effluent Limitations			
		Average Monthly	Maximum Daily	Instantaneous Minimum	Instantaneous Maximum
Xylene	µg/L	---	10	---	---
	lbs/day[1]	---	0.012	---	---

[1] Mass-based effluent limitations based on a maximum discharge flow rate of 0.140 MGD.

C. Water Quality-Based Effluent Limitations (WQBELs)

1. Scope and Authority

Section 301(b) of the CWA and 40 C.F.R. 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 40 C.F.R. 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.

The specific procedures for determining reasonable potential for discharges from the Facility, and if necessary for calculating WQBELs, are contained in the SIP.

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 40 C.F.R. 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 maximum salinity reported during the permit term for receiving water is 0.84 g/L, which is equivalent to 0.84 ppt, (at RSW-001, 3Q09). Therefore, 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.

Some water quality criteria are hardness-dependent. The lowest available receiving water hardness value was 150 mg/L as $CaCO_3$, which value was used for evaluation of reasonable potential in this Order as well as in the prior permit. No hardness sampling was required in Order No. R4-2007-0029 and therefore, more recent sampling results were not provided.

Tables F-5 summarizes the applicable numeric water quality criteria/objective for priority pollutants either limited in the existing permit or reported in detectable concentrations in the effluent or receiving water based on data submitted to the Regional Water Board. These criteria were used in conducting the RPA for this Order.

Table F-6. Applicable Water Quality Criteria – Treated Ground Water and Non-Process Wastewater

CTR No.	Constituent	Selected Criteria	CTR/NTR Water Quality Criteria					
			Freshwater		Saltwater		Human Health for Consumption of:	
			Acute	Chronic	Acute	Chronic	Water & Organisms	Organisms only
		µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
1	Antimony	4,300	--	--	N/A			4,300
2	Arsenic	150	340	150				--
4	Cadmium	3.38	7.14	3.38				Narrative
5a	Chromium, III	288.50	2,420.45	288.50				Narrative
5b	Chromium, VI	11.43	16.29	11.43				Narrative
6	Copper [1]	9.7	9.7	--				--
7	Lead [1]	42.7	42.7	--				Narrative
8	Mercury	0.051	--	--				0.051
9	Nickel	73.51	661.16	73.51				4,600
10	Selenium	5.0	20	5				Narrative
11	Silver	8.15	8.15	--				--
13	Zinc [1]	69.7	69.7	--				--

CTR No.	Constituent	Selected Criteria	CTR/NTR Water Quality Criteria					
			Freshwater		Saltwater		Human Health for Consumption of:	
			Acute	Chronic	Acute	Chronic	Water & Organisms	Organisms only
		µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
19	Benzene	71	--	--				71
20	Bromoform	360	--	--				360
21	Carbon Tetrachloride	4.4	--	--				4.4
23	Chlorodibromomethane	34	--	--				34
26	Chloroform	NC	--	--				--
27	Dichlorobromomethane	46	--	--				46
28	1,1-Dichloroethane	NC	--	--				--
29	1,2-Dichloroethane	99	--	--				99
30	1,1-Dichloroethylene	3.2	--	--				3.2
33	Ethylbenzene	29,000	--	--				29,000
36	Methylene Chloride	1,600	--	--				1,600
38	Tetrachloroethylene	8.85	--	--				8.85
39	Toluene	200,000	--	--				200,000
41	1,1,1-Trichloroethane	NC	--	--				--
43	Trichloroethylene	81	--	--				81
44	Vinyl Chloride	525	--	--				525
54	Phenol	4,600,000	--	--				4,600,000
55	2,4,6-Trichlorophenol	6.5	--	--				6.5
68	Bis(2-Ethylhexyl)Phthalate	5.9	--	--				5.9
70	Butlybenzyl Phthalate	5,200	--	--				5,200
77	1,4-Dichlorobenzene	2,600	--	--				2,600
78	3,3-Dichlorobenzidine	0.077	--	--				0.077
81	Di-n-Butyl Phthalate	12,000	--	--				12,000

[1] Page 12, Attachment A to Resolution No. R11-008 (Harbor Toxics TMDL)
N/A – Not applicable; indicates the receiving water body is not characterized as saltwater.
NC – No criteria are 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 a state 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 ≥ 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. Sixteen (16)[1] effluent data sets characterizing treated groundwater and non-process wastewater were available for Discharge Point 001. Sixteen (16) receiving water data sets were available for both RSW-001 and RSW-002. Based on the RPA, pollutants that demonstrate reasonable potential in the treated wastewater are copper, selenium, zinc, and bis(2-ethylhexyl)phthalate . Refer to Attachment J for a summary of the RPA and associated effluent limitation calculations.

The applicable water quality criteria (C) for 3,3-Dichlorbenzidine is 0.077 µg/L. This constituent was not detected (ND) in effluent monitoring (MDL = 0.38 µg/L) or receiving water monitoring (MDL = 2.9 µg/L). In both cases, the MDLs were above the C. The ML listed in Attachment H of this order for this constituent is 5 µg/L. As per the instructions in Section I.H of Attachment E of this Order, when 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 Discharger is required to sample annually for 3,3-Dichlorbenzidine as part of the requirements for monitoring priority pollutants. Therefore using Best Professional Judgment (BPJ) staff has determined

[1] Sixteen sets of discharge data were submitted. Reports were available for 2007, 2008, 2009 and 2010 (Quarterly and Annual, with the exception of 1st and 2nd Quarter 2007 results, which were submitted and reported on the 2007 Annual Report).

that based on ND data and in the absence of additional evidence there is no RPA for 3,3-Dichlorbenzidine.

Table F-6 summarizes the results of the RPA.

Table F-7. Summary Reasonable Potential Analysis – Treated Ground Water and Non-Process Wastewater

CTR No.	Constituent	Applicable Water Quality Criteria (C)	Max Effluent Conc. (MEC)	Maximum Detected Receiving Water Conc. (B)	RPA Result - Need Limit?	Reason
		µg/L	µg/L	µg/L		
1	Antimony	4,300	0.24	1.9	No	MEC & B < C
2	Arsenic	150	4.5	1.8	No	MEC & B < C
4	Cadmium	3.38	0.54	0.4	No	MEC & B < C
5a	Chromium (III)	288.50	2.1	2.6	No	MEC & B < C
5b	Chromium (IV)	11.43	2.1	0.6	No	MEC & B < C
6	Copper, Total Recoverable	9.7[1]	15	15	Yes	B > C & MEC>=C
7	Lead, Total Recoverable	42.7[1]	0.28	1.8	Yes	Harbor Toxics TMDL
8	Mercury	0.051	< 0.1	< 0.1	No	MEC & B < C
9	Nickel, Total Recoverable	73.51	6.5	3	No	MEC & B < C
10	Selenium, Total Recoverable	5.0	14	0.94	Yes	MEC>=C
11	Silver, Total Recoverable	8.15	1.4	< 0.1	No	MEC & B < C
13	Zinc, Total Recoverable	69.7[1]	77	170	Yes	B > C & MEC is detected
19	Benzene	71	< 0.28	< 0.28	No	MEC & B < C
20	Bromoform	360	< 0.28	0.75	No	B < C, MEC is nondetect
21	Carbon Tetrachloride	4.4	< 0.28	< 0.28	No	MEC & B < C
23	Chlorodibromomethane	34	< 0.28	2.2	No	B < C, MEC is nondetect
26	Chloroform	NC	< 0.28	0.94	No	No Criteria
27	Dichlorobromomethane	46	< 0.28	1.4	No	B < C, MEC is nondetect
28	1,1-Dichloroethane	NC	< 0.27	< 0.4	No	No Criteria
29	1,2-Dichloroethane	99	< 0.28	< 0.28	No	MEC & B < C
30	1,1-Dichloroethylene	3.2	1.1	ND	No	MEC<C & B is nondetect
33	Ethylbenzene	29,000	< 0.25	< 0.25	No	MEC & B < C
36	Methylene Chloride	1,600	< 0.28	7	No	B < C, MEC is nondetect
38	Tetrachloroethylene	8.85	< 0.32	< 0.32	No	MEC & B < C
39	Toluene	200,000	< 0.36	< 0.36	No	MEC & B < C
41	1,1,1-Trichloroethane	NC	0.42	< 0.3	Yes	BPJ[2]

CTR No.	Constituent	Applicable Water Quality Criteria (C)	Max Effluent Conc. (MEC)	Maximum Detected Receiving Water Conc. (B)	RPA Result - Need Limit?	Reason
		µg/L	µg/L	µg/L		
43	Trichloroethylene	81	< 0.26	< 0.26	No	MEC & B < C
44	Vinyl Chloride	525	< 0.3	< 0.4	No	MEC & B < C
54	Phenol	4,600,000	0.0065	< 1.9	No	MEC & B < C
55	2,4,6-Trichlorophenol	6.5	1.8	< 4.2	No	MEC & B < C
68	Bis(2-Ethylhexyl)Phthalate	5.9	5.4	6.7	Yes	B > C & MEC is detected
70	Butylbenzyl Phthalate	5,200	1.5	< 3.8	No	MEC & B < C
77	1,4-Dichlorobenzene	2,600	< 0.19	< 0.37	No	MEC & B < C
78	3,3-Dichlorobenzidine	0.077	< 0.38	< 2.9	No	BPJ[3]
81	Di-n-Butyl Phthalate	12,000	< 0.19	8.4	No	MEC & B < C

NC – No Criteria
[1] Page 12, Attachment A to Resolution No. R11-008 (Harbor Toxics TMDL)
[2] A limit has been included in this Order based on BPJ, site history and background, and historical concentrations.
[3] Rationale for using BPJ is present in Section IV.C.3 of Attachment F or this Order. Additional samples with a lower detection limit are required.

