CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD

COLORADO RIVER BASIN REGION

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BOARD ORDER R7-2009-0020
NPDES NO. CA0104248

WASTE DISCHARGE REQUIREMENTS FOR THE IMPERIAL IRRIGATION DISTRICT EL CENTRO GENERATING STATION

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The following Discharger is subject to Waste Discharge Requirements (WDRs) as set forth in this Board Order:

Table 1. Discharger Information

Discharger	**Imperial Irrigation District**
Name of Facility	**El Centro Generating Station**
Facility Address	**485 East Villa Road**
	El Centro, California 92243
	Imperial 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 Imperial Irrigation District's El Centro Generating Station from the discharge point identified below is subject to WDRs as set forth in this Board Order:

Table 2. Discharge Location

Discharge Point	Effluent Description	Discharge Point Latitude	Discharge Point Longitude	Receiving Water
001	Treated Wastewater	32º, 48', 14" N	115 º, 32', 35" W	Central Drain No. 5

Table 3. Administrative Information

This Board Order was adopted by the Regional Water Quality Control Board on:	June 18, 2009
This Board Order shall become effective on:	June 18, 2009
This Board Order shall expire on:	June 17, 2014
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:	December 19, 2013

I, Robert Perdue, Executive Officer, do hereby certify that this Board Order with all attachments is a full, true, and correct copy of an Order adopted by the California Regional Water Quality Control Board, Colorado River Basin Region, on June 18, 2009.

_____
Robert Perdue, Executive Officer

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I. FACILITY INFORMATION

The following Discharger is subject to WDRs as set forth in this Board Order:

Table 4. Facility Information

Discharger	**Imperial Irrigation District**
Name of Facility	**El Centro Generating Station**
Facility Address	**485 East Villa Road**
	El Centro, CA 92243
	Imperial County
Facility Contact, Title, and Phone	**Henryk Olstowski, Assistant Manager Energy** **(760) 339 – 0517**
Mailing Address	**P.O. Box 937** **Imperial, CA 92251**
Type of Facility	**Industrial**
Facility Design Flow	**0.995 million gallons per day (MGD)**

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II. FINDINGS

The California Regional Water Quality Control Board, Colorado River Basin Region (hereinafter Regional Water Board), finds:

A. Background. The Imperial Irrigation District (hereinafter Discharger) is currently discharging pursuant to Board Order R7-2004-0086 and National Pollutant Discharge Elimination System (NPDES) Permit No. CA0104248. The Discharger submitted a Report of Waste Discharge (ROWD) dated December 23, 2008, and applied for a NPDES permit renewal to discharge up to 0.995 MGD of industrial process cooling water from the El Centro Generating Station, hereinafter Facility. The application was deemed complete on January 16, 2009. A site visit was conducted on November 19, 2008, to observe operations and collect additional data to develop permit limitations and conditions.

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

B. Facility Description. The Discharger owns and operates El Centro Generating Station, a gas and oil fired power plant, located in the city of El Centro. The plant consists of two steam units and one combined cycle unit and has a total output of 240 Megawatts (MW). The steam units are rated at 77 MW and 46 MW, and the combined cycle unit is rated at 117 MW (85 MW gas turbine and 32 MW steam turbine). All units are cooled using water circulated through unit specific cooling towers. The facility has a potential to discharge a maximum of 0.995 million gallons per day (MGD) of industrial process cooling water. The process wastewater includes cooling tower blowdown, wash wastes, floor drain wastes, condensate wastes, evaporative cooler wastes, de-mineralizer ion exchanger wastes, and boiler blowdown. Wastewater is discharged from Discharge Point 001 (see table on cover page) to Central Drain No. 5, a tributary to the Alamo River, a water of the United States and a tributary to the Salton Sea. Attachment B provides a map of the area around the Facility. Attachment C provides a flow schematic of the Facility.

C. Legal Authorities. This Board 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 California Water Code (CWC) (commencing with Section 13370). It shall serve as a NPDES permit for point source discharges from this facility to surface waters. This Board Order also serves as WDRs pursuant to Article 4, Chapter 4, Division 7 of the CWC (commencing with Section 13260).

D. Background and Rationale for Requirements. The Regional Water Board developed the requirements in this Board 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 Board Order requirements, is hereby incorporated into this Board Order and

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constitutes part of the Findings for this Board Order. Attachments A through E and G through I are also incorporated into this Board Order.

E. California Environmental Quality Act (CEQA). Pursuant to CWC Section 13389, this action to adopt an NPDES permit is exempt from the provisions of Chapter 3 of CEQA, commencing with Section 21100 of the Public Resources Code.

F. Technology-based Effluent Limitations. Section 301(b) of the CWA and implementing USEPA permit regulations at Section 122.44, Title 40 of the Code of Federal Regulations[1] (CFRs), 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 Board Order must meet minimum federal technology-based requirements based on Effluent Limitations Guidelines and Standards for the Steam Electric Power Generating Point Source Category at Part 423 and Best Professional Judgment (BPJ) in accordance with Part 125, section 125.3. The Regional Water Board has considered the factors listed in CWC Section 13241 in establishing these requirements. A detailed discussion of the technology-based effluent limitations development is included in the Fact Sheet (Attachment F).

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

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

H. Water Quality Control Plans. The Regional Water Board adopted a Water Quality Control Plan for the Colorado River Basin (hereinafter Basin Plan) on November 17, 1993 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 (includes amendments adopted by the Regional Water Board to date). 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. Consistent with this state policy, effluent limitations

[1] All further regulatory references are to Title 40 of the CFRs unless otherwise indicated.

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specified in this Board Order protect existing and potential beneficial uses of the Central Drain No. 5, which are described in Table 5:

Table 5. Basin Plan Beneficial Uses

Discharge Point	Receiving Water Name	Beneficial Use(s)
001	Central Drain No. 5 (Imperial Valley Drains)	Existing: Fresh Water Replenishment (FRSH); Water Contact Recreation (REC-I)[1, 2]; Non-Contact Water Recreation (REC-II) [1]; Warm Freshwater Habitat (WARM); Wildlife Habitat (WILD); and Support of Rare, Threatened, or Endangered Species (RARE) [3].

[1] Unauthorized use.
[2] The only REC-I usage that is known to occur is from infrequent fishing activity.
[3] Rare, endangered, or threatened wildlife exists in or utilizes some of these waterway(s). If the RARE beneficial use may be affected by a water quality control decision, responsibility for substantiation of the existence of rare, endangered, or threatened species on a case-by case basis is upon the California Department of Fish and Game on its own initiative and/or at the request of the Regional Board; and such substantiation must be provided within a reasonable time frame as approved by the Regional Board.

Requirements of this Board Order implement the Basin Plan.

The immediate receiving water is the Central Drain No. 5, which is a part of the Imperial Valley Drains. The 2006 USEPA 303(d) list of impaired waters (hereinafter 303(d) List) classifies the Imperial Valley Drains as impaired by dieldrin, DDT, endosulfan, PCBs, toxaphene and selenium. Further, the Alamo River, to which the Central Drain No. 5 is tributary, is impaired by chlorpyrifos, DDT, dieldrin, PCBs, selenium, and toxaphene.

In addition, the 303(d) List classifies the Salton Sea as impaired by nutrients, salt and selenium. Tributaries to the Salton Sea, including the Alamo River, may be affected by the development of TMDLs for the Salton Sea. No TMDL has been developed to date for the Salton Sea, although a nutrient TMDL is under development for the Salton Sea that may impact the permitted discharges to tributaries to the Salton Sea (i.e., Alamo River). The nutrient TMDL for the Salton Sea is tentatively scheduled for completion in 2009.

I. **Thermal Plan.** The State Water Board adopted the Water Quality Control Plan for Control of Temperature in the Coastal and Interstate Water and Enclosed Bays and Estuaries of California (Thermal Plan) on May 18, 1972, and amended this plan on September 18, 1975. This plan contains temperature objectives for surface waters. The Thermal Plan does not apply to these discharges to the Central Drain No. 5.

J. **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.

K. **State Implementation Policy.** On March 2, 2000, the State Water Board adopted the Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed

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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 Board Order implement the SIP.

The Discharger conducted a Biological Assessment at the location of the discharge. The objective of the Biological Assessment was to determine whether water, plant life, and aquatic life at the discharge location are more typical of a saltwater or a freshwater environment. On May 23, 2008, the Discharger submitted the results of the Biological Assessment to USEPA requesting approval to use alternative freshwater criteria at the location of the discharge. The Biological Assessment was conducted at the discharge location into Central Drain No. 5. Sampling stations were established at the outfall, 480 meters upstream from the outfall, and 600 meters downstream from the outfall. At each sampling station the following data were collected: water salinity, dominant vegetation, and aquatic invertebrates. The water salinity ranged from 1.2-2.0 parts per thousand at the three sampling locations. According to the Biological Assessment, obligate freshwater species that were observed included crayfish, water boatman, dragon fly, mosquito fish, water fowl, California palm and cattails. In addition, plant species included salt cedar and salt heliotrope which are equally well adapted to fresh water environments. This assessment determined that the applicable reach of the Central Drain No. 5 is characterized as freshwater; therefore, saltwater aquatic life criteria are not applicable for this reach of the Central Drain No. 5. USEPA reviewed the Biological Assessment prepared by the Discharger. On November 10, 2008, USEPA issued a tentative approval of the findings in the Discharger's Biological Assessment and the application of water quality criteria for the protection of freshwater aquatic life.

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L. 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. Where a compliance schedule for a final effluent limitation exceeds 1 year, the Board Order must include interim numeric limitations for that constituent or parameter. Where allowed by the Colorado River Basin Region, compliance schedules and interim effluent limitations or discharge specifications may also be granted to allow time to implement a new or revised water quality objective. This Board Order carries forward a compliance schedule and interim effluent limitations established by the previous Board Order (R7-2004-0086).

M. 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.

N. Stringency of Requirements for Individual Pollutants. This Board Order contains both technology-based effluent limitations and water quality-based effluent limitations for individual pollutants. The technology-based effluent limitations consist of restrictions on pH and polychlorinated biphenyls (PCBs). Restrictions on pH and PCBs are discussed in sections IV.B of the Fact Sheet. This Board Order's technology-based pollutant restrictions implement the minimum, applicable federal technology-based requirements. These limitations are not more stringent than required by the CWA.

Water quality-based effluent limitations have been scientifically derived to implement water quality objectives that protect beneficial uses. Both the beneficial uses and the water quality objectives have been approved pursuant to federal law and are the applicable federal water quality standards. To the extent that toxic pollutant water quality-based effluent limitations were derived from the CTR, the CTR is the applicable standard pursuant to section 131.38. The scientific procedures for calculating the individual water quality-based effluent limitations for priority pollutants are based on the CTR-SIP, which was approved by USEPA on May 18, 2000. All beneficial uses and water quality objectives contained in the Basin Plan were approved under state law and submitted to and approved by USEPA prior to May 30, 2000. Any water quality objectives and beneficial uses submitted to USEPA prior to May 30, 2000, but not approved by USEPA before that date, are nonetheless "applicable water quality standards for purposes of the CWA" pursuant to section 131.21(c)(1). Collectively, this Board Order's restrictions on individual pollutants are no more stringent than required to implement the requirements of the CWA.

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O. Antidegradation Policy. 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 incorporates the federal antidegradation policy where the federal policy applies under federal law. Resolution No. 68-16 requires that existing quality of waters 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 Discharger submitted an Antidegradation Analysis Report on March 27, 2008 in response to the Regional Water Board's request in a letter dated November 16, 2007. As discussed in detail in the Fact Sheet the permitted discharge is consistent with the antidegradation provision of section 131.12 and State Water Board Resolution No. 68-16.

P. Anti-Backsliding Requirements. Sections 402(o)(2) and 303(d)(4) of the CWA and federal regulations at Title 40, CFRs Section 122.44(l) prohibit backsliding in NPDES permits. These anti-backsliding provisions require effluent limitations in a reissued permit to be as stringent as those in the previous permit, with some exceptions where limitations may be relaxed. Some effluent limitations in this Board Order are less stringent than those in the previous Board Order. The previous Board Order (R7-2004-0086) established numeric effluent limitations for Total Dissolved Solids (TDS). Due to the incorrect interpretation of the Basin Plan receiving water quality objectives for TDS as numeric effluent limitations, the numeric effluent limitations for TDS are replaced by a narrative effluent limitation and a numeric receiving water limitation for TDS to accurately apply the water quality objectives of the Basin Plan. This relaxation of effluent limitations is consistent with the exception to the anti-backsliding requirements of the CWA provided in Section 402(o)(2)(B)(ii) and federal regulations. Further, this Board Order revises some effluent limitations to reflect USEPA approval of application of water quality criteria for the protection of freshwater aquatic life, which is discussed in detail in section IV.C of the Fact Sheet. This Board Order revises characterization of the immediate receiving water, the Central Drain No. 5, as a freshwater environment and establishes effluent limitations based on the CTR and SIP freshwater criteria for the discharge. Therefore, based on consideration of new information (i.e., discharge monitoring data and reasonable potential analysis reflecting revised applicable water quality criteria), this Board Order discontinues effluent limitations for nickel, thallium, and zinc because the discharge did not demonstrate a reasonable potential to cause or contribute to an excursion above applicable water quality standards for nickel, thallium, and zinc. In addition, effluent limitations for copper and cyanide are revised based on the application of revised water quality criteria, current discharge monitoring data, and reasonable potential analysis. This relaxation of effluent limitations is consistent with the anti-backsliding requirements of the CWA and federal regulations.

Q. Endangered Species Act. This Board 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 Sections 2050 to 2097) or the Federal Endangered Species Act (16 U.S.C.A. Sections 1531 to 1544). This Board Order requires compliance with effluent limits, receiving water limits, and other requirements to protect the beneficial

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uses of waters of the state. The Discharger is responsible for meeting all requirements of the applicable Endangered Species Act.

R. Monitoring and Reporting. Section 122.48 requires that all NPDES permits specify requirements for recording and reporting monitoring results. CWC Sections 13267 and 13383 authorizes the Regional Water Board to require technical and monitoring reports. The Monitoring and Reporting Program establishes monitoring and reporting requirements to implement federal and State requirements. This Monitoring and Reporting Program is provided in Attachment E.

S. Standard and Special Provisions. Standard Provisions, which apply to all NPDES permits in accordance with section 122.41, and additional conditions applicable to specified categories of permits in accordance with section 122.42, are provided in Attachment D. The Discharger must comply with all standard provisions and with those additional conditions that are applicable under section 122.42. The Regional Water Board has also included in this Board Order special provisions applicable to the Discharger. A rationale for the special provisions contained in this Board Order is provided in the attached Fact Sheet.

T. Provisions and Requirements Implementing State Law. The provisions/ requirements in subsections IV.B, IV.C, V.B, and VI.C.4. of this Board 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.

U. Notification of Interested Parties. The Regional Water Board has notified the Discharger and interested agencies and persons of its intent to prescribe WDRs 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 Board Order.

V. 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 Board Order.

THEREFORE, IT IS HEREBY ORDERED, that Board Order R7-2004-0086 is rescinded upon the effective date of this Board Order except for enforcement purposes, and, in order to meet the provisions contained in division 7 of the CWC (commencing with Section 13000) and regulations adopted thereunder, and the provisions of the federal CWA and regulations and guidelines adopted thereunder, the Discharger shall comply with the requirements in this Board Order.

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III. DISCHARGE PROHIBITIONS

A. Bypass, overflow, discharge or spill of untreated or partially treated waste is prohibited.

B. The discharge of waste to land not owned or controlled by the Discharger is prohibited.

C. Discharge of treated wastewater at a location or in a manner different from that described in Findings of this Board Order is prohibited.

D. Except as allowed under the Standard Provisions for NPDES permits (hereinafter Standard Provisions), included as Attachment D, the bypass or overflow of untreated wastewater or wastes to the Central Drain No. 5 is prohibited.

E. The Discharger shall not accept waste in excess of the design treatment or disposal capacity of the system.

F. The discharge shall not cause degradation of any water supply.

G. The treatment or disposal of wastes from the facility shall not cause pollution or nuisance as defined in Section 13050, subdivisions (l) and (m), respectively, of the CWC.

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IV. EFFLUENT LIMITATIONS AND DISCHARGE SPECIFICATIONS

A. Effluent Limitations – Discharge Point 001

1. Final Effluent Limitations – Discharge Point 001

a. The Discharger 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:

Table 6. Final Effluent Limitations

Parameter	Units	Effluent Limitations				
		Average Monthly	Average Weekly	Maximum Daily	Instantaneous Minimum	Instantaneous Maximum
Flow	MGD	0.995	---	---	---	---
pH	Standard Units	---	---	---	6.0	9.0
Total Residual Chlorine	mg/L	0.01	---	---	---	0.02
	lbs/day[2]	0.083				0.17
Copper, Total Recoverable[1]	µg/L	22	---	52	---	---
	lbs/day[2]	0.18	---	0.43	---	---
Cyanide, Free[1]	µg/L	4.3	---	8.5	---	---
	lbs/day[2]	0.04	---	0.07	---	---
Selenium, Total Recoverable[1]	µg/L	4.1	---	8.2	---	---
	lbs/day[2]	0.03	---	0.07	---	---

[1] Final effluent limitations are in effect starting July 1, 2009.

[2] The mass-based effluent limitations are based on a design capacity of 0.995 MGD.

b. The effluent shall not contain heavy metals, chemicals, pesticides or other constituents in concentrations toxic to aquatic life.

c. **PCBs**: There shall be no discharge of polychlorinated biphenyl compounds such as those commonly used for transformer liquid.

d. **Toxicity:** There shall be no acute or chronic toxicity in the treatment plant effluent nor shall the treatment plant effluent cause any acute or chronic toxicity in the receiving water, as defined in section V of the MRP. All waters shall be maintained free of toxic substances in concentrations which are toxic to, or which produce detrimental physiological responses in human, plant, animal, or indigenous aquatic life. Compliance with this objective will be determined by use of indicator organisms, analyses of species diversity, population density, growth anomalies, or bioassays of appropriate duration or other appropriate methods specified by the Regional Water Board.

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e. Total Dissolved Solids: Discharges of wastes or wastewater shall not increase the total dissolved solids content of receiving waters, unless it can be demonstrated to the satisfaction of the Regional Water Board that such an increase in total dissolved solids does not adversely affect beneficial uses of receiving waters.

2. Interim Effluent Limitations

a. From June 18, 2009 through June 30, 2009 the Discharger shall maintain compliance with the following limitations at Discharge Point 001, with compliance measured at Monitoring Location EFF-001 as described in the attached MRP. These interim effluent limitations shall apply in lieu of the corresponding final effluent limitations specified for the same parameters during the time period indicated in this provision.

Table 7. Interim Effluent Limitations

Parameter	Date Interim Effluent Limitation Becomes Effective	Date Interim Effluent Limitation Expires	Units	Average Monthly Interim Effluent Limitation (AMEL)	Maximum Daily Interim Effluent Limitation (MDEL)
Copper, Total Recoverable	June 18, 2009[1]	June 30, 2009[1]	µg/L	200.0	200.0
			lbs/day[2]	1.7	1.7
Selenium, Total Recoverable	June 18, 2009[1]	June 30, 2009[1]	µg/L	66.0	66.0
			lbs/day	0.55	0.55
Cyanide, Free	June 18, 2009[1]	June 30, 2009[1]	µg/L	10.0	10.0
			lbs/day	0.08	0.08

1. These interim effluent limitations were established in the previous Board Order (R7-2004-0086) and are carried forward in this Board Order (R7-2009-0020); therefore, the effective date is the effective date of this Board Order (R7-2009-0020). Final effluent limitations are established in section IV.A.1, Table 6, above.
2. The mass-based effluent limitations are based on a design capacity of 0.995 MGD.

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 Board Order. The discharge shall not cause the following in the Central Drain No. 5:

1. Result in the concentration of dissolved oxygen in the receiving water to fall below 5.0 mg/L. When dissolved oxygen in the receiving water is already below 5.0 mg/L, the discharge shall not cause any further depression.

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2. Result in the presence of oil, grease, floating material (liquids, solids, foam and scum) or suspended material in amounts that create a nuisance or adversely affect beneficial uses.

3. Result in the deposition of pesticides or combination of pesticides detectable in concentrations that adversely affects beneficial uses.

4. Result in discoloration in the receiving water that adversely affects beneficial uses.

5. Result in the discharge of biostimulatory substances in concentrations that promote aquatic growths to the extent that such growths cause nuisance or adversely affect beneficial uses.

6. Result in an increase turbidity that adversely affects beneficial uses.

7. Result in the normal ambient pH of the receiving water to fall below 6.0 or exceed 9.0 units.

8. Result in the natural receiving water temperature to be altered, unless it can be demonstrated to the satisfaction of the Regional Water Board that such alteration in temperature does not adversely affect beneficial uses.

9. Result in the deposition of material that causes nuisance or adversely affects beneficial uses.

10. Result in the discharge of an individual chemical or combination of chemicals in concentrations that adversely affect beneficial uses.

11. Result in toxic pollutants to be present in the water column, sediments or biota in concentrations that adversely affect beneficial uses or that produce detrimental physiological responses in human, plant, animal, or aquatic life.

12. Result in an increase in taste or odor-producing substances that adversely affect beneficial uses.

13. Result in the violation of any applicable water quality standard for receiving waters adopted by the Regional Water Board or the State Water Board as required by the Federal CWA and regulations adopted thereunder. If more stringent applicable water quality standards are promulgated or approved pursuant to CWA Section 303 or amendments thereto, the Regional Water Board will revise and modify this Permit in accordance with such more stringent standards.

14. Result in the concentration of total dissolved solids in the Central Drain No. 5 to exceed an annual average concentration of 4,000 mg/L or a maximum daily concentration of 4,500 mg/L.

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B. Groundwater Limitations – Not Applicable

VI. PROVISIONS

A. Standard Provisions

1. **Federal Standard Provisions.** The Discharger shall comply with all Standard Provisions included in Attachment D of this Board Order.

2. **Regional Water Board Standard Provisions.** The Discharger shall comply with the following provisions:

   a. The Facility shall be protected from any washout or erosion of wastes or covering material, and from any inundation, which could occur as a result of floods having a predicted frequency of once in 100 years.

   b. The Discharger shall comply with all conditions of this Board Order. Noncompliance constitutes a violation of the Federal Clean Water Act and Porter-Cologne Water Quality Control Act, and is grounds for enforcement action; for permit termination, revocation and reissuance, or modification of WDRs; or denial of a permit renewal application.

   c. The Discharger shall ensure that all site-operating personnel are familiar with the content of this Board Order, and shall maintain a copy of this Board Order at the site.

   d. The Discharger shall immediately notify the Regional Water Board by phone at (760) 346-7491, the local health officer or directors of environmental health with jurisdiction over affected water bodies and the Office of Emergency Services by phone at (800) 852-7550 to report any noncompliance that may endanger human health or the environment as soon as: (1) the Discharger has knowledge of the discharge, (2) notification is possible, and (3) notification can be provided without substantially impeding cleanup or other emergency measures.

   Although States and Regional Water Boards do not have duties as first responders, it is important to ensure that the agencies that do have first responder duties are notified in a timely manner in order to protect public health and beneficial uses. To carry out this objective, the following notification requirements are to be implemented:

   i. For any discharges of sewage that result in a discharge to a drainage channel or surface water, the Discharger shall, as soon as possible, but not later than two (2) hours after becoming aware of the discharge, notify the State Office of Emergency Services, the local health officer or directors of environmental health with jurisdiction over affected water bodies, and the Regional Water Board.

   ii. As soon as possible, but no later than twenty-four (24) hours after becoming aware of a discharge to a drainage channel or a surface water,

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the Discharger shall submit to the Regional Water Board a certification that the State Office of Emergency Services and the local health officer or directors of environmental health with jurisdiction over the affected water bodies have been notified of the discharge.

iii. During non-business hours, the Discharger shall leave a voice message on the Regional Water Board's voice recorder. A written report shall also be provided within five (5) business days of the time the Discharger becomes aware of the incident. The written report shall contain a description of the noncompliance and its cause, the period of noncompliance, the anticipated time to achieve full compliance, and the steps taken or planned, to reduce, eliminate, and prevent recurrence of the noncompliance. The Discharger shall report all intentional or unintentional spills in excess of one thousand (1,000) gallons occurring within the facility or collection system to the Regional Water Board in accordance with the above time limits.

e. Prior to any change in ownership or management of the Facility, the Discharger shall transmit a copy of this Board Order to the succeeding owner/operator, and forward a copy of the transmittal to the Regional Board.

f. Prior to any modifications in this facility, which would result in material change in the quality or, quantity of wastewater treated or discharged, or any material change in the location of discharge, the Discharger shall report all pertinent information in writing to the Regional Water Board and obtain revised requirements before any modifications are implemented.

g. Adequate measures shall be taken to assure that flood or surface drainage waters do not erode or otherwise render portions of the discharge facilities inoperable.

h. This Board Order does not authorize violation of any federal, state, or local laws or regulations.

B. Monitoring and Reporting Program (MRP) Requirements

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

C. Special Provisions

1. Reopener Provisions

a. This Board 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 Board 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

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parameters. Additional requirements may be included in this Board Order as a result of the special condition monitoring data.

b. This Board Order may be modified, rescinded and reissued, for cause. The filing of a request by the Discharger for a Board Order modification, rescission and reissuance, or a notification of planned changes or anticipated noncompliance does not stay any Board Order condition. Causes for modification include the promulgation of new regulations, modification of land application plans, or modification in sludge use or disposal practices, or adoption of new regulations by the State Water Board or the Regional Water Board, including revisions to the Basin Plan.

c. The CWA requires the Regional Water Board to modify, or terminate and reissue, the NPDES permit if a Discharger must implement a pretreatment program. Public notice and a comment period are mandatory for these actions.

d. This Board Order may be reopened and the Whole Effluent Toxicity (WET) Requirements, contained in section V of the MRP may be modified to address changes to USEPA or State Water Board policies or guidance regarding the testing or reporting requirements for WET testing.

e. TMDLs for dieldrin, DDT, endosulfan, polychlorinated biphenyls (PCBs), chlorpyrifos, nutrients, salt, selenium, and toxaphene are to be developed by the Regional Water Board. The permit may be reopened and modified to include appropriate requirements necessary to fully implement the approved TMDL, if needed.

2. **Special Studies, Technical Reports and Additional Monitoring Requirements**

a. Copper, Selenium and Cyanide Effluent Limitation Compliance Evaluation. The Discharger shall conduct a compliance evaluation for the copper, selenium and cyanide effluent limitations. The Discharger shall evaluate options for reducing concentrations of copper, selenium and cyanide in the discharge, perhaps through continuation of pilot studies of alternative wastewater treatment options. The Discharger shall work with the Regional Water Board to investigate possible source control and treatment options to ensure compliance with the effluent limitations for copper, selenium and cyanide. The Discharger will submit to the Regional Water Board a report detailing all monitoring activities, treatment options, potential cost-effective control measures, and recommend actions to comply with the final effluent limitations within 90 days of the effective date of this Board Order.

b. Whole Effluent Toxicity Testing. For compliance with the Basin Plan's narrative toxicity objective, this Board Order requires the Discharger to conduct acute and chronic whole effluent toxicity (WET) testing, as specified in MRP section V. Furthermore, this Provision requires the Discharger to investigate the causes of, and identify corrective actions to reduce or eliminate effluent toxicity. If the Discharge exceeds the numeric toxicity monitoring triggers specified in section V.D of the MRP, this Board Order requires the Discharger to initiate

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accelerated WET testing. If the Discharger exceeds the numeric toxicity monitoring triggers during the accelerated WET testing the Discharger is required to initiate a Toxicity Reduction Evaluation (TRE) and Toxicity Identification Evaluation (TIE) in accordance with an approved TRE Work Plan. A TRE is a site-specific study conducted in a stepwise process to identify the source(s) of toxicity, evaluate effective control measures for effluent toxicity and confirm the reduction in effluent toxicity. This Provision includes requirements for the Discharger to develop and submit a TRE Work Plan and, if necessary, initiate accelerated WET testing and a TRE/TIE.

c. **Toxicity Reduction Evaluation (TRE) Work Plan**. Within 90 days of the effective date of this Board Order, the Discharger shall submit to the Regional Water Board a TRE Work Plan for approval by the Executive Officer. The TRE Work Plan shall outline the procedures for identifying the source(s) of, and reducing or eliminating effluent toxicity. The TRE Work Plan must be developed in accordance with USEPA guidance provided in manuals EPA/600/2-88/070 (industrial) or EPA/833B-99/002 (municipal) and be of adequate detail to allow the Discharger to immediately initiate the TRE Work Plan upon notification from the WET testing laboratory of effluent toxicity. This plan shall describe the steps the Discharger intends to follow in the event that toxicity is detected, and should include at a minimum:

   i. Specific actions the Discharger will take to investigate and identify the cause(s) of toxicity, including a TRE/TIE WET monitoring schedule;

   ii. Specific actions the Discharger will take to mitigate the impact of the discharge and prevent the recurrence of toxicity; and

   iii. A schedule for these actions.

d. **Translator Study.** Should the Discharger wish to use a translator for metals and selenium other than the default USEPA conversion factors listed in Tables 2 and 3 of the CTR, the Discharger shall submit a written request to the Executive Officer. Otherwise, the USEPA conversion factors shall remain the default standard used when calculating water quality-based effluent limitations for metals and selenium.

3. **Best Management Practices and Pollution Prevention**

a. **Pollutant Minimization Program**

The Discharger shall develop and conduct a Pollutant Minimization Program (PMP) as further described below when there is evidence (e.g., sample results reported as “Detected, but Not Quantified” (DNQ) when the effluent limitation is less than the Method Detection Limit (MDL), sample results from analytical methods more sensitive than those methods required by this Board Order, presence of whole effluent toxicity, health advisories for fish consumption, results of benthic or aquatic organism tissue sampling) that a priority pollutant is present in the effluent above an effluent limitation and either:

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i. A sample result is reported as DNQ and the effluent limitation is less than the RL; or

ii. A sample result is reported as ND and the effluent limitation is less than the MDL, using definitions described in Attachment A and reporting protocols described in MRP section X.B.4.

The PMP shall include, but not be limited to, the following actions and submittals acceptable to the Regional Water Board:

i. An annual review and semi-annual monitoring of potential sources of the reportable priority pollutant(s), which may include fish tissue monitoring and other bio-uptake sampling;

ii. Quarterly monitoring for the reportable priority pollutant(s) in the influent to the wastewater treatment system;

iii. Submittal of a control strategy designed to proceed toward the goal of maintaining concentrations of the reportable priority pollutant(s) in the effluent at or below the effluent limitation;

iv. Implementation of appropriate cost-effective control measures for the reportable priority pollutant(s), consistent with the control strategy; and

v. An annual status report that shall be sent to the Regional Water Board including:

(a) All PMP monitoring results for the previous year;

(b) A list of potential sources of the reportable priority pollutant(s);

(c) A summary of all actions undertaken pursuant to the control strategy; and

(d) A description of actions to be taken in the following year.

b. Storm Water

i. In the event there are storm water discharges associated with industrial activities, the Discharger shall submit a Notice of Intent and/or maintain coverage under the Water Quality Board Order 97-03-DWQ, NPDES General Permit No. CAS000001 for Discharges of Storm Water Associated with Industrial Activities.

(a) All storm water discharges from this facility must comply with the lawful requirements of municipalities, counties, drainage districts, and other local agencies, regarding discharges of storm water to storm water drain systems or other courses under their jurisdiction.

(b) Storm water discharges from the facility shall not cause or threaten to cause pollution or contamination.

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(c) Storm water discharges from the facility shall not contain hazardous substances equal to or in excess of a reportable quantity listed in Part 117 and/or Part 302.

4. **Construction, Operation and Maintenance Specifications**

a. Facility and Treatment Operation

i. The Discharger shall, at all times, properly operate and maintain all systems and components of collection, treatment and control which are installed or used by the Discharger to achieve compliance with the conditions of this Board Order. Proper operation and maintenance includes effective performance, adequate process controls and appropriate quality assurance procedures. This provision requires the operation of backup or auxiliary facilities or similar systems when necessary to achieve compliance with the conditions of this Board Order. All systems both in service and reserved, shall be inspected and maintained on a regular basis. Records shall be kept of the inspection results and maintenance performed and made available to the Regional Water Board upon demand.

ii. Temporary power and/or adequate storage capacity shall be provided to maintain the plant in operation in the event of commercial power failure.

iii. Adequate measures shall be taken to assure that unauthorized persons are effectively excluded from contact with the wastewater disposal facilities.

iv. The Discharger shall implement acceptable operation and maintenance at the facility so that needed repair and maintenance are performed in a timely manner.

b. Antidegradation Analysis and Engineering Report for Proposed Plant Improvements

All proposed changes to the Facility that will result in the increase in flows, facility changes, and/or change in the nature and character of the discharge, must be reviewed and approved by the Executive Officer, prior to the start of construction of changes to the treatment facility. The Discharger shall submit a technical report that provides an analysis and justification to support the proposed plant improvement project. At a minimum, the report will evaluate treatment capacity, address mass increases of pollutants discharged, and propose additional units as necessary to enable adequate treatment. The report shall include time schedules for the ongoing and planned projects and address project status. The report shall also include documentation that any proposed increases in discharges will not violate the State Water Board's antidegradation policy. This analysis is necessary before the Board will consider approving any adjustment in effluent limitations.

c. Operations Plan for Proposed Plant Upgrade

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At least 30 days in advance of the operation of the modified treatment facility, the Discharger shall submit an Operations Plan in accordance with CWC Section 13385(j)(1)(D).

d. Spill Response Plan

The Discharger shall develop and submit a Spill Response Plan (SRP) and revise if needed within 60 days after the effective date of this Board Order. Revised plans shall be submitted for Regional Water Board staff review. Thereafter, the plan shall be updated annually, and shall be available for staff review during Regional Water Board inspections. The Discharger shall ensure that all operating personnel are familiar with the contents of the SRP. A copy of the SRP shall be maintained at the site and shall be accessible to all operating personnel.

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

6. **Other Special Provisions**

a. The Discharger may be required to submit technical reports as directed by the Regional Water Board's Executive Officer.

b. The Discharger shall exclude from the wastewater treatment plant any liquid or solid waste that could adversely affect the plant operation or effluent quality. The excluded liquid or solid waste shall be disposed of in accordance with applicable regulations.

7. **Compliance Schedules**

a. Deliverables and Due Dates. The Discharger shall comply with the following compliance schedules as summarized in Table 8:

Table 8. Compliance Schedule

Activity	Description	Due Date
TRE Workplan	Description of steps the Discharger will take in the event toxicity is detected. The workplan should describe investigation and evaluation techniques used to identify sources of toxicity; method for maximizing in-house efficiency; and identify the party who will conduct the TIE	Within 90 days of the effective date of this Board Order.
Copper, Selenium and Cyanide Effluent Limitation Compliance Evaluation	The Discharger shall conduct a compliance evaluation for the copper, selenium, and cyanide effluent limitations, including evaluating options for reducing concentrations of copper, selenium, and cyanide in the discharge, perhaps through continuation of pilot studies of alternative wastewater treatment options. The Discharger shall work with the Regional Board to investigate possible source control and treatment options to ensure compliance with the effluent limitations for copper, selenium, and cyanide. The Discharger will submit to the Regional Water Board a report detailing all monitoring activities, treatment options, potential cost-effective control measures, and recommend actions to comply with the final effluent limitations.	Within 90 days of the effective date of this Board Order.
Spill Response Plan	The Discharger shall develop a Spill Response Plan (SRP).	Within 60 days of the effective date of this Board Order.

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VII. COMPLIANCE DETERMINATION

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

A. General.

Compliance with effluent limitations for priority pollutants shall be determined using sample reporting protocols defined in the MRP and Attachment A of this Board 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).

B. Multiple Sample Data.

When determining compliance with an Average Monthly Effluent Limitation (AMEL), Average Weekly Effluent Limitation (AWEL) and Maximum Daily Effluent Limitation (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.

C. Average Monthly Effluent Limitation (AMEL).

If the average (or when applicable, the median determined by subsection B 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. The Discharger will only be considered out of compliance for days when the discharge occurs. For any one calendar month during which no sample (daily discharge) is taken, no compliance determination can be made for that calendar month.

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D. Average Weekly Effluent Limitation (AWEL).

If the average (or when applicable, the median determined by subsection B above for multiple sample data) of daily discharges over a calendar week exceeds the AWEL for a given parameter, this will represent a single violation, though the Discharger will be considered out of compliance for each day of that week for that parameter, resulting in 7 days of non-compliance. If only a single sample is taken during the calendar week and the analytical result for that sample exceeds the AWEL, the Discharger will be considered out of compliance for that calendar week. The Discharger will only be considered out of compliance for days when the discharge occurs. For any one calendar week during which no sample (daily discharge) is taken, no compliance determination can be made for that calendar week.

E. Maximum Daily Effluent Limitation (MDEL).

If a daily discharge (or when applicable, the median determined by subsection B above for multiple sample data of a daily discharge) exceeds the MDEL for a given parameter, 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.

F. Instantaneous Minimum Effluent Limitation.

If the analytical result of a single grab sample is lower than the instantaneous minimum effluent limitation for a parameter, 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).

G. Instantaneous Maximum Effluent Limitation.

If the analytical result of a single grab sample is higher than the instantaneous maximum effluent limitation for a parameter, 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).

H. Effect of Conducting a Pollutant Minimization Program (PMP).

If a sample result for a priority pollutant, or the arithmetic mean or median of multiple sample results is below the RL, and there is evidence that the priority pollutant is present in the effluent above an effluent limitation <u>and</u> the Discharger conducts a PMP for the priority pollutant (as described in Provision VI.C.3.a.), the Discharger shall <u>not</u> be deemed out of compliance.

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I. Water Quality-Based Effluent Limitations.

1. In accordance with section 2.4.5 of the SIP, compliance with water quality-based effluent limitations shall be determined as follows:

a. Dischargers shall be deemed out of compliance with an effluent limitation if the concentration of a priority pollutant in the monitoring sample is greater than the effluent limitation and greater than or equal to the reported Minimum Level (ML).

b. When determining compliance with an average monthly effluent limitation and more than one sample result is available in a month, the Discharger shall compute the arithmetic mean unless the data set contains one or more reported determinations of DNQ or ND. In those cases, the Discharger shall compute the median in place of the arithmetic mean in accordance with the following procedure:

i. The data set shall be ranked from low to high, reported ND determinations lowest, DNQ determinations next, and followed by quantified values (if any). The order of the individual ND or DNQ determinations is unimportant.

ii. 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 a DNQ.

If a sample result, or the arithmetic mean or median of multiple sample results, is below the reported ML, and there is evidence that the priority pollutant is present in the effluent above an effluent limitation <u>and</u> the Discharger conducts a PMP, the Discharger shall <u>not</u> be deemed out of compliance.

J. Mass and Concentration Limitation.

Compliance with mass and concentration effluent limitations for the same parameter shall be determined separately with their respective limitations. When the concentration of a constituent in an effluent sample is determined to be ND or DNQ, the corresponding mass emission rate (MER) determined from that sample concentration shall also be reported as ND or DNQ.