Existing Order No. R4-2007-0029 included effluent limitations for arsenic, cadmium, chromium VI, lead, mercury, silver, benzene, carbon tetrachloride, 1,1-dichloroethane, 1,2-dichloroethane, 1,2-dichloroethane, 1,1-dichloroethylene, ethylbenzene, tetrachloroethylene, toluene, trichloroethylene, vinyl chloride, and 1,4-dichlorobenzene. Based on the consideration of facility monitoring data submitted during the permit term and the results of the RPA, effluent limitations for these pollutants are not included in this Order.

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:

i. If applicable and available, use of the wasteload allocation (WLA) established as part of a total maximum daily load (TMDL).

ii. Use of a steady-state model to derive maximum daily effluent limitations (MDELs) and average monthly effluent limitations (AMELs).

iii. Where sufficient effluent and receiving water data exist, use of a dynamic model, which has been approved by the Regional Water Board.

b. WQBELs for copper, selenium, zinc, and bis(2-ethylhexyl)phthalate for discharges of treated groundwater and non-process wastewater, and WQBELs for have been developed for Discharge Point 001. These WQBELs 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 included. However, in accordance with the reopener provision in Section VI.C.1.e, 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 based on aquatic life criterion were established for this Order. The process for developing these limits is in accordance with section 1.4 of the SIP. Attachment I summarizes the development and calculation of all WQBELs for this Order using the process described below.

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:

ECA = C + D(C-B) when C>B, and

ECA = C when C<= B,

Where C = The priority pollutant criterion/objective, adjusted if necessary for hardness, pH, and translators,
D = The dilution credit, and
B = The ambient background concentration

Dilution was not allowed due to the nature of the receiving water and quantity of the effluent; therefore,

ECA = C

For copper, the applicable water quality criteria are:

ECA_{acute}= 9.7 µg/L (WLA per Harbor Toxics TMDL)

$ECA_{chronic}$= None

$ECA_{human\ health}$= Not Applicable

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.

$LTA_{acute} = ECA_{acute} \times Multiplier_{acute}$

$LTA_{chronic} = ECA_{chronic} \times Multiplier_{chronic}$

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 was used to develop the acute and chronic LTA using Table 1 of the SIP:

No. of Samples Available	CV	$Multiplier_{acute}$	$Multiplier_{chronic}$
17	0.81	0.25	0.43

$LTA_{acute} = 9.7\ \mu g/L \times 0.25 = 2.38\ \mu g/L$

$LTA_{chronic} =$ None

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

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

For copper, the most limiting LTA was the LTA_{acute}

LTA = 2.38 µg/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 Limitations (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 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.

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

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

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 was used to develop the AMEL and MDEL for aquatic life using Table 2 of the SIP:

No. of Samples Per Month	CV	$Multiplier_{MDEL}$	$Multiplier_{AMEL}$
4	0.81	4.07	1.76

$AMEL_{aquatic\ life} = 2.38\ \mu g/L \times 1.76 = 4.18\ \mu g/L$

$MDEL_{aquatic\ life} = 2.38\ \mu g/L \times 4.07 = 9.68\ \mu g/L$

Step 5: For the ECA based on human health, set the AMEL equal to the

$ECA_{human\ health}$

$AMEL_{human\ health} = ECA_{human\ health}$

However, for copper, $ECA_{human\ health}$ = 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.

$MDEL_{human\ health} = AMEL_{human\ health} \times (Multiplier_{MDEL} / Multiplier_{AMEL})$

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 water-quality based effluent limit for the Order.

$AMEL_{aquatic\ life}$	$MDEL_{aquatic\ life}$	$AMEL_{human\ health}$	$MDEL_{human\ health}$
4.18 µg/L	9.68 µg/L	Not Available	Not Available

The lowest (most restrictive) effluent limits are based on aquatic life toxicity and were incorporated into this Order.

Selenium has no human health criteria; therefore, the AMEL and MDEL based on aquatic life toxicity and criteria are established as the WQBELs. Bis(2-ethylhexyl)phthalate has no aquatic life criteria; therefore, human health criteria was used to calculate the AMEL and MDEL as the WQBELs.

For copper, lead, and zinc, there are no human health (Consumption of Organism Only) criteria, and WLAs have been established based on the Harbor Toxics TMDL; therefore, the established effluent limitations are based on aquatic life criteria used for the Harbor Toxics TMDL WLAs.

5. WQBELS based on Basin Plan Objectives

These Basin Plan Objectives were evaluated with respect to effluent monitoring data and Facility operations.

a. pH. The pH of inland suface waters shall not be depressed below 6.5 or raised above 8.5 as a result of waste discharges. Ambient pH levels shall not be changed more than 0.5 units from natural conditions as a result of waste discharge. This Order includes effluent and receiving water limitations for pH to ensure compliance with Basin Plan Objectives for pH.

b. Dissolved Oxygen. For all waters, the mean annual dissolved oxygen concentration shall be greater than 7 mg/L, and no single determination shall be less than 5.0 mg/L, except when natural conditions cause lesser concentrations. This Order applies the water quality objective for dissolved oxygen as a receiving water limitation.

c. Turbidity. Where natural turbidity is between 0 and 50 NTU, increases shall not exceed 20%. Where natural turbidity is greater than 50 NTU increases shall not exceed 10%. This Order applies the water quality objective for turbidity as a receiving water limitation in addition to the technology-based effluent limitation. At times the WQO may be more stringent then the numeric technology-based effluent limitation.

d. Temperature. 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 permit. The white paper evaluated the optimum temperatures for steelhead, topsmelt, ghost shrimp, brown rock crab, jackknife clam, and blue mussel.

6. WQBELs based on the Harbor Toxics TMDL

The Harbor Toxics TMDL assigned freshwater final concentration-based waste load allocations (WLAs) for chronic toxicity, copper, lead, and zinc for discharges to the

Dominguez Channel. The TMDL's implementation schedule to demonstrate attainment of WLAs and load allocations is 20 years after the TMDL effective date for a Discharger who justifies the need for interim limits and a compliance plan. As explained in Section II.D "Implementation of the Harbor Toxics TMDL" the Discharger has demonstrated the ability to meet the final limits established in this Order and therefore a compliance schedule is not applicable.

During the TMDL implementation period, the Discharger is also required, either individually or with a collaborating group, to develop a monitoring and reporting plan (Monitoring Plan) and quality assurance project plan (QAPP) for the water column, sediment, and fish tissue in the Dominguez Channel Estuary. These plans shall follow the "TMDL Element – Monitoring Plan" provisions in Attachment A to Resolution No. R11-008. The Monitoring Plan and QAPP shall be submitted 20 months after the effective date of the TMDL for public review and subsequent Executive Officer approval. The Discharger shall begin monitoring 6 months after the Monitoring Plan and QAPP are approved by the Executive Officer, unless otherwise directed by the Executive Officer. The compliance monitoring program shall include water column, sediment, and fish tissue monitoring.

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 measures mortality. A chronic toxicity test 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.

a. Acute Toxicity Limitation:

This Order includes acute toxicity limitations and requires acute toxicity monitoring. In accordance with the Basin Plan, 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. Acute toxicity provisions in the Order are derived from the Basin Plan's toxicity standards (Basin Plan 3-16 and 3-17). The provisions require the Discharger to accelerate acute toxicity monitoring and take further actions to identify the source of toxicity and to reduce acute toxicity when it is determined to be present.

b. Chronic Toxicity Limit and Requirements:

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 discharge from Discharge Point 001 has been determined to have the reasonable potential to cause or contribute chronic toxicity in receiving waters, in accordance with 40 CFR part 122.44(d), because a chronic toxicity TMDL WLA is applicable to the discharge and WQBELs based on this WLA are required (40 CFR part 122.44(d)(1)(vii)(B)).

The USEPA Regions 8, 9 and 10 Toxicity Training Tool (January 2010) (Toxicity Tool) recommends that permitting authorities establish a monthly median limit (MML) of 1.0 TUc as the monthly compliance level for chronic WET for NPDES dischargers without a mixing zone or dilution allowance (Section 2.6.2). The use of the MML of 1.0 TUc for chronic WET is recommended only in conjunction with the following permit conditions as defined in the USEPA's Technical Support Document For Water Quality-based Toxics Control (March 1991) (TSD):

- A statistically calculated maximum daily limit (MDL) for chronic WET (TSD Section 5.4.1) ; and

- Routine WET monitoring using the most sensitive test species identified through screening using species representing three different phyla (TSD Section 1.3.4).

This Order establishes the recommended MML of 1.0 TUc as the monthly chronic toxicity effluent limitation. Table C-2 of Appendix C of the Toxicity Tool (pages C-7 to C-11) provides an example of a statistically caluculated MDL for chronic WET based on a CV of 0.6 that results in a MDL of 1.6 TUc. The parameters used in this example are applicable to this Facility and therefore a MDL of 1.6 TUc is established in this Order as the daily chronic toxicity effluent limitation. The routine WET monitoring requirements have been established in Section V.B of Attachment E – Monitoring and Reporting Requirements of this Order.