K. Acute and Chronic Toxicity Narrative Effluent Limitations.

Compliance with WET limitations established in the Board Order shall be determined in accordance with section III.B of the State Water Board's Water Quality Enforcement Policy.

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ATTACHMENT A – DEFINITIONS

Acutely Toxic Conditions
When used in the context of mixing zones, acutely toxic conditions refers to lethality that occurs to mobile aquatic organisms that move or drift through the mixing zone.

Annual Average Effluent Limitation
The highest allowable average of monthly discharges over a calendar year, calculated as the sum of all monthly discharges measured during a calendar year divided by the number of monthly discharges measured during that year.

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.

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

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 non-point discharges including storm water. BMPs include structural and non-structural controls, and operation and 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.

Biosolids
Biosolids refer to non-hazardous sewage sludge as defined in section 503.9.

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

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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.

Domestic Sewage
Domestic Sewage is waste and wastewater from humans or household operations that is discharged to or otherwise enters a treatment works.

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,

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Morro Bay, Los Angeles-Long Beach Harbor, 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 included, but are not limited to, the Sacramento-San Joaquin Delta, as defined in CWC section 12220, Suisun Bay, Carquinez Strait downstream to the Carquinez Bridge, and appropriate areas of the Smith, Mad, Eel, Noyo, Russian, Klamath, San Diego, and Otay rivers. 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., an existing Facility with treatment systems in place from its current discharge that is or will be expanding, upgrading, or modifying its existing permitted discharge after the effective date of the State Implementation Policy).

Geometric Mean (or Log Mean)
Geometric mean, or log mean, is a measure of the central tendency of a data set that minimizes the effects of extreme values. The geometric mean used for determining compliance with bacterial standards is calculated with the following equation:

Geometric Mean = $(C_1 \times C_2 \times \ldots \times C_n)^{1/n}$ where n = the number of days samples were collected during the period, and C = the concentration of bacteria (CFU/100 mL) found on each day of sampling.

Incompletely-Mixed Discharge
A discharge that contributes to a condition that does not meet the meaning of a completely-mixed discharge condition.

Infeasible
Infeasible means 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).

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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).

Load Allocation (LA)
The portion of a receiving water's total maximum daily load that is allocated to one of its non-point sources of pollution or to natural background sources.

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)
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)
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.

Municipality
Municipality means a city, town, borough, county, parish, district, association, or other public body created by or under State law and having jurisdiction over disposal of sewage, industrial wastes, or other wastes, or an Indian tribe or an authorized Indian tribal organization, or a designated and approved management agency under section 208 of CWA.

New Discharger
New Discharger includes any building, structure, Facility, or installation from which there is, or may be, a discharge of pollutants, the construction of which commenced after the effective date of the State Implementation Policy.

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Not Detected (ND)
ND are those sample results less than the laboratory's MDL.

Objectionable Bottom Deposits
Objectionable Bottom Deposits are an accumulation of materials or substances on or near the bottom of a water body, which creates conditions that adversely impact aquatic life, human health, beneficial uses, or aesthetics. These conditions include, but are not limited to, the accumulation of pollutants in the sediments and other conditions that result in harm to benthic organisms, production of food chain organisms, or fish egg development. The presence of such deposits shall be determined by Regional Water Board(s) on a case-by-case basis.

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 CWC 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 CWC 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.

Public Entity
Public Entity includes the Federal government or a state, county, city and county, city, district, public authority, or public agency.

Publicly Owned Treatment Works (POTW)
POTW means a treatment works as defined in 40 CFR 212, which is owned by a State or municipality. This definition includes any devices and systems used in the storage, treatment,

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recycling and reclamation of municipal sewage or industrial wastes of a liquid nature. It also includes sewers, pipes, and other conveyances only if they convey wastewater to a POTW Treatment Plant. The term also means the municipality as defined in 40 CFR 502(4), which has jurisdiction over the Indirect Discharges to and the discharges from such a treatment works.

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 Board Order. The MLs included in this Board 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 that a sanitary sewer system is tributary to.

Sewage Sludge
Sewage sludge is solid, semi-solid, or liquid residue generated during the treatment of domestic sewage in a treatment works. Sewage sludge includes, but is not limited to, domestic septage; scum or solids removed in primary, secondary, or advanced wastewater treatment processes; and a material derived from sewage sludge. Sewage sludge does not include ash generated during the firing of sewage sludge in a sewage sludge incinerator or grit and screenings generated during preliminary treatment of domestic sewage in a treatment works. Sewage sludge that has been classified as hazardous shall be disposed in accordance with 40 CFR 261.

Sewage Sludge, Class A
Sewage Sludge to be classified Class A with respect to pathogens shall comply with the requirements in 40 CFR 503.32(a)(2) and the requirements in either 40 CFR 503.32(a)(3), (a)(4), (a)(5), (a)(6), (a)(7), or (a)(8).

Sewage Sludge, Class B
Sewage Sludge to be classified Class B with respect to pathogens shall comply with the requirements in either 40 CFR 503.32(b)(2), (b)(3), or (b)(4).

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:

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

where:

x is the observed value;

μ is the arithmetic mean of the observed values; and

n is the number of samples.

State Implementation Policy (SIP)
The Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California.

Teratogenic
Teratogenic pollutants are substances that are known to cause structural abnormalities or birth defects in living organisms.

Total Solids
Total Solids are the materials that remain as residue when dried at 103 to 105 degrees Celsius.

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.)

Treatment Works
Treatment works is either a federally owned, publicly owned, or privately owned device or system used to treat (including recycle and reclaim) either domestic sewage or a combination of domestic sewage and industrial waste of a liquid nature.

Vector Attraction
Vector Attraction is the characteristic of a material that attracts rodents, flies, mosquitoes, or other organisms capable of transporting infectious agents.

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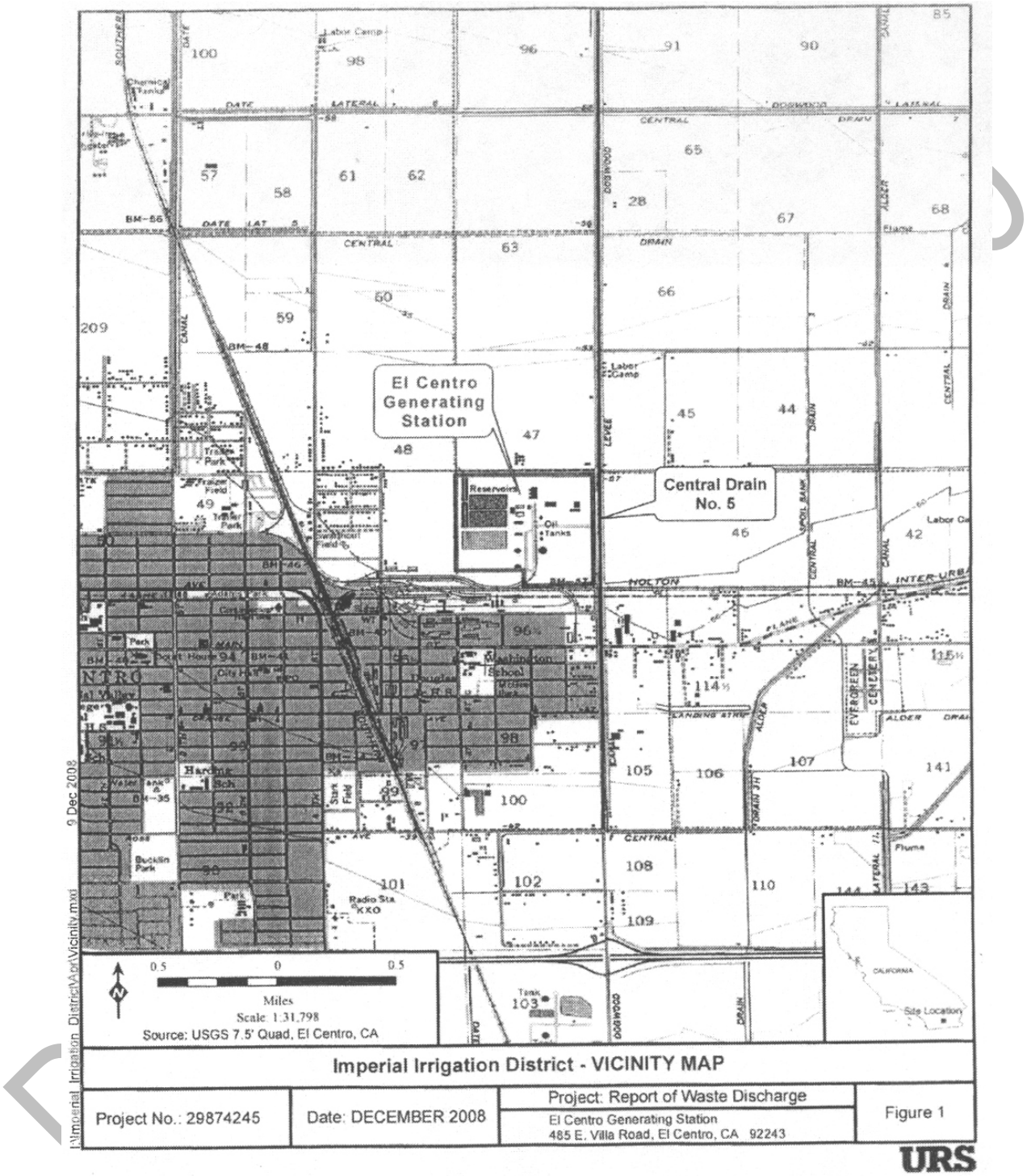
ATTACHMENT B – MAP



IMPERIAL IRRIGATION DISTRICT, OWNER/OPERATOR;
EL CENTRO GENERATING STATION;
El Centro, Imperial County

Location of Discharge: NE ¼ of Section 32, T15S, R14E, SBB&M

ATTACHMENT C – FLOW SCHEMATIC

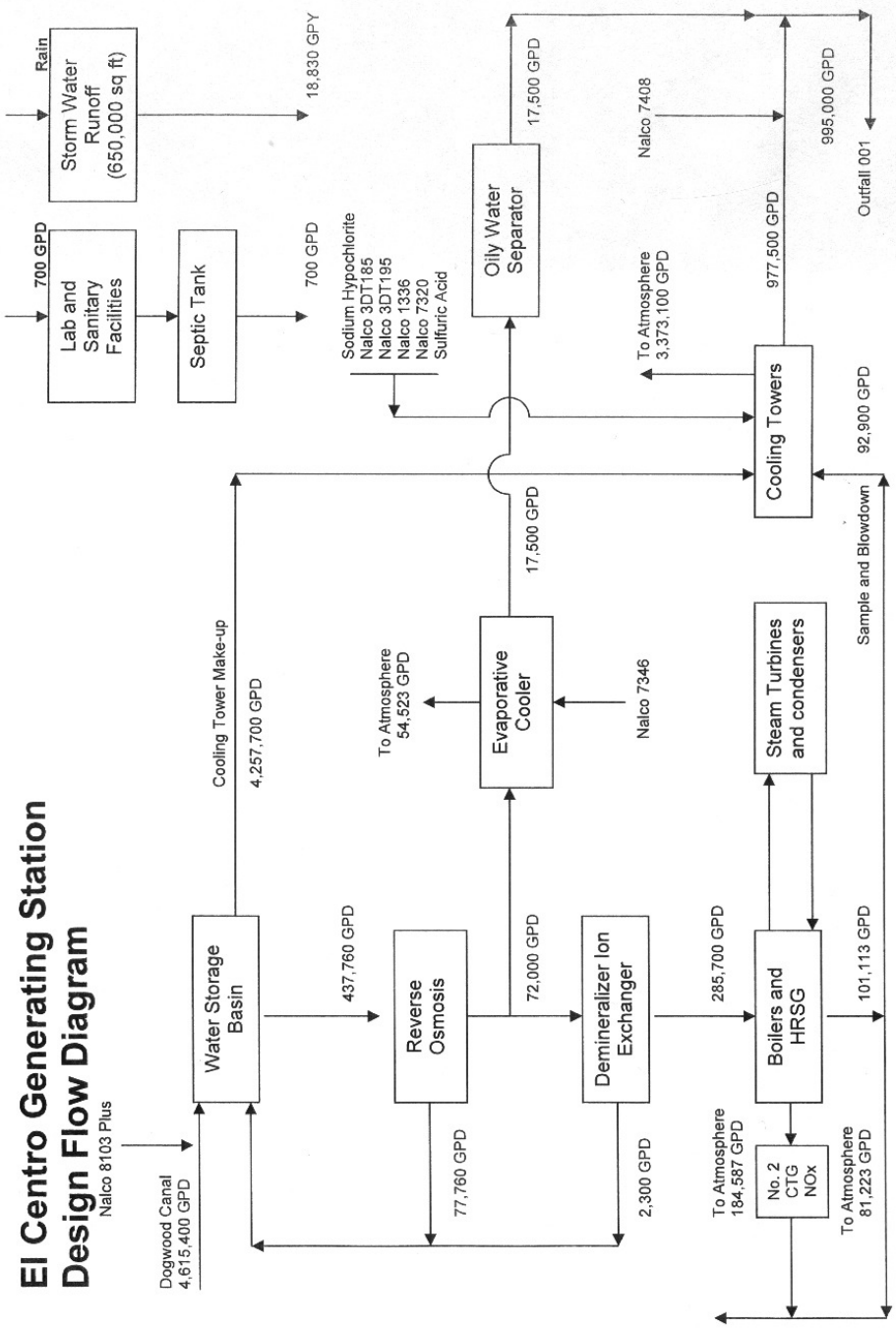


Figure 3b. Water Balance Flow Diagram (Design)

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 Board Order. Any noncompliance constitutes a violation of the Clean Water Act (CWA) and the CWC 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 Board 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 Board Order. (40 C.F.R. § 122.41l.)

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 Board 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 Board 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 Board Order. (40 C.F.R. § 122.41(e).)

E. Property Rights

1. This Board Order does not convey any property rights of any sort or any exclusive privileges. (40 C.F.R. § 122.41(g).)

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2. The issuance of this Board 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); Wat. 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 Board 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 Board 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 Board Order (40 C.F.R. § 122.41(i)(3)); and

4. Sample or monitor, at reasonable times, for the purposes of assuring Board Order compliance or as otherwise authorized by the CWA or the CWC, 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).)

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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).)

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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 Board 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 Board Order condition. (40 C.F.R. § 122.41(f).)

B. Duty to Reapply

If the Discharger wishes to continue an activity regulated by this Board Order after the expiration date of this Board Order, the Discharger must apply for and obtain a new permit. (40 C.F.R. § 122.41(b).)

C. Transfers

This Board 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 Board Order to change the name of the Discharger and incorporate such other requirements as may be necessary under the CWA and the CWC. (40 C.F.R. § 122.41(l)(3); § 122.61.)

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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 Part 136 unless otherwise specified in Part 503 unless other test procedures have been specified in this Board Order. (40 C.F.R. § 122.41(j)(4); § 122.44(i)(1)(iv).)

IV. STANDARD PROVISIONS – RECORDS

A. Except for records of monitoring information required by this Board Order related to the Discharger's sewage sludge use and disposal activities, which shall be retained for a period of at least five years (or longer as required by Part 503), the Discharger shall retain records of all monitoring information, including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation, copies of all reports required by this Board Order, and records of all data used to complete the application for this Board 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).)

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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 Board Order or to determine compliance with this Board 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 Board Order. (40 C.F.R. § 122.41(h); Wat. 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 either a principal executive officer or ranking elected official. For purposes of this provision, a principal executive officer of a federal agency includes: (i) the chief executive officer of the agency, or (ii) a senior executive officer having responsibility for the overall operations of a principal geographic unit of the agency (e.g., Regional Administrators of USEPA). (40 C.F.R. § 122.22(a)(3).).

3. All reports required by this Board 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

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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 Board 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 Board Order using test procedures approved under Part 136 or, in the case of sludge use or disposal, approved under Part 136 unless otherwise specified in Part 503, or as specified in this Board Order, the results of this monitoring shall be included in the calculation and reporting of the data submitted in the DMR or sludge reporting form specified by the Regional Water Board. (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 Board 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 Board 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

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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 Board Order. (40 C.F.R. § 122.41(l)(6)(ii)(A).)

b. Any upset that exceeds any effluent limitation in this Board 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 not subject to effluent limitations in this Board Order. (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 General Board Order requirements. (40 C.F.R. § 122.41(l)(2).)

H. Other Noncompliance

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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 CWC, including, but not limited to, Sections 13385, 13386, and 13387.

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 Board 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 Board 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));

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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).)

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ATTACHMENT E – MONITORING AND REPORTING PROGRAM (MRP)

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

I. GENERAL MONITORING PROVISIONS

A. Samples and measurements taken as required herein shall be representative of the volume and nature of the monitored discharge. All samples shall be taken at the monitoring locations specified below and, unless otherwise specified, before the monitored flow joins or is diluted by any other waste stream, body of water, or substance. Monitoring locations shall not be changed without notification to and the approval of this Regional Water Board.

B. Appropriate flow measurement devices and methods consistent with accepted scientific practices shall be selected and used to ensure the accuracy and reliability of measurements of the volume of monitored discharges. The devices shall be installed, calibrated and maintained to ensure that the accuracy of the measurements is consistent with the accepted capability of that type of device. Devices selected shall be capable of measuring flows with a maximum deviation of less than ±10 percent from true discharge rates throughout the range of expected discharge volumes. Guidance in selection, installation, calibration and operation of acceptable flow measurement devices can be obtained from the following references:

1. "A Guide to Methods and Standards for the Measurement of Water Flow," U.S. Department of Commerce, National Bureau of Standards, NBS Special Publication 421, May 1975, 96 pp. (Available from the U.S. Government Printing Office, Washington, D.C. 20402. Order by SD Catalog No. C13.10:421.)

2. "Water Measurement Manual," U.S. Department of Interior, Bureau of Reclamation, Second Edition, Revised Reprint, 1974, 327 pp. (Available from the U.S. Government Printing Office, Washington, D.C. 20402. Order by Catalog No. 172.19/2:W29/2, Stock No. S/N 24003-0027.)

3. "Flow Measurement in Open Channels and Closed Conduits," U.S. Department of Commerce, National Bureau of Standards, NBS Special Publication 484, October 197, 982 pp. (Available in paper copy or microfiche from National Technical Information Services (NTIS) Springfield, VA 22151. Order by NTIS No. PB-273 535/5ST.)

4. "NPDES Compliance Sampling Manual," USEPA, Office of Water Enforcement, Publication MDC-51, 1977, 140 pp. (Available from the General Services Administration (8FFS), Centralized Mailing Lists Services, Building 41, Denver Federal Center, CO 80225.)

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C. All flow measurement devices shall be calibrated at least once per year or more frequently, to ensure continued accuracy of the devices.

D. All analyses shall be conducted at a laboratory certified for such analyses by the State Department of Public Health. Laboratories analyzing monitoring samples shall be certified by the Department of Public Health, in accordance with the provision of CWC Section 13176, and must include quality assurance/quality control data with their reports.

E. The collection, preservation and holding times of all samples shall be in accordance with the test procedures under Part 136 (revised as of May 14, 1999) "Guidelines Establishing Test Procedures for the Analysis of Pollutants," promulgated by the United States Environmental Protection Agency (USEPA), unless otherwise specified in this MRP. In addition, the Regional Water Board and/or EPA, at their discretion, may specify test methods that are more sensitive than those specified in Part 136.

F. For priority pollutants, the Discharger shall require its testing laboratory to calibrate the analytical system down to the minimum levels (MLs) specified in Attachment "H" of this Board Order, unless an alternative minimum level is approved by the Regional Water Board's Executive Officer. For priority pollutants with water quality-based effluent limitations (WQBELs) established in this Board Order, when there is more than one ML value listed in Attachment "H" for that substance, the Discharger shall select any one of the ML values and its associated analytical method that is below the calculated effluent limitation. If no ML is below the effluent limitation, then the lowest ML value and its associated analytical method shall be used. For priority pollutants without effluent limitations established in this Board Order, the Discharger shall select any one of the cited analytical methods for monitoring and reporting purposes. Any internal quality control data associated with the sample shall be reported when requested by the Executive Officer. The Regional Water Board will reject the quantified laboratory data if quality control data is unacceptable.

G. In conformance with federal regulations Section 122.45(c), analyses to determine compliance with the effluent limitations for metals shall be conducted using the total recoverable method. For Chromium (VI), the dissolved method in conformance with Part 136 shall be used to measure compliance with a Chromium (VI) effluent limitation. For Cyanide, Total Cyanide or Available Cyanide analytical test methods in conformance with Part 136 may be used as acceptable methods to measure compliance with a Cyanide effluent limitation.

H. In accordance with the test procedures under Part 136, samples shall be analyzed as soon as possible after collection. For samples with maximum holding times of 15 minutes or less (e.g., Temperature, Total Chlorine Residual, Dissolved Oxygen, pH and Sulfite) the Discharger shall be authorized to analyze the samples onsite. The Discharger shall develop a written Quality Assurance Plan (QAP) for samples that are analyzed onsite. The QAP shall at a minimum address the following steps:

1. Provide an overview of the task description and objectives;

2. Identify the sampling process, method and handling;

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3. Identify the instrumentation/equipment testing, inspection and maintenance;

4. Identify the instrumentation/equipment calibration and frequency;

5. Identify the sample analysis methods and calibration range; and

6. Summarize the data review and validation procedures.

I. All monitoring instruments and devices used by the discharger to fulfill the prescribed monitoring program shall be properly maintained and calibrated as necessary to ensure their continued accuracy. In the event that continuous monitoring equipment is out of service for period greater than 24-hours, the Discharger shall obtain representative grab samples each day the equipment is out of service. The Discharger shall correct the cause(s) of failure of the continuous monitoring equipment as soon as practicable. The Discharger shall report the period(s) during which the equipment was out of service and if the problem has not been corrected, shall identify the steps which the Discharger is taking or proposes to take to bring the equipment back into service and the schedule for these actions.

J. Monitoring results, including noncompliance, shall be reported at intervals and in a manner specified in this MRP.

K. Whenever the Discharger monitors any pollutant more frequently than is required by this Board Order, the results of this monitoring shall be included in the calculations and reporting of the data submitted in the discharge monitoring report specified by the Executive Officer.

L. If the facility is not in operation, or there is no discharge during a required reporting period, the Discharger shall forward a letter to the Regional Water Board indicating that there has been no activity during the required reporting period.

II. MONITORING LOCATIONS

The Discharger shall establish the following monitoring locations to demonstrate compliance with the effluent limitations, discharge specifications, and other requirements in this Board Order:

Table E-1. Monitoring Station Locations

Discharge Point Name	Monitoring Location Name	Monitoring Location Description
001	EFF-001	Effluent discharged from the facility shall be monitored at the outlet pipe to the receiving water (Central Drain No. 5) where representative samples of the effluent can be obtained (Latitude 32º, 48', 14" N and Longitude 115 º, 32', 35" W)
--	RSW-001	Receiving water (Central Drain No. 5) monitoring location not to exceed 100 feet upstream from the location where the effluent enters the Central Drain No. 5. A greater distance may be acceptable provided the discharger submits proper justification that the prescribed distance is inaccessible.

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Discharge Point Name	Monitoring Location Name	Monitoring Location Description
--	RSW-002	Receiving water (Central Drain No. 5) monitoring location not to exceed 25 feet downstream from the location where the effluent enters the Central Drain No. 5.

III. INFLUENT MONITORING REQUIREMENTS – NOT APPLICABLE

IV. EFFLUENT MONITORING REQUIREMENTS

A. Monitoring Location EFF-001

1. The Discharger shall monitor treated industrial wastewater effluent at Monitoring Location EFF-001 as follows:

Table E-2. Effluent Monitoring

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method and Minimum Level (ML)
Flow	MGD	Calculated	1x/Day[1]	See Section I.B of the MRP
Temperature	^{0}F	Grab	1x/Day[2]	See Section I.E of the MRP
pH	Standard Units	Grab	1x/Day[2]	"
Chlorine, Total Residual	mg/L	Grab	1x/Day[2]	"
Total Suspended Solids (TSS)	mg/L	Grab	2x/Month	"
Total Dissolved Solids (TDS)	mg/L	24-Hr. Composite	2x/Month	"
Nitrates as Nitrogen (N)	mg/L	Grab	1x/Quarter	"
Nitrites as N	mg/L	Grab	1x/Quarter	"
Ammonia Nitrogen as N	mg/L	Grab	1x/Quarter	"
Total Nitrogen as N	mg/L	Grab	1x/Quarter	"
Total Phosphorus as P	mg/L	Grab	1x/Quarter	"
Ortho-Phosphate as P	mg/L	Grab	1x/Quarter	"
Copper, Total Recoverable	µg/L	Grab	1x/Month	See Section I.F of the MRP
Cyanide, Free	µg/L	Grab	1x/Month	See Sections I.F and I.G of the MRP
Selenium, Total Recoverable	µg/L	Grab	1x/Month	See Section I.F of the MRP
Sulfates	mg/L	Grab	1x/Quarter	See Section I.E of the MRP
Hardness, Total (as $CaCO_3$)	mg/L	Grab	1x/Month	"
Oil and Grease	mg/L	Grab	1x/Year	"

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Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method and Minimum Level (ML)
Priority Pollutants (Inorganic Portion)[3]	µg/L	24-Hr. Composite	1x/Year	See Section I.F of the MRP
Priority Pollutants (Remaining Portion)[4]	µg/L	Grab	1x/Year	"

1 Reported monthly with monthly average daily flow
2 Daily [excluding Friday off day (9/80 based schedule), holidays and weekends].
3 Inorganic Priority Pollutants as listed in Attachment H and as defined by the California Toxics Rule (CTR).
4 Volatile, Semi-Volatile, Pesticide, and PCB Priority Pollutants as listed in Attachment H and as defined by the CTR.

V. WHOLE EFFLUENT TOXICITY TESTING REQUIREMENTS

A. Monitoring Requirements

1. Bioassays shall be performed to evaluate the toxicity of the discharged wastewater in accordance with the following procedures unless otherwise specified by the Regional Water Board's Executive Officer or his designee:

a. Bioassays shall be conducted on a sensitive fish species and an invertebrate species as approved by the Regional Water Board's Executive Officer. *Pimephales promelas* (fathead minnow) and *Ceriodaphnia dubia* (water flea) are suggested test species that may be utilized. The bioassays shall be conducted in accordance with the protocol given in EPA/821-R-02-013 – *Short Term Methods for Estimating the Chronic Toxicity of Effluent and Receiving Waters to Freshwater Organisms, 4th Edition*, and EPA/821-R-02-012 – *Methods for Measuring the Acute Toxicity of Effluents and Receiving Waters for Freshwater and Marine Organisms, 5th Edition*, or subsequent editions.

2. The Discharger shall conduct chronic and acute toxicity testing on the final effluent discharged at monitoring point EFF-001.

Table E-3. Whole Effluent Toxicity Testing

Test	Units	Sample Type	Minimum Sampling Frequency
Chronic Toxicity	TU_c [1]	24-Hr. Composite	1x/Year
Acute Toxicity	TU_a [2,3,4] & % Survival	24-Hr. Composite	1x/Year

1 Chronic toxicity units
2 Acute toxicity units
3 Acute Bioassay results can be calculated from chronic bioassay test for *Pimephales promelas*
4 Discharger can provide Pass/Fail when using a t-test.

3. Both test species given below shall be used to measure chronic and acute toxicity:

Table E-4. Whole Effluent Toxicity Test Species

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Species	Effect	Test Duration (days)	Reference
Water Flea (*Ceriodaphnia dubia*)	Survival and Reproduction	7	EPA/821-R-02-013 (Chronic) EPA/821-R-02-012 [1] (Acute)
Fathead Minnow *Pimephales promelas*	Larval Survival and Growth	7	EPA/821-R-02-013 (Chronic) EPA/821-R-02-012 [1] (Acute)

[1] Acute bioassay results can be calculated from chronic bioassay test for *Pimephales promelas*

4. Toxicity Test References for Conducting Toxicity Tests

a. Methods for Measuring the Acute Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms, Fifth Edition, EPA/821-R-02-012, October 2002 or subsequent editions.

b. Short Term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Water for Freshwater Organisms, Fourth Edition, EPA/821-R-02-013, October 2002 or subsequent editions.

B. Quality Assurance

1. Dilution and control waters may be obtained from an unaffected area of receiving waters. Synthetic (standard) dilution is an option and may be used if the above source is suspected to have toxicity greater than 1.0 TU_c.

2. A series of at least five dilutions and a control shall be tested for chronic toxicity testing and may be used for acute toxicity testing. The series shall include the following concentrations: 12.5, 25, 50, 75, and 100 percent effluent.

3. For the acute toxicity testing using a t-test, two dilutions shall be used, i.e., 100 percent effluent and a control (when a t-test is used instead of an LC_{50}).

4. If organisms are not cultured in-house, concurrent testing with a referenced toxicant shall be conducted. Where organisms are cultured in-house, monthly reference toxicant testing is sufficient. Reference toxicant tests shall also be conducted using the same test conditions as the effluent toxicity tests (e.g., same test duration).

5. If either the reference toxicant test or effluent test does not meet all test acceptability criteria (TAC) as specified in the toxicity test references, then the permittee must re-sample and retest within 15 working days or as soon as possible. The retesting period begins when the Discharger receives the test results that indicate retesting is needed or collects the first sample required to complete the retest.

6. The reference toxicant and effluent tests must meet the upper and lower bounds on test sensitivity as determined by calculating the percent minimum significant difference (PMSD) for each test result. The test sensitivity bound is specified for each test method in the respective methods manuals.

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C. Chronic and Acute Toxicity Definitions

1. Chronic toxicity measures 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.

2. Chronic toxicity shall be measured in TUc, where TUc = 100/NOEC. The no observed effect concentration (NOEC) is the highest concentration of toxicant to which organisms are exposed in a chronic test that causes no observable adverse effect on the test organisms (e.g., the highest concentration of toxicant to which the values for the observed responses are not statistically significantly different from the control(s).

3. Acute toxicity is a measure of primarily lethal effects that occur over a ninety-six (96) hour period. Acute toxicity for Pimephales promelas can be calculated from the results of the chronic toxicity test for Pimephales promelas and reported along with the results of each chronic test. Acute toxicity for Ceriodaphnia dubia cannot be calculated from the results of the chronic toxicity test for Ceriodaphnia dubia because the test design is not amenable to calculation of a lethal concentration (LC50) value as needed for the acute requirement.

4. Acute toxicity shall be measured in TUa, where TUa = 100/LC50 and percent survival or as pass/fail using a t-test. LC50 is the toxicant concentration that would cause death in 50 percent of the test organisms.

D. Numeric Toxicity Monitoring Triggers

1. **Chronic Toxicity.** Any chronic toxicity test result that exceeds 2 chronic toxicity units (TUc) or a three (3)-sample median (consecutive samples) that exceeds 1 TUc shall trigger accelerated WET testing.

2. **Acute Toxicity.** Any acute toxicity test result showing high toxicity shall trigger accelerated WET testing. High acute toxicity is defined as follows:

   a. Less than 80% survival when acute toxicity is calculated from results of the chronic toxicity test (only for *Pimephales promelas*), or

   b. Less than 90% survival when acute toxicity is calculated from the results of the acute toxicity test, or

   c. Results of acute toxicity t-test for 100 percent effluent concentration that is reported as failed.

   The numeric toxicity triggers are not an effluent limitation, they are the toxicity threshold at which the Discharger is required to perform accelerated WET testing to confirm effluent toxicity, as well as, the threshold to initiate a toxicity reduction evaluation (TRE) and Toxicity Identification Evaluation (TIE) if toxicity is confirmed.

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E. Accelerated WET Testing Requirements

When a numeric toxicity trigger is exceeded during regular acute and chronic toxicity monitoring, and the WET test satisfies the test acceptability criteria, the Discharger shall initiate accelerated WET testing. The Discharger shall initiate accelerated monitoring within fifteen (15) days of notification by the laboratory of the exceedance. Accelerated WET testing shall consist of performing three (3) WET tests in a nine (9)-week period. The accelerated WET tests shall use the bioassay test species that exceeded the numeric toxicity monitoring triggers. The following protocol shall be used for accelerated monitoring:

1. If the results of the three (3) consecutive accelerated WET tests do not exceed the numeric toxicity monitoring triggers, the Discharger may cease accelerated WET testing and resume regular acute and chronic toxicity monitoring. However, notwithstanding the accelerated monitoring results, if there is adequate evidence of a pattern of effluent toxicity, the Executive Officer may require that the Discharger initiate a TRE.

2. If the source(s) of the toxicity is easily identified (e.g., temporary plant upset), the Discharger shall make necessary corrections to the facility and only one accelerated WET test shall be performed. Upon confirmation that the effluent toxicity has been removed, the Discharger may cease accelerated WET testing and resume regular acute and chronic toxicity monitoring.

3. If the results of two of the three accelerated WET tests exceed the numeric toxicity monitoring trigger, the accelerated WET testing schedule may be terminated, or used as necessary in performing a TRE/TIE to investigate the cause(s) of, and identify the corrective actions to reduce or eliminate effluent toxicity. Within fifteen (15) days of notification by the laboratory of the second accelerated WET test result exceeding the numeric toxicity monitoring trigger, the Discharger shall initiate a TIE and TRE.

F. Conducting Toxicity Identification Evaluations and Toxicity Reduction Evaluations

1. A Toxicity Identification Evaluation (TIE) shall be triggered if the two of the three accelerated WET tests exceed the numeric toxicity monitoring triggers specified in section V.D. of the MRP.

2. The TIE shall be conducted to identify and evaluate toxicity in accordance with procedures recommended by the USEPA which include the following:

a. Toxicity Identification Evaluations: Characterization of Chronically Toxic Effluents, Phase I, EPA 600-6-91-005F, 1992;

b. Methods for Aquatic Toxicity Identification Evaluations: Phase I Toxicity Characterization Procedures, Second Edition, EPA 600-R-91-003, 1991;

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c. Methods for Aquatic Toxicity Identification Evaluations: Phase II Toxicity Identification Procedures for Samples Exhibiting Acute and Chronic Toxicity, EPA 600-R-92-080, 1993; and

d. Methods for Aquatic Toxicity Identification Evaluations: Phase III Toxicity Confirmation Procedures for Samples Exhibiting Acute and Chronic Toxicity, EPA 600-R-92-081, 1993.

3. As part of the TIE Investigation, the Discharger shall be required to implement its TRE workplan. The Discharger shall take all reasonable steps to control toxicity once the source of the toxicity is identified. A failure to conduct required WET tests or a TRE within a designated period shall result in the establishment of numerical toxicity effluent limitations in a permit or appropriate enforcement action. Recommended guidance in conducting a TRE include the following:

a. Toxicity Reduction Evaluation Guidance for Municipal Wastewater Treatment Plants, EPA/833B-99-002, August 1999;

b. Generalized Methodology for Conducting Industrial Toxicity Reduction Evaluations, EPA/600/2-88/70, April 1989; and

c. Clarifications Regarding Toxicity Reduction and Identification Evaluations in the National Pollutant Discharge Elimination System Program dated March 27, 2001, USEPA Office of Wastewater Management, Office of Regulatory Enforcement.

G. Reporting

1. The Discharger shall submit the results of WET tests, including any accelerated WET test results with the discharge monitoring reports for the month in which the last test was conducted.

2. If a TIE is conducted, the Discharger shall submit the results of the TIE with the discharge monitoring reports for the month in which the final report is completed.

3. If the TRE has been initiated, the Discharger shall report on the progress of the actions being taken to identify and reduce or eliminate the source(s) of effluent toxicity and include this information with each monthly monitoring report.

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VI. LAND DISCHARGE MONITORING REQUIREMENTS – NOT APPLICABLE

VII. RECLAMATION MONITORING REQUIREMENTS – NOT APPLICABLE

VIII. RECEIVING WATER MONITORING REQUIREMENTS – SURFACE WATER AND GROUNDWATER

A. Monitoring Location RSW-001

1. The Discharger shall monitor the Central Drain No. 5 at RSW-001 as follows. In the event that no receiving water is present at RSW-001, no receiving water monitoring data are required for station RSW-001.

Table E-5. Receiving Water Monitoring Requirements RSW-001

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
Temperature	^{0}F	Grab	1x/Day[1]	See Section I.E of the MRP
DO	mg/L	Grab	1x/Day[1]	"
pH	Standard Units	Grab	1x/Day[1]	"
Hardness (CaCO3)	mg/L	Grab	1x/Month	"
TDS	mg/L	Grab	1x/Month	"
Nitrates as N	mg/L	Grab	1x/Quarter	"
Nitrites as N	mg/L	Grab	1x/Quarter	"
Ammonia Nitrogen as N	mg/L	Grab	1x/Quarter	"
Total Nitrogen as N	mg/L	Grab	1x/Quarter	"
Total Phosphorus as P	mg/L	Grab	1x/Quarter	"
Orthophosphate as P	mg/L	Grab	1x/Quarter	"
Oil and Grease	mg/L	Grab	1x/Quarter	"
Priority Pollutants (Inorganic Portion)[2, 3]	µg/L	Grab	1x/Year	See Section I.F of the MRP
Priority Pollutants (Organic Portion)	µg/L	Grab	1x/Year	"

1 Daily [excluding Friday off day (9/80 based schedule), holidays, and weekends].
2 Inorganic Priority Pollutants as listed in Attachment H and as defined by the CTR.
3 Volatile, Semi-Volatile, Pesticide, and PCB Priority Pollutants as listed in Attachment H and as defined by the CTR.

A. Monitoring Location RSW-002

1. The Discharger shall monitor the Central Drain No. 5 at RSW-002 as follows.

Table E-6. Receiving Water Monitoring Requirements RSW-002

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
Temperature	^{0}F	Grab	1x/Day[1]	See Section I.E of the MRP
DO	mg/L	Grab	1x/Day[1]	"

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Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
pH	Standard Units	Grab	1x/Day[1]	"
Hardness, Total (as CaCO3)	mg/L	Grab	1x/Month	"
TDS	mg/L	Grab	1x/Month	"
Nitrates as N	mg/L	Grab	1x/Quarter	"
Nitrites as N	mg/L	Grab	1x/Quarter	"
Ammonia Nitrogen as N	mg/L	Grab	1x/Quarter	"
Total Nitrogen as N	mg/L	Grab	1x/Quarter	"
Total Phosphorus as P	mg/L	Grab	1x/Quarter	"
Orthophosphate as P	mg/L	Grab	1x/Quarter	"
Oil and Grease	mg/L	Grab	1x/Quarter	"

[1] Daily [excluding Friday off day (9/80 based schedule), holidays, and weekends].

B. Visual Monitoring at RSW-001 and RSW-002

1. In conducting the receiving water sampling, a log shall be kept of the receiving water conditions at Monitoring Locations RSW-001. Notes on receiving water conditions shall be summarized in the monitoring report. Attention shall be given to the presence or absence of:

a. Floating or suspended matter;

b. Discoloration;

c. Aquatic life (including plants, fish, shellfish, birds);

d. Visible film, sheen, or coating;

e. Fungi, slime, or objectionable growths; and

f. Potential nuisance conditions.