8. Final WQBELs

A summary of the WQBELs are described in Table F-8.

Table F-8. Summary of Water Quality-Based Effluent Limitations – Treated Ground Water and Non-Process Wastewater to Discharge Point 001

Parameter	Units	Effluent Limitations			
		Average Monthly	Maximum Daily	Instantaneous Minimum	Instantaneous Maximum
pH	standard units	---	---	6.5	8.5
Copper, Total Recoverable	µg/L	4.2	9.7	---	---
	lbs/day[1]	0.005	0.011	---	---
Lead, Total Recoverable	µg/L	21.3	42.7		
	lbs/day[1]	0.025	0.050		
Selenium, Total Recoverable	µg/L	3.5	9.2	---	---
	lbs/day[1]	0.0041	0.011	---	---
Zinc, Total Recoverable	µg/L	25	70	---	---
	lbs/day[1]	0.029	0.082	---	---
Bis(2-Ethylhexyl)Phthalate	µg/L	5.9	11.8	---	---
	lbs/day[1]	0.007	0.014	---	---
Temperature	Deg. F	---	---	---	86
Acute Toxicity	% survival and Pass or Fail for TST approach	[2]			
Chronic Toxicity	TUc and Pass or Fail for TST approach	[3]			

[1] Mass-based effluent limitations based on a maximum discharge flow rate of 0.140 MGD.
[2] The acute toxicity of the effluent shall be such that: the average survival in the undiluted effluent for any three (3) consecutive 96-hourstatic or continuous flow bioassay test shall be at least 90%, and 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 (Attachment E).
[3] The monthly median limit for chronic toxicity of 100% effluent in a critical life stage test is 1.0 TUc and the maximum daily limit for chronic toxicity of 100% effluent in a critical life stage test is 1.6 TUc.

D. Final Effluent Limitations

Effluent limitations for pH, TSS, temperature, BOD_5, oil and grease, turbidity, sulfides, phenolic compounds (chlorinated), acute toxicity, 1,1,1-trichloroethane, acetone, and xylene, are carried over from the previous Order (No. R4-2007-0029) for discharges from the ground water treatment system through Discharge Point 001.

Further, copper, selenium, zinc, and bis-2(ethylhexyl)phthalate exhibited reasonable potential and have final effluent limits based on the most current sampling data set. Approved Harbor Toxics TMDL WLAs for copper, lead, and zinc are also available for the discharge. Refer to Attachment J for a summary of the RPA and associated effluent limitation calculations.

1. Satisfaction of Anti-Backsliding Requirements

Sections 402(o)(2) and 303(d)(4) of the CWA and federal regulations at 40 C.F.R. part 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.

Some effluent limitations in this Order are less stringent than those in the previous Order. Existing Order No. R4-2007-0029 contains effluent limitations for arsenic, cadmium, chromium (VI), mercury, silver, benzene, carbon tetrachloride, 1,1-dichloroethane, 1,2-dichloroethane, 1,1-dichloroethylene, ethylbenzene, tetrachloroethylene, toluene, 1,1,1-trichloroethane (1,1,1-TCA), trichloroethylene, vinyl chloride, and 1,4-dichlorobenzene. With the exception of 1,1,1-TCA, these limits have been discontinued in this Order. The relaxation of these effluent limitations is consistent with the CWA §§ 402(o)(1)/303(c)(4)(B), as the receiving water is in attainment for these pollutants and backsliding is allowed as long as the antidegradation standard will be protected. The existing limit for 1,1,1-TCA has been included in this Order based on best professional judgment taking into account site history, background, and historical concentrations.

The protection afforded under this Order results in an equal level of protection of beneficial uses to the previous conditions of Order No. R4-2007-0029. Additionally, this Order is consistent with section 303(d)(4)(B) of the Clean Water Act, which allows for changes to effluent limitations or other permitting standards provided that the quality of receiving waters equals or exceeds levels necessary to protect the beneficial uses for such waters and the change is consistent with the antidegradation policy. Consistency with the anti-degradation policy is addressed below.

In addition, CWA §§ 402(o)(1)/303(c)(4)(B) allow for the relaxation of effluent limitations for lead as the receiving water is not in attainment for lead and backsliding is allowed as long as the WQBEL is based on a TMDL WLA and the antidegradation standard is met. The WQBEL is based on the applicable TMDL WLA for lead. The permit does not authorize additional mass loading for lead so the anti-degradation standard will be protected. Backsliding, however, is not allowed under CWA § 402(o)(1)/303(d)(4) for selenium as the receiving water is in attainment for selenium. The effluent limits for selenium will be retained from the existing permit.

2. Satisfaction of Antidegradation Policy

Section 131.12, 40 C.F.R., requires that the state water quality standards include an anti-degradation 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 is consistent with the antidegradation provisions of 40 C.F.R. section 131.12 and State Water Board Resolution 68-16 because there will be no lowering of water quality of receiving waters. This Order does not provide for an increase in the permitted design flow or allow for a reduction in the level of treatment. The final limitations and performance goals in this Order meet the requirements of the SIP and hold the Discharger to performance levels that will not cause or contribute to water quality impairment. Further, compliance with these requirements will result in the use of best practicable treatment or control of the discharge. Hence, the permitted discharge is consistent with the antidegradation provision of 40 C.F.R.section 131.12 and State Water Board Resolution No. 68-16.

3. Mass-based Effluent Limitations

Mass-based effluent limitations are established using the following formula:
Mass (lbs/day) = flow rate (MGD) x 8.34 x 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)

4. Stringency of Requirements for Individual Pollutants

This Order contains both technology-based and water quality-based effluent limitations for individual pollutants. The technology-based effluent limitations which apply to the waste stream consist of restrictions on pH, BOD, TSS, oil and grease, turbidity, sulfides, 1,1,1-trichloroethane, acetone, phenolic compounds (chlorinated) and xylene.

WQBELs 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 WQBELs were derived from the CTR, the CTR is the applicable standard pursuant to 40 C.F.R. section 131.38. The scientific procedures for calculating the individual WQBELs for priority pollutants are based on the 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.

Table F-9. Summary of Final Effluent Limitations and Basis – Treated Groundwater and Non-Process Wastewater

Pollutant	Unit	Effluent Limitations				Performance Goals[6]	Basis[1]
		Average Monthly	Maximum Daily	Instan-taneous Minimum	Instan-taneous Maximum	Avg Monthly/ Max Daily	
pH	standard units	---	---	6.5	8.5		BP
Biochemical Oxygen Demand $(BOD)_5$ @ 20°C	mg/L	20	30	---	---		E, BPJ
	lbs/day[2]	23	35	---	- --		
Oil and Grease	mg/L	10	15	---	---		E, BPJ
	lbs/day[2]	12	18	---	---		
Total Suspended Solids (TSS)	mg/L	50	75	---	---		E, BPJ
	lbs/day[2]	58	88	---	---		
Copper, Total Recoverable	µg/L	4.2	9.7	---	---		CTR/SIP/ TMDL
	lbs/day[2]	0.005	0.011	---	---		
Lead, Total Recoverable	µg/L	21.3	42.7	---	---	2.59/5.19	CTR/SIP/ TMDL
	lbs/day[2]	0.025	0.050	---	---	0.003/0.006	
Selenium, Total Recoverable	µg/L	3.5	8.2[5]	---	---		E
	lbs/day[2]	0.0041	0.011	---	---		
Zinc, Total Recoverable	µg/L	25	70	---	---		CTR/SIP/ TMDL
	lbs/day[2]	0.029	0.082	---	---		
Bis(2 Ethylhexyl)Phthalate	µg/L	5.9	11.8	---	---		CTR/SIP
	lbs/day[2]	0.007	0.014	---	---		
1,1,1-Trichloroethane	µg/L	--	200	---	---		E, BPJ
	lbs/day[2]	--	0.23	---	---		
Acetone	µg/L	--	700	---	---		E
	lbs/day[2]	--	0.82	---	---		
Phenolic Compounds (chlorinated)	µg/L	--	1.0	---	---		E
	lbs/day[2]	--	0.001	---	---		
Sulfides	mg/L	--	1.0	---	---		E
	lbs/day[2]	--	1.2	---	---		
Temperature	Deg. F	---	---	---	86		E
Turbidity	NTU	50	75	---	---		E, BPJ
Xylene	µg/L	--	10	---	---		E
	lbs/day[2]	--	0.012	---	---		
Acute Toxicity	% survival and Pass or Fail for TST approach	[3]					E
Chronic Toxicity	TUc and Pass or Fail for TST approach	[4]					TMDL

[1] BP = Basin Plan; E = Existing; BPJ = Best professional judgment; CTR=California Toxics Rule; SIP=State Implementation Plan, TMDL = Harbor Toxics Total Maximum Daily Load
[2] The mass-based effluent limitations are based on a maximum discharge rate of 0.140 MGD..
[3] The acute toxicity of the effluent shall be such that: the average survival in the undiluted effluent for any three (3) consecutive 96-hourstatic or continuous flow bioassay test shall be at least 90%, and 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 (Attachment E).
[4] The monthly median limit for chronic toxicity of 100% effluent in a critical life stage test is 1.0 TUc and the maximum daily limit for chronic toxicity of 100% effluent in a critical life stage test is 1.6 TUc.
[5] Existing limit retained for selenium as backsliding is not allowed per explanation in section II.D.1.
[6] Performance goals are intended to ensure that effluent concentrations and mass discharges do not exceed levels currently achieved by the permitted facility. These performance goals are not limitations or standards for the regulation of the facility. They act as triggers to determine when treatment technologies fail to produce effluent concentrations consistent with historical levels.

E. Land Discharge Specifications – Not Applicable

F. 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 (40 C.F.R. § 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, 40 C.F.R., requires that all NPDES permits specify requirements for recording and reporting monitoring results. Water Code sections 13267 and 13383 authorize 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 and for which effluent limitations exist at Monitoring Location EFF-001 for Discharge Point 001 will be required as shown in the proposed MRP. To determine compliance with effluent limitations, the proposed monitoring plan includes quarterly monitoring for all constituents that demonstrated

reasonable potential. For those priority pollutants for which effluent limitations were discontinued based on a lack of reasonable potential, regular monitoring has been consolidated into the requirement for annual priority pollutant testing.

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. Discharges from the facility occur intermittently. An acute toxicity test is conducted over a short time period, consistent with the discharge, and measures mortality. This Order includes an effluent limitation for acute toxicity, and monitoring requirements are included in the MRP. The discharge from Discharge Point 001 has been determined to have the reasonable potential to cause or contribute chronic toxicity in receiving waters, in accordance with 40 CFR part 122.44(d), because a chronic toxicity TMDL WLA is applicable to the discharge, WQBELs based on this WLA are required (40 CFR part 122.44(d)(1)(vii)(B)).

D. Receiving Water Monitoring

1. Surface Water

The Regional Water Board is requiring that the Discharger conduct upstream receiving water monitoring for pH, temperature, TDS, hardness, salinity, and CTR priority pollutants at Monitoring Location RSW-001. Sampling for hardness has been added to upstream and downstream sampling requirements to be consistent with other Orders in the Region, and to provide an updated value for conducting RPA. Downstream receiving water monitoring is required for pH, temperature, and dissolved oxygen at Monitoring Location RSW-002, to determine compliance with receiving water limitations and characterize the quality of the receiving water.

2. Groundwater – Not Applicable

E. Other Monitoring Requirements – Not Applicable

VII. RATIONALE FOR PROVISIONS

A. Standard Provisions

Standard Provisions, which apply to all NPDES permits in accordance with 40 C.F.R. section 122.41, and additional conditions applicable to specified categories of permits in accordance with 40 C.F.R. 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 40 C.F.R. section 122.42.

Section 122.41(a)(1) and (b) through (n), 40 C.F.R., 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

40 C.F.R. section 123.25, this Order omits federal conditions that address enforcement authority specified in 40 C.F.R. 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).

B. Special Provisions

1. Reopener Provisions

These provisions are based on 40 C.F.R. 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. Initial Investigation Toxicity Reduction Evaluation Workplan. This provision is based on section 4 of the SIP, Toxicity Control Provisions, which establishes minimum toxicity control requirements for implementing the narrative toxicity objective for aquatic life protection established in the basin plans of the State of California.

b. Harbor Toxics TMDL Water Column, Sediment, and Fish Tissue Monitoring for Dominguez Channel, Torrance Lateral, and Dominguez Channel Estuary Compliance Monitoring Program. This provision is required to implement the Harbor Toxics TMDL. As defined in the Harbor Toxics TMDL, the Discharger is a "responsible party" because it is an "Individual Industrial Permittee". As such, either individually or with a collaborating group, the Discharger shall develop a monitoring and reporting plan (Monitoring Plan) and quality assurance project plan (QAPP) for the water column, sediment, and fish tissue in Dominguez Channel, Torrance Lateral, and Dominguez Channel Estuary. These plans shall follow the "TMDL Element – Monitoring Plan" provisions in Attachment A to Resolution No. R11-008. The Monitoring Plan and QAPP shall be submitted 20 months after the effective date of the TMDL for public review and subsequent Executive Officer approval. The Discharger shall begin monitoring 6 months after the Monitoring Plan and QAPP are approved by the Executive Officer.

3. Best Management Practices Plan and Spill Contingency Plan – Not Applicable

4. Construction, Operation, and Maintenance Specifications

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

5. Special Provisions for Municipal Facilities (POTWs Only) – Not Applicable

6. Other Special Provisions – Not Applicable

7. Compliance Schedules – Not Applicable

VIII. PUBLIC PARTICIPATION

The California Regional Water Quality Control Board, Los Angeles Region (Regional Water Board) is considering the issuance of waste discharge requirements (WDRs) that will serve as a National Pollutant Discharge Elimination System (NPDES) permit for the Northrop Grumman –Hawthorne Site (formerly TRW, Inc.). 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 to all interested parties.

The Regional Water Board's web address is http://www.waterboards.ca.gov/losangeles where the public has been provided access to the agenda including any changes in dates and locations.

B. Written Comments

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

To be fully responded to by staff and considered by the Regional Board, written comments must be received at the Regional Board offices by 5:00 p.m. on October 16, 2013.

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: **November 7, 2013**
Time: **9:00 AM**
Location: **Simi Valley Council Chambers**
2929 Tapo Canyon Road
Simi Valley, California

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. Nature of Hearing

This will be a formal adjudicative hearing pursuant to section 648 et seq. of title 23 of the California Code of Regulations. Chapter 5 of the California Administrative Procedure Act (commencing with section 11500 of the Government Code) will not apply to this proceeding.

Ex Parte Communications Prohibited: As a quasi-adjudicative proceeding, no board member may discuss the subject of this hearing with any person, except during the public hearing itself. Any communications to the Regional Water Board must be directed to staff.

E. Parties to the Hearing

The following are the parties to this proceeding:

The applicant/permittee

Any other persons requesting party status must submit a written or electronic request to staff not later than 20 business days before the hearing. All parties will be notified if other persons are so designated.

F. Public Comments and Submittal of Evidence

Persons wishing to comment upon or object to the tentative waste discharge requirements, or submit evidence for the Board to consider, are invited to submit them in writing to the above address. To be evaluated and responded to by staff, included in the Board's agenda folder, and fully considered by the Board, written comments must be received no later than 5 p.m. on October 11, 2013. Comments or evidence received after that time will be submitted, ex agenda, to the Board for consideration, but only included in the administrative record with express approval of the Chair during the hearing. Additionally, if the Board receives only supportive comments, the permit may be placed on the Board's consent calendar, and approved without oral testimony.

G. Hearing Procedure

The meeting, in which the hearing will be a part, will start at 9:00 a.m. Interested persons are invited to attend. Staff will present the matter under consideration, after which oral statements from parties or interested persons will be heard. For accuracy of the record, all important testimony should be in writing. The Board will include in the

administrative record written transcriptions of oral testimony that is actually presented at the hearing. Oral testimony may be limited to 3 minutes maximum or less for each speaker, depending on the number of persons wishing to be heard. Parties or persons with similar concerns or opinions are encouraged to choose one representative to speak. At the conclusion of testimony, the Board will deliberate in open or closed session, and render a decision.

Parties or persons with special procedural requests should contact staff. Any procedure not specified in this hearing notice will be waived pursuant to section 648(d) of title 23 of the California Code of Regulations. Objections to any procedure to be used during this hearing must be submitted in writing not later than close of 15 business days prior to the date of the hearing. Procedural objections will not be entertained at the hearing.

H. Waste Discharge Requirements Petitions

Any person aggrieved by this action of the Regional Water Board may petition the State Water Board to review the action in accordance with Water Code section 13320 and California Code of Regulations, title 23, sections 2050 and following. The State Water Board must *receive* the petition by 5:00 p.m., 30 days after the date of this Order, except that if the thirtieth day following the date of this Order falls on a Saturday, Sunday, or state holiday, the petition must be received by the State Water Board by 5:00 p.m. on the next business day. Copies of the law and regulations applicable to filing petitions may be found on the Internet at:

http://www.waterboards.ca.gov/public_notices/petitions/water_quality

or will be provided upon request.

The State Water Board's mailing address is the following:

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

I. Information and Copying

The Report of Waste Discharge (ROWD), related documents, tentative effluent limitations and special provisions, comments received, and other information are on file and may be inspected at the address above 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.

J. 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.

K. Additional Information

Requests for additional information or questions regarding this order should be directed to Thomas Siebels at (213) 576-6756.