IX. OTHER MONITORING REQUIREMENTS – NOT APPLICABLE

X. REPORTING REQUIREMENTS

A. General Monitoring and Reporting Requirements

1. The Discharger shall comply with all Standard Provisions (Attachment D) related to monitoring, reporting, and recordkeeping.

2. The Discharger shall report the results of acute and chronic toxicity testing, TRE, and TIE as required in Section V, "Effluent Toxicity Testing."

3. The results of any analysis taken more frequently than required using analytical methods, monitoring procedures and performed at the locations specified in this MRP shall be reported to the Regional Water Board.

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B. Self Monitoring Reports (SMRs)

1. At any time during the term of this permit, the State or Regional Water Board may notify the Discharger to electronically submit Self-Monitoring Reports (SMRs) using the State Water Board's California Integrated Water Quality System (CIWQS) Program Web site (http://www.waterboards.ca.gov/ciwqs/index.html). Until such notification is given, the Discharger shall submit hard copy SMRs. The CIWQS Web site will provide additional directions for SMR submittal in the event there will be service interruption for electronic submittal.

2. The Discharger shall report in the SMR the results for all monitoring specified in this MRP under sections III through IX. The Discharger shall submit monthly, quarterly, and annual SMRs including the results of all required monitoring using USEPA-approved test methods or other test methods specified in this Board Order. If the Discharger monitors any pollutant more frequently than required by this Board 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-7. Monitoring Periods and Reporting Schedule

Sampling Frequency	Monitoring Period Begins On…	Monitoring Period	SMR Due Date
1x/Day	June 18, 2009	(Midnight through 11:59 PM) or any 24-hour period that reasonably represents a calendar day for purposes of sampling.	Submit with monthly SMR
1x/Week	June 18, 2009	Sunday through Saturday	Submit with monthly SMR
2x/Month	July 1, 2009	1st day of calendar month through last day of calendar month	First day of second month from end of monitoring period
1x/Month	July 1, 2009	1st day of calendar month through last day of calendar month	First day of second month from end of monitoring period
1x/Quarter	July 1, 2009	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
1x/Year	January 1, 2010	January 1 through December 31	Submit with Annual Report – 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 Part 136.

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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 ML 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.

5. Multiple Sample Data. If the permit contains an AMEL for a priority pollutant and more than one sample result is available for the pollutant, the Discharger shall report the arithmetic mean unless the data set contains one or more reported determinations of DNQ or ND. In those cases, the Discharger shall report 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.

6. The Discharge 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

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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, signed and certified as required by the Standard Provisions (Attachment D), to the address listed below in Table E-8:

Table E-8. Self-Monitoring Report – Mailing Address

Standard Mail/FedEx/UPS/Other Private Carriers
California Regional Water Quality Control Board Colorado River Basin Region 73-720 Fred Waring, Suite 100 Palm Desert, CA 92260

C. Discharge Monitoring Reports (DMRs)

1. As described in section X.B.1 above, at any time during the term of this permit, the State or Regional Water Board may notify the Discharger to electronically submit SMRs that will satisfy federal requirements for submittal of Discharge Monitoring Reports (DMRs). Until such notification is given, the Discharger shall submit DMRs in accordance with the requirements described below.

2. DMRs must be signed and certified as required by the standard provisions (Attachment D). The Discharger shall submit the original DMR and one copy of the DMR to the address listed below in Table E-9:

Table E-9. Discharge Monitoring Reports – Mailing Address

STANDARD MAIL	FEDEX/UPS/ OTHER PRIVATE CARRIERS
State Water Resources Control Board Division of Water Quality c/o DMR Processing Center PO Box 100 Sacramento, CA 95812-1000	State Water Resources Control Board Division of Water Quality c/o DMR Processing Center 1001 I Street, 15th Floor Sacramento, CA 95814

DRAFT April 3, 2009

3. All discharge monitoring results must be reported on the official USEPA pre-printed DMR forms (EPA Form 3320-1). Forms that are self-generated will not be accepted unless they follow the exact same format of EPA Form 3320-1.

D. Other Reports

1. The Discharger shall report the results of any special studies required by Special Provisions – V.C.2 (Copper, Selenium, and Cyanide Effluent Limitations Compliance Evaluation; TRE/TIE; acute and chronic toxicity testing, and translator study) of this Board Order. The Discharger shall report the progress in satisfaction of compliance schedule dates specified in Special Provisions – V.C.7 of this Board Order. The Discharger shall submit reports with the first monthly SMR scheduled to be submitted on or immediately following the report due date.

2. **Operations and Maintenance Report.** The Discharger shall report the following as shown in Table E-10:

Table E-10. Operations and Maintenance Report

Activity	Reporting Frequency
The amount of chlorine shall be monitored daily and reported monthly. Measured in pounds per day. Chemical usage for all chemicals used at the plant site, except chlorine, will be reported on a monthly basis.	1x/Month
To inspect and document any operation/maintenance problems by inspecting each unit process. Certification statement shall be included in Annual Report verifying this activity.	1x/Year
Calibration of flow meters and mechanical equipment shall be performed in a timely manner and documented. Certification statement shall be included in Annual Report verifying this activity.	1x/Year
The Discharger shall include documentation of all logbooks (operation and maintenance), chain of custody sheets and sampling activities as stated in Special Provision VI.C.4.b (Limitations and Discharge Requirements) and Standard Provisions sections IV and V (Attachment D). . Certification statement shall be included in Annual Report verifying this activity.	1x/Year

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ATTACHMENT F – FACT SHEET

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ATTACHMENT F – FACT SHEET

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

This Board 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 Board Order that are specifically identified as "not applicable" have been determined not to apply to this Discharger. Sections or subsections of this Board 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	7A 13 0128 003
Discharger	Imperial Irrigation District
Name of Facility	El Centro Generating Station
Facility Address	485 East Villa Road
	El Centro, CA 92243
	Imperial County
Facility Contact, Title and Phone	Henryk Olstowski, Assistant Manager Energy (760) 339 -0517
Authorized Person to Sign and Submit Reports	SAME
Mailing Address	P.O. Box 937 Imperial, CA 92251
Billing Address	P.O. Box 937 Imperial, CA 92251
Type of Facility	Industrial
Major or Minor Facility	Minor
Threat to Water Quality	1
Complexity	A
Pretreatment Program	N
Reclamation Requirements	N
Facility Permitted Flow	0.995 million gallons per day (MGD)
Facility Design Flow	0.995 MGD
Watershed	Brawley HA
Receiving Water	Central Drain No. 5
Receiving Water Type	Agricultural Drain

A. The Imperial Irrigation District (hereinafter Discharger) is the owner and operator of the El Centro Generating Station (hereinafter Facility).

For the purposes of this Board 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 Central Drain No. 5, a water of the United States, and is currently regulated by Board Order No. R7-2004-0086 which was adopted on July 1, 2004 and expires on July 1, 2009.

C. The Discharger filed a report of waste discharge (ROWD) and submitted an application for renewal of its Waste Discharge Requirements (WDRs) and National Pollutant Discharge Elimination System (NPDES) permit on December 23, 2008. A site visit was conducted on November 19, 2008, to observe operations and collect additional data to develop permit limitations and conditions.

II. FACILITY DESCRIPTION

Imperial Irrigation District owns and operates the El Centro Generating Station, a gas and oil fired power plant located in the city of El Centro. The plant consists of two steam units and one combined cycle unit and has a total output of 240 Megawatts (MW). The steam units are rated at 77 MW and 46 MW, and the combined cycle unit is rated at 117 MW (85 MW gas turbine and 32 MW steam turbine). All units are cooled using water circulated through unit specific cooling towers. The Facility has a potential to discharge a maximum of 0.995 million gallons per day (MGD) of industrial cooling water to Central Drain No. 5.

A. Description of Wastewater and Biosolids Treatment or Controls

All units (steam and combined cycle) are cooled using water circulated through unit-specific cooling towers. Condenser cooling is provided by a closed cycle system of mechanical draft cooling towers and cooling water storage basins. Make-up cooling water is withdrawn from the Dogwood Canal, an Imperial Irrigation District conveyance. Canal water is passed through a screen to remove large debris and then through a series of settling basins to remove sediment. Settling basin effluent is then pumped through reverse osmosis (RO) units and is de-ionized prior to being stored in surge tanks for cooling tower make-up. The Facility injects a number of chemicals into the cooling water stream to prevent biofouling and scaling on the condenser tubes. Cooling tower supply water is treated with corrosion inhibitors, scale inhibitors, dispersants, biological control agents, coagulants, and flocculants. Cooling tower make-up is added to the system as feed water. Cooling tower blowdowns occur periodically based on operational hours, heat transfer demands, and mineral composition of the cooling water.

In addition, chlorination is used as an oxidizing biocide. Chlorine treatment occurs in four hour cycles approximately once every twelve hours. Sulfuric acid is added to the system to maintain proper pH balance. Up to 21,600 gallons per day (gpd) of RO treated effluent (prior to de-ionization), is used for the evaporative cooler. Bleed off from the evaporative cooler is directed through an oil water separator for treatment.

Cooling tower blowdown, RO reject water, and evaporative cooling water are commingled in a collection vault. Sodium bisulfate is added to de-chlorinate the effluent at the collection vault prior to discharge to the Central Drain No. 5.

The Discharger indicated in the ROWD the following list of chemicals that are added to the cooling tower water:

- Sodium Hypochlorite
- Nalco 3DT 185
- Nalco 3DT 195
- Nalco 1336
- Nalco 7320
- Sulfuric Acid

B. Discharge Points and Receiving Waters

The final effluent is discharged through Discharge Point 001 at Latitude 32° 48' 14" North and Longitude 115° 32' 35" West, to the Central Drain No. 5, which flows into the Alamo River, which flows into the Salton Sea, a water of the United States. The permitted maximum daily flow limitation is equal to the design capacity of the wastewater treatment plant which is 0.995 MGD. The discharge consists of industrial cooling water.

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

Effluent limitations contained in the existing Board Order for discharges from Discharge Point 001 (Monitoring Location EFF-001) and representative monitoring data from the term of the previous Board Order are as follows in Table F-2:

Table F-2. Historic Effluent Limitations and Monitoring Data

Parameter	Units	Effluent Limitation			Monitoring Data (From August 2004 – To December 2008)		
		Average Monthly	Average Weekly	Maximum Daily	Highest Average Monthly Discharge	Highest Average Weekly Discharge	Highest Daily Discharge
Flow	MGD	1.04	---	---	0.48[1]	---	0.81[2]
Total Residual Chlorine	mg/L	0.01	---	0.02	0.01	---	0.02
Total Dissolved Solids (TDS)	mg/L	4,000	4,500	---	4,020	---	4,314
pH	s.u.	---	---	6.0 – 9.0[3]	---	---	6.12 – 8.58[4]
Copper[5]	µg/L	200.0 (I)[6]/ 2.39 (F)[7]	---	200.0 (I)/ 4.8 (F)	192	---	192
Cyanide[5]	µg/L	10.0 (I)[6]/ 0.5 (F)[7]	---	10.0 (I)/ 1.0 (F)	7.9	---	7.9
Nickel[5]	µg/L	12.0 (I)[6]/ 6.71 (F)[7]	---	13.5 (I)/ 13.5 (F)	42.0	---	42.0
Selenium[5]	µg/L	66.0 (I)[6]/ 4.09 (F)[7]	---	66.0 (I)/ 8.22 (F)	10	---	10

Parameter	Units	Effluent Limitation			Monitoring Data (From August 2004 – To December 2008)		
		Average Monthly	Average Weekly	Maximum Daily	Highest Average Monthly Discharge	Highest Average Weekly Discharge	Highest Daily Discharge
Thallium[5]	µg/L	14.0 (I) [6]/ 6.30 (F)[7]	---	14.0 (I)/ 12.6 (F)	4.0	---	4.0
Zinc[5]	µg/L	240.0 (I) [6]/ 44.8 (F)[7]	---	240.0 (I)/ 90.0 (F)	179.0	---	179.0

1 This value represents the highest average monthly flow value (August 2005).
2 This value represents the highest reported flow value (September 2008).
3 This range represents the instantaneous minimum and maximum pH limitations, respectively.
4 This represents the range of reported pH values.
5 The MRP requires monthly sampling for copper, cyanide, nickel, selenium, thallium, and zinc.
6 I=Interim Effluent Limitations. Board Order R7-2004-0086 established interim effluent limitations for selected priority pollutants effective July 1, 2004 through June 30, 2009.
7 F=Final Effluent Limitations. Board Order R7-2004-0086 established final effluent limitations for selected priority pollutants effective July 1, 2009.

The ROWD described the existing discharge as follows:

Annual Average Effluent Flow – 0.44 MGD

Maximum Daily Effluent Flow – 0.81 MGD

The ROWD described the effluent characteristics in Table F-3 as follows:

Table F-3. Effluent Characteristics

Parameter	Units	Maximum Daily	Maximum 30-Day Value
pH (Minimum)	s.u.	7.55	7.24
pH (Maximum)	s.u.	8.58	8.16
Temperature (Winter)	°F	32.6	26.1
Temperature (Summer)	°F	42.5	35.9
Biochemical Oxygen Demand	mg/L	19.2	---
	lbs/day	129.8	---
Chemical Oxygen Demand	mg/L	48.0	---
	lbs/day	324.5	---
Total Organic Carbon	mg/L	4.5	---
	lbs/day	30.4	---
Total Suspended Solids	mg/L	20.0	19.8
	lbs/day	135.2	133.8
Ammonia as Nitrogen	mg/L	4.48	---
	lbs/day	30.28	---

The Discharger also provided analytical results for additional parameters. Table F-4 summarizes those pollutants reported as detected above method detection limits.

Table F-4. Additional Effluent Monitoring Data Submitted with ROWD

Parameter	Units	Reported Concentration (Submitted with ROWD)
Chlorine, Total Residual	mg/L	0.01
	lbs/day	0.07
Nitrate as N	mg/L	3.1
	lbs/day	21.0
Nitrite as N	mg/L	0.07
	lbs/day	0.5
Nitrogen, Total Organic (as N)	mg/L	7.93
	lbs/day	53.6
Oil and Grease	mg/L	1.9
	lbs/day	12.8
Phosphorus (as P)	mg/L	2.47
	lbs/day	16.7
Iron, Total	µg/L	13.0
	lbs/day	0.088
Arsenic, Total	µg/L	9.4
	lbs/day	0.064
Copper, Total	µg/L	92.0
	lbs/day	0.62
Nickel, Total	µg/L	16.0
	lbs/day	0.11
Selenium, Total	µg/L	6.6
	lbs/day	0.045
Zinc, Total	µg/L	75.0
	lbs/day	0.51
Chlorodibromomethane	µg/L	1.5
	lbs/day	0.010
Chloroform	µg/L	3.7
	lbs/day	0.025
Dichlorobromomethane	µg/L	1.4
	lbs/day	0.0095

D. Compliance Summary

The available effluent monitoring data and Notices of Noncompliance correspondence indicate that the Discharger exceeded effluent limitations contained in Board Order R7-2004-0086 for nickel and accelerated monitoring triggers for toxicity. Table F-5 presents a brief enforcement summary. In addition, the Regional Water Board issued a Notice of Noncompliance on June 9, 2005 stating the reported minimum level for effluent samples collected during the period from August 2004 through April 2005 were above the required minimum level necessary to determine compliance with effluent limitations for copper, cyanide, nickel, selenium, thallium, and zinc. The Discharger submitted a letter on June 16, 2005 responding to the notice; it appears the Discharger has complied with the requirement since this time.

Table F-5. Compliance Summary

Date	Violation Type	Parameter	Reported Effluent Value	Permit Limitation	Units
January 2005	Annual Report - 2004	Incomplete Report	---	---	---
April 2005	Monitoring – Monthly	Incomplete Data for Hardness	---	---	mg/L
January 5, 2006[1]	Maximum Daily	Nickel	42	13.5	µg/L
January 2006[1]	Monthly Average	Nickel	42	12.0	µg/L
May 5, 2008[2]	Maximum Daily	Nickel	14	13.5	µg/L
May 2008[2]	Monthly Average	Nickel	14	12.0	µg/L
June 2, 2008	Maximum Daily	Nickel	16	13.5	µg/L
June 2008	Monthly Average	Nickel	16	12.0	µg/L

[1] The Regional Water Board rescinded the NOV issued February 24, 2006 and dismissed violations for nickel for the month of January 2006 in a letter dated April 2, 2007.

[2] The Regional Water Board amended the May 2008 Notice of Noncompliance indicating results of a sample re-analysis were lower than the original reported value (22 µg/L).

1. **Toxicity Compliance Summary.** The available effluent monitoring data indicate the Discharger has exceeded the accelerated monitoring triggers contained in Board Order R7-2004-0086 for toxicity in *C. dubia* (2 TU_c chronic toxicity); 4 TU_c chronic toxicity was reported on the 3rd Quarter 2006 report.

   The Regional Water Board issued a Notice on Noncompliance (dated October 2, 2006), notifying the Discharger of the violation of toxicity limits (no acute or chronic toxicity in the treatment plant effluent). The Regional Water Board informed the Discharger that accelerated monitoring was required as a result of the 3rd Quarter 2006 test; as described in Specifications D.9 of Board Order R7-2004-0086 and report the results as required by Monitoring and Reporting Program R7-2004-0086. The Discharger responded via written correspondence (dated January 17, 2007) indicating the results of the accelerated monitoring. The results of the accelerated monitoring are summarized in Table F-6 below:

Table F-6. Accelerated Monitoring for Toxicity in the Effluent:

Species/Sample	% Acute Survival	TUa	% Chronic Survival	TUc (Survival)	% Chronic Repro.	TUc (Repro.)	% Chronic (Growth)	TUc (Growth)
Trigger	90%	<1	80%	<1[1]	80%	<1[1]	80%	<1[1]
Ceriodaphnia dubia:								
Sample 11/10/2006	100	0.59	100	1.00	100	1.00	NA	NA
Sample 11/17/2006	95	0.59	100	1.00	75	1.33	NA	NA
Sample 12/01/2006	100	0.59	100	1.0	100	1.00	NA	NA

[1] Median of the three (3) accelerated monitoring sample results.

As shown in Table F-6, the results of the accelerated monitoring have shown the Discharger to be in compliance with the effluent monitoring triggers contained in Board Order R7-2004-0086 for toxicity with *C. dubia*. Specifications No. 23 of Board Order R7-2004-0086 states that a TIE may be triggered if the results of the

accelerated monitoring frequency exceed the acute or chronic toxicity triggers. Because the Discharger's accelerated monitoring results complied with effluent monitoring triggers, a TIE was not initiated.

The TRE Workplan the Discharger submitted to the Regional Board stated that if toxicity exceedances occurred, the Discharger would look to a number of sources to begin a determination of the cause of toxicity. The Discharger would evaluate the operation and performance of the facility as it relates to the effluent stream to identify and correct deficiencies contributing to effluent toxicity. The deficiencies may include operation excursions, chemical additives, or the uncontrolled introduction of contaminants into the effluent stream.

2. **Compliance Schedule.** Board Order R7-2004-0086 required the Discharger to adhere to a compliance schedule to work towards achieving compliance with the new effluent limitations pursuant to implementation of the CTR and provide an annual report to summarize each milestone and accomplishment.

The Discharger retained an environmental consultant (URS Corporation) to evaluate the various alternatives for management of the waste streams at the Facility and control technologies to maintain compliance with the California Toxics Rule (CTR) Effluent Limits. The results of the evaluation conducted recommended that the Discharger:

1) Eliminate the discharge of all process wastewater to Central Drain No. 5.