ATTACHMENT G – STATE WATER BOARD MINIMUM LEVELS (MICROGRAMS/LITER)

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		
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-Chloroethoxyl) 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		

Table 2b - SEMI-VOLATILE SUBSTANCES*	GC	GCMS	LC	COLOR
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

Table 2d – PESTICIDES – PCBs*	GC
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 – LIST OF PRIORITY POLLUTANTS

CTR Number	Parameter	CAS Number	Suggested Analytical Methods
			[1]
1	Antimony	7440360	[1]
2	Arsenic	7440382	[1]
3	Beryllium	7440417	[1]
4	Cadmium	7440439	[1]
5a	Chromium (III)	16065831	[1]
5a	Chromium (VI)	18540299	[1]
6	Copper	7440508	[1]
7	Lead	7439921	[1]
8	Mercury	7439976	[1]
9	Nickel	7440020	[1]
10	Selenium	7782492	[1]
11	Silver	7440224	[1]
12	Thallium	7440280	[1]
13	Zinc	7440666	[1]
14	Cyanide	57125	[1]
15	Asbestos	1332214	[1]
16	2,3,7,8-TCDD	1746016	[1]
17	Acrolein	107028	[1]
18	Acrylonitrile	107131	[1]
19	Benzene	71432	[1]
20	Bromoform	75252	[1]
21	Carbon Tetrachloride	56235	[1]
22	Chlorobenzene	108907	[1]
23	Chlorodibromomethane	124481	[1]
24	Chloroethane	75003	[1]
25	2-Chloroethylvinyl Ether	110758	[1]
26	Chloroform	67663	[1]
27	Dichlorobromomethane	75274	[1]
28	1,1-Dichloroethane	75343	[1]
29	1,2-Dichloroethane	107062	[1]
30	1,1-Dichloroethylene	75354	[1]
31	1,2-Dichloropropane	78875	[1]
32	1,3-Dichloropropylene	542756	[1]
33	Ethylbenzene	100414	[1]
34	Methyl Bromide	74839	[1]
35	Methyl Chloride	74873	[1]
36	Methylene Chloride	75092	[1]
37	1,1,2,2-Tetrachloroethane	79345	[1]
38	Tetrachloroethylene	127184	[1]
39	Toluene	108883	[1]
40	1,2-Trans-Dichloroethylene	156605	[1]
41	1,1,1-Trichloroethane	71556	[1]
42	1,12-Trichloroethane	79005	[1]

CTR Number	Parameter	CAS Number	Suggested Analytical Methods
43	Trichloroethylene	79016	[1]
44	Vinyl Chloride	75014	[1]
45	2-Chlorophenol	95578	[1]
46	2,4-Dichlorophenol	120832	[1]
47	2,4-Dimethylphenol	105679	[1]
48	2-Methyl-4,6-Dinitrophenol	534521	[1]
49	2,4-Dinitrophenol	51285	[1]
50	2-Nitrophenol	88755	[1]
51	4-Nitrophenol	100027	[1]
52	3-Methyl-4-Chlorophenol	59507	[1]
53	Pentachlorophenol	87865	[1]
54	Phenol	108952	[1]
55	2,4,6-Trichlorophenol	88062	[1]
56	Acenaphthene	83329	[1]
57	Acenaphthylene	208968	[1]
58	Anthracene	120127	[1]
59	Benzidine	92875	[1]
60	Benzo(a)Anthracene	56553	[1]
61	Benzo(a)Pyrene	50328	[1]
62	Benzo(b)Fluoranthene	205992	[1]
63	Benzo(ghi)Perylene	191242	[1]
64	Benzo(k)Fluoranthene	207089	[1]
65	Bis(2-Chloroethoxy)Methane	111911	[1]
66	Bis(2-Chloroethyl)Ether	111444	[1]
67	Bis(2-Chloroisopropyl)Ether	108601	[1]
68	Bis(2-Ethylhexyl)Phthalate	117817	[1]
69	4-Bromophenyl Phenyl Ether	101553	[1]
70	Butylbenzyl Phthalate	85687	[1]
71	2-Chloronaphthalene	91587	[1]
72	4-Chlorophenyl Phenyl Ether	7005723	[1]
73	Chrysene	218019	[1]
74	Dibenzo(a,h)Anthracene	53703	[1]
75	1,2-Dichlorobenzene	95501	[1]
76	1,3-Dichlorobenzene	541731	[1]
77	1,4-Dichlorobenzene	106467	[1]
78	3,3'-Dichlorobenzidine	91941	[1]
79	Diethyl Phthalate	84662	[1]
80	Dimethyl Phthalate	131113	[1]
81	Di-n-Butyl Phthalate	84742	[1]
82	2,4-Dinitrotoluene	121142	[1]
83	2,6-Dinitrotoluene	606202	[1]
84	Di-n-Octyl Phthalate	117840	[1]
85	1,2-Diphenylhydrazine	122667	[1]
86	Fluoranthene	206440	[1]

CTR Number	Parameter	CAS Number	Suggested Analytical Methods
87	Fluorene	86737	[1]
88	Hexachlorobenzene	118741	[1]
89	Hexachlorobutadiene	87863	[1]
90	Hexachlorocyclopentadiene	77474	[1]
91	Hexachloroethane	67721	[1]
92	Indeno(1,2,3-cd)Pyrene	193395	[1]
93	Isophorone	78591	[1]
94	Naphthalene	91203	[1]
95	Nitrobenzene	98953	[1]
96	N-Nitrosodimethylamine	62759	[1]
97	N-Nitrosodi-n-Propylamine	621647	[1]
98	N-Nitrosodiphenylamine	86306	[1]
99	Phenanthrene	85018	[1]
100	Pyrene	129000	[1]
101	1,2,4-Trichlorobenzene	120821	[1]
102	Aldrin	309002	[1]
103	alpha-BHC	319846	[1]
104	beta-BHC	319857	[1]
105	gamma-BHC	58899	[1]
106	delta-BHC	319868	[1]
107	Chlordane	57749	[1]
108	4,4'-DDT	50293	[1]
109	4,4'-DDE	72559	[1]
110	4,4'-DDD	72548	[1]
111	Dieldrin	60571	[1]
112	alpha-Endosulfan	959988	[1]
113	beta-Endosulfan	33213659	[1]
114	Endosulfan Sulfate	1031078	[1]
115	Endrin	72208	[1]
116	Endrin Aldehyde	7421934	[1]
117	Heptachlor	76448	[1]
118	Heptachlor Epoxide	1024573	[1]
119	PCB-1016	12674112	[1]
120	PCB-1221	11104282	[1]
121	PCB-1232	11141165	[1]
122	PCB-1242	53469219	[1]
123	PCB-1248	12672296	[1]
124	PCB-1254	11097691	[1]
125	PCB-1260	11096825	[1]
126	Toxaphene	8001352	[1]

[1] Pollutants shall be analyzed using the methods described in 40 CFR Part 136.

ATTACHMENT I – SUMMARY OF REASONABLE POTENTIAL ANALYSIS (RPA)