2) Design, permit and construct two deep injection wells for disposal of all process wastewater, and;

3) File a notice to terminate coverage under NPDES permit No. CA0104248, once the above two actions have been completed.

In a letter dated November 26, 2007 the Discharger notified the Regional Water Board that during the bidding process the actual costs more than doubled for the Deep Well Injection Process and that the allocated funds budgeted for the project are not sufficient. Based on total cost escalation and budget funding limitations, the Discharger formally requested an extension allowing for time to re-examine the Deep Well Injection Project and explore other project options that were identified in the original study to meet permit requirements.

The Discharger's request for an extension was rejected by the Regional Water Board in a letter dated March 6, 2008 for the following reasons:

1) Board Order R7-2004-0086 expires on July 1, 2009; as such, any compliance schedule after July 1, 2009 would need to be issued in a new permit for the next 5-year permit term.

2) Board Order R7-2004-0086 contained the maximum allowable compliance schedule to be in compliance with the final effluent limitations.

E. Planned Changes

The Discharger stated in the December 23, 2008 ROWD their progress towards implementing a technology that will enable the effluent discharged to meet effluent limitations for priority pollutants based on water quality criteria contained in the California Toxics Rule (CTR). The Discharger has been conducting pilot test studies to test treatment technologies to reduce the levels of constituents of concern in the Facility's effluent. To date, the Discharger has not identified a treatment technology that will result in an effluent that will meet proposed water quality-based effluent limitations. In parallel with the ongoing evaluation of treatment technologies, the Discharger is proceeding with developing a system for treating the wastewater via reverse osmosis with the discharge of concentrated reject water to an evaporation pond. This will allow for the suspension of the discharge to the Central Drain No. 5 until such time as a technology can be identified to meet the proposed water quality-based effluent limitations. The Discharger will seek coverage under separate WDRs for the discharge of concentrated reject water to the evaporation pond.

III. APPLICABLE PLANS, POLICIES, AND REGULATIONS

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

A. Legal Authorities

This Board 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 CWC (commencing with section 13370). It shall serve as a NPDES permit for point source discharges from this facility to surface waters. This Board Order also serves as Waste Discharge Requirements (WDRs) pursuant to Article 4, Chapter 4, Division 7 of the CWC (commencing with Section 13260).

B. California Environmental Quality Act (CEQA)

Under CWC Section 13389, this action to adopt an NPDES permit is exempt from the provisions of Chapter 3 of CEQA, commencing with Section 21100 of the Public Resources Code.

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 for the Colorado River Basin (hereinafter Basin Plan) on November 17, 1993 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 (includes amendments adopted by the Regional Water Board to date). 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. Consistent with state policy, effluent limitations specified in this Board Order protect existing and potential beneficial uses of the Central Drain No. 5, which are described below in Table F-7:

Table F-7. Basin Plan Beneficial Uses

Discharge Point	Receiving Water Name	Beneficial Use(s)
001	Central Drain No. 5 (Imperial Valley Drains)	Existing: Fresh Water Replenishment (FRSH); Water Contact Recreation (REC-I) [1, 2]; Non-Contact Water Recreation (REC-II)[1]; Warm Freshwater Habitat (WARM); Wildlife Habitat (WILD); and Support of Rare, Threatened, or Endangered Species (RARE) [3].

[1] Unauthorized use.
[2] The only REC-I usage that is known to occur is from infrequent fishing activity.
[3] Rare, endangered, or threatened wildlife exists in or utilizes some of these waterway(s). If the RARE beneficial use may be affected by a water quality control decision, responsibility for substantiation of the existence of rare, endangered, or threatened species on a case-by case basis is upon the California Department of Fish and Game on its own initiative and/or at the request of the Regional Board; and such substantiation must be provided within a reasonable time frame as approved by the Regional Board.

Requirements of this Board Order implement the Basin Plan.

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 May 18, 1972, and amended this plan on September 18, 1975. This plan contains temperature objectives for surface waters. The Thermal Plan does not apply to this discharge to Central Drain No. 5.

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 Board Order implement the SIP.

5. **Emergency Planning and Community Right to Know Act.** Section 13263.6(a), CWC, requires that "the Regional Water Board shall prescribe effluent limitations as part of the WDRs of a POTW for all substances that the most recent toxic chemical release data reported to the state emergency response commission pursuant to Section 313 of the Emergency Planning and Community Right to Know Act of 1986 (42 U.S.C. Sec. 11023) (EPCRKA) indicate as discharged into the POTW, for which the State Water Board or the Regional Water Board has established numeric water quality objectives, and has determined that the discharge is or may be discharged at a level which will cause, have the reasonable potential to cause, or contribute to, an excursion above any numeric water quality objective."

6. **Storm Water Requirements.** USEPA promulgated Federal Regulations for storm water on November 16, 1990 in 40 CFR Parts 122, 123, and 124. The NPDES Industrial Storm Water Program regulates storm water discharges from wastewater treatment facilities. Wastewater treatment plants are applicable industries under the storm water program and are obligated to comply with the Federal Regulations.

7. **Endangered Species Act.** This Board 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 (California Fish and Game Code section 2050 to 2097) or the Federal Endangered Species Act (16 U.S.C.A. Sections 1531 to 1544). This Board Order requires compliance with effluent limits, receiving water limits, and other requirements to protect the beneficial uses of waters of the state. The Discharger is responsible for meeting all requirements of the applicable Endangered Species Act.

8. **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.

9. **Stringency of Requirements for Individual Pollutants.** This Board Order contains both technology-based and water quality-based effluent limitations for individual pollutants. The technology-based effluent limitations consist of restrictions on pH and flow and are specified in the Effluent Limit Guidelines (ELGs) for the Steam Electric Power Generating Point Source Category at Part 423 and the Permit's technology-based pollutant restrictions are no more stringent than required by the CWA. This Board Order's technology-based pollutant restrictions implement the minimum, applicable federal technology-based requirements. Water quality-based effluent limitations have been scientifically derived to implement water quality objectives that protect beneficial uses. Both the beneficial uses and the water quality objectives have been approved pursuant to federal law and are the applicable federal water quality standards. To the extent that toxic pollutant water quality-based effluent limitations were derived from the CTR, the CTR is the

applicable standard pursuant to Title 40, Code of Federal Regulations Section 131.38.[1] The scientific procedures for calculating the individual water quality-based effluent limitations are based on the CTR-SIP, which was approved by the 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 Board Order's restrictions on individual pollutants are no more stringent than required to implement the requirements of the CWA.

10. **Antidegradation Policy.** 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 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.

11. **Anti-Backsliding Requirements.** Sections 402(o)(2) and 303(d)(4) of the CWA and federal regulations at title 40, Code of Federal Regulations section 122.44(l) prohibit backsliding in NPDES permits. These anti-backsliding provisions require that effluent limitations in a reissued permit must be as stringent as those in the previous permit, with some exceptions in which limitations may be relaxed.

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

The immediate receiving water is the Central Drain No. 5, which is a part of the Imperial Valley Drains. The 2006 USEPA 303(d) list of impaired waters (hereinafter 303(d) List) classifies the Imperial Valley Drains as impaired by dieldrin, DDT, endosulfan, PCBs, toxaphene, and selenium. Further, the Alamo River, to which the Central Drain No. 5 is tributary, is impaired by chlorpyrifos, DDT, dieldrin, PCBs, selenium, and toxaphene.

In addition, the 303(d) List classifies the Salton Sea as impaired by nutrients, salt and selenium. Tributaries to the Salton Sea, including the Alamo River, may be affected by the development of TMDLs for the Salton Sea. No TMDL has been developed to date for the Salton Sea, although a nutrient TMDL is under development for the Salton Sea that may impact the permitted discharges to tributaries to the Salton Sea (i.e., Alamo River). The nutrient TMDL for the Salton Sea is tentatively scheduled for completion in 2009.

E. Other Plans, Polices and Regulations

Federal regulations for storm water discharges require specific categories of facilities, which discharge storm water associated with industrial activity (storm water), to obtain NPDES permits and to implement Best Conventional Pollutant Technology (BCT) and

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

Best Available Technology Economically Achievable (BAT) to reduce or eliminate industrial storm water pollution.

The State Water Board adopted Board Order 97-03-DWQ (General Permit No. CAS000001), specifying WDRs for discharges of storm water associated with industrial activities, excluding construction activities, and requiring submittal of a Notice of Intent by industries to be covered under the Permit. The Facility is covered under the General Permit for storm water discharges associated with industrial activities.

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: section 122.44(a) requires that permits include applicable technology-based limitations and standards; and 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. 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) may be established: (1) using USEPA criteria guidance under CWA Section 304(a), supplemented where necessary by other relevant information; (2) on an indicator parameter for the pollutant of concern; or (3) using a calculated numeric water quality criterion, such as a proposed state criterion or policy interpreting the state's narrative criterion, supplemented with other relevant information, as provided in section 122.44(d)(1)(vi).

Effluent and receiving water limitations in this Board Order are based on the federal CWA, Basin Plan, State Water Board's plans and policies, USEPA guidance and regulations, ELGs for the Steam Electric Power Generating Point Source Category at Part 423, and best practicable waste treatment technology. While developing effluent limitations and receiving water limitations, monitoring requirements, and special conditions for the draft permit, the following information sources were used:

1. USEPA NPDES Application Forms: California Form 200, dated December 23, 2008; USEPA Forms 1, 2A, and 2S dated December 23, 2008.

2. Code of Federal Regulations – Title 40.

3. Water Quality Control Plan (Colorado River Basin – Region 7) as amended to date.

4. Regional Water Board files related to Imperial Irrigation District, El Centro Generating Station NPDES permit CA0104248.

A. Discharge Prohibitions

Effluent and receiving water limitations in this Board Order are based on the Federal CWA, Basin Plan, State Water Board's plans and policies, USEPA guidance and

regulations, ELGs for the Steam Electric Power Generating Point Source Category at Part 423, and best practicable waste treatment technology.

B. Technology-Based Effluent Limitations

1. Scope and Authority

Section 301(b) of the CWA and implementing USEPA permit regulations at section 122.44, title 40 of the Code of Federal Regulations, 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 Board Order must meet minimum federal technology-based requirements based on Effluent Limitations Guidelines and Standards for the Steam Electric Power Generating Point Source Category at Part 423 and Best Professional Judgment (BPJ) in accordance with Part 125, section 125.3.

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, fecal coliform, pH, and oil and grease. The BCT standard is established after considering the “cost reasonableness” of the relationship between the cost of attaining a reduction in effluent discharge and the benefits that would result, and also the cost effectiveness of additional industrial treatment beyond BPT.

d. New source performance standards (NSPS) represent the best available demonstrated control technology standards. The intent of NSPS guidelines is to set limitations that represent state-of-the-art treatment technology for new sources.

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

2. Applicable Technology-Based Effluent Limitations

a. This Board Order includes technology-based effluent limitations based on Effluent Limitations Guidelines and Standards for the Steam Electric Power Generating Point Source Category at Part 423 and BPJ in accordance with Part 125, section 125.3 for pH and polychlorinated biphenyls (PCBs). Effluent limitations for pH and PCBs in this Board Order have been carried over from the previous Board Order R7-2004-0086 as described below:

Table F-8. Summary of Technology-based Effluent Limitations

Parameter	Units	Effluent Limitations				
		Average Monthly	Average Weekly	Maximum Daily	Instantaneous Minimum	Instantaneous Maximum
Flow[1]	MGD	0.995	---	---	---	---
pH	s.u.	---	---	---	6.0	9.0

[1] The proposed Board Order establishes mass-based effluent limitations for a design capacity of 0.995 MGD.

PCBs: There shall be no discharge of PCBs such as those commonly used for transformer fluid.

b. Basis for Limitations:

Table F-9. Basis for Limitations

Constituents	Basis for Limitations
Hydrogen Ion (pH)	Hydrogen Ion (pH) is a measure of Hydrogen Ion concentration in the water. A range specified between 6.0 and 9.0 ensures suitability of biological life. This limitation has been adopted in the Basin Plan of the Region.
Flow	The design capacity of the treatment plant is 0.995 MGD.

C. Water Quality-Based Effluent Limitations (WQBELs)

1. Scope and Authority

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

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

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

2. Applicable Beneficial Uses and Water Quality Criteria and Objectives

Table F-10 summarizes the applicable water quality criteria/objectives for priority pollutants reported in detectable concentrations in the effluent. The Discharger was not required to sample the receiving water for priority pollutants; therefore, the RPA considered only effluent monitoring data.

On May 23, 2008, the Discharger conducted a Biological Assessment at the location of the discharge; the objective of the Biological Assessment was to determine whether water, plant life, and aquatic life at the discharge location are more typical of a saltwater or a freshwater environment. The Discharger submitted the results of the Biological Assessment to USEPA requesting approval to use alternative freshwater criteria at the location of the discharge. The assessment determined that the applicable reach of the Central Drain No. 5 is characterized as freshwater; therefore, saltwater aquatic life criteria are not applicable for this reach of the Central Drain No. 5.

USEPA reviewed the Biological Assessment and on November 10, 2008 USEPA issued a tentative approval of the findings in the Discharger's Biological Assessment and the application of water quality criteria for the protection of freshwater aquatic life. This Board Order considers the revised application of water quality criteria in the Reasonable Potential Analysis (RPA).

Table F-10 summarizes the applicable water quality criteria/objectives for priority pollutants reported in detectable concentrations in the effluent or receiving water. The hardness value used to determine applicable hardness-dependent water quality criteria for the discharge is 400 mg/L as $CaCO_3$ (the minimum hardness reported from a receiving water sample). The RPA conducted is based on the more stringent of freshwater criteria and human health criteria for the consumption of organisms; these criteria identified in Table F-10 were used in conducting the RPA for this Board Order.

Table F-10. Applicable Beneficial Uses and Water Quality Criteria and Objectives

CTR No.	Parameter	Most Stringent Criteria	CTR/NTR Water Quality Criteria				
			Freshwater		Saltwater		Human Health for Consumption of:
			Acute	Chronic	Acute	Chronic	Organisms Only
		µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
2	Arsenic	150	340	150	Not Applicable		---
6	Copper	30.50	51.68	30.50			---

CTR No.	Parameter	Most Stringent Criteria	CTR/NTR Water Quality Criteria				
			Freshwater		Saltwater		Human Health for Consumption of:
			Acute	Chronic	Acute	Chronic	Organisms Only
		µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
9	Nickel	168.54	1,515.92	168.54			4,600
10	Selenium	5	20	5			---
12	Thallium	6.3	---	---			6.3
13	Zinc	387.83	387.83	387.83			---
14	Cyanide	5.2	22	5.2			220,000
23	Chlorodibromomethane	34	---	---			34
26	Chloroform	No Criteria	---	---			---
27	Dichlorobromomethane	46	---	---			46

"---" No water quality criteria available.

3. Determining the Need for WQBELs

In accordance with section 1.3 of the SIP, the Regional Water Board conducted a RPA for each priority pollutant with an applicable criterion or objective to determine if a WQBEL is required in the Board Order. The Regional Water Board analyzed effluent data to determine if a pollutant in a discharge has the reasonable potential to cause or contribute to an excursion above a state water quality standard. For all parameters that have the reasonable potential to cause or contribute to an excursion above a water quality standard, numeric WQBELs are required. The RPA considers 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 identified the maximum observed effluent concentration (MEC) 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 is greater than or equal to the CTR water quality criteria or applicable objective (C), a limit is needed.

2) Trigger 2 – If background water quality (B) > C and the pollutant is detected in the effluent, a limit is needed.

3) Trigger 3 – If other related information, such as a 303(d) listing for a pollutant, discharge type, compliance history, etc., indicates that a WQBEL is required.

Sufficient effluent and ambient 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. In accordance with section 1.2 of the SIP, the Regional Water Board shall have discretion to consider if any data are inappropriate for use in determining reasonable potential.

The RPA was performed on available priority pollutant monitoring data collected by the Discharger for the period from August 2004 to December 2008. Based on the RPA, copper, selenium, and cyanide demonstrated reasonable potential to cause or contribute to an excursion above a water quality standard. Data evaluated in the RPA for priority pollutants reported in detectable concentrations in the effluent as well as those pollutants for which effluent limitations existed in Board Order R7-2004-0086, are summarized in Table F-11. Data used in the RPA are summarized in Table F-11.

Based on the data submitted and the revised applicable water quality criteria, the discharge demonstrates a reasonable potential to cause or contribute to an excursion above the applicable water quality standards for copper, selenium, and cyanide. Further, the previous Board Order (R7-2004-0086) contained effluent limitations for nickel, thallium, and zinc. Based on USEPA's tentative approval of the application of water quality criteria for the protection of freshwater aquatic life and the data submitted by the Discharger, the discharge did not demonstrate a reasonable potential to cause or contribute to an excursion above water quality standards for nickel, thallium, and zinc; therefore, the effluent limitations for these pollutants are discontinued.

Table F-11. Summary of Reasonable Potential Analysis

CTR No.	Priority Pollutant	Applicable Water Quality Criteria (C)	Max. Effluent Concentration (MEC)	Max. Detected Receiving Water Concentration (B)	RPA Result – Effluent Limit Required?	Reason
		µg/L	µg/L	µg/L		
2	Arsenic	150	9.4	Not Available[2]	No	MEC < C
6	Copper	30.50	192		Yes	MEC > C
9	Nickel	168.54	42		No	MEC < C
10	Selenium	5.00	10		Yes	MEC > C
12	Thallium	6.30	6.0		No	MEC < C
13	Zinc	387.83	179		No	MEC < C
14	Cyanide	5.2	7.9		Yes	MEC > C
23	Chlorodibromomethane	34.00	1.5		No	MEC < C
26	Chloroform	NC[1]	3.7		No	No criteria
27	Dichlorobromomethane	46.00	1.4		No	MEC < C

[1] Sampling the receiving water for priority pollutants was not required during the previous permit term.

[2] NC = No Criteria contained in the CTR.

4. WQBEL Calculations

a. Final WQBELs are based on monitoring results and following the calculation process outlined in section 1.4 of the SIP. A table providing the calculations for all applicable WQBELs for this Board Order is provided in Attachment I of this Board Order.

b. WQBELs Calculation Example

Using cyanide as an example, the following demonstrates how WQBELs based on aquatic life criterion were established for Board Order R7-2009-0020. 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 Board 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. In this Board Order a hardness value from the effluent of 400 mg/L (as $CaCO_3$) was used for development of hardness-dependant criteria, and a pH of 6.11 was used for pH-dependant criteria. Upstream receiving water samples were not available.
	D =	The dilution credit, and
	B =	The ambient background concentration

For this Board Order, dilution was not allowed due to the nature of the receiving water and quantity of the effluent; therefore:

ECA = C

For cyanide, the applicable water quality criteria are:

ECA_{acute}= 22 µg/L
$ECA_{chronic}$= 5.2 µg/L
$ECA_{human\ health}$= 220,000 µg/L

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 cyanide, the following data was used to develop the acute and chronic LTA using Table 1 of the SIP:

No. of Samples Available	CV	$Multiplier_{acute}$	$Multiplier_{chronic}$
52	0.6	0.32	0.53

$LTA_{acute} = 22\ \mu g/L \times 0.32 = 7.06\ \mu g/L$

$LTA_{chronic} = 5.2\ \mu g/L \times 0.53 = 2.74\ \mu g/L$

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

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

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

LTA = 2.74 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 cyanide, 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	0.6	3.11	1.55

$AMEL_{aquatic\ life}$ = 2.74 x 1.55 = 4.3 µg/L

$MDEL_{aquatic\ life}$ = 2.74 x 3.11 = 8.5 µg/L

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

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

For cyanide:

$AMEL_{human\ health}$ = 220,000 µg/L

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.