ATTACHMENT I - RPA ANALYSIS FOR CTR CONSTITUENTS FOR DISCHARGE POINT NO. 001

					CTR Water Quality Criteria (ug/L)							REASONABLE POTENTIAL ANALYSIS (RPA)							
					Freshwater		Saltwater		Human Health for consumption of:											
CTR#	Parameters	Units	CV	MEC	C acute = CMC tot	C chronic = CCC tot	C acute = CMC tot	C chronic = CCC tot	Water & organisms	Organisms only	Lowest C	MEC >= Lowest C	Tier 1 - Need limit?	B Available (Y/N)?	Are all B data points non-detects (Y/N)?	If all data points ND Enter the min detection limit (MDL)	Enter the pollutant B detected max conc (ug/L)	If all B is ND, is MDL>C?	If B>C, effluent limit required
1	Antimony	ug/L	0.6	0.24						4300.00	4300.00	No	No	Y	N		1.9		B<=C, Step 7
2	Arsenic	ug/L	0.6	4.5	340.00	150.00					150.00	No	No	Y	N		1.8		B<=C, Step 7
3	Beryllium	ug/L	0.6	No Criteria						Narrative	No Criteria	No Criteria	No Criteria	Y	Y	0.1		N	No Criteria
4	Cadmium	ug/L	0.6	0.54	2.07	1.43				Narrative	1.43	No	No	Y	N		0.4		B<=C, Step 7
5a	Chromium (III)		0.6	2.1	984.32	117.32				Narrative	117.32	No	No	Y	N		2.6		B<=C, Step 7
5b	Chromium (VI)	ug/L	0.6	2.1	16.29	11.43				Narrative	11.43	No	No	Y	N		0.6		B<=C, Step 7
6	Copper	ug/L	0.814	8.75	9.70						9.70	No	No	Y	N		15		Limit required, B>C & pollutant
7	Lead	ug/L	0.6	0.28	42.70						42.70	No	No	Y	N		1.8		B<=C, Step 7
8	Mercury	ug/L	0.6		Reserved	Reserved				0.051	0.051			Y	Y	0.1		Y	No detected value of B, Step 7
9	Nickel	ug/L	0.6	6.5	261.01	29.02				4600.00	29.02	No	No	Y	N		3		B<=C, Step 7
10	Selenium	ug/L	1.171	9.5	20.00	5.00				Narrative	5.00	Yes	Yes	Y	N		0.94		B<=C, Step 7
11	Silver	ug/L	0.6	1.4	1.23						1.23	Yes	Yes	Y	Y	0.1		N	No detected value of B, Step 7
12	Thallium	ug/L	0.6	0.2						6.30	6.30	No	No	Y	Y	0.2		N	No detected value of B, Step 7
13	Zinc	ug/L	1.303	77	69.60						69.60	Yes	Yes	Y	N		170		Limit required, B>C & pollutant
14	Cyanide	ug/L	0.6	2.2	22.00	5.20				220000.00	5.20	No	No	Y	Y	2.2		N	No detected value of B, Step 7
15	Asbestos	Fibers/L	0.6	No Criteria							No Criteria	No Criteria	No Criteria	Y	Y	5.4		N	No Criteria
16	2,3,7,8 TCDD	ug/L	0.6							0.000000014	0.000000014			Y	Y	2.2		Y	No detected value of B, Step 7
17	Acrolein	ug/L	0.6	4						780	780	No	No	Y	Y	4		N	No detected value of B, Step 7
18	Acrylonitrile	ug/L	0.6							0.66	0.660			Y	Y	0.7		Y	No detected value of B, Step 7
19	Benzene	ug/L	0.6	0.28						71	71.0	No	No	Y	Y	0.28		N	No detected value of B, Step 7
20	Bromoform	ug/L	0.6	0.28						360	360.0	No	No	Y	N		0.75		B<=C, Step 7
21	Carbon Tetrachloride	ug/L	0.6	0.28						4.4	4.40	No	No	Y	Y	0.28		N	No detected value of B, Step 7
22	Chlorobenzene	ug/L	0.6	0.28						21000	21000	No	No	Y	Y	0.36		N	No detected value of B, Step 7
23	Chlorodibromomethane	ug/L	0.6	0.28						34	34.00	No	No	Y	N		2.2		B<=C, Step 7
24	Chloroethane	ug/L	0.6	No Criteria							No Criteria	No Criteria	No Criteria	Y	Y	0.4		N	No Criteria
25	2-Chloroethylvinyl ether	ug/L	0.6	No Criteria							No Criteria	No Criteria	No Criteria	Y	Y	1.8		N	No Criteria
26	Chloroform	ug/L	0.6	No Criteria							No Criteria	No Criteria	No Criteria	Y	N	0.94	0.94	N	No Criteria
27	Dichlorobromomethane	ug/L	0.6	0.28						46	46.00	No	No	Y	N		1.4		B<=C, Step 7
28	1,1-Dichloroethane	ug/L	0.6	No Criteria							No Criteria	No Criteria	No Criteria	Y	Y	0.4		N	No Criteria
29	1,2-Dichloroethane	ug/L	0.6	0.28						99	99.00	No	No	Y	Y	0.28		N	No detected value of B, Step 7
30	1,1-Dichloroethylene	ug/L	0.6	1.1						3.2	3.200	No	No	Y	Y	0.42		N	No detected value of B, Step 7
31	1,2-Dichloropropane	ug/L	0.6	0.28						39	39.00	No	No	Y	Y	0.35		N	No detected value of B, Step 7
32	1,3-Dichloropropylene	ug/L	0.6	0.54						1700	1700	No	No	Y	Y	0.54		N	No detected value of B, Step 7
33	Ethylbenzene	ug/L	0.6	0.25						29000	29000	No	No	Y	Y	0.25		N	No detected value of B, Step 7
34	Methyl Bromide	ug/L	0.6	0.28						4000	4000	No	No	Y	Y	0.4		N	No detected value of B, Step 7
35	Methyl Chloride	ug/L	0.6	No Criteria							No Criteria	No Criteria	No Criteria	Y	Y	0.4		N	No Criteria
36	Methylene Chloride	ug/L	0.6	0.28						1600	1600.0	No	No	Y	N		7		B<=C, Step 7
37	1,1,2,2-Tetrachloroethane	ug/L	0.6	0.28						11	11.00	No	No	Y	Y	0.3		N	No detected value of B, Step 7
38	Tetrachloroethylene	ug/L	0.6	0.32						8.85	8.9	No	No	Y	Y	0.32		N	No detected value of B, Step 7
39	Toluene	ug/L	0.6	0.36						200000	200000	No	No	Y	Y	0.36		N	No detected value of B, Step 7
40	1,2-Trans-Dichloroethylene	ug/L	0.6	0.28						140000	140000	No	No	Y	Y	0.3		N	No detected value of B, Step 7
41	1,1,1-Trichloroethane	ug/L	0.6	No Criteria							No Criteria	No Criteria	No Criteria	Y	Y	0.3		N	No Criteria
42	1,1,2-Trichloroethane	ug/L	0.6	0.28						42	42.0	No	No	Y	Y	0.3		N	No detected value of B, Step 7
43	Trichloroethylene	ug/L	0.6	0.26						81	81.0	No	No	Y	Y	0.26		N	No detected value of B, Step 7
44	Vinyl Chloride	ug/L	0.6	0.3						525	525	No	No	Y	Y	0.4		N	No detected value of B, Step 7
45	2-Chlorophenol	ug/L	0.6	0.094						400	400	No	No	Y	Y	2.8		N	No detected value of B, Step 7
46	2,4-Dichlorophenol	ug/L	0.6	0.094						790	790	No	No	Y	Y	3.3		N	No detected value of B, Step 7
47	2,4-Dimethylphenol	ug/L	0.6	3.3						2300	2300	No	No	Y	Y	3.4		N	No detected value of B, Step 7
48	4,6-dinitro-o-resol (aka2-methyl-4,6-Dinitrophenol)	ug/L	0.6	0.19						765	765.0	No	No	Y	Y	3.8		N	No detected value of B, Step 7
49	2,4-Dinitrophenol	ug/L	0.6	0.19						14000	14000	No	No	Y	Y	1.5		N	No detected value of B, Step 7
50	2-Nitrophenol	ug/L	0.6	No Criteria							No Criteria	No Criteria	No Criteria	Y	Y	3.3		N	No Criteria
51	4-Nitrophenol	ug/L	0.6	No Criteria							No Criteria	No Criteria	No Criteria	Y	Y	3.4		N	No Criteria
52	3-Methyl-4-Chlorophenol (aka P-chloro-m-resol)	ug/L	0.6	No Criteria							No Criteria	No Criteria	No Criteria	Y	Y	2.4		N	No Criteria
53	Pentachlorophenol	ug/L	0.6	0.09	8.72	6.69				8.2	6.69	No	No	Y	Y	3.3		N	No detected value of B, Step 7
54	Phenol	ug/L	0.6	0.0065						4600000	4600000	No	No	Y	Y	1.9		N	No detected value of B, Step 7
55	2,4,6-Trichlorophenol	ug/L	0.6	1.8						6.5	6.5	No	No	Y	Y	4.2		N	No detected value of B, Step 7
56	Acenaphthene	ug/L	0.6	0.094						2700	2700	No	No	Y	Y	2.8		N	No detected value of B, Step 7
57	Acenaphthylene	ug/L	0.6	No Criteria							No Criteria	No Criteria	No Criteria	Y	Y	2.8		N	No Criteria
58	Anthracene	ug/L	0.6	0.094						110000	110000	No	No	Y	Y	2		N	No detected value of B, Step 7
59	Benzidine	ug/L	0.6							0.00054	0.00054			Y	Y	8.3		Y	No detected value of B, Step 7

ATTACHMENT I - RPA ANALYSIS

CTR#	Parameters	Tier 3 - other info. ?	RPA Result - Need Limit?	Reason	HUMAN HEALTH CALCULATIONS Organisms only: AMEL hh = ECA = C hh O only	MDEL/AMEL multiplier	MDEL hh	AQUATIC LIFE CALCULATIONS Saltwater / Freshwater / Basin Plan: ECA acute multiplier (p.7)	LTA acute	ECA chronic multiplier	LTA chronic	Lowest LTA	AMEL multiplier 95	AMEL aq life	MDEL multiplier 99	MDEL aq life	LIMITS: Lowest AMEL	Lowest MDEL	Recommendation
1	Antimony		No	MEC<C & B<=C															No Limit
2	Arsenic		No	MEC<C & B<=C															No Limit
3	Beryllium	No Criteria	Uc	No Criteria															No Limit
4	Cadmium		No	MEC<C & B<=C															No Limit
5a	Chromium (III)		No	MEC<C & B<=C															No Limit
5b	Chromium (VI)		No	MEC<C & B<=C															No Limit
6	Copper		Yes	B>C & pollutant detected in e		2.31		0.25	2.38	0.43		2.38	1.76	4.20	4.07	9.70	4.2	9.7	
7	Lead		Yes	MEC<C & B<=C		2.01		0.32	13.71	0.53		13.71	1.55	21.28	3.11	42.70	21.3	42.7	
8	Mercury		No	UD; effluent ND, MDL>C, and															No Limit
9	Nickel		No	MEC<C & B<=C															No Limit
10	Selenium		Yes	MEC>=C		2.67		0.18	3.55	0.33	1.64	1.64	2.11	3.45	5.64	9.24	3.5	9.2	
11	Silver		Yes	MEC>=C											3.11				
12	Thallium		No	MEC<C & B is ND															No Limit
13	Zinc		Yes	MEC>=C		2.77		0.16	11.26	0.30		11.26	2.23	25.11	6.18	69.6	25	70	
14	Cyanide		No	MEC<C & B is ND															No Limit
15	Asbestos	No Criteria	Uc	No Criteria															No Limit
16	2,3,7,8 TCDD		No	UD; effluent ND, MDL>C, and															No Limit
17	Acrolein		No	MEC<C & B is ND															No Limit
18	Acrylonitrile		No	UD; effluent ND, MDL>C, and															No Limit
19	Benzene		No	MEC<C & B is ND															No Limit
20	Bromoform		No	MEC<C & B<=C															No Limit
21	Carbon Tetrachloride		No	MEC<C & B is ND															No Limit
22	Chlorobenzene		No	MEC<C & B is ND															No Limit
23	Chlorodibromomethane		No	MEC<C & B<=C															No Limit
24	Chloroethane	No Criteria	Uc	No Criteria															No Limit
25	2-Chloroethylvinyl ether	No Criteria	Uc	No Criteria															No Limit
26	Chloroform	No Criteria	Uc	No Criteria															No Limit
27	Dichlorobromomethane		No	MEC<C & B<=C															No Limit
28	1,1-Dichloroethane	No Criteria	Uc	No Criteria															No Limit
29	1,2-Dichloroethane		No	MEC<C & B is ND															No Limit
30	1,1-Dichloroethylene		No	MEC<C & B is ND															No Limit
31	1,2-Dichloropropane		No	MEC<C & B is ND															No Limit
32	1,3-Dichloropropylene		No	MEC<C & B is ND															No Limit
33	Ethylbenzene		No	MEC<C & B is ND															No Limit
34	Methyl Bromide		No	MEC<C & B is ND															No Limit
35	Methyl Chloride	No Criteria	Uc	No Criteria															No Limit
36	Methylene Chloride		No	MEC<C & B<=C															No Limit
37	1,1,2,2-Tetrachloroethane		No	MEC<C & B is ND															No Limit
38	Tetrachloroethylene		No	MEC<C & B is ND															No Limit
39	Toluene		No	MEC<C & B is ND															No Limit
40	1,2-Trans-Dichloroethylene		No	MEC<C & B is ND															No Limit
41	1,1,1-Trichloroethane	No Criteria	Uc	No Criteria															No Limit
42	1,1,2-Trichloroethane		No	MEC<C & B is ND															No Limit
43	Trichloroethylene		No	MEC<C & B is ND															No Limit
44	Vinyl Chloride		No	MEC<C & B is ND															No Limit
45	2-Chlorophenol		No	MEC<C & B is ND															No Limit
46	2,4-Dichlorophenol		No	MEC<C & B is ND															No Limit
47	2,4-Dimethylphenol		No	MEC<C & B is ND															No Limit
48	4,6-dinitro-o-resol (aka2-methyl-4,6-Dinitrophenol)		No	MEC<C & B is ND															No Limit
49	2,4-Dinitrophenol		No	MEC<C & B is ND															No Limit
50	2-Nitrophenol	No Criteria	Uc	No Criteria															No Limit
51	4-Nitrophenol	No Criteria	Uc	No Criteria															No Limit
52	3-Methyl-4-Chlorophenol (aka P-chloro-m-resol)	No Criteria	Uc	No Criteria															No Limit
53	Pentachlorophenol		No	MEC<C & B is ND															No Limit
54	Phenol		No	MEC<C & B is ND															No Limit
55	2,4,6-Trichlorophenol		No	MEC<C & B is ND															No Limit
56	Acenaphthene		No	MEC<C & B is ND															No Limit
57	Acenaphthylene	No Criteria	Uc	No Criteria															No Limit
58	Anthracene		No	MEC<C & B is ND															No Limit
59	Benzidine		No	UD; effluent ND, MDL>C, and															No Limit