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

For cyanide, the following data were used to develop the $MDEL_{human\ health}$:

No. of Samples Per Month	CV	$Multiplier_{MDEL\ 99}$	$Multiplier_{AMEL\ 95}$	Ratio
4	0.6	3.11	1.55	2.01

$MDEL_{human\ health}$ = 220,000 µg/L x 2.01 = 441,362 µg/L

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 Board Order.

$AMEL_{aquatic\ life}$	$MDEL_{aquatic\ life}$	$AMEL_{human\ health}$	$MDEL_{human\ health}$
4.3 µg/L	8.5 µg/L	220,000 µg/L	441,362 µg/L

The lowest (most restrictive) effluent limits are based on aquatic life criteria and were incorporated into this Board Order. For copper and selenium, there are no human health criteria; therefore, the AMEL and MDEL based on aquatic life criteria are established as the WQBELs. In addition, the previous Board Order (R7-2004-0086) included interim and final effluent limitations for copper, cyanide, nickel, selenium, thallium, and zinc that were developed based on the more

stringent of saltwater and freshwater criteria. As a result of the revised RPA and resulting proposed final effluent limits for copper and cyanide are now based on freshwater aquatic life criteria which are less stringent than saltwater aquatic life criteria for those pollutants. These newly calculated limits will be protective of aquatic life.

c. WQBELs Based on Basin Plan Objectives

i. Previous Board Order R7-2004-0086 established WQBELs for TDS. These WQBELs were based on receiving water quality objectives established in the Basin Plan that state any discharge to the Imperial Valley Drains (Central Drain No. 5 is an Imperial Valley Drain) shall not cause the concentration of TDS in the surface water to exceed an annual average of 4,000 mg/L or a maximum daily of 4,500 mg/L. Due to the incorrect interpretation of the Basin Plan receiving water quality objectives for TDS as numeric effluent limitations, this Board Order replaces the numeric effluent limitations for TDS of the previous permit with a narrative effluent limitation and establishes a receiving water limitation for TDS to accurately apply the WQO of the Basin Plan. As stated in finding II.P of this Board Order, the replacement of those numeric effluent limitations with a narrative effluent limitation and receiving water limitation for TDS does not constitute backsliding due to the exception contained in section 402(o)(2)(B)(ii) of the CWA which states that if the Administrator determines that a technical mistake or mistake in interpretation of the law were made when establishing the limits, the appropriate application of those laws is justified. Further, the effluent data were compared to the Basin Plan receiving water quality objectives; the reported concentrations in the discharge are all less than the water quality objectives.

ii. The Basin Plan's general surface water objectives state that all waters shall be maintained free of toxic substances in concentrations which are toxic to, or which produce detrimental physiological responses in human, plant, animal, or indigenous aquatic life. Chlorine is known to be toxic to aquatic life. The previous Board Order establishes numeric effluent limitations for total chlorine residual and these limitations are carried over to this Board Order.

The effluent limitations calculated for this permit renewal for copper and cyanide are based on USEPA's approval of freshwater quality criteria contained in the CTR, discharge monitoring data, and pursuant to procedures established in the SIP; thus, they are established in this Board Order.

Table F-12. Summary of Water Quality-based Effluent Limitations

Parameter	Units	Effluent Limitations				
		Average Monthly	Average Weekly	Maximum Daily	Instantaneous Minimum	Instantaneous Maximum
Total Residual Chlorine	mg/L	0.01	0.02	---	---	---
Copper, Total Recoverable	µg/L	22	---	52	---	---
	lbs/day[1]	0.18	---	0.43	---	---

Parameter	Units	Effluent Limitations				
		Average Monthly	Average Weekly	Maximum Daily	Instantaneous Minimum	Instantaneous Maximum
Selenium, Total Recoverable	µg/L	4.1	---	8.2	---	---
	lbs/day[1]	0.03	---	0.07	---	---
Cyanide, Free	µg/L	4.3	---	8.5	---	---
	lbs/day[1]	0.04	---	0.07	---	---

[1] The mass-based effluent limitations are based on a design capacity of 0.995 MGD.

(a) **Total Dissolved Solids:** Discharges of wastes or wastewater shall not increase the total dissolved solids content of receiving waters, unless it can be demonstrated to the satisfaction of the Regional Water Board that such an increase in total dissolved solids does not adversely affect beneficial uses of receiving waters.

5. Whole Effluent Toxicity (WET)

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

The Basin Plan specifies a narrative objective for toxicity, requiring that all waters be maintained free of toxic substances in concentrations that are lethal to or produce other detrimental response on aquatic organisms. Detrimental response includes but is not limited to decreased growth rate, decreased reproductive success of resident or indicator species, and/or significant alterations in population, community ecology, or receiving water biota.

The previous Board Order contained toxicity limits and monitoring requirements. As discussed in section II.C of this Fact Sheet, the Discharger has reported exceedances of toxicity triggers and has conducted accelerated monitoring. Following accelerated monitoring, the discharge has been in compliance with toxicity triggers.

This Board Order implements the narrative objective for toxicity, requiring there shall be no acute or chronic toxicity in the treatment plant effluent. In addition, the Order establishes thresholds that when exceeded requires the Discharger to conduct accelerated toxicity testing and/or conduct toxicity identification evaluation (TIE) and toxicity reduction evaluation (TRE) studies.

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. Therefore, in accordance with the SIP, this Board Order requires the Discharger to conduct chronic toxicity testing for discharges to the Central Drain No.5.

D. Final Effluent Limitations

Table F-14 below summarizes the proposed effluent limitations for the discharge through Discharge Point 001. Proposed effluent limitations are based on ELGs for the Steam Electric Power Generating Point Source Category at Part 423, California Toxics Rule, and Colorado River Basin Plan Water Quality Standards.

The previous Board Order established effluent limitations for total residual chlorine, TDS, pH, copper, cyanide, nickel, selenium, thallium, zinc and toxicity. The effluent limitations for pH, total residual chlorine, and selenium are carried over to the proposed Board Order. The numeric effluent limitations for TDS have been revised and are now a narrative requirement, with numeric receiving water limitations established. In addition, as discussed in section IV.C.3, the effluent limitations for nickel, thallium and zinc do not demonstrate reasonable potential; therefore are discontinued. The final effluent limitations for copper and cyanide are revised based on USEPA's approval of the application of freshwater criteria for this discharge. As discussed in section IV.C.4.b, the effluent limitations calculated for this permit renewal for copper and cyanide are less stringent than the effluent limitations contained in the previous Board Order (R7-2004-0096); however, are calculated in accordance with SIP procedures and thus are established in this Board Order. Further, a review of the available effluent data for copper, selenium, and cyanide indicate reported concentrations exceed the AMELs established in this Board Order. The previous Board Order granted interim effluent limitations for copper, selenium, and cyanide to allow the Discharger to complete actions necessary to comply with final CTR-based WQBELs; these interim effluent limitations are effective through June 30, 2009. This Board Order proposes new final WQBELs for copper, selenium, and cyanide; therefore, the Discharger may request a Time Schedule or Cease and Desist Order to comply with the effluent limitation for copper, selenium, and cyanide. If a compliance schedule were granted, it would establish time schedules for the Discharger to complete necessary investigative, preventive, and remedial actions to address its imminent and threatened violations.

1. Mass-based Effluent Limitations

Section 122.45(f)(1) requires effluent limitations be expressed in terms of mass, with some exceptions, and section 122.45(f)(2) allows pollutants that are limited in terms of mass to additionally be limited in terms of other units of measurement. This Board Order includes effluent limitations expressed in terms of mass and concentration. In addition, pursuant to the exceptions to mass limitations provided in section 122.45(f)(1), some effluent limitations are not expressed in terms of mass, such as pH and temperature, and when the applicable standards are expressed in terms of concentration (e.g. CTR criteria and MCLs) and mass limitations are not necessary to protect the beneficial uses of the receiving water.

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)

2. Final Effluent Limitations

a. The Discharger shall maintain compliance with the following effluent limitations at Discharge Point 001, with compliance measured at Monitoring Location EFF-001 as described in the MRP.

Table F-13. Summary of Final Effluent Limitations

Parameter	Units	Effluent Limitations					Basis
		Average Monthly	Average Weekly	Maximum Daily	Instantaneous Minimum	Instantaneous Maximum	
Flow	MGD	0.995	---	---	---	---	
pH	standard units	---	---	---	6.0	9.0	ELG[3], Basin Plan
Total Residual Chlorine	mg/L	0.01	0.02	---	---	---	Basin Plan
Copper, Total Recoverable	µg/L	22	---	52	---	---	E, CTR, SIP[2]
	lbs/day	0.18	---	0.43	---	---	
Cyanide, Free	µg/L	4.3	---	8.5	---	---	E, CTR, SIP[2]
	lbs/day	0.04	---	0.07	---	---	
Selenium, Total Recoverable	µg/L	4.1	---	8.2	---	---	E, CTR, SIP[2]
	lbs/day	0.03	---	0.07	---	---	

[1] The proposed Board Order establishes mass-based effluent limitations for a design capacity of 0.995 MGD.
[2] E = Carried over from the previous Board Order (R7-2004-0086). CTR/SIP = Calculations based on water quality criteria contained in the CTR and the requirements contained in Section 1.4 of the SIP.
[3] ELG = Effluent Limit Guidelines for the Steam Electric Power Generating Point Source Category at Part 423

b. The effluent shall not contain heavy metals, chemicals, pesticides or other constituents in concentrations toxic to aquatic life.

c. PCBs: There shall be no discharge of polychlorinated biphenyl compounds such as those commonly used for transformer liquid.

d. Toxicity: There shall be no acute or chronic toxicity in the facility's effluent nor shall the treatment plant effluent cause any acute or chronic toxicity in the receiving water, as defined in section V of the MRP. All waters shall be maintained free of toxic substances in concentrations which are toxic to, or which produce detrimental physiological responses in human, plant, animal, or indigenous aquatic life. Compliance with this objective will be determined by use

of indicator organisms, analyses of species diversity, population density, growth anomalies, or bioassays of appropriate duration or other appropriate methods specified by the Regional Water Board.

e. Total Dissolved Solids: Discharges of wastes or wastewater shall not increase the total dissolved solids content of receiving waters, unless it can be demonstrated to the satisfaction of the Regional Water Board that such an increase in total dissolved solids does not adversely affect beneficial uses of receiving waters.

3. Satisfaction of Anti-Backsliding Requirements

Sections 402(o)(2) and 303(d)(4) of the CWA and federal regulations at Title 40, CFRs Section 122.44(l) prohibit backsliding in NPDES permits. These anti-backsliding provisions require that effluent limitations in a reissued permit must be as stringent as those in the previous permit, with some exceptions in which limitations may be relaxed. Some effluent limitations in this Board Order are less stringent than those in the previous Board Order. The previous Board Order (R7-2004-0086) established numeric effluent limitations for TDS. Due to the incorrect interpretation of the Basin Plan receiving water quality objectives for TDS as numeric effluent limitations, the numeric effluent limitations for TDS are replaced by a narrative effluent limitation and a numeric receiving water limitation for TDS to accurately apply the water quality objectives of the Basin Plan. This relaxation of effluent limitations is consistent with the exception to the anti-backsliding requirements of the CWA provided in section 402(o)(2)(B)(ii) and federal regulations. Further, this Board Order revises some effluent limitations to reflect USEPA approval of application of water quality criteria for the protection of freshwater aquatic life, which is discussed in detail in section IV.C. This Board Order revises characterization of the immediate receiving water, the Central Drain No. 5 as a freshwater environment and establishes effluent limitations based on the CTR and SIP freshwater criteria for the discharge. Therefore, based on consideration of new information (i.e., discharge monitoring data and reasonable potential analysis reflecting revised applicable water quality criteria), this Board Order discontinues effluent limitations for nickel, thallium, and zinc because the discharge did not demonstrate a reasonable potential to cause or contribute to an excursion above applicable water quality standards for nickel, thallium, and zinc. In addition, effluent limitations for copper and cyanide are revised based on the application of revised water quality criteria, current discharge monitoring data, and reasonable potential analysis. This relaxation of effluent limitations is consistent with the anti-backsliding requirements of the CWA and federal regulations.

4. Satisfaction of Antidegradation Policy

Section 131.12 requires that the state water quality standards include an anti-degradation policy consistent with the federal policy. As stated previously in Fact Sheet section III.C.10, the State Water Board established California's anti-degradation policy in State Water Board Resolution No. 68-16. As discussed in detail below, the permitted discharge is consistent with the anti-degradation provision of section 131.12 and State Water Board Resolution No. 68-16.

The source water for the Facility and the entire Imperial Valley is the Colorado River. Average annual precipitation in the Imperial Valley is insignificant (approximately 2 inches/year). Therefore, the Central Drain No. 5 is an effluent-dominated surface water that carries discharges from WWTPs; agricultural return flows from approximately 30 Imperial Valley drains that discharge tilewater and tailwater from farmlands; and wastes from Mexicali, Mexico. The Central Drain No. 5 discharges to the Alamo River, which in turn discharges to the Salton Sea. The wastes from Mexico include agricultural runoff (tailwater), partially treated and untreated municipal and Industrial wastewater, stormwater, and urban runoff from the Mexicali Valley. The wastes from Mexico contain pollutants (e.g., pathogens, trash, VOCs, pesticides, nutrients, raw sewage, BOD_5, and metals) that impair the Alamo River's beneficial uses. Tailwater is irrigation water that does not percolate into the soil, and exits the lower end of the field into a drain. Tailwater tends to erode fields and thus acquire silt and sediments as it crosses and exits a field. Tilewater is water that has percolated through the soil, but is not absorbed by crops. Tilewater flushes salts from the soil. This highly saline water accumulates in tile lines beneath the fields, wherein it is transported to drains by gravity flow or a sump system. Consequently, "background" water quality in the Central Drain No. 5 is difficult to establish for the purpose of conducting a typical antidegradation analysis. It is likely that the Central Drain No. 5 has historically contained "background" water from farmland[2] and Mexico that contains pollutants at concentrations that violate certain Basin Plan water quality objectives for those pollutants, in particular, pesticides, silt/sediment[3], VOCs, nutrients, pathogens, and selenium.

The discharge from the Facility contains conventional pollutants (TSS and pH) that are controlled through best practicable control technology currently available (BPT) and best available technology economically achievable (BCT) to prevent exceedances of the receiving water quality objectives for those pollutants and prevent adverse impacts on the REC-I and REC-II beneficial uses of the Central Drain No. 5. The discharge also contains TDS, but at concentrations below the 4,000 mg/L TDS WQO for the receiving water. Copper, cyanide, and selenium have been measured in the effluent at concentrations above the numeric criteria for priority toxic pollutants for the State of California. These toxic pollutants are being controlled through WQBELs derived from water quality criteria established in the CTR. The established WQBELs for copper, cyanide, and selenium prevent adverse impacts of the beneficial uses of the river and ensure compliance with the Basin Plan. Board Order R7-2004-0086 established interim effluent limitations for copper, cyanide, and selenium that were effective from July 1, 2004 to July 1, 2009 and final WQBELs become effective thereafter. Nevertheless, the TSS, pH, copper, cyanide, and selenium are likely to lower water quality in the receiving water (i.e., cause degradation). For conventional pollutants, including TSS and pH, this degradation is restricted to pollutants associated with industrial cooling wastewater, is localized and will not result in water quality less than that prescribed in the Basin Plan. For toxic pollutants, including copper, cyanide, and selenium, this degradation will be not

[2] The agricultural return flows from the Imperial Valley and Mexico are essentially free of BOD_5 and fecal coliform bacteria and have pH well within the receiving water quality objective of 6.0 to 9.0 pH units.
[3] Silt/sediment can be measured in terms of TSS.

significant once controlled and will not result in water quality less than that prescribed in the Basin Plan.

The discharge from the Facility as permitted herein reflects best practicable treatment and control (BPTC) for the subject wastewater. The control is intended to assure that the discharge does not create a condition of pollution or nuisance and that the highest "background" water quality as defined above will be maintained.

The discharge is necessary to accommodate economic development in the area and essential public services for the Imperial Valley area, which are an important benefit to the State. Based on the foregoing, the discharge as permitted herein is consistent with Resolution No. 68-16.

5. Stringency of Requirements for Individual Pollutants

This Board Order contains both technology-based and WQBELs for individual pollutants. The technology-based effluent limitations consist of restrictions on flow and pH. Restrictions on flow and pH are discussed in section IV.B. This Board Order's technology-based pollutant restrictions implement the minimum, applicable federal technology-based requirements.

Water quality-based effluent limitations have been scientifically derived to implement water quality objectives that protect beneficial uses. Both the beneficial uses and the water quality objectives have been approved pursuant to federal law and are the applicable federal water quality standards. To the extent that toxic pollutant WQBELs were derived from the CTR, the CTR is the applicable standard pursuant to section 131.38. The scientific procedures for calculating the individual WQBELs for priority pollutants are based on the CTR-SIP, which was approved by USEPA on May 18, 2000. All beneficial uses and water quality objectives contained in the Basin Plan were approved under state law and submitted to and approved by USEPA prior to May 30, 2000. Any water quality objectives and beneficial uses submitted to USEPA prior to May 30, 2000, but not approved by USEPA before that date, are nonetheless "applicable water quality standards for purposes of the CWA" pursuant to section 131.21(c)(1). Collectively, this Board Order's restrictions on individual pollutants are no more stringent than required to implement the requirements of the CWA.

E. Interim Effluent Limitations

A review of the available effluent data for copper, selenium, and cyanide indicate reported concentrations exceed the AMELs established in this Board Order. The previous Board Order granted interim effluent limitations for copper, selenium, and cyanide to allow the Discharger to complete actions necessary to comply with final CTR-based WQBELs; these interim effluent limitations are effective through June 30, 2009. This Board Order proposes new final WQBELs for copper, selenium, and cyanide; therefore, the Discharger may request a Time Schedule or Cease and Desist Order to comply with the effluent limitation for copper, selenium, and cyanide. If a compliance schedule were granted, it would establish time schedules for the Discharger

to complete necessary investigative, preventive, and remedial actions to address its imminent and threatened violations.

Table F-14. Interim Effluent Limitations

Parameter	Date Interim Effluent Limitation Becomes Effective	Date Interim Effluent Limitation Expires	Units	Average Monthly Interim Effluent Limitation (AMEL)	Maximum Daily Interim Effluent Limitation (MDEL)
Copper, Total Recoverable	June 18, 2009[1]	June 30, 2009[1]	µg/L	200.0	200.0
			lbs/day[2]	1.7	1.7
Selenium, Total Recoverable	June 18, 2009[1]	June 30, 2009[1]	µg/L	66.0	66.0
			lbs/day	0.55	0.55
Cyanide, Free	June 18, 2009[1]	June 30, 2009[1]	µg/L	10.0	10.0
			lbs/day	0.08	0.08

1 These interim effluent limitations were established in the previous Board Order (R7-2004-0086) and are carried forward in this Board Order (R7-2009-0020); therefore, the effective date is the effective date of this Board Order (R7-2009-0020).
2 The proposed Board Order establishes mass-based effluent limitations for a design capacity of 0.995 MGD.

F. Land Discharge Specifications – Not Applicable

G. Reclamation Specifications – Not Applicable

V. RATIONALE FOR RECEIVING WATER LIMITATIONS

The receiving water limitations in the proposed Board Order are based upon the water quality objectives contained in the Basin Plan. As such, they are a required part of the proposed Board Order.

A. Surface Water

The surface water receiving water limitations in the proposed Board Order are based upon the water quality objectives contained in the Basin Plan and are carried forward from the previous Board Order. As such, they are a required part of the proposed Board Order. The receiving water limitations for dissolved oxygen and temperature are as follows:

The discharge shall not cause the concentration of dissolved oxygen in the receiving water to fall below 5.0 mg/L. When the dissolved oxygen in the receiving water is already below 5.0 mg/L, the discharge shall not cause any further depression.

The discharge shall not result in the natural receiving water temperature to be altered, unless it can be demonstrated to the satisfaction of the Regional Water Board that such alteration in temperature does not adversely affect beneficial uses.

The discharge shall not result in the normal ambient pH of the receiving water to fall below 6.0 or exceed 9.0 units.

Also, a new receiving water limitation was added for TDS based on the Regional Water Board's Basin Plan as follows:

The discharge shall not cause the concentration of total dissolved solids in the Central Drain No. 5 to exceed an annual average concentration of 4,000 mg/L or a maximum daily concentration of 4,500 mg/L.

B. Groundwater – Not Applicable

VI. RATIONALE FOR MONITORING AND REPORTING REQUIREMENTS

Section 122.48 requires that all NPDES permits specify requirements for recording and reporting monitoring results. CWC Sections 13267 and 13383 authorizes the Regional Water Board to require technical and monitoring reports. The Monitoring and Reporting Program (MRP), Attachment E of this Board 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

The Discharger is required to conduct monitoring of the permitted discharges in order to evaluate compliance with permit conditions. Monitoring requirements are given in the proposed MRP. This provision requires compliance with the MRP, and is based on sections 122.44(i), 122.62, 122.63 and 124.5. The MRP is a standard requirement in almost all NPDES permits (including the proposed Board Order) issued by the Regional Water Board. In addition to containing definitions of terms, it specifies general sampling/analytical protocols and the requirements of reporting of spills, violations, and routine monitoring data in accordance with NPDES regulations, the CWC, and Regional Water Board's policies. The MRP also contains sampling program specific for the Discharger's facility. It defines the sampling stations and frequency, pollutants to be monitored, and additional reporting requirements. Pollutants to be monitored include all pollutants for which effluent limitations are specified. Further, in accordance with section 1.3 of the SIP, periodic monitoring is required for all priority pollutants defined by the CTR, for which criteria apply and for which no effluent limitations have been established, to evaluate reasonable potential to cause or contribute to an excursion above a water quality standard.

Monitoring for those pollutants expected to be present in the discharge from the Facility, EFF-001, will be required as shown in the proposed MRP and as required by the SIP.

Monitoring requirements are largely unchanged from the previous Board Order. Annual monitoring for priority pollutants in the effluent and receiving water (RSW-001 only) has been added, as required in accordance with the SIP. The previous Board Order included a specific effluent monitoring requirement for volatile organic compounds (VOCs). Due to the inclusion of VOCs monitoring in the priority pollutant monitoring requirement in the MRP, the VOC-specific monitoring requirement has been removed.

C. Whole Effluent Toxicity Testing Requirements

Whole effluent toxicity (WET) testing requirements establish monitoring of the effluent to ensure that the receiving water quality is protected from the aggregate toxic effect of a mixture of pollutants in the effluent. An acute toxicity test is conducted over a short time period and measures mortality. A chronic toxicity test is conducted over a longer period of time and may measure mortality, reproduction, and growth.

This requirement establishes conditions and protocol by which compliance with the Basin Plan narrative water quality objective for toxicity will be demonstrated and in accordance with section 4.0 of the SIP. Conditions include required monitoring and evaluation of the effluent for acute and chronic toxicity and numerical values for chronic toxicity evaluation to be used as 'triggers' for initiating accelerated monitoring and toxicity reduction evaluation(s).

The WET testing requirements contained in the MRP, section V were developed based on the Draft National Whole Effluent Toxicity Implementation Guidance Under the NPDES Program developed by USEPA (Docket ID. No. OW-2004-0037). This is the most current guidance available to the Regional Water Board. This Board Order includes a reopener to allow the requirements of this section to be revised pending the issuance of final guidance or policies developed by either the USEPA or State Water Board.

D. Receiving Water Monitoring

1. Surface Water

Surface water monitoring is required to determine compliance with receiving water limitations and to characterize the water quality of the receiving water pursuant to the Basin Plan. Monitoring requirements for the receiving water have been carried over and established at Monitoring Location RSW-001. This Board Order also establishes monitoring for nutrients in the receiving water in order to characterize that portion of the Central Drain No. 5 upon the completion of the Salton Sea Nutrient TMDL in 2009. Additionally, annual monitoring of the receiving water at monitoring location RSW-001 for priority pollutants has been added in accordance with the SIP.

E. Groundwater – Not Applicable

F. Other Monitoring Requirements – Not Applicable

VII. RATIONALE FOR PROVISIONS

A. Standard Provisions

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

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

B. Special Provisions

1. Reopener Provisions

This provision is based on Part 123. The Regional Water Board may reopen the permit to modify permit conditions and requirements. Causes for modifications include the promulgation of new regulations, modification in sludge use or disposal practices, 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. **Copper, Selenium, and Cyanide Effluent Limitation Compliance Evaluation.** The Discharger is in the process of evaluating alternative treatment options to achieve compliance with effluent limitations for copper, selenium, and cyanide. The Discharger shall evaluate options for reducing concentrations of copper, selenium, and cyanide in the discharge, perhaps through continuation of pilot studies of alternative wastewater treatment options.

b. **TRE Work Plan, Toxicity Identification Evaluations, and Toxicity Reduction Evaluations.** This provision is based on the SIP, section 4, Toxicity Control Provisions.

c. **Translator Study.** This provision is based on the SIP. This provision allows the Discharger to conduct an optional translator study, based on the SIP at the Discharger's discretion. This provision is based on the need to gather site-specific information in order to apply a different translator from the default translator specified in the CTR and SIP. Without site-specific data, the default translators are used with the CTR criteria.

3. Best Management Practices and Pollution Prevention

a. **Pollutant Minimization Program.** This provision is based on the requirements of section 2.4.5 of the SIP.

b. **Storm Water.** This provision is based on Water Quality Board Order 97-03-DWQ, NPDES General Permit No. CAS000001 for Discharges of Storm Water Associated with Industrial Activities.

4. Construction, Operation, and Maintenance Specifications

a. **Facility and Treatment Operation.** This provision is based on the requirements of section 122.41(e) and the previous Board Order.

b. **Antidegradation Analysis and Engineering Report for Proposed Plant Improvements.** This requirement is based on the Discharger's proposal to modify existing treatment systems. The Discharger is required to evaluate treatment capacity, address mass increases of pollutants discharged, and propose additional units as necessary to enable adequate treatment, while ensuring that any proposed increases in discharges will not violate the State Water Board's antidegradation policy. The Discharger must also provide written certification that the expansion to the treatment system is completed and operational before adjusted effluent limitations are applicable.

c. **Operations Plan for Proposed Plant Modifications.** This provision is based on Section 13385(j)(1)(D) of the CWC and allows a specified time period in which the Discharger may adjust and test the modified treatment system. This provision requires the Discharger to submit an Operations Plan describing the actions the Discharger will take during the period of adjusting and testing to prevent violations.

d. **Spill Response Plan.** This provision is based on the requirements of Section 122.41(e) and the previous Board Order.

5. Other Special Provisions

Special Provisions V.C.6.a and V.C.6.b are included to ensure the compliance with requirements established in Board Order R7-2009-0020, and are based on the previous Board Order, the CWA, USEPA regulations, CWC, and Regional Water Board plans and policies.

6. Compliance Schedules

The compliance schedules specify the deliverables and due dates for the TRE Workplan, Copper, Selenium, and Cyanide Effluent Limitation Compliance Evaluation, and Spill Response Plan.

VIII. PUBLIC PARTICIPATION

The Regional Water Board is considering the issuance of WDRs that will serve as a NPDES permit for Imperial Irrigation District El Centro Generating Station. As a step in the WDRs adoption process, the Regional Water Board staff has developed tentative WDRs. The Regional Water Board encourages public participation in the WDRs 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 in accordance with Public Notice No. 7-09-11. In addition, the discharger conducted a Biological Assessment of the receiving water for designation as a Freshwater habitat and submitted it to the USEPA for approval. The USEPA has issued a tentative approval, which is publicly noticed pursuant to the above Public Notice. Notification was also provided through publication in Imperial Valley Press.

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 Water Board at the address above on the cover page of this Board Order.

To be considered by the Regional Water Board, written comments must be received at the Regional Water Board office by 5:00 p.m. on **May 13, 2009**. Please see the Public Notice on this matter for further information concerning the submittal of written comments.

Comments made in reference to USEPA's approval letter and the Biological Assessment should be directed to:

Matthew Mitchell
USEPA
75 Hawthorne Street (WTR-5)
San Francisco, CA 94105

C. Public Hearing

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

Date: **June 18, 2009**
Time: **10:00 AM**
Location: **Hi-Desert Water District**
55-439 29 Palms Highway
Yucca Valley, CA 92284

Interested person are invited to attend. At the public hearing, the Regional Water Board will hear testimony, if any, pertinent to the discharge, WDRs, and permit. Please refer to the Public Notice for further information concerning the procedures that will be followed for oral testimony.

Please be aware that dates and venues may change. Our Web address is **http://www.waterboards.ca.gov/coloradoriver** where you can access the current agenda for any changes in dates and locations.

D. 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 CWC Section 13320 and the 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 Board Order, except that if the thirtieth day following the date of this Board 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.

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

E. Information and Copying

The Report of Waste Discharge (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 (760) 346-7491.

F. Register of Interested Persons

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

G. Additional Information

Requests for additional information or questions regarding this Board Order should be directed to John Carmona at (760) 340-4521.

ATTACHMENT G – LIST OF PRIORITY POLLUTANTS

Table G-1. List of Priority Pollutants

CTR Number	Parameter	CAS Number	Suggested Analytical Methods
1	Antimony	7440360	EPA 6020/200.8
2	Arsenic	7440382	EPA 1632
3	Beryllium	7440417	EPA 6020/200.8
4	Cadmium	7440439	EPA 1638/200.8
5a	Chromium (III)	16065831	EPA 6020/200.8
5a	Chromium (VI)	18540299	EPA 7199/1636
6	Copper	7440508	EPA 6020/200.8
7	Lead	7439921	EPA 1638
8	Mercury	7439976	EPA 1669/1631
9	Nickel	7440020	EPA 6020/200.8
10	Selenium	7782492	EPA 6020/200.8
11	Silver	7440224	EPA 6020/200.8
12	Thallium	7440280	EPA 6020/200.8
13	Zinc	7440666	EPA 6020/200.8
14	Cyanide	57125	EPA 9012A
15	Asbestos	1332214	EPA/600/R-93/116(PCM)
16	2,3,7,8-TCDD	1746016	EPA 8290 (HRGC) MS
17	Acrolein	107028	EPA 8260B
18	Acrylonitrile	107131	EPA 8260B
19	Benzene	71432	EPA 8260B
20	Bromoform	75252	EPA 8260B
21	Carbon Tetrachloride	56235	EPA 8260B
22	Chlorobenzene	108907	EPA 8260B
23	Chlorodibromomethane	124481	EPA 8260B
24	Chloroethane	75003	EPA 8260B
25	2-Chloroethylvinyl Ether	110758	EPA 8260B
26	Chloroform	67663	EPA 8260B
27	Dichlorobromomethane	75274	EPA 8260B
28	1,1-Dichloroethane	75343	EPA 8260B
29	1,2-Dichloroethane	107062	EPA 8260B
30	1,1-Dichloroethylene	75354	EPA 8260B

CTR Number	Parameter	CAS Number	Suggested Analytical Methods
31	1,2-Dichloropropane	78875	EPA 8260B
32	1,3-Dichloropropylene	542756	EPA 8260B
33	Ethylbenzene	100414	EPA 8260B
34	Methyl Bromide	74839	EPA 8260B
35	Methyl Chloride	74873	EPA 8260B
36	Methylene Chloride	75092	EPA 8260B
37	1,1,2,2-Tetrachloroethane	79345	EPA 8260B
38	Tetrachloroethylene	127184	EPA 8260B
39	Toluene	108883	EPA 8260B
40	1,2-Trans-Dichloroethylene	156605	EPA 8260B
41	1,1,1-Trichloroethane	71556	EPA 8260B
42	1,12-Trichloroethane	79005	EPA 8260B
43	Trichloroethylene	79016	EPA 8260B
44	Vinyl Chloride	75014	EPA 8260B
45	2-Chlorophenol	95578	EPA 8270C
46	2,4-Dichlorophenol	120832	EPA 8270C
47	2,4-Dimethylphenol	105679	EPA 8270C
48	2-Methyl-4,6-Dinitrophenol	534521	EPA 8270C
49	2,4-Dinitrophenol	51285	EPA 8270C
50	2-Nitrophenol	88755	EPA 8270C
51	4-Nitrophenol	100027	EPA 8270C
52	3-Methyl-4-Chlorophenol	59507	EPA 8270C
53	Pentachlorophenol	87865	EPA 8270C
54	Phenol	108952	EPA 8270C
55	2,4,6-Trichlorophenol	88062	EPA 8270C
56	Acenaphthene	83329	EPA 8270C
57	Acenaphthylene	208968	EPA 8270C
58	Anthracene	120127	EPA 8270C
59	Benzidine	92875	EPA 8270C
60	Benzo(a)Anthracene	56553	EPA 8270C
61	Benzo(a)Pyrene	50328	EPA 8270C
62	Benzo(b)Fluoranthene	205992	EPA 8270C
63	Benzo(ghi)Perylene	191242	EPA 8270C
64	Benzo(k)Fluoranthene	207089	EPA 8270C
65	Bis(2-Chloroethoxy)Methane	111911	EPA 8270C

CTR Number	Parameter	CAS Number	Suggested Analytical Methods
66	Bis(2-Chloroethyl)Ether	111444	EPA 8270C
67	Bis(2-Chloroisopropyl)Ether	108601	EPA 8270C
68	Bis(2-Ethylhexyl)Phthalate	117817	EPA 8270C
69	4-Bromophenyl Phenyl Ether	101553	EPA 8270C
70	Butylbenzyl Phthalate	85687	EPA 8270C
71	2-Chloronaphthalene	91587	EPA 8270C
72	4-Chlorophenyl Phenyl Ether	7005723	EPA 8270C
73	Chrysene	218019	EPA 8270C
74	Dibenzo(a,h)Anthracene	53703	EPA 8270C
75	1,2-Dichlorobenzene	95501	EPA 8260B
76	1,3-Dichlorobenzene	541731	EPA 8260B
77	1,4-Dichlorobenzene	106467	EPA 8260B
78	3,3'-Dichlorobenzidine	91941	EPA 8270C
79	Diethyl Phthalate	84662	EPA 8270C
80	Dimethyl Phthalate	131113	EPA 8270C
81	Di-n-Butyl Phthalate	84742	EPA 8270C
82	2,4-Dinitrotoluene	121142	EPA 8270C
83	2,6-Dinitrotoluene	606202	EPA 8270C
84	Di-n-Octyl Phthalate	117840	EPA 8270C
85	1,2-Diphenylhydrazine	122667	EPA 8270C
86	Fluoranthene	206440	EPA 8270C
87	Fluorene	86737	EPA 8270C
88	Hexachlorobenzene	118741	EPA 8260B
89	Hexachlorobutadiene	87863	EPA 8260B
90	Hexachlorocyclopentadiene	77474	EPA 8270C
91	Hexachloroethane	67721	EPA 8260B
92	Indeno(1,2,3-cd)Pyrene	193395	EPA 8270C
93	Isophorone	78591	EPA 8270C
94	Naphthalene	91203	EPA 8260B
95	Nitrobenzene	98953	EPA 8270C
96	N-Nitrosodimethylamine	62759	EPA 8270C
97	N-Nitrosodi-n-Propylamine	621647	EPA 8270C
98	N-Nitrosodiphenylamine	86306	EPA 8270C
99	Phenanthrene	85018	EPA 8270C
100	Pyrene	129000	EPA 8270C

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

ATTACHMENT H – STATE WATER BOARD MINIMUM LEVELS

The State Water Board 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. The MLs in this appendix are in parts per billion (µg/L).

Table H-1. Volatile Substances

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 H-2. Semi-Volatile Substances

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		

Table 2b - SEMI-VOLATILE SUBSTANCES*	GC	GCMS	LC	COLOR
Hexachlorobenzene	5	1		
Hexachlorobutadiene	5	1		
Hexachloroethane	5	1		
Indeno(1,2,3,cd)-pyrene		10	0.05	
Isophorone	10	1		
N-Nitroso diphenyl amine	10	1		
N-Nitroso-dimethyl amine	10	5		
N-Nitroso -di n-propyl amine	10	5		
Naphthalene	10	1	0.2	
Nitrobenzene	10	1		
Pentachlorophenol	1	5		
Phenanthrene		5	0.05	
Phenol **	1	1		50
Pyrene		10	0.05	

*With the exception of phenol by colorimetric technique, the normal method-specific factor for these substances is 1,000; therefore, the lowest standard concentration in the calibration curve is equal to the above ML value for each substance multiplied by 1,000.

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

Table H-3. Inorganics

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 H-4. Pesticides and PCBs

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

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

Techniques:

GC - Gas Chromatography
GCMS - Gas Chromatography/Mass Spectrometry
HRGCMS - High Resolution Gas Chromatography/Mass Spectrometry (i.e., EPA 1613, 1624, or 1625)
LC - High Pressure Liquid Chromatography
FAA - Flame Atomic Absorption
GFAA - Graphite Furnace Atomic Absorption
HYDRIDE - Gaseous Hydride Atomic Absorption
CVAA - Cold Vapor Atomic Absorption
ICP - Inductively Coupled Plasma
ICPMS - Inductively Coupled Plasma/Mass Spectrometry
SPGFAA - Stabilized Platform Graphite Furnace Atomic Absorption (i.e., EPA 200.9)
DCP - Direct Current Plasma
COLOR – Colorimetric

ATTACHMENT I – SUMMARY OF WQBELS CALCULATIONS

The WQBELs developed for this Order are summarized below and were calculated as described in the methodology summarized in Attachment F, Fact Sheet and are contained in section IV.A.1.a of this Order.

Table I-1. Summary of WQBELs Calculations

CTR #	Parameter	Human Health Calculations			Aquatic Life Calculations											Effluent Limitations	
		Organism Only			Saltwater / Freshwater												
		AMEL HH = ECA = C HH only	MDEL/ AMEL multiplier	MDEL HH	ECA acute = C acute	ECA acute multiplier	LTA acute	ECA chronic = C chronic	ECA chronic multiplier	LTA chronic	Lowest LTA	AMEL multiplier 95	AMEL aquatic life	MDEL multiplier 99	MDEL aquatic life	AMEL	MDEL
		µg/L		µg/L	µg/L		µg/L	µg/L		µg/L	µg/L					µg/L	µg/L
6	Copper	n/a	n/a	n/a	51.68	0.23	11.71	30.50	0.41	12.42	11.71	1.84	21.5	4.41	51.7	22	52
10	Selenium	n/a	n/a	n/a	20	0.32	6.42	5.0	0.53	2.64	2.64	1.55	4.1	3.11	8.2	4.1	8.2
14	Cyanide	220,000	2.01	441,362	22	0.32	7.06	5.2	0.53	2.74	2.74	1.55	4.3	3.11	8.5	4.3	8.5

Notes:

C = Water Quality Criteria
HH = Human health
AMEL = Average monthly effluent limitation
MDEL = Maximum daily effluent limitation
ECA = Effluent concentration allowance
LTA = Long-term average concentration.

DRAFT April 3, 2009