CTR#	Parameters	Units	CV	MEC	CTR Water Quality Criteria (ug/L)						Lowest C	REASONABLE POTENTIAL ANALYSIS (RPA)							
					Freshwater		Saltwater		Human Health for consumption of:			MEC >= Lowest C	Tier 1 - Need limit?	B Available (Y/N)?	Are all B data points non-detects (Y/N)?	If all data points ND Enter the min detection limit (MDL)	Enter the pollutant B detected max conc (ug/L)	If all B is ND, is MDL>C?	If B>C, effluent limit required
					C acute = CMC tot	C chronic = CCC tot	C acute = CMC tot	C chronic = CCC tot	Water & organisms	Organisms only									
60	Benzo(a)Anthracene	ug/L	0.6							0.049	0.0490			Y	Y	2		Y	No detected value of B, Step 7
61	Benzo(a)Pyrene	ug/L	0.6							0.049	0.0490			Y	Y	2		Y	No detected value of B, Step 7
62	Benzo(b)Fluoranthene	ug/L	0.6							0.049	0.0490			Y	Y	1.9		Y	No detected value of B, Step 7
63	Benzo(ghi)Perylene	ug/L	0.6	No Criteria							No Criteria	No Criteria	No Criteria	Y	Y	3.8		N	No Criteria
64	Benzo(k)Fluoranthene	ug/L	0.6							0.049	0.0490			Y	Y	2.4		Y	No detected value of B, Step 7
65	Bis(2-Chloroethoxy)Methan	ug/L	0.6	No Criteria							No Criteria	No Criteria	No Criteria	Y	Y	2.8		N	No Criteria
66	Bis(2-Chloroethyl)Ether	ug/L	0.6	0.094						1.4	1.400	No	No	Y	Y	2.8		Y	No detected value of B, Step 7
67	Bis(2-Chloroisopropyl)Ether	ug/L	0.6	0.094						170000	170000	No	No	Y	Y	2.4		N	No detected value of B, Step 7
68	Bis(2-Ethylhexyl)Phthalate	ug/L	0.6	5.4						5.9	5.9	No	No	Y	N		6.7		Limit required, B>C & pollutant
69	4-Bromophenyl Phenyl Ethe	ug/L	0.6	No Criteria							No Criteria	No Criteria	No Criteria	Y	Y	2.8		N	No Criteria
70	Butylbenzyl Phthalate	ug/L	0.6	1.5						5200	5200	No	No	Y	Y	3.8		N	No detected value of B, Step 7
71	2-Chloronaphthalene	ug/L	0.6	0.094						4300	4300	No	No	Y	Y	2.8		N	No detected value of B, Step 7
72	4-Chlorophenyl Phenyl Ethe	ug/L	0.6	No Criteria							No Criteria	No Criteria	No Criteria	Y	Y	2.4		N	No Criteria
73	Chrysene	ug/L	0.6							0.049	0.0490			Y	Y	2.4		Y	No detected value of B, Step 7
74	Dibenzo(a,h)Anthracene	ug/L	0.6							0.049	0.0490			Y	Y	2.8		Y	No detected value of B, Step 7
75	1,2-Dichlorobenzene	ug/L	0.6	0.094						17000	17000	No	No	Y	Y	0.32		N	No detected value of B, Step 7
76	1,3-Dichlorobenzene	ug/L	0.6	0.094						2600	2600	No	No	Y	Y	0.35		N	No detected value of B, Step 7
77	1,4-Dichlorobenzene	ug/L	0.6	0.19						2600	2600	No	No	Y	Y	0.37		N	No detected value of B, Step 7
78	3,3 Dichlorobenzidine	ug/L	0.6	1.5						0.077	0.08	Yes	Yes	Y	Y	2.9		Y	No detected value of B, Step 7
79	Diethyl Phthalate	ug/L	0.6	0.094						120000	120000	No	No	Y	Y	3.4		N	No detected value of B, Step 7
80	Dimethyl Phthalate	ug/L	0.6	0.094						2900000	2900000	No	No	Y	Y	2		N	No detected value of B, Step 7
81	Di-n-Butyl Phthalate	ug/L	0.6	0.19						12000	12000	No	No	Y	N		8.4		B<=C, Step 7
82	2,4-Dinitrotoluene	ug/L	0.6	2.4						9.10	9.10	No	No	Y	Y	7.8		N	No detected value of B, Step 7
83	2,6-Dinitrotoluene	ug/L	0.6	No Criteria							No Criteria	No Criteria	No Criteria	Y	Y	2		N	No Criteria
84	Di-n-Octyl Phthalate	ug/L	0.6	No Criteria							No Criteria	No Criteria	No Criteria	Y	Y	3.4		N	No Criteria
85	1,2-Diphenylhydrazine	ug/L	0.6	0.094						0.54	0.540	No	No	Y	Y	2.4		Y	No detected value of B, Step 7
86	Fluoranthene	ug/L	0.6	0.094						370	370	No	No	Y	Y	2.9		N	No detected value of B, Step 7
87	Fluorene	ug/L	0.6	0.094						14000	14000	No	No	Y	Y	2.9		N	No detected value of B, Step 7
88	Hexachlorobenzene	ug/L	0.6							0.00077	0.00077			Y	Y	2.9		Y	No detected value of B, Step 7
89	Hexachlorobutadiene	ug/L	0.6	0.19						50	50.00	No	No	Y	Y	0.38		N	No detected value of B, Step 7
90	Hexachlorocyclopentadiene	ug/L	0.6	0.094						17000	17000	No	No	Y	Y	4.9		N	No detected value of B, Step 7
91	Hexachloroethane	ug/L	0.6	0.19						8.9	8.9	No	No	Y	Y	3.4		N	No detected value of B, Step 7
92	Indeno(1,2,3-cd)Pyrene	ug/L	0.6							0.049	0.0490			Y	Y	3.4		Y	No detected value of B, Step 7
93	Isophorone	ug/L	0.6	0.094						600	600.0	No	No	Y	Y	2.4		N	No detected value of B, Step 7
94	Naphthalene	ug/L	0.6	No Criteria							No Criteria	No Criteria	No Criteria	Y	Y	2.9		N	No Criteria
95	Nitrobenzene	ug/L	0.6	0.094						1900	1900	No	No	Y	Y	2.4		N	No detected value of B, Step 7
96	N-Nitrosodimethylamine	ug/L	0.6	0.094						8.10	8.10000	No	No	Y	Y	2		N	No detected value of B, Step 7
97	N-Nitrosodi-n-Propylamine	ug/L	0.6	0.094						1.40	1.400	No	No	Y	Y	3.4		Y	No detected value of B, Step 7
98	N-Nitrosodiphenylamine	ug/L	0.6	0.094						16	16.0	No	No	Y	Y	2		N	No detected value of B, Step 7
99	Phenanthrene	ug/L	0.6	No Criteria							No Criteria	No Criteria	No Criteria	Y	Y	3.4		N	No Criteria
100	Pyrene	ug/L	0.6	0.094						11000	11000	No	No	Y	Y	3.9		N	No detected value of B, Step 7
101	1,2,4-Trichlorobenzene	ug/L	0.6	No Criteria							No Criteria	No Criteria	No Criteria	Y	Y	0.48		N	No Criteria
102	Aldrin	ug/L	0.6		3.00					0.00014	0.00014			Y	Y				No detected value of B, Step 7
103	alpha-BHC	ug/L	0.6	0.0024						0.013	0.0130	No	No	Y	Y				No detected value of B, Step 7
104	beta-BHC	ug/L	0.6	0.0038						0.046	0.046	No	No	Y	Y	0.038		N	No detected value of B, Step 7
105	gamma-BHC	ug/L	0.6	0.0028	0.95					0.063	0.063	No	No	Y	Y	0.028		N	No detected value of B, Step 7
106	delta-BHC	ug/L	0.6	No Criteria							No Criteria	No Criteria	No Criteria	Y	Y	0.019		N	No Criteria
107	Chlordane	ug/L	0.6		2.4	0.0043				0.00059	0.00059			Y	Y	0.19		Y	No detected value of B, Step 7
108	4,4'-DDT	ug/L	0.6		1.1	0.001				0.00059	0.00059			Y	Y	0.028		Y	No detected value of B, Step 7
109	4,4'-DDE (linked to DDT)	ug/L	0.6							0.00059	0.00059			Y	Y	0.028		Y	No detected value of B, Step 7
110	4,4'-DDD	ug/L	0.6							0.00084	0.00084			Y	Y	0.028		Y	No detected value of B, Step 7
111	Dieldrin	ug/L	0.6		0.24	0.056				0.00014	0.00014			Y	Y	0.028		Y	No detected value of B, Step 7
112	alpha-Endosulfan	ug/L	0.6	0.0019	0.22	0.056				240	0.0560	No	No	Y	Y	0.028		N	No detected value of B, Step 7
113	beta-Endolsulfan	ug/L	0.6	0.0028	0.22	0.056				240	0.0560	No	No	Y	Y	0.038		N	No detected value of B, Step 7
114	Endosulfan Sulfate	ug/L	0.6	0.0019						240	240	No	No	Y	Y	0.047		N	No detected value of B, Step 7
115	Endrin	ug/L	0.6	0.0019	0.086	0.036				0.81	0.0360	No	No	Y	Y	0.028		N	No detected value of B, Step 7
116	Endrin Aldehyde	ug/L	0.6	0.0019						0.81	0.81	No	No	Y	Y	0.047		N	No detected value of B, Step 7
117	Heptachlor	ug/L	0.6		0.52	0.0038				0.00021	0.00021			Y	Y	0.028		Y	No detected value of B, Step 7
118	Heptachlor Epoxide	ug/L	0.6		0.52	0.0038				0.00011	0.00011			Y	Y	0.028		Y	No detected value of B, Step 7
119-125	PCBs sum (2)	ug/L	0.6			0.014				0.00017	0.00017			Y	Y	1.9		Y	No detected value of B, Step 7
126	Toxaphene	ug/L	0.6		0.73	0.0002				0.00075	0.0002			Y	Y	0.75		Y	No detected value of B, Step 7

Notes:
Ud = Undetermined due to lack of data
Uc = Undetermined due to lack of CTR Water Quality Criteria
C = Water Quality Criteria
B = Background receiving water data

CTR#	Parameters	Tier 3 - other info. ?	RPA Result - Need Limit?	Reason	HUMAN HEALTH CALCULATIONS: Organisms only: AMEL hh = ECA = C hh O only	HUMAN HEALTH CALCULATIONS: Organisms only: MDEL/AMEL multiplier	HUMAN HEALTH CALCULATIONS: Organisms only: MDEL hh	AQUATIC LIFE CALCULATIONS: Saltwater / Freshwater / Basin Plan: ECA acute multiplier (p.7)	LTA acute	ECA chronic multiplier	LTA chronic	Lowest LTA	AMEL multiplier 95	AMEL aq life	MDEL multiplier 99	MDEL aq life	LIMITS: Lowest AMEL	LIMITS: Lowest MDEL	Recommendation
60	Benzo(a)Anthracene		No	UD; effluent ND, MDL>C, and															No Limit
61	Benzo(a)Pyrene		No	UD; effluent ND, MDL>C, and															No Limit
62	Benzo(b)Fluoranthene		No	UD; effluent ND, MDL>C, and															No Limit
63	Benzo(ghi)Perylene	No Criteria	Uc	No Criteria															No Limit
64	Benzo(k)Fluoranthene		No	UD; effluent ND, MDL>C, and															No Limit
65	Bis(2-Chloroethoxy)Methan	No Criteria	Uc	No Criteria															No Limit
66	Bis(2-Chloroethyl)Ether		No	MEC<C & B is ND															No Limit
67	Bis(2-Chloroisopropyl)Ether		No	MEC<C & B is ND															No Limit
68	Bis(2-Ethylhexyl)Phthalate		Yes	B>C & pollutant detected in e	5.9	2.01	11.83652						1.55		3.11		5.9	11.8	
69	4-Bromophenyl Phenyl Ethe	No Criteria	Uc	No Criteria															No Limit
70	Butylbenzyl Phthalate		No	MEC<C & B is ND															No Limit
71	2-Chloronaphthalene		No	MEC<C & B is ND															No Limit
72	4-Chlorophenyl Phenyl Ethe	No Criteria	Uc	No Criteria															No Limit
73	Chrysene		No	UD; effluent ND, MDL>C, and															No Limit
74	Dibenzo(a,h)Anthracene		No	UD; effluent ND, MDL>C, and															No Limit
75	1,2-Dichlorobenzene		No	MEC<C & B is ND															No Limit
76	1,3-Dichlorobenzene		No	MEC<C & B is ND															No Limit
77	1,4-Dichlorobenzene		No	MEC<C & B is ND															No Limit
78	3,3 Dichlorobenzidine		Yes	MEC>=C	0.077	2.01	0.15448						1.55		3.11		0.07700	0.15448	
79	Diethyl Phthalate		No	MEC<C & B is ND															No Limit
80	Dimethyl Phthalate		No	MEC<C & B is ND															No Limit
81	Di-n-Butyl Phthalate		No	MEC<C & B<=C															No Limit
82	2,4-Dinitrotoluene		No	MEC<C & B is ND															No Limit
83	2,6-Dinitrotoluene	No Criteria	Uc	No Criteria															No Limit
84	Di-n-Octyl Phthalate	No Criteria	Uc	No Criteria															No Limit
85	1,2-Diphenylhydrazine		No	MEC<C & B is ND															No Limit
86	Fluoranthene		No	MEC<C & B is ND															No Limit
87	Fluorene		No	MEC<C & B is ND															No Limit
88	Hexachlorobenzene		No	UD; effluent ND, MDL>C, and															No Limit
89	Hexachlorobutadiene		No	MEC<C & B is ND															No Limit
90	Hexachlorocyclopentadiene		No	MEC<C & B is ND															No Limit
91	Hexachloroethane		No	MEC<C & B is ND															No Limit
92	Indeno(1,2,3-cd)Pyrene		No	UD; effluent ND, MDL>C, and															No Limit
93	Isophorone		No	MEC<C & B is ND															No Limit
94	Naphthalene	No Criteria	Uc	No Criteria															No Limit
95	Nitrobenzene		No	MEC<C & B is ND															No Limit
96	N-Nitrosodimethylamine		No	MEC<C & B is ND															No Limit
97	N-Nitrosodi-n-Propylamine		No	MEC<C & B is ND															No Limit
98	N-Nitrosodiphenylamine		No	MEC<C & B is ND															No Limit
99	Phenanthrene	No Criteria	Uc	No Criteria															No Limit
100	Pyrene		No	MEC<C & B is ND															No Limit
101	1,2,4-Trichlorobenzene	No Criteria	Uc	No Criteria															No Limit
102	Aldrin		No	UD; effluent ND, MDL>C, and															No Limit
103	alpha-BHC		No	MEC<C & B is ND															No Limit
104	beta-BHC		No	MEC<C & B is ND															No Limit
105	gamma-BHC		No	MEC<C & B is ND															No Limit
106	delta-BHC	No Criteria	Uc	No Criteria															No Limit
107	Chlordane		No	UD; effluent ND, MDL>C, and															No Limit
108	4,4'-DDT		No	UD; effluent ND, MDL>C, and															No Limit
109	4,4'-DDE (linked to DDT)		No	UD; effluent ND, MDL>C, and															No Limit
110	4,4'-DDD		No	UD; effluent ND, MDL>C, and															No Limit
111	Dieldrin		No	UD; effluent ND, MDL>C, and															No Limit
112	alpha-Endosulfan		No	MEC<C & B is ND															No Limit
113	beta-Endolsulfan		No	MEC<C & B is ND															No Limit
114	Endosulfan Sulfate		No	MEC<C & B is ND															No Limit
115	Endrin		No	MEC<C & B is ND															No Limit
116	Endrin Aldehyde		No	MEC<C & B is ND															No Limit
117	Heptachlor		No	UD; effluent ND, MDL>C, and															No Limit
118	Heptachlor Epoxide		No	UD; effluent ND, MDL>C, and															No Limit
119-125	PCBs sum (2)		No	UD; effluent ND, MDL>C, and															No Limit
126	Toxaphene		No	UD; effluent ND, MDL>C, and															No Limit

Notes:
Ud = Undetermined due to lack of data
Uc = Undetermined due to lack of CTR
C = Water Quality Criteria
B = Background receiving water